Credit Risk Transfer Handbook

March 2024
Mission is at the heart of all we do at Freddie Mac. We pioneered agency Single-Family Credit Risk Transfer (CRT) to reduce credit risk to U.S. taxpayers, while supporting the liquidity, stability and affordability of the country’s housing finance system. Along the way, we created innovative opportunities for private investors to participate in the U.S. single-family residential credit market.

This handbook is designed to familiarize you with some of those opportunities, including Freddie Mac's complementary capital markets and (re)insurance CRT executions, STACR® and ACIS®. It further provides a close-up view of Freddie Mac's risk management framework and quarterly U.S. housing statistics.

- Kevin Cheng, Vice President, Head of Mortgage Assets & Risk Transfer
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Development of an Asset Class
Freddie Mac was chartered by the federal government in 1970 to provide liquidity, stability, and affordability to the housing market.

1. **Lenders originate loans.** Lenders include banks, credit unions, mortgage brokers and others. They originate loans per the Single-Family Seller/Servicer Guide and sell loans to Freddie Mac.

2. **Freddie Mac overlays its credit risk management framework on purchased loans, ensuring loan quality.** Underwriting and Quality Control processes take advantage of proprietary data models and intelligent automation to ensure all loans meet Freddie Mac underwriting standards.

3. **Interest rate risk is passed through to investors by guaranteed Uniform Mortgage-Backed Securities (UMBS®).** Investors include Federal Reserve, money managers, hedge funds, banks, credit unions and more.

4. **Credit investors gain exposure to the U.S. mortgage market through innovative risk-sharing offerings.** Investors include money managers, hedge funds, (re)insurers, Real Estate Investment Trusts (REITs), insurance companies and other investors.
Sustainable Business Model

Buy and **Hold** Credit Risk

**Old Model**

- **Mortgage Lenders**
- **Credit Risk**
- **Interest Rate Risk**
- **Freddie Mac**
- **Credit Risk**
- **Freddie Mac**
- **Interest Rate Risk**
- **Investors**

**Interest Rate Risk Transfer**

**Uniform Mortgage-Backed Securities (UMBS):** Pass-through securities representing an undivided interest in a pool of residential mortgages which transfer interest rate risk to investors. Freddie Mac guarantees the timely payment of interest and scheduled principal on all UMBS’ issued by Freddie Mac.

**Credit Risk Transfer**

**Structured Agency Credit Risk (STACR®) Trust:** Freddie Mac’s flagship securitization credit risk sharing vehicle. STACR transactions transfer risk to the private capital markets through the issuance of unsecured and non-guaranteed notes. The bankruptcy-remote trust makes periodic payments of principal and interest on the notes to investors.

**Agency Credit Insurance Structure (ACIS®):** Freddie Mac’s flagship insurance-based credit risk sharing vehicle. ACIS transactions are insurance policies issued by or ceded to global (re)insurance companies to cover a portion of credit risk on the STACR or standalone reference pools. Freddie Mac pays monthly premiums to (re)insurers, based on their tranche participation, in exchange for claim coverage on their portion of the reference pool.

Buy and **Transfer** Credit Risk

**New Model**

- **Mortgage Lenders**
- **Credit Risk**
- **Interest Rate Risk**
- **Freddie Mac**
- **Mortgage**
- **Freddie Mac**
- **Credit Risk**
- **Interest Rate Risk**
- **Investors**
Timeline

Development of an Asset Class

- **2013**: Created Scale and Depth
  Transitioned program from calculated to actual losses
- **2015**: Established Market
  Issued first STACR and ACIS transactions
- **2016**: Broadened Focus
  First ACIS Forward transaction
- **2017**: Strengthened Structure
  Issued first STACR Trust transaction
- **2018**: Leveraged Success
  • Debut Clarity Data Intelligence® portal
  • First STACR REMIC Trust transaction
- **2019**: Structural Enhancements
  First STACR Tender Offer transactions
- **2020**: Leverage Success
  • First STACR REMIC Trust transaction
- **2021**: Optimized Structure for ERCF
- **2022**: Further Enhancements
  Introduced A1 Structure
- **2023**: Expand Opportunity
  Issued first ACIS 15-year standalone transaction

**Timeline Events**

- 2013: Created Scale and Depth
- 2015: Established Market
- 2016: Broadened Focus
- 2017: Strengthened Structure
- 2018: Leveraged Success
- 2019: Structural Enhancements
- 2020: Further Enhancements
- 2023: Expand Opportunity
Single-Family CRT by the Numbers

- **10** Years Since First Transaction
- **186** Transactions Issued Across Single-Family CRT Offerings
- **340+** Unique Investors in Single-Family CRT Offerings
- **$109 Billion** Risk Transferred to Private Capital on Single-Family Mortgages
- **$3.3 Trillion** Single-Family Mortgages with Credit Risk Protection

**Source:** Freddie Mac, as of March 2024.

**Note:** Includes STACR and ACIS transactions.
CRT Issuance and Portfolio Coverage

Source: Freddie Mac, as of Q4 2023.

UPB Covered by New CRT Issuance ($Billions)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>UPB Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Q22</td>
<td>$46</td>
</tr>
<tr>
<td>1Q23</td>
<td>$15</td>
</tr>
<tr>
<td>2Q23</td>
<td>$63</td>
</tr>
<tr>
<td>3Q23</td>
<td>$7</td>
</tr>
<tr>
<td>4Q23</td>
<td>$29</td>
</tr>
</tbody>
</table>

Mortgage Portfolio with Credit Enhancement ($Billions)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Percentage</th>
<th>UPB Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Q22</td>
<td>61%</td>
<td>$1,832</td>
</tr>
<tr>
<td>1Q23</td>
<td>62%</td>
<td>$1,840</td>
</tr>
<tr>
<td>2Q23</td>
<td>62%</td>
<td>$1,854</td>
</tr>
<tr>
<td>3Q23</td>
<td>62%</td>
<td>$1,885</td>
</tr>
<tr>
<td>4Q23</td>
<td>61%</td>
<td>$1,860</td>
</tr>
</tbody>
</table>
**Key Offerings**

**SECURITIES**

**STACR®**
Structured Agency Credit Risk

Freddie Mac Single-Family’s flagship CRT offering, where non-guaranteed notes are issued across multiple tranches, and reference pool performance determines payments.

**Series**

**DNA:** On-the-run, original LTV of 61-80%

**HQA:** On-the-run, original LTV of 81-97%

**HRP:** HARP and Relief Refi collateral

**FTR:** Off-the-run, seasoned B collateral

**SPI:** Fully collateralized non-synthetic transactions

**RE)INSURANCE CONTRACTS**

**ACIS®**
Agency Credit Insurance Structure

Freddie Mac’s flagship (re)insurance offering provides (re)insurers the opportunity to gain broad exposure to the U.S. housing market on a direct or reinsurance basis.

**Series**

**DNA:** On-the-run, original LTV of 61-80%

**HQA:** On-the-run, original LTV of 81-97%

**SPL:** Standalone, original LTV of 61-80%

**SPH:** Standalone, original LTV of 81-97%

**SAP:** 15/20/30-year collateral

**ARMR:** HARP and Relief Refi collateral

**FTR:** Off-the-run, seasoned B collateral

**AFRM:** Forward transactions

**AFH:** Forward transactions, original LTV of 81-97%

**COR:** Cash Out Refinances, original LTV of 50-60%
Clarity Investor Portal

Clarity Data Intelligence® was introduced in 2019 as a centralized hub for CRT analytics. Through Clarity, market participants have easy access to various dashboards for CRT transactions and single-family loan-level historical data.

How to access Clarity

- Visit clarity.freddiemac.com
- A login is required to gain access

Available Dashboards

**CRT Transactions**

- Credit profile across reference pool and various cohorts
- Historical performance and loss trends
- CRT structure and trigger information
- Investor participation

**Single-family Historical Dataset**

- Credit profile across various vintages
- Historical performance and loss analysis

Recent Updates

- EU Annex 2 and Annex 12 templates are available for download
- Bookmark functionality enables users to save filters and available dropdown for frequently used dashboards
STACR® and ACIS®
1. Transaction Overview
CRT Business Process

**Loan Origination**
Lenders originate loans to borrowers according to Freddie Mac origination guidelines. Freddie Mac purchases such loans and guarantees securities backed by the loans.

