LIBOR Transition Playbook

Multifamily ARMs (Fannie Mae), Floating-Rate Loans (Freddie Mac), and Securities and Multifamily Credit Risk Transfer

June 2023
**Summary of Changes**

The table below details the list of changes to this section since the April 2023 version of the LIBOR Transition Playbook was published on the Fannie Mae and Freddie Mac websites.

<table>
<thead>
<tr>
<th>Section</th>
<th>Summary of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Multifamily ARMs, Floating-Rate Loans, and Securities</td>
<td>▪ Updated loan and bond interest accrual timeline illustrations in Section 3.3</td>
</tr>
</tbody>
</table>
Legal information and disclaimer

Information in the London Interbank Offered Rate ("LIBOR") Transition Playbook is preliminary and subject to revision and updates from time to time. This document is an indicative summary of our preliminary analysis regarding the potential upcoming LIBOR transition. This document and the analysis may be amended, superseded or replaced by subsequent summaries or actions. The analyses, preliminary views and opinions expressed herein are based on certain assumptions that also are subject to change. Readers should rely on the information contained in the loan documentation, securities offering documents, operative documents, etc. in order to evaluate the rights and obligations for each such loan or security. As a reminder, Fannie Mae and Freddie Mac (the “GSEs”) are in separate conservatorships and their conservator (“FHFA”) has the authority to direct either or both GSEs to take whatever actions it deems appropriate in respect of any LIBOR transition and product or contract.

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Please be aware that the federal Adjustable Interest Rate (LIBOR) Act (the “LIBOR Act”) became law on March 15, 2022. As required by the Act, the Board of Governors of the Federal Reserve System ("Board") published regulations identifying Board-selected benchmark replacement rates based on the Secured Overnight Financing Rate (“SOFR”) on December 16, 2022. The regulations published by the Board have a significant impact on steps that the GSEs will take in connection with the transition from LIBOR-indexed products to SOFR-indexed products.

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3. Multifamily ARMs (Fannie Mae), Floating-Rate Loans (Freddie Mac), and Securities

3.1 Introduction

On December 22, 2022, the GSEs announced their selection of 30-day compounded Average SOFR (“30-day Average SOFR”) plus a fixed tenor spread adjustment as the benchmark replacement for their LIBOR-indexed MF ARMs, Floating-Rate Loans and securities following the cessation of LIBOR. This decision aligns with the Board-selected benchmark replacements for cash transactions that are FHFA-regulated-entity contracts and is applicable to MF ARMs/Floating-Rate Loans and MBS/PCs/K-Deals for which the GSEs are responsible for selecting the benchmark replacement. The following section will help you understand:

- Key milestone dates for transitioning LIBOR-indexed MF ARMs, Floating-Rate Loans, and securities
- Guidance on when LIBOR-indexed MF ARMs and Floating-Rate Loans will convert to SOFR-indexed MF ARMs and Floating-Rate Loans
- Guidance on benchmark replacements and associated spread adjustments
- High-level considerations for transitioning legacy LIBOR-indexed ARMs and Floating-Rate Loans
- Guidance on servicing legacy LIBOR-indexed MF ARMs and Floating-Rate Loans
- Guidance on legacy securities

More information on the legacy transition can be found on Fannie Mae’s LIBOR Transition website and Freddie Mac’s Reference Rates Transition website.

3.2 Transition milestones

The GSEs defined key dates related to the transition of legacy LIBOR-indexed MF ARMs, Floating-Rate Loans and securities. Milestones will continue to be updated as necessary. Figure 3-1 identifies these key transition milestones. Unlike Single-Family, Multifamily cessation does not include a 12-month transitional period.

Figure 3-1: Multifamily LIBOR transition milestone
3.3 Replacement rate determination and spread methodology

❖ Benchmark replacement determination

The LIBOR Act required the Board to publish regulations identifying a Board-selected benchmark replacement based on SOFR. On December 16, 2022, the Board published its final rulemaking confirming the LIBOR benchmark replacements. MF ARMs/Floating-Rate Loans and MBS/PCs/K-Deals will fall back to 30-day Average SOFR with a fixed tenor spread adjustment as defined in the LIBOR Act.