**UMBS Packages**
Loans purchased by Freddie Mac are grouped and sold to Uniform Mortgage-Backed Securities (UMBS) investors, transferring interest rate risk away from Freddie Mac.

**CRT Eligibility**
Loans backing the guaranteed securities (UMBS) are subject to additional CRT eligibility requirements and screened for underwriting defects and performance deficiencies before being included in a CRT transaction.

**Transaction Issuance**
STACR and ACIS deploy similar financial structures. Freddie Mac maintains “skin in the game” by retaining all or a portion of each tranche, thus aligning Freddie Mac and investor interest with reference pool performance.
Reference Pool Creation Illustration

Total Loans Securitized in UMBS Q1
$81 billion

Reference Pool Eligibility Criteria
- 100% fully amortizing
- Fixed-rate
- 1-to-4 unit
- First lien mortgage loans
- Original terms of 241-360 months
- No loans originated under Relief Refinance programs
- Meets transaction specific LTV criteria (61-80 LTV for DNA; 81-97 LTV for HQA)
- REMIC election made

Initial Cohort
$28 billion

Loan Performance Removals
- Incomplete data reconciliation
- Corrected data
- Repurchased
- Removed by QC process
- Paid in full
- Failed delinquency criteria
- Bankruptcy

Reference Pool
$26 billion

STACR & ACIS Transaction

Transaction Overview
Enhanced STACR Structure

Introduction of A-1 Class

Freddie Mac issued $4B worth of CRT in 2023

2023

<table>
<thead>
<tr>
<th>Tranche</th>
<th>Loss Coverage</th>
<th>Expected Ratings</th>
<th>WAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-1A</td>
<td>3.00%</td>
<td>4.50% IG</td>
<td>2.20</td>
</tr>
<tr>
<td>M-1B</td>
<td>2.00%</td>
<td>3.00% IG</td>
<td>4.80</td>
</tr>
<tr>
<td>M-2</td>
<td>1.25%</td>
<td>2.00% IG / Non-IG</td>
<td>5.04</td>
</tr>
<tr>
<td>B-1</td>
<td>0.75%</td>
<td>1.25% Non-IG</td>
<td>5.04</td>
</tr>
<tr>
<td>B-2</td>
<td>0.25%</td>
<td>0.75% NR</td>
<td>5.04</td>
</tr>
</tbody>
</table>

2024 and Forward

<table>
<thead>
<tr>
<th>Tranche</th>
<th>Loss Coverage</th>
<th>Expected Ratings</th>
<th>WAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>4.25%</td>
<td>5.25% IG</td>
<td>2.60</td>
</tr>
<tr>
<td>M-1</td>
<td>3.25%</td>
<td>4.25% IG</td>
<td>1.50</td>
</tr>
<tr>
<td>M-2</td>
<td>2.25%</td>
<td>3.25% IG / Non-IG</td>
<td>4.30</td>
</tr>
<tr>
<td>B-1H</td>
<td>1.50%</td>
<td>2.25% N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>B-2H</td>
<td>0.25%</td>
<td>1.50% N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

STACR and ACIS are complementary programs that can issue on a linked basis using the same reference pool. Delinked transactions have also been used to transfer risk for on-the-run deals.

Source: Freddie Mac
Notes: Illustrative purposes only. Final structures may vary by deal. IG = Investment-Grade or higher.

Available on our Resource Hub: Looking Ahead - CRT in 2024

Transaction Overview

Freddie Mac issued $4B worth of CRT in 2023
STACR REMIC Structure

Transaction Overview

Hypothetical Allocation of Principal Payments

Class A-H (Reference Tranche Only)

- Class A-1
- Class M-1
- Class M-2
- Class B-1H
- Class B-2H
- Class B-3H (Reference Tranche Only)

Retained Credit Risk

STACR Notes Offered at Closing

Capital Contribution Amount
- Transfer Amount
- Return Reimbursement Amount

IO Q-REMIC Interests

Freddie Mac STACR REMIC Trust 2024

Trust issues Notes
- Receives cash proceeds

Earnings and Liquidation Proceeds

Freddie Mac STACR REMIC Trust 2024

Trust pays interest
- (uncapped SOFR floater)

Cash proceeds

Capital Contribution Amount

Eligible Investments

Liquidation Proceeds cover Return Amounts

Reference Pool

Source: Freddie Mac
Notes: Illustrative purposes only. Final structures may vary by deal.
ACIS (Re)Insurers May Write on a Direct or Indirect Basis

**Direct Policy**

Freddie Mac enters into/execute a primary insurance policy directly with Insurers

- Insurer #1
- Insurer #2
- Insurer #3
- Insurer #4

Collateral Trust

**Indirect Policy**

Freddie Mac enters into/execute a primary insurance policy with cell company

Freddie Mac enters into/executes a primary insurance policy directly with Insurers

- Reinsurer #1
- Reinsurer #2
- Reinsurer #3
- Reinsurer #4

Collateral Trust

**Cell Company**

Cell issues quota share reinsurance contract to the reinsurers

- Cell issues quota share reinsurance contract to the reinsurers

Net amount of claims and premiums flow through cell

Reinsurers, based on their license, have option to contract directly or indirectly (via cell company) with Freddie Mac.
## Transaction Example and Program Comparisons

### Transaction Overview

**Note**: For illustrative purposes only

<table>
<thead>
<tr>
<th>Tranche</th>
<th>Loss Coverage</th>
<th>Expected Ratings</th>
<th>Balance</th>
<th>WAL</th>
<th>Principal Window</th>
<th>WAL</th>
<th>Principal Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>425 550</td>
<td>Investment Grade</td>
<td>$217m</td>
<td>$90m</td>
<td>2.60</td>
<td>1.25</td>
<td>1 – 31</td>
</tr>
<tr>
<td>M-1</td>
<td>290 425</td>
<td>Investment Grade</td>
<td>$234m</td>
<td>$90m</td>
<td>1.50</td>
<td>4.47</td>
<td>31 – 79</td>
</tr>
<tr>
<td>M-2</td>
<td>220 290</td>
<td>Rated/Investment Grade</td>
<td>$121m</td>
<td>$69m</td>
<td>4.30</td>
<td>8.22</td>
<td>79 – 120</td>
</tr>
<tr>
<td>B-1H</td>
<td>125 220</td>
<td>Rated/Not Rated</td>
<td>Not Offered</td>
<td>$45m</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>B-2H</td>
<td>25 125</td>
<td>Rated/Not Rated</td>
<td>Not Offered</td>
<td>$20m</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>$572m</td>
<td>$314m</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Performance Triggers

- Minimum Credit Enhancement Test
- Delinquency Test
- Cumulative Net Loss Test

### Other

- 144A Compliant
- Reg S Compliant
- Minimum Denomination $10,000
- Minimum Increment $1

### STACR vs. ACIS

<table>
<thead>
<tr>
<th></th>
<th>STACR</th>
<th>ACIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity</td>
<td>20 Year</td>
<td>20 Year</td>
</tr>
<tr>
<td>Early Termination</td>
<td>Earlier of: (a) 10% or less pool factor or (b) on or after 60th payment date</td>
<td>Earlier of: (a) 10% or less pool factor or (b) on or after 60th payment date</td>
</tr>
<tr>
<td>Qualified Buyer</td>
<td>Qualified Institutional Buyer “QIB”</td>
<td>Approved Counterparty</td>
</tr>
<tr>
<td>Coupon/Premium</td>
<td>30-day Average SOFR plus spread (post 10/2020)</td>
<td>Fixed rate</td>
</tr>
<tr>
<td>Liquidity</td>
<td>10-12 broker/dealers make active markets daily</td>
<td>(Re)insurer posts collateral for a portion of risk insured; buy and hold position with the ability to seek further reinsurance from a third party; interest paid based on notional amount</td>
</tr>
<tr>
<td>Performance Triggers</td>
<td>Minimum Credit Enhancement Test, Delinquency Test, Cumulative Net Loss Test</td>
<td>Same as STACR</td>
</tr>
<tr>
<td>Other</td>
<td>144A Compliant, Reg S Compliant, Minimum Denomination $10,000, Minimum Increment $1</td>
<td>N/A</td>
</tr>
</tbody>
</table>
# Loss Due to Credit Event

## Allocation of Loss Due to Credit Event

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Loss ($+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UPB at time of removal from the Reference Pool (including prior principal forgiveness)</td>
</tr>
<tr>
<td>2</td>
<td>Net Sales Proceeds</td>
</tr>
<tr>
<td>3</td>
<td>Delinquent Accrued Interest (Non-Capitalized) Interest Bearing UPB * min(Note Rate – 35bps, Accounting Net Yield) * (# of Months Delinquent/12)</td>
</tr>
<tr>
<td>4</td>
<td>Taxes and Insurance</td>
</tr>
<tr>
<td>5</td>
<td>Legal Costs</td>
</tr>
<tr>
<td>6</td>
<td>Maintenance and Preservation Costs (e.g. Property Inspection, HOA, Utilities, Rental Receipts, REO Management, etc.)</td>
</tr>
<tr>
<td>7</td>
<td>MI Proceeds (Total Claim Amount * Coverage %)</td>
</tr>
<tr>
<td>8</td>
<td>Miscellaneous Expenses (e.g. BPO, other sales expenses not included in item 2 above)</td>
</tr>
<tr>
<td>9</td>
<td>Miscellaneous Credits (e.g. Positive Escrow, Insurance Refunds, Hazard Claim Proceeds, Make Whole Events, etc.)</td>
</tr>
</tbody>
</table>

**Note:** For illustrative purposes only.
Modification Loss

Modification Loss

Transaction Overview

Allocation of Modification Loss

<table>
<thead>
<tr>
<th>Modification Hierarchy</th>
<th>Investor Impact</th>
<th>Borrower Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Extension</td>
<td>No Impact</td>
<td>Loan term is extended to reduce borrower monthly payments</td>
</tr>
<tr>
<td>Interest Rate Reduction</td>
<td>Loss of interest from rate change</td>
<td>Reduces monthly payment</td>
</tr>
<tr>
<td>Principal Forbearance</td>
<td>Loss of interest from non-interest bearing amount</td>
<td>Suspension of mortgage payments for a specific period of time which is paid as a balloon payment upon termination of the loan</td>
</tr>
</tbody>
</table>

Modification Loss =

1. (+) Modification Costs e.g. Interest Short Fall (Passed to investors on a monthly basis included in modification loss amount)
2. (+) Bankruptcy Cramdown Costs (Passed to investors at time of cramdown included in write down loss amount)

Note: For illustrative purposes only.
2. Investors and Liquidity
Investor Participation at Issuance

Source: Freddie Mac, as of February 2024. Note: In addition to the participation shown above, ACIS is generally responsible for 25% of each tranche issued for (Re)insurer participation.
STACR Trading Volume

Average Monthly Trading Volume by Year

Average Trading Volume per Month

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal ($Billions)</th>
<th>% of Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0.3</td>
<td>48%</td>
</tr>
<tr>
<td>2014</td>
<td>0.6</td>
<td>20%</td>
</tr>
<tr>
<td>2015</td>
<td>1.1</td>
<td>13%</td>
</tr>
<tr>
<td>2016</td>
<td>1.5</td>
<td>11%</td>
</tr>
<tr>
<td>2017</td>
<td>1.9</td>
<td>12%</td>
</tr>
<tr>
<td>2018</td>
<td>1.7</td>
<td>8%</td>
</tr>
<tr>
<td>2019</td>
<td>2.0</td>
<td>8%</td>
</tr>
<tr>
<td>2020</td>
<td>2.4</td>
<td>9%</td>
</tr>
<tr>
<td>2021</td>
<td>2.2</td>
<td>7%</td>
</tr>
<tr>
<td>2022</td>
<td>2.4</td>
<td>7%</td>
</tr>
<tr>
<td>2023</td>
<td>2.3</td>
<td>7%</td>
</tr>
<tr>
<td>2024</td>
<td>2.6</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: Freddie Mac and Bloomberg, as of February 2024. Note: Trading volumes reflect the sum of all buy and sell trades.
STACR Issuance and Ratings

### Cumulative Issuance ($billions)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Issuance</td>
<td>$74.3B</td>
</tr>
<tr>
<td>Deals</td>
<td>89</td>
</tr>
</tbody>
</table>

### Current Outstanding ($billions)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated</td>
<td>22.1</td>
</tr>
<tr>
<td>Unrated</td>
<td>8.6</td>
</tr>
<tr>
<td>Total</td>
<td>30.7</td>
</tr>
</tbody>
</table>

**Source:** Freddie Mac and Bloomberg, as of March 2024.
**Flagship CRT offering and portfolio management tool**

More than $34 billion coverage placed since inception

Cumulative ACIS Issuance

- **Pioneered first reinsurance transactions in GSE CRT market**
- **Developed key relationships with global reinsurers, brokers, and service providers**
- **Created an insurance Cell structure**
- **Diversified reinsurer panel: 40+ Unique Reinsurers**
- **Launched ACIS Standalone (SAP), ACIS Forward (AFRM), ARMR series (HARP), and sold seasoned B2 risk (FTR)**
- **Introduced 5-year call option**
- **Priced ACIS 2020-AFRM1 in June 2020, restarting CRT issuances since the onset of COVID-19 pandemic**
- **2021: issued $8.2B of limit, highest issuance year driven by the Refi Boom**
- **2022: introduced 2 new offerings – COR & AFH**
- **90+ Transactions in 10 years**

Source: Freddie Mac, as of March 2024.
114 STACR REMIC trust notes have NAIC designations.
38 STACR trust notes have NAIC designations.
53 STACR debt notes, 4 STACR HRP notes, and 3 STACR SPI notes have NAIC designations.

Source: NAIC.
Note: The National Association of Insurance Commissioners 2022 Mortgage Reference Securities Report is not a market substitute for or functional equivalent of the credit ratings of rating agencies and is not produced to permit investors to compare the likelihood of default or of full and timely payment between one or more securities.
STACR and ACIS

3. Portfolio Trends and CRT Performance
Proxy Cohort Performance

Low LTV Series

Source: Freddie Mac Clarity Proxy Cohort, as of February 2024. For illustrative purposes only.

Notes: Data included in the tables above are derived from the most recent release of Freddie Mac’s Single-Family Loan Level Dataset (SF LLD). Historical losses are weighted in proportion to the applicable deal’s cohorts of FICO and either OLTV or ELTV. Cumulative losses do not include modification losses. For more information, please reference the SF LLD website.

* Specified class takes 100% loss, assuming no principal payments.

High LTV Series
Disaster Matrix Examples

Source: Freddie Mac Clarity Disaster Matrix, as of February 2024. For illustrative purposes only.
## Collateral Profile: Low LTV Series

<table>
<thead>
<tr>
<th>Deal</th>
<th>OLTV</th>
<th>ELTV</th>
<th>FICO</th>
<th>DTI</th>
<th>Investor %</th>
<th>DTI&gt;45 %</th>
<th>FICO&lt;680 %</th>
<th>Home Possible %</th>
<th>ACE %</th>
<th>Forebearance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024-DNA1</td>
<td>76</td>
<td>72</td>
<td>752</td>
<td>39</td>
<td>11.6%</td>
<td>25.1%</td>
<td>5.8%</td>
<td>4.0%</td>
<td>10.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2023-DNA2</td>
<td>76</td>
<td>71</td>
<td>751</td>
<td>37</td>
<td>15.5%</td>
<td>19.4%</td>
<td>6.9%</td>
<td>0.8%</td>
<td>20.4%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2023-DNA1</td>
<td>76</td>
<td>71</td>
<td>749</td>
<td>37</td>
<td>9.5%</td>
<td>19.6%</td>
<td>8.3%</td>
<td>0.7%</td>
<td>20.8%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2022-DNA7</td>
<td>75</td>
<td>64</td>
<td>740</td>
<td>36</td>
<td>10.6%</td>
<td>13.7%</td>
<td>11.9%</td>
<td>0.7%</td>
<td>21.4%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2022-DNA6</td>
<td>74</td>
<td>63</td>
<td>745</td>
<td>36</td>
<td>9.0%</td>
<td>13.9%</td>
<td>9.5%</td>
<td>0.6%</td>
<td>26.7%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Average</td>
<td>75</td>
<td>67</td>
<td>747</td>
<td>37</td>
<td>10.9%</td>
<td>17.6%</td>
<td>8.7%</td>
<td>1.3%</td>
<td>20.9%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