❖ SOFR replacement index and spread adjustment methodology

Under the LIBOR Act, a pre-determined fixed tenor spread adjustment will be added to NY Fed-published 30-day Average SOFR following the cessation of LIBOR to determine replacement rates. The following fixed tenor spread adjustments were affirmed by the Board’s final rulemaking and will not change:

- 1-month LIBOR replacement – 0.11448%
- 3-month spread adjustment – 0.26161%
- 6-month LIBOR replacement – 0.42826%
- 12-month LIBOR replacement – 0.71513%

These tenor spread adjustments align with the ISDA fallback spread adjustments that were set on March 5, 2021.

Figure 3-2 depicts the LIBOR benchmark replacements and spread adjustment methodology for MF ARMs/Floating-Rate Loans and MBS/PCs/K-Deals.

**Figure 3-2: Benchmark replacement guidance for MF LIBOR ARMs/Floating-Rate Loans and MBS/PCs/K-Deals**

<table>
<thead>
<tr>
<th>Board Final Rule Category</th>
<th>Current LIBOR Index</th>
<th>Spread-adjusted SOFR Replacement Index</th>
<th>All-In Replacement Rate Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHFA-Regulated-Entity Contract</td>
<td>1M LIBOR</td>
<td>30-Day Average SOFR + 1-Month Spread Adjustment</td>
<td>30-Day Average SOFR + 0.11448 (percent)</td>
</tr>
<tr>
<td></td>
<td>6M LIBOR</td>
<td>30-Day Average SOFR + 6-Month Spread Adjustment</td>
<td>30-Day Average SOFR + 0.42826 (percent)</td>
</tr>
<tr>
<td></td>
<td>1Y LIBOR</td>
<td>30-Day Average SOFR + 12-Month Spread Adjustment</td>
<td>30-Day Average SOFR + 0.71513 (percent)</td>
</tr>
</tbody>
</table>
It should be noted that 30-day Average SOFR will be the only SOFR average used as part of the GSE contract replacements for the 1-, 3-, 6- and 12-month tenors of LIBOR. The GSEs will not use the 90- and 180-day averages published by the NY Fed for these purposes.

It should also be noted that the fixed tenor spread adjustment applied to 30-day Average SOFR will match the tenor of the original LIBOR index. There will not be additional adjustment factors accounting for changes in tenor between the original LIBOR rate and the replacement index. For example, when a security originally indexed to 6-month LIBOR transitions to SOFR, it will convert from 6-month LIBOR to 30-day Average SOFR plus the fixed tenor spread adjustment for 6-month LIBOR (0.42826%), with no further adjustments incorporated. Similarly, a security originally indexed to 12-month LIBOR will transition to 30-day Average SOFR plus the fixed tenor spread adjustment for 12-month LIBOR (0.71513%).

For updates on regulatory and industry efforts to advance the legacy transition, refer to the Board’s final rulemaking and ARRC’s website.

**SOFR Interest Rate Calculations and Timelines**

As mentioned above, the SOFR-based rate replacing LIBOR on legacy Multifamily LIBOR-based loans and securities consists of 30-day Average SOFR plus the applicable fixed tenor spread adjustment. The LIBOR replacement rates for loans and securities can be calculated by pulling the 30-Day Average SOFR rate as of the loan or security’s Determination Date from the NY Fed’s website and adding the applicable fixed tenor spread adjustment. The 30-Day Average SOFR rate that appears as of 3:00 p.m. ET should be used for calculations. Please refer to the loan documents for the applicable loan for the margin and any instructions regarding rounding.

The SOFR Determination Date for Multifamily loans and securities is determined by the applicable reset date and lookback period. Refer to your loan or securities documents for more information. The conventions are generally unchanged from the current LIBOR and SOFR interest accrual practices, as shown in the illustrations below.

*Figure 3-3: Fannie Mae SARM post-LIBOR Transition loan and bond interest accrual timeline*

*Figure 3-4: Fannie Mae ARM 7-6™ post-LIBOR Transition loan and bond interest accrual timeline*
3.4 Servicing legacy LIBOR-indexed MF ARMs and Floating-Rate Loans

MF ARMs and Floating-Rate Loans indexed to LIBOR will transition to the benchmark replacement, requiring borrower communications and updated payment calculations.