**Source:** Freddie Mac Clarity/Origination/Characteristics, as of February 2024. More data fields available in Clarity. **Note:** Amounts shown are current.
### Collateral Profile: High LTV Series

<table>
<thead>
<tr>
<th>Deal</th>
<th>OLTV</th>
<th>ELTV</th>
<th>FICO</th>
<th>DTI</th>
<th>Investor %</th>
<th>DTI&gt;45 %</th>
<th>FICO&lt;680 %</th>
<th>Home Possible %</th>
<th>ACE %</th>
<th>Forebearance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024-HQA1</td>
<td>92</td>
<td>87</td>
<td>750</td>
<td>40</td>
<td>0.4%</td>
<td>23.6%</td>
<td>3.0%</td>
<td>13.9%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2023-HQA3</td>
<td>92</td>
<td>86</td>
<td>754</td>
<td>38</td>
<td>0.3%</td>
<td>17.3%</td>
<td>2.7%</td>
<td>6.6%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>2023-HQA2</td>
<td>92</td>
<td>85</td>
<td>750</td>
<td>39</td>
<td>0.5%</td>
<td>20.7%</td>
<td>3.3%</td>
<td>6.8%</td>
<td>0.0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2023-HQA1</td>
<td>92</td>
<td>78</td>
<td>751</td>
<td>37</td>
<td>0.5%</td>
<td>12.0%</td>
<td>4.2%</td>
<td>5.9%</td>
<td>1.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2022-HQA3</td>
<td>92</td>
<td>75</td>
<td>750</td>
<td>36</td>
<td>0.3%</td>
<td>10.2%</td>
<td>4.5%</td>
<td>8.1%</td>
<td>1.8%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Average</td>
<td>92</td>
<td>83</td>
<td>751</td>
<td>38</td>
<td>0.4%</td>
<td>17.7%</td>
<td>3.4%</td>
<td>8.7%</td>
<td>0.5%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

**Source:** Freddie Mac Clarity/Origination/Characteristics, as of February 2024. More data fields available in Clarity. **Note:** Amounts shown are current.
Cumulative Net Loss by Series

Source: Freddie Mac Clarity/Charts/Credit Event, as of February 2024. For illustrative purposes only.
## Transition Matrix by Series

### Low LTV Series, Actual Loss

<table>
<thead>
<tr>
<th>Prior Loan Status</th>
<th>Current</th>
<th>D30</th>
<th>D60</th>
<th>D90</th>
<th>D120</th>
<th>D150</th>
<th>D180+</th>
<th>REO</th>
<th>Credit Event</th>
<th>Defect</th>
<th>Prepaid</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>94.3%</td>
<td>0.36%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.22%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>D30</td>
<td>52.45%</td>
<td>34.73%</td>
<td>12.00%</td>
<td>0.13%</td>
<td>0.00%</td>
<td>0.00%</td>
<td></td>
<td>0.00%</td>
<td>0.02%</td>
<td>0.64%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>D60</td>
<td>19.15%</td>
<td>13.50%</td>
<td>29.93%</td>
<td>37.14%</td>
<td>0.33%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.03%</td>
<td>0.63%</td>
<td>100.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D90</td>
<td>16.07%</td>
<td>2.50%</td>
<td>6.11%</td>
<td>16.21%</td>
<td>58.57%</td>
<td>0.00%</td>
<td></td>
<td>0.00%</td>
<td>1.01%</td>
<td>100.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D120</td>
<td>12.48%</td>
<td>1.31%</td>
<td>1.02%</td>
<td>2.72%</td>
<td>13.79%</td>
<td>67.64%</td>
<td>0.12%</td>
<td>0.92%</td>
<td>1.01%</td>
<td>100.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D150</td>
<td>17.10%</td>
<td>1.09%</td>
<td>0.56%</td>
<td>0.36%</td>
<td>1.74%</td>
<td>17.84%</td>
<td>60.39%</td>
<td>0.88%</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D180+</td>
<td>11.86%</td>
<td>0.66%</td>
<td>0.18%</td>
<td>0.15%</td>
<td>0.19%</td>
<td>0.50%</td>
<td>64.82%</td>
<td>0.19%</td>
<td>0.01%</td>
<td>1.28%</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

### High LTV Series, Actual Loss

<table>
<thead>
<tr>
<th>Prior Loan Status</th>
<th>Current</th>
<th>D30</th>
<th>D60</th>
<th>D90</th>
<th>D120</th>
<th>D150</th>
<th>D180+</th>
<th>REO</th>
<th>Credit Event</th>
<th>Defect</th>
<th>Prepaid</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>99.23%</td>
<td>0.43%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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</tr>
<tr>
<td>D30</td>
<td>44.54%</td>
<td>39.58%</td>
<td>15.14%</td>
<td>0.10%</td>
<td>0.01%</td>
<td>0.00%</td>
<td></td>
<td>0.00%</td>
<td>0.01%</td>
<td>0.62%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>D60</td>
<td>16.02%</td>
<td>13.49%</td>
<td>29.62%</td>
<td>38.70%</td>
<td>0.27%</td>
<td>0.10%</td>
<td>0.02%</td>
<td>0.86%</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D90</td>
<td>14.51%</td>
<td>3.15%</td>
<td>7.05%</td>
<td>15.56%</td>
<td>58.27%</td>
<td>0.18%</td>
<td></td>
<td>0.76%</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>D120</td>
<td>12.66%</td>
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<td>1.13%</td>
<td>3.17%</td>
<td>15.95%</td>
<td>65.24%</td>
<td>0.14%</td>
<td>0.14%</td>
<td>0.89%</td>
<td>100.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D150</td>
<td>14.64%</td>
<td>0.89%</td>
<td>0.44%</td>
<td>0.35%</td>
<td>2.89%</td>
<td>18.64%</td>
<td>61.72%</td>
<td>0.50%</td>
<td>100.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D180+</td>
<td>9.61%</td>
<td>0.92%</td>
<td>0.19%</td>
<td>0.12%</td>
<td>0.17%</td>
<td>0.43%</td>
<td>89.33%</td>
<td>0.57%</td>
<td>0.27%</td>
<td>0.07%</td>
<td>1.93%</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Freddie Mac Clarity/Performance/Transition Matrix, as of February 2024. For illustrative purposes only.
Serious Delinquency (D90+) by Series

DNA Delinquent Status (% of Current Balance)

HQA Delinquent Status (% of Current Balance)

Source: Freddie Mac Clarity/Performance/Delinquency, as of February 2024. Stacked column charts created using D90, D120, D150, D180+ and REO data segments.
Voluntary Prepayment Rates by Series

Source: Freddie Mac monthly remittance data, as of January 2024.

Source: Freddie Mac monthly remittance data, as of February 2024.
DNA Third-Party Base Expected Default and Loss

Collateral Expected Default and Loss at Issuance to Maturity

<table>
<thead>
<tr>
<th>Bank</th>
<th>22-DNA6</th>
<th>22-DNA7</th>
<th>23-DNA1</th>
<th>23-DNA2</th>
<th>24-DNA1</th>
</tr>
</thead>
<tbody>
<tr>
<td>BofA</td>
<td>92</td>
<td>105</td>
<td>70</td>
<td>147</td>
<td>147</td>
</tr>
<tr>
<td>Credit Suisse</td>
<td>75</td>
<td>91</td>
<td>86</td>
<td>139</td>
<td>139</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>76</td>
<td>92</td>
<td>74</td>
<td>97</td>
<td>97</td>
</tr>
</tbody>
</table>

Disclaimer: The estimates shown above are for informational purposes only and delivered solely as reference material with respect to Freddie Mac. There is no assurance that the actual losses of the Reference Obligations will mirror the estimates shown above. The information contained in these materials may be based on assumptions regarding market conditions and other matters that may be of a proprietary nature to the model owners and unknown to Freddie Mac. The model owners have consented to Freddie Mac’s use and presentation of the estimates shown here, but do not make any representations that the information is accurate or complete. Neither Freddie Mac, nor the model owners, take responsibility for or make representations regarding the reasonableness of the underlying assumptions that form the basis of the estimates shown here or the likelihood that the estimates shown will coincide with actual market conditions or events and the estimates should not be relied upon for such purposes.

*Values indicated are based on a 20-year term to maturity; other deal values indicated are based on a 12.5-year term to maturity.
HQA Third-Party Base Expected Default and Loss

Collateral Expected Default and Loss at Issuance to Maturity

Disclaimer: The estimates shown above are for informational purposes only and delivered solely as reference material with respect to Freddie Mac. There is no assurance that the actual losses of the Reference Obligations will mirror the estimates shown above. The information contained in these materials may be based on assumptions regarding market conditions and other matters that may be of a proprietary nature to the model owners and unknown to Freddie Mac. The model owners have consented to Freddie Mac’s use and presentation of the estimates shown here, but do not make any representations that the information is accurate or complete. Neither Freddie Mac, nor the model owners, take responsibility for or make representations regarding the reasonableness of the underlying assumptions that form the basis of the estimates shown here or the likelihood that the estimates shown will coincide with actual market conditions or events and the estimates should not be relied upon for such purposes.

*Values indicated are based on a 30-year term to maturity; **Values indicated are based on a 12.5-year term to maturity; other deal values indicated are based on a 20-year term to maturity
Estimated LTV Numbers

Ongoing positive house price appreciation allows borrowers to build equity, thereby reducing loan-to-value ratio and credit risk.

- Home Value Explorer® (HVE®) is a Freddie Mac AVM tool that generates an estimate of property value
- HVE provides extensive coverage of all 50 states and more than 3,100 counties with its database of ~100 million property records
- For more information on HVE visit: sf.freddiemac.com/tools-learning/home-value-suite/overview

Source: Freddie Mac, as of February 2024. **Weighted average life was 28 months at issuance, typical transaction is between 9-12 months.**
Credit Risk Management Framework
Credit Risk Management Framework

1. Overview
Credit Risk Management Overview

Freddie Mac – Risk Management

**Underwriting Standards**
- Documentation Standards and Credit Eligibility Requirements
- Delegated Underwriting Guidelines
- Seller Representations and Warranties
- Freddie Mac Loan Advisor®

**Quality Control**
- Post-Close Credit Review
- Quality Assurance
- Compliance Review
- Performing Loan and Non-Performing Loan Quality Control Review
- Due Diligence Review
- Underwriting Defects Repurchase Process

**Seller/Servicer Management**
- Seller In-House Quality Control
- Seller/Servicer Approval Standards
- Loan Servicer Performance Monitoring and Scorecard
- Counterparty Operational Risk Evaluation (CORE) Reviews

**CRT is supported by an advanced risk management framework**
Underwriting Standards

Loan Advisor

Freddie Mac Loan Advisor® is a smart, end-to-end technology solution built to provide greater certainty about the quality of loans and offer insight into loans’ purchase eligibility early in the loan production process. Loan Advisor’s advanced analytics and modeling capabilities automate processes, catch errors and identify opportunities to reduce risk.

Freddie Mac’s goal is to have 100% of loans processed through Loan Product Advisor or Loan Quality Advisor.*

Loan Advisor is set up so the Exclusionary List is only accessible by approved Seller-Servicers.

Loans sold to Freddie Mac must have documented evidence of the mortgagor’s ability to repay and of the value of the property.

Appraisal independence rules insulate the appraiser from influence by other parties involved in processing or originating the loan.

Representations & Warranties require the Seller/Servicer to repurchase the loan if there is a material underwriting defect discovered, subject to certain limits.

*Does not include bulk deals
Underwriting Standards

Loan Product Advisor®

Loan Product Advisor (LPA℠) is the cornerstone of Loan Advisor. LPA takes advantage of proprietary data models and intelligent automation to promote loan compliance with Freddie Mac underwriting standards.

Features innovative tools and offerings leveraging algorithms to enhance the origination process

Home Value Explorer® (HVE)
An automated Freddie Mac tool used to determine values of properties inside and outside of Freddie Mac.

Automated Collateral Evaluation (ACE)
An offering that eliminates the need for a traditional appraisal for properties that have valuations validated by HVE.

Asset and Income Modeler (AIM)
An Automated Underwriting System (AUS) solution used to verify borrower assets and income. AIM is the first and only AUS solution in the industry to also assess self-employed income.

Generates an assessment of a loan’s credit risk and overall quality

✓ Minimum credit score requirements
✓ Maximum debt-to-income ratio limits
✓ Maximum loan-to-value ratio limits
✓ Elimination of risky products (IOs, pay option ARMs, no documentation and balloons)
Quality Control (QC)

Freddie Mac performs QC across all purchased loans, including those that are credit enhanced by any of the CRT programs. Losses are mitigated through a comprehensive QC program across performing and non-performing loans, including third-party QC processes by lenders.

| Performing Loan QC | ▪ Regularly perform QC on a random and targeted basis to test the quality of recently purchased loans, including added focus on key elements of particular interest or concern (e.g., loan attributes or Sellers).  
▪ Freddie Mac benchmarks every loan we purchase against our valuation model and appraisals are assessed within our automated system, Loan Collateral Advisor® for instantaneous feedback to the originator.  
▪ CRT transactions perform a separate Due Diligence review. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Performing Loan QC</td>
<td>▪ Freddie Mac also reviews mortgage loans that default within the first few years after purchase or guarantee.</td>
</tr>
</tbody>
</table>
| Seller In-House QC | ▪ Each loan Seller must have an in-house QC program that has written procedures and operates independently of the sellers’ origination and underwriting functions.  
▪ Freddie Mac reviews, monitors, and provides feedback on sellers’ QC and origination practices, including performing on-site reviews of its largest Sellers. |
## Seller/Servicer Management

Freddie Mac believes that a well-rounded view of servicing performance supports a broad and in-depth analysis of both performing and non-performing loans.

### Account Plans
- Focused on covered National, Regional and Community Servicers, Independent Mortgage Bankers, Specialty Servicers, Master Servicers and Subservicers.
- Sets goals and objectives, establishes agreed-upon action plans and milestones.

### File Reviews, Rewards and Remedies
- Identifies servicing performance gaps and trends, encourages and rewards quality servicing.
- Helps identify and resolve issues and provides consequences for poor data quality and servicing processes.

### Servicer Success Scorecard
- Covers Master, Interim, Sub and Consolidated servicing modes
- Performance evaluation specific to servicer segments (ranked groups), uses synthetics and ranks.
- Provides loan level data and analyses.
- **Freddie Mac Servicer Honors and Rewards Program (SHARP)**SM – enables eligible servicing clients to receive annual rewards based on completion of the Servicer Success Scorecard.

### Counterparty Operational Risk Evaluation (CORE)
- Identifies Single-Family counterparty operational risk issues and monitors remediation.
- Provides assessment of Counterparty's compliance with Guide requirements.
- Conducts on-site due diligence of Servicers’ preparedness for large MSR transfers.
- Works closely with account managers and Single-Family Operations to ensure review scope addresses new/ emerging risks.
Credit Risk Management Framework

2. Loss Mitigation
## Loss Mitigation

<table>
<thead>
<tr>
<th>Payment Relief Options</th>
<th>Loan Modification Options</th>
<th>Liquidation Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forbearance</td>
<td>5. Flex Modification</td>
<td>6. Applicable Credit Events</td>
</tr>
<tr>
<td>2. Reinstatement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Repayment Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Deferred Payment Alternatives</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Forbearance
Provides a temporary reduction or suspension of payments to give borrowers a specified period of time to improve their financial situation. No mod loss impact.

### Reinstatement
The most desirable resolution for a temporary hardship. Reinstatement is the act of restoring a delinquent Mortgage to current status.

### Repayment Plan
Gives the borrower a defined period of time to reinstate the Mortgage following a temporary hardship by paying normal regular payments plus an additional agreed upon amount in repayment of the Delinquency.

### Payment Deferral*
A relief option for borrowers who became delinquent due to a short-term hardship that has since been resolved. Past due payments are deferred (non-interest bearing) and will be due at maturity, payoff date, or upon transfer or sale of the Mortgaged Premises.

#### COVID-19 Payment Deferral*
Leverages a similar concept to the Payment Deferral solution. An eligible borrower will be brought current by deferring delinquent amounts to create a non-interest bearing balance that will become due at the earlier of the Mortgage maturity date, payoff date, or upon transfer or sale of the Mortgaged Premises.