Non-standard notes

If servicers identify any additional LIBOR ARM or LIBOR Floating-Rate Loan non-standard notes in their respective GSE servicing books, they are expected to contact the applicable GSE as soon as possible to discern if any specific accommodations are necessary. Servicers have been encouraged to initially focus their reviews on older vintages of loans, loans originated by Sellers no longer in business, and any loans originated under policies and procedures that are known to not require use of Fannie
Mae/Freddie Mac uniform instruments. Identified non-standard loans may require a change to mortgage margin or designation to a specific benchmark replacement once LIBOR is no longer in effect.

❖ **SOFR ARM index source**

Figure 3-7 shows the changes in the description of MF ARM indices for Fannie Mae servicing and Figure 3.8 shows the changes in the description for Freddie Mac Floating-Rate Loan indices.

**Figure 3-7: Updated index descriptions for active Fannie Mae MF ARM indices**

<table>
<thead>
<tr>
<th>Pre-cessation index descriptions</th>
<th>Post-cessation index descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 MONTH BRITISH BANKERS LIBOR - DAILY</td>
<td>30-Day Average SOFR + 1-Month Spread Adjustment</td>
</tr>
<tr>
<td>6 MONTH WALL STREET JOURNAL LIBOR RATE</td>
<td>30-Day Average SOFR + 6-Month Spread Adjustment</td>
</tr>
<tr>
<td>6 MONTH WALL STREET JOURNAL LIBOR</td>
<td>30-Day Average SOFR + 6-Month Spread Adjustment</td>
</tr>
<tr>
<td>6 MONTH BRITISH BANKERS LIBOR – DAILY</td>
<td>30-Day Average SOFR + 6-Month Spread Adjustment</td>
</tr>
</tbody>
</table>

**Figure 3-8: Updated index descriptions for active Freddie Mac MF Floating-Rate Loan indices**

<table>
<thead>
<tr>
<th>Pre-cessation index descriptions</th>
<th>Post-cessation index descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercontinental Exchange (ICE) Rate for the 1 Month London Interbank Offered Rate for US Dollars</td>
<td>30-Day Average SOFR + 1-Month Spread Adjustment</td>
</tr>
<tr>
<td>Intercontinental Exchange (ICE) Rate for the 6 Month London Interbank Offered Rate for US Dollars</td>
<td>30-Day Average SOFR + 6-Month Spread Adjustment</td>
</tr>
<tr>
<td>12 Month LIBOR as published by the Wall Street Journal</td>
<td>30-Day Average SOFR + 12-Month Spread Adjustment</td>
</tr>
</tbody>
</table>

❖ **Actions to consider**

Servicers will need to incorporate the benchmark replacements into calculations and reconciliations for borrower payments. The calculations will need to be updated on an individual loan basis based on the terms of the ARM which include:

- Payment adjustment frequency
- Rate adjustment frequency
- Loan payment lookback period
- Loan rate lookback period
- Initial/next payment reset date
- Initial/next interest rate reset date

**Figure 3-9: Actions to consider when servicing MF ARMs and Floating-Rate Loans**
<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Actions to consider</th>
</tr>
</thead>
</table>
| Borrower communications         | ▪ Provide timely notice of the change in the index to borrowers consistent with loan documents, applicable law and regulations, including those governing payment change notices  
▪ Retain a copy of the notice in the servicing file                                                                                                    |
| Legal documentation             | ▪ Provide a copy of the note to the appropriate GSE if there are any variations to the ARM/Floating-Rate Loan note’s replacement language that was used just prior to recent revisions and request instructions on how to proceed |
| Use of a new index in rate and payment calculations | ▪ Update and test systems, reporting and other processes or activities related to interest rate adjustment calculations to incorporate the replacement index’s product parameters  
▪ Adjust interest accrual calculations for changes in the underlying index                                                                                      |
| Transfer of servicing           | ▪ Ensure that servicing transferees have the capability to service loans indexed to the benchmark replacement                                                                                                           |
| Interest rate calculation and rounding | ▪ The interest rate calculation method set forth in the related Multifamily Note must be followed. In most cases, the Multifamily Notes provide that the variable interest rate calculated for each interest period is equal to the Index Rate for such interest period plus the Margin. The Index Rate for a legacy LIBOR loan is equal to the sum of the applicable LIBOR replacement index (the 30-day Average SOFR rate) plus the applicable spread adjustment. Any rounding convention to be applied should be determined pursuant to the terms of the Multifamily Note or otherwise be consistent with Freddie Mac servicing practices. |

❖ Existing third-party caps

Consult your interest rate cap agreements for specific language on the transition to a new index (e.g., SOFR). Fannie Mae and Freddie Mac expect that each interest rate cap provider will select a benchmark replacement. The borrower’s obligation to purchase replacement interest rate caps as required by the loan documents for existing LIBOR-indexed ARMs and Floating-Rate Loans is unaffected.