#### Disaster Payment Deferral*
As with the Payment Deferral and the COVID-19 Payment Deferral, under the terms of a Disaster Payment Deferral an eligible Borrower will be brought current by deferring delinquent amounts to create a non-interest bearing balance that will become due at the earlier of the Mortgage maturity date, payoff date or upon transfer or sale of the Mortgaged Premises.

### Flex Modification
An affordable modification that provides significant payment relief to eligible borrowers, leverages requirements of the Freddie Mac Standard and Streamlined Modifications.

### Applicable Credit Events
Credit Events such as short sale, third party sale, deed-in-lieu, REO disposition

*Starting with STACR 2021-HQA3: Cost of Payment Deferral will be included in modification related costs
REO Overview

**Mission:** Effectively manage Freddie Mac’s credit losses in a way that maximizes financial recoveries and supports community stabilization.

**Credit Loss Management**
- Improve Collateral Values
- Manage Expenses
- Maximize Remedies

**Community Stabilization**
- Preserve, Maintain, & Repair
- Price Homes At Fair Market Value
- Nonprofit / Owner-Occupant Priority
Freddie Mac utilizes an asset management firm to perform the core REO disposition activities using the firm’s vendor network.

**REO Core Process**

- **Outsourced With Freddie Mac Oversight**
  - The outsourcer and their vendors are required to use Freddie Mac systems, follow detailed policies & procedures, and utilize proprietary methodologies for valuation, pricing, and repair decisioning.

**REO Support & Financial Functions**

- **Managed By Freddie Mac Staff**
  - Freddie Mac staff perform oversight monitoring, support, and financial functions.

**Freddie Mac: Oversight | Support | Financial Functions**

- Listing Brokers
- P&M Vendors
- General Contractors
- Eviction Attorneys
- Title & Closing Agents

**Asset Management Firm (Outsourced)**
REO Core Competencies

- **Efficient & Controlled Processes**: Mature, efficient, and controlled disposition processes that helped us effectively manage our REO portfolio during the last financial crisis. Processes are continually refined as business and market conditions change.

- **Valuation & Pricing Methodologies**: Extensive disposition data and analytics used to develop pricing models and disposition strategies to maximize collateral recoveries.

- **Risk Management**: Proven financial, liability and reputation risk management practices.

- **“Good Neighbor Policy”**: REO homes are properly maintained and priced to protect communities. Nonprofit/Owner-Occupant exclusive purchase opportunities.

- **Experienced Staff**: Experienced and tenured staff and management team.
## Servicing Disaster Relief Timeline

<table>
<thead>
<tr>
<th>Disaster Solution</th>
<th>General Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaster Payment Deferral</td>
<td><strong>Flex Modification</strong></td>
</tr>
<tr>
<td></td>
<td>Targeting a payment reduction of 20% or greater</td>
</tr>
<tr>
<td></td>
<td>Delinquencies (including advanced escrow) are capitalized</td>
</tr>
<tr>
<td></td>
<td>Term is extended to 480 months</td>
</tr>
<tr>
<td></td>
<td>May provide interest rate relief</td>
</tr>
<tr>
<td></td>
<td>May result in principal forbearance</td>
</tr>
</tbody>
</table>

An eligible Borrower who was current or less than 60 days delinquent at the time of the disaster will be brought current by deferring delinquent amounts to create a non-interest bearing balance that will become due at the earlier of the Mortgage maturity date, payoff date or upon transfer or sale of the Mortgaged Premises.

Only available for borrowers affected by disaster
Freddie Mac Disaster Policy goes into effect when:

A property located in a county, parish or municipality has been declared by the President of the United States to be a Major Disaster Area where federal aid in the form of Individual Assistance is being made available (Eligible Disaster Area*).

Servicers must assist borrowers with Freddie Mac-owned mortgages who work or reside in the designated eligible disaster area*

<table>
<thead>
<tr>
<th><strong>Servicing Guidelines for Disaster Relief</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Freddie Mac Disaster Policy goes into effect when:</strong></td>
</tr>
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</tr>
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<td><strong>Freddie Mac Disaster Policy goes into effect when:</strong></td>
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<tr>
<td>Servicers must assist borrowers with Freddie Mac-owned mortgages who work or reside in the designated eligible disaster area*</td>
</tr>
<tr>
<td><strong>Suspend Payments</strong></td>
</tr>
<tr>
<td><strong>Waive Fees</strong></td>
</tr>
<tr>
<td><strong>Disburse Insurance</strong></td>
</tr>
</tbody>
</table>

*Disaster policy also goes into effect if damaged property is outside of FEMA area but has an insurable loss.
Sustaining Homeownership During COVID-19 Workout Options – What Are They?

Relief Options

**Reinstatement:** An option to catch up on all the missed payments at once in a single lump-sum payment.

**Repayment:** An option to spread out past due amount on the mortgage over a set time frame (e.g., 3, 6, 9 or up to 18 months) and added onto the existing mortgage payments.

**Payment Deferral:** An option to defer up to two monthly delinquent amounts to create a non-interest bearing balance that will become due at the earlier of the mortgage maturity date, payoff date, or upon transfer or sale of the mortgaged premises.

**COVID-19 Payment Deferral** (Effective July 1, 2020): An option to defer up to eighteen monthly delinquent amounts to create a non-interest bearing balance that will become due at the earlier of the mortgage maturity date, payoff date, or upon transfer or sale of the mortgaged premises. The hardship must be related to COVID-19.

Modification Options

**Flex Modification:** An option for borrowers who can no longer afford their pre-forbearance payment. It adds unpaid balances from a forbearance period to an unpaid loan balance. The payment reduction is calculated depending on the LTV.

Visit the COVID-19 Resources web page
Credit Risk Management Framework

3. Freddie Mac Home Possible®
Home Possible® Overview

Home Possible offers flexibility to meet a variety of borrower needs.

**Borrower Profile and Benefits**

- First-time homebuyers, move-up borrowers and retirees.
- Stable monthly payments with fixed-rate mortgages.
- Flexible sources of funds for down payment including gifts, grants, sweat equity or an approved public agency or nonprofit secondary finance program.
- Low 3% down payment option for very low- to low-income borrowers.

**Key Features**

- Purchase and no cash out refinancing.
- 1-Unit: 97% LTV/105% TLTV*/97% HTLTV.
- 2-4 Unit: 95% LTV/105% TLTV*/97% HTLTV.
- Sweat equity allowed for the entire amount of down payment and closing costs.
- Ability to cancel mortgage insurance after reaching 20% equity resulting in reduced monthly mortgage payments.
- Loan Product Advisor or manual underwriting.
- No reserves required for 1-unit properties for manually underwritten mortgages.

*A TLTV ratio up to 105% is permitted when secondary financing is an Affordable Second for Freddie Mac.
## Home Possible® Overview

<table>
<thead>
<tr>
<th>Feature</th>
<th>Home Possible</th>
<th>Standard Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eligible Mortgages</strong></td>
<td>15, 20, and 30-year fixed 5/3 and 5/6-month, 7/6-month, 10/6-month ARM</td>
<td>15, 20, and 30-year fixed 5/1, 5/5, 7/1 and 10/1 CMT- and LIBOR-indexed ARMS</td>
</tr>
<tr>
<td><strong>Maximum LTV</strong></td>
<td>1- Unit: 97% 2-4 Unit: 95%</td>
<td>1- Unit: 95% 2-Unit: 85% 3-4 Unit: 80%</td>
</tr>
<tr>
<td><strong>Maximum TLTV</strong></td>
<td>105% affordable second 97% secondary financing</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Occupancy</strong></td>
<td>1- 4 Unit primary residence</td>
<td>Primary residence, second home, or investment property</td>
</tr>
<tr>
<td><strong>Property Type</strong></td>
<td>1 - 4 Unit: Single-Family, Condos, PUDs, Manufactured Housing (1-unit primary residences only)</td>
<td>1- 4 Unit: Single-Family, Condos, PUDs, Manufactured Housing</td>
</tr>
<tr>
<td><strong>Other Income</strong></td>
<td>Boarder income (1-Unit properties only)</td>
<td>All income considered</td>
</tr>
<tr>
<td><strong>Mortgage Insurance</strong></td>
<td>Lender Paid Single Premium MI and Financed Single Premium MI allowed</td>
<td>Lender Paid or Borrower Paid</td>
</tr>
<tr>
<td><strong>Underwriting Method</strong></td>
<td>Loan Product Advisor® (LPA) or Manual – LPA flags Home Possible eligible loans</td>
<td>LPA or LQA</td>
</tr>
<tr>
<td><strong>No Credit Score Borrowers</strong></td>
<td>Borrowers with no credit score can be evaluated through LPA</td>
<td>At least one borrower on the transaction must have a usable credit score</td>
</tr>
<tr>
<td><strong>Income Limit</strong></td>
<td>Determined by LPA; Non-LPA HP eligibility is determined by the HP Income and Eligibility Tool</td>
<td>No Income Limits</td>
</tr>
<tr>
<td><strong>Geographic Limit</strong></td>
<td>No Geographic Limits</td>
<td>No Geographic Limits</td>
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### Mortgage Insurance Coverage Levels

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<tr>
<th></th>
<th>Home Possible Fixed Rate &gt;20yrs</th>
<th>Non-Home Possible Fixed Rate &gt;20yrs</th>
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<tbody>
<tr>
<td></td>
<td>Standard</td>
<td>Custom*</td>
</tr>
<tr>
<td>&gt;80% &amp; ≤85% LTV</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>&gt;85% &amp; ≤90% LTV</td>
<td>25%</td>
<td>12%</td>
</tr>
<tr>
<td>&gt;90% &amp; ≤95% LTV</td>
<td>25%</td>
<td>16%</td>
</tr>
<tr>
<td>&gt;95% &amp; ≤97% LTV</td>
<td>25%</td>
<td>18%</td>
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*If custom mortgage insurance is chosen, in addition to all other applicable delivery fees, the custom mortgage insurance delivery fee applies, including on Home Possible Mortgages.
U.S. Housing Market Overview
Home Value Trends

Entry-Level Home Prices Skyrocket

Affordability Gap Rapidly Rising
Cumulative Gap Between Entry Level and High End Home Prices – Home Price Index Level

Source: NAR, Census and CoreLogic. Entry level home prices are homes that sell at 75% of the median or below. High end home prices sell at 125% of the median or higher. Last data point December 2022.

Freddie Mac House Price Index - March 2023 (YoY %, SA)

Source: Freddie Mac
Origination Trends

Q1 2023: Home Sales Cooled Due to Rapidly Rising Rates & Deteriorating Affordability

Total Home Sales (Thousands, SAAR)

Home Sales – Region (Thousands, SAAR)

Sources: National Association of Realtors (NAR); U.S. Census Bureau. Total sales includes new and existing SF until 1999, when existing condos and coops are included.

Note: Data as of March 2023.
Resources
Credit Risk Transfer

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Jeff Shue
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In addition, we have additional resources readily available in the CRT Resource Hub.
Freddie Mac has made available the Single-Family Loan-Level Dataset as part of a larger effort to increase transparency; the dataset includes loan-level origination and monthly loan performance data on over 45.5 million loans. 
freddiemac.com/research/datasets/sf_loanlevel_dataset.page

Additionally, Freddie Mac releases a STACR Loan-Level Dataset for all deals on a monthly basis. Access the data files, disclosure file layout, and glossary here: 
crt.freddiemac.com/offerings/stacr.aspx#overview-details

In 2019, Clarity® launched bringing further insight into Freddie Mac’s CRT program. Origination and Performance metrics are available with new enhancements scheduled. 
clarity.freddiemac.com/

Additional information about Freddie Mac’s Single-Family CRT offerings, including: issuance calendars, historical performance presentations, NAIC designations and more can be found at: 
crt.freddiemac.com/
## Market Support Tools

Freddie Mac’s credit risk offerings have deep market support. Analyze and model transactions using these tools:

<table>
<thead>
<tr>
<th>Credit Suisse</th>
<th>Milliman</th>
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<tr>
<td>Locus Tool</td>
<td>M-Pire</td>
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<tr>
<th>J.P. Morgan</th>
<th>RiskSpan</th>
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<tr>
<td>Morgan Markets</td>
<td>Edge</td>
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<tr>
<th>Bloomberg</th>
<th>CoreLogic</th>
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<tr>
<td>Terminal/BTM Model</td>
<td>Property Data Leader</td>
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<th>LSEG</th>
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<tr>
<td>Yield Book</td>
<td>Analytics and Data Management</td>
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</table>
Disaster Relief Servicing Resources

Freddie Mac Disaster Relief Webpage

Managing Hazard Insurance Losses Reference

Guide Chapter 8404

Seller/Servicer Guide
STACR Trust Structure

Freddie Mac STACR Trust

Credit premium and credit protection reimbursement payments

Credit protection payments

Payments of principal and interest on notes

Proceeds of sale of notes

Earnings/liquidation proceeds of eligible investments

Proceeds of sale of notes

Eligible Investments

STACR Transaction

Freddie Mac

Resources
Transition to SOFR-Indexed CRT Issuance

- Reducing LIBOR exposure and LIBOR transition risk for investors has been a high priority for Freddie Mac.
- Freddie Mac has been a market leader in LIBOR transition and successfully issued floating rate notes (FRNs), agency CMOs, Multifamily K-Deal® and a STACR deal that are indexed to SOFR.

Resources

May 2020

Freddie Mac Intentions
• Announced our intention to begin issuing SOFR-indexed CRT deals in Q4 2020.

June 2020

Replacement Feedback
• Closely engaged CRT investors to get feedback on LIBOR replacement index.

Market Readiness
• Conducted a joint GSE market survey to gauge the market readiness for SOFR-indexed CRT.

Index Methodology
• Published SOFR index methodology for new CRT issuance, and affirmed SOFR readiness with key market participants.

Inaugural SOFR CRT
• STACR 2020-DNA5 was Freddie Mac’s inaugural SOFR-indexed CRT transaction.
• Freddie Mac discontinued issuance of LIBOR-indexed CRT deals.

October 2020

SF CRT Legacy Libor Transition in 2023

Q3 2020

Fut u r e

2019

DATA SENSITIVITY CLASSIFICATION LABEL

CRT Handbook, March 2024

Prepared by Freddie Mac © Freddie Mac
Since developing the tender offer program in 2021, Freddie Mac has successfully conducted ten STACR® tender offers, totaling approximately $11 billion original principal amount in repurchased bonds.

STACR® tender offers allow Freddie Mac to reduce the interest expense on STACR® notes that no longer provide economically sensible credit protection to Freddie Mac. After a tender offer, all STACR® notes that are tendered and accepted are retired and cancelled.

STACR® tender offers inject liquidity to the market, especially for less liquid, off-the-run STACR® notes. All STACR® tender offers have provided noteholders with an opportunity to sell eligible STACR® notes at an announced tender price, without any adverse impact on the secondary market. For noteholders who decide not to tender, their notes remain outstanding, and the bond payments and credit enhancement levels are not affected by tender offers.

Through STACR tender offers, Freddie Mac accelerates principal payments to CRT noteholders, allowing them to potentially reinvest in on-the-run CRT new issue notes.
Since 2021, Freddie Mac has exercised its 5-Year ACIS call option to wind down over $1 billion in out-of-the-money coverage and save over $100 million in future premium spend.

Freddie Mac retains sole discretion over whether or not to exercise any call options and the timing thereof, which may be impacted by market conditions.

Freddie Mac may exercise call options on STACR and ACIS deals, as specified in the applicable private placement memorandum and/or offering documents and will determine when to exercise based on business objectives which may consider capital relief, cost, and other factors.
Disclaimers
Freddie Mac obligations
Freddie Mac's securities are obligations of Freddie Mac only. The securities, including any interest or return of discount on the securities, are not guaranteed by and are not debts or obligations of the United States or any federal agency or instrumentality other than Freddie Mac.