For updates on industry efforts to advance the legacy transition, refer to the [ARRC website](#). Additional details will be released as the timeline is finalized.

### 3.5 Administering Legacy LIBOR-indexed MBS/PCs/K-Deals

The LIBOR transition impacts MBS/PCs/K-Deals consisting of pools of LIBOR-indexed ARMs and LIBOR-indexed Floating-Rate Loans. Unless terminated at or prior to the time of the LIBOR transition, those outstanding MBS/PCs/K-Deals will also transition to 30-day Average SOFR with a fixed tenor spread adjustment as defined in the LIBOR Act.
It is important to note that the applicable LIBOR index is all that is changing. Upon LIBOR cessation, the applicable LIBOR index will transition to the applicable spread-adjusted 30-day Average SOFR replacement index. Securities mechanics will not change from those currently in practice on outstanding Multifamily LIBOR-based securities, and bond payments will continue to be made on the 25th day of the month or the succeeding business day.

Please also note that Fannie Mae and Freddie Mac Multifamily will refrain from taking any steps that would result in the conversion of any existing SOFR-indexed ARMs and securities from 30-Day Average SOFR to Term SOFR based on any provision that calls for such conversion when operationally, administratively, and technically feasible.

❖ **Determining Person**

The fallback language in all legacy Freddie Mac and Fannie Mae LIBOR-based securities documents identifies a Determining Person who is responsible for deciding what the replacement index will be. The Determining Person may be Fannie Mae or Freddie Mac (or Freddie Mac’s trustee or certificate administrator with Freddie Mac’s consent). In all cases where Fannie Mae or Freddie Mac is the Determining Person or Freddie Mac has consent rights, LIBOR will transition to the applicable spread-adjusted 30-day Average SOFR. In all cases where the Trustee/Certificate Administrator is the Determining Person, we expect the applicable Trustee/Certificate Administrator to select the applicable spread-adjusted 30-day Average SOFR index as the replacement index consistent with the Board’s final rulemaking.

❖ **Actions to consider**

Investors and vendors will need to maintain awareness of index and calculation changes. MF MBS subtypes and index codes will not change, however, index descriptions associated with subtypes and index codes will be updated in Fannie Mae and Freddie Mac applications and disclosure reporting.

**Figure 3-10: Actions to consider when administering MF MBS/PCs**

<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Actions to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor awareness</td>
<td>▪ Maintain awareness of the updates to impacted pools</td>
</tr>
<tr>
<td>Use of a new index in rate and payment calculations</td>
<td>▪ Update and test systems, reporting and other processes or activities related to interest rate adjustment calculations to incorporate the benchmark replacements’ product parameters</td>
</tr>
</tbody>
</table>

❖ **Additional Considerations for Freddie Mac MBS/PCs/K-Deals**

The following dates are the critical transition dates for Freddie Mac MBS/PCs/K-Deals*:

- **June 30**: The last day LIBOR will be published and the final index Determination Date where LIBOR will be used for legacy LIBOR loans and securities
- **July 31**: First index Determination Date where SOFR will be used for legacy LIBOR loans and securities
- **September 1**: First loan payment date with interest accrual indexed to SOFR
• **September 25**: First securities Distribution Date with interest accrual indexed to SOFR

*These dates are specific to the substantial majority of legacy LIBOR-indexed K, Q, SB, and ML securities; Multi PCs®; and the loans collateralizing them.

Freddie Mac Multifamily securities will all transition to a spread-adjusted 30-Day Average SOFR rate. For additional nuances to consider, please refer to [section 12.7 of the appendix](#).
6. Appendix: Introduction to SOFR based new products

6.1 Introduction

To assist stakeholders in preparing for the transition from LIBOR to alternative reference rates (“ARRs”), information and guidance related to the issuance of new contracts have been consolidated into the following appendix sections. The following sections are targeted at readers who need information about the following products:

- Single-Family (“SF”) Adjustable-rate Mortgages (“ARMs”) and securities, i.e., Mortgage-backed Securities (“MBS”) and Participation Certificates (“PCs”)
- SF Credit Risk Transfer (“CRT”) transactions
- Collateralized Mortgage Obligations (“CMOs”)
- Fannie Mae Multifamily (“MF”) ARMs and MBS
- Freddie Mac MF Floating-Rate Loans and securities
- MF CRT transactions

The following sections describe key transition milestones and recommended actions for stakeholders to consider as they manage the upcoming transition from LIBOR. The following sections serve as a tool to help plan and adapt business policies, procedures, and processes to support products linked to ARRs and prepare for discontinuing the use of LIBOR as an index.

Under the guidance of FHFA, the GSEs have been working together on several aspects of the LIBOR transition. Where appropriate, the GSEs have aligned policies and milestones. However, each GSE’s timelines and product details may differ. Readers should take note of these differences, which are further explained in each chapter of this document.

For more details and FAQs on each GSE’s transition, refer to LIBOR transition webpages for Fannie Mae and Freddie Mac, respectively.

Please direct any additional questions to your Fannie Mae or Freddie Mac account management teams.

6.2 SOFR-indexed key milestones

The GSEs have established milestones leading to the transition from LIBOR, including timelines for beginning acquisition and issuance of SOFR-indexed products and ceasing acquisition and issuance of LIBOR-indexed products.

Transition timelines are defined for major products offered by the GSEs based on timing for finalizing transition strategies and external market dependencies. Milestones will continue to be updated as necessary. For more detailed timelines, refer to the individual chapters for each product.
### Figure 6-1: Key transition milestones

<table>
<thead>
<tr>
<th>Product</th>
<th>Fannie Mae</th>
<th>Freddie Mac</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Offer SOFR</td>
<td>Cease LIBOR</td>
</tr>
<tr>
<td></td>
<td>products</td>
<td>offering</td>
</tr>
<tr>
<td>SF ARMs and MBS/PCs¹</td>
<td>Aug. 2020</td>
<td>Dec. 2020²</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fannie Mae MF ARMs and MBS¹</td>
<td>Sep. 2020</td>
<td>Dec. 2020</td>
</tr>
<tr>
<td>Freddie Mac MF Floating-Rate Loans and securities</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ The underlying mortgages needed to have an application date no later than September 30, 2020. Effective June 30, 2022, the GSEs will no longer resecuritize LIBOR-indexed MBS/PCs and Megas/Giants into new issuance LIBOR-indexed bonds.

² The GSEs stopped accepting LIBOR-indexed pool deliveries after this date.

³ The GSEs will no longer issue resecuritizations of previously issued LIBOR-indexed certificates (whether CMO or ARM certificates) into new LIBOR-indexed bonds that settle after June 30, 2022.
10. Appendix: Multifamily ARMs (Fannie Mae)

10.1 Introduction

The Multifamily borrower community relies on a wide range of variable rate financing options from Fannie Mae. To ensure stability across all product lines, Fannie Mae has developed SOFR-indexed offerings for the Structured ARM (“SARM”), 7/6 ARM and Hybrid ARM products. In addition, Fannie Mae has developed a second capped SOFR-indexed ARM structure to ensure a broad range of financing solutions.

More product information can be found on Fannie Mae’s Multifamily website.

❖ Transition preparation

To prepare for the transition from LIBOR for MF ARMs, Fannie Mae has:

- Stopped accepting MBS deliveries (the last eligible MBS pool issue date for LIBOR-indexed ARM pools was December 1, 2020)
- Stopped cash/whole loan purchase of LIBOR-indexed ARMs after December 31, 2020
- Stopped accepting LIBOR loans with commitment dates after September 30, 2020
- Developed SOFR-indexed offerings using existing product structures (i.e., SARM, ARM 7/6 and Hybrid ARM products)
- Designed a MF capped ARM product that uses 30-day Average SOFR as the underlying index
- Started developing a comprehensive plan for the transition of existing LIBOR-indexed ARMs on Fannie Mae’s book once LIBOR is no longer available
- Continued providing information and training to ensure a smooth transition

10.2 Transition Milestones

Fannie Mae began purchasing SOFR-indexed ARMs on September 1, 2020 and stopped purchasing and securitizing LIBOR-indexed ARMs at the end of 2020. By doing this, Fannie Mae has met demand for variable rate loans without disruption.