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Forward-looking statements
Freddie Mac's presentations may contain forward-looking statements, which may include statements pertaining to the conservatorship, the company's current expectations and objectives for its Single-family Guarantee, Multifamily and Capital Markets segments, its efforts to assist the housing market, liquidity and capital management, economic and market conditions and trends, market share, the effect of legislative and regulatory developments and new accounting guidance, credit quality of loans the company owns or guarantees, the costs and benefits of the company's credit risk transfer transactions, and results of operations and financial condition on a GAAP, Segment Earnings, non-GAAP and fair value basis. Forward-looking statements involve known and unknown risks and uncertainties, some of which are beyond the company's control. Management's expectations for the company's future necessarily involve a number of assumptions, judgments and estimates, and various factors, including changes in market conditions, liquidity, mortgage spreads, credit outlook, actions by the U.S. government (including FHFA, Treasury and Congress), and the impacts of legislation or regulations new or amended accounting guidance, could cause actual results to differ materially from these expectations. These assumptions, judgments, estimates and factors are discussed in the company's Annual Report on Form 10-K for the year ended December 31, 2023, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, which are available on the Investor Relations page of the company's website at www.freddiemac.com/investors and the SEC’s website at www.sec.gov. The company undertakes no obligation to update forward-looking statements it makes to reflect events or circumstances occurring after the date of this presentation.
Disclaimer

Notice to all Investors:
This presentation ("Presentation") is not an offer to sell any Freddie Mac securities. Offers for any given security are made only through applicable private placement memorandums and any related supplements, which incorporate Freddie Mac's Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 14, 2022, and all documents that Freddie Mac files with the SEC pursuant to Section 13(a), 13(c) or 14 of the Exchange Act, excluding any information "furnished" to the SEC on Form 8-K. Content in this Presentation is not reflective of current markets/spreads and is not indicative of any future Freddie Mac offerings. Please use this Presentation for informational purposes only.

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This Presentation MUST NOT BE ACTED ON OR RELIED UPON BY PERSONS WHO ARE NOT (RE)INSURANCE PROFESSIONALS WITH THE REQUISITE LEVEL OF EXPERTISE AND SOPHISTICATION REQUIRED TO UNDERSTAND AND UNDERWRITE MORTGAGE CREDIT INSURANCE RISK. ADDITIONAL DUE DILIGENCE WILL BE REQUIRED ON THE PART OF SUCH PROFESSIONALS IN THEIR INDIVIDUAL ASSESSMENTS OF, AND THE DEGREE TO WHICH THEIR RESPECTIVE (RE)INSURANCE COMPANIES MAY COVER, ANY RISK SUMMARIZED IN THIS PRESENTATION.

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THIS PRESENTATION IS NOT A PROSPECTUS FOR THE PURPOSES OF THE EU PROSPECTUS REGULATION (AS DEFINED BELOW). THE NOTES ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY EEA RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA (THE "EEA"). FOR THESE PURPOSES, AN "EEA RETAIL INVESTOR" MEANS A PERSON WHO IS ONE (OR MORE) OF THE FOLLOWING:

(I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "MIFID II"); OR

(II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97, WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR

(III) NOT A QUALIFIED INVESTOR AS DEFINED IN ARTICLE 2 OF REGULATION (EU) 2017/1129 (AS AMENDED, THE "EU PROSPECTUS REGULATION").

CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA CONSUMES, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA. CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA. CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA.

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ANY DISTRIBUTOR SUBJECT TO MIFID II THAT IS OFFERING, SELLING OR RECOMMENDING THE NOTES IS RESPONSIBLE FOR UNDERSTAKING ITS OWN TARGET MARKET ASSESSMENT IN RESPECT OF THE NOTES AND DETERMINING ITS OWN DISTRIBUTION CHANNELS FOR THE PURPOSES OF THE MIFID II PRODUCT GOVERNANCE.

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DATA SENSITIVITY CLASSIFICATION LABEL

CRT Handbook, March 2024
FINANCIAL PROMOTION REGIME AND PROMOTION OF COLLECTIVE INVESTMENT SCHEMES REGIME

THE TRUST MAY CONSTITUTE A "COLLECTIVE INVESTMENT SCHEME" AS DEFINED BY SECTION 235 OF THE FSMA THAT IS NOT A "RECOGNIZED COLLECTIVE INVESTMENT SCHEME" FOR THE PURPOSES OF THE FSMA AND THAT HAS NOT BEEN AUTHORIZED, REGULATED OR OTHERWISE RECOGNIZED OR APPROVED. AS AN UNREGULATED SCHEME, THE NOTES CANNOT BE MARKETED IN THE UNITED KINGDOM TO THE GENERAL PUBLIC, EXCEPT IN ACCORDANCE WITH THE FSMA.

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Notice to Canadian Investors:

The Notes may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Notice to Spanish Investors:

No action has been or will be taken by Freddie Mac that would permit a public offering of the Notes in Spain non-exempted from the prospectus requirement. Neither the Notes nor the offering have been or will be registered or approved by the Spanish Securities Market Commission (Comisión Nacional del Mercado de Valores) ("CNMV") and, therefore, no prospectus has been or will be registered or approved by the CNMV for the purposes of this offering.
Notice to Japanese Investors:

The Notes have not been and will not be registered under FIEA and, accordingly, each Initial Purchaser undertakes that it will not offer or sell any Notes directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan or to others for re-offering or resale, directly or indirectly, in Japan or to any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with the FIEA and other relevant laws and regulations of Japan. As used in this paragraph, "resident of Japan" means any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Korean Investors:

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The Notes may not be offered or sold directly or indirectly within the PRC. The offering material or information contained herein relating to the Notes, which has not been and will not be submitted to or approved/verified by or registered with any relevant governmental authorities in the PRC (including but not limited to the China Securities Regulatory Commission (“CSRC”)), may not be supplied to the public in the PRC or used in connection with any offer for the subscription or sale of the Notes in the PRC. The offering material or information contained herein relating to the Notes does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC.

The Notes may only be invested by PRC investors that are authorized to engage in the purchase of notes of the type being offered or sold, including but not limited to those that are authorized to engage in the purchase and sale of foreign exchange for themselves and on behalf of their customers and/or the purchase and sale of government bonds or financial bonds and/or the purchase and sale of debt securities denominated in foreign currency other than stocks. PRC investors are responsible for informing themselves about and observing all legal and regulatory restrictions, obtaining all relevant approvals/licenses, verification and/or registrations themselves from relevant governmental authorities (including but not limited to the People’s Bank of China, CSRC, the State Administration of Foreign Exchange, the China Banking and Insurance Regulatory Commission and other relevant regulatory bodies), and complying with all relevant PRC regulations, including, but not limited to, all relevant foreign exchange regulations and/or foreign investment regulations.

Notice to Singaporean Investors:

SECTION 309B(1)(C) NOTIFICATION UNDER THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE: THE NOTES ARE CAPITAL MARKETS PRODUCTS OTHER THAN PRESCRIBED CAPITAL MARKETS PRODUCTS (AS DEFINED IN THE SECURITIES AND FUTURES (CAPITAL MARKETS PRODUCTS) REGULATIONS 2018 OF SINGAPORE) AND SPECIFIED INVESTMENT PRODUCTS (AS DEFINED IN MAS NOTICE SFA 04-N12: NOTICE ON THE SALE OF INVESTMENT PRODUCTS AND MAS NOTICE FAA-N16: NOTICE ON RECOMMENDATIONS ON INVESTMENT PRODUCTS). This Presentation has not been, and will not be, registered as a prospectus with the Monetary Authority of Singapore, and the Notes will be offered pursuant to exemptions under the Securities and Futures Act (Chapter 289 of Singapore) (the "SFA"). Accordingly, this Presentation or any document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes may not be circulated or distributed, nor may the Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any persons in Singapore other than (i) to an institutional investor (as defined in Section 4A of the SFA) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1)(A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018 of Singapore or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Notice to Taiwanese Investors:

The Notes have not been and will not be registered with the Financial Supervisory Commission of Taiwan, the Republic of China pursuant to relevant securities laws and regulations and may not be offered or sold in Taiwan, the Republic of China through a public offering or in circumstance which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan, the Republic of China that requires a registration or approval of the Financial Supervisory Commission of Taiwan, the Republic of China. No person or entity in Taiwan, the Republic of China has been authorized to offer or sell the Notes in Taiwan, the Republic of China.

A prospective investor in securities of Freddie Mac must conduct its own independent review and due diligence to make its own assessment of the merits and risks of making an investment in, perform its own legal, accounting and tax analysis and conclude that the investment in the securities of Freddie Mac (i) is fully consistent with the investor’s financial requirements and financial condition, investment objectives and risk tolerance; (ii) complies and is fully consistent with all investment policies, guidelines and restrictions applicable to the investor; and (iii) is a fit, proper and suitable investment for the investor.