Fannie Mae has developed a coordinated strategy, in advance of LIBOR cessation, with the ARRC, FHFA and industry stakeholders to transition legacy LIBOR-indexed instruments.

**Figure 10-1: Multifamily LIBOR transition milestones**

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1, 2020</td>
<td>▪ MF released a new SOFR-indexed capped ARM product and began offering SOFR-indexed SARMs, 7/6 ARMs and Hybrid ARMs&lt;br&gt;▪ System capabilities are in place for lenders to deliver SOFR-indexed ARMs with an embedded cap and SOFR-indexed uncapped ARMs (see below for notes on the external cap market)&lt;br&gt;▪ Investors can invest in Fannie Mae-issued MBS based on a capped SOFR-indexed ARM</td>
</tr>
<tr>
<td>October 1, 2020</td>
<td>▪ Commitments for LIBOR-indexed ARMs are no longer accepted (i.e., must have been designated as “Committed” in DUS Gateway® on or before September 30, 2020)</td>
</tr>
</tbody>
</table>
### Timeline

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1, 2021</td>
<td>▪ Multifamily no longer purchases LIBOR-indexed ARMs (i.e., had to be purchased on or before December 31, 2020 as a Cash Mortgage Loan or MBS Mortgage Loan with an Issue Date on or before December 1, 2020)</td>
</tr>
<tr>
<td>June 30, 2023</td>
<td>▪ Legacy LIBOR-indexed ARM products will be converted to a SOFR index at MF’s discretion upon LIBOR no longer being representative or available</td>
</tr>
</tbody>
</table>

### 10.3 SOFR-indexed characteristics

#### Product conventions

In accordance with the transition timeline, specific product features were made available on Fannie Mae’s Multifamily website, as well as during external training sessions that took place through September 2020 and will be made available on an ongoing basis as needed. Product conventions are described at a high level in Figure 10-2.

**Figure 10-2: Product conventions**

<table>
<thead>
<tr>
<th>Convention</th>
<th>LIBOR ARMs</th>
<th>SOFR ARMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate determination</td>
<td>Survey of interbank lending</td>
<td>Treasury collateralized repo market</td>
</tr>
<tr>
<td>Floating-rate index</td>
<td>1-, 3- or 6-month LIBOR</td>
<td>30-Day Average SOFR</td>
</tr>
<tr>
<td>Cap requirement</td>
<td>Embedded or third-party caps available</td>
<td>Embedded or third-party caps available</td>
</tr>
</tbody>
</table>

The underlying index for MF SOFR-indexed ARMs, 30-day Average SOFR, is published by the [NY Fed](https://www.newyorkfed.org). The 30-Day Average SOFR rate that is available as of 3:00 p.m. ET should be used for calculations. ET. The new index is also available from third-party vendors (e.g., Bloomberg and Refinitiv).

#### Interest rate calculation

Fannie Mae’s MF SOFR-indexed products accrue interest based on the same calendar-month accrual periods that exist for LIBOR-indexed ARMs.

On each interest rate change date, the interest rate is adjusted to equal the sum of the mortgage margin plus the latest index value available as of the date that precedes the interest rate change date by the number of days set forth in the mortgage note (one business day for all MF SOFR-indexed ARM loans). Figure 10-3 exhibits how the interest rate is determined for a January accrual month.

**Figure 10-3: Example interest rate timeline**

1. **Last Day of December**
   - 30-Day Average SOFR Rate published at 2:30 pm EST
2. **First Day of January**
   - Interest rates adjust based on prior day’s published 30-Day Average SOFR Rate
3. **First Day of February**
   - Borrower payment, including interest accrued in January is due
❖ **External cap market**

The availability of third-party SOFR interest rate caps is necessary for offering and acquiring uncapped MF SOFR-indexed ARMs. At this time, several cap providers are prepared to issue SOFR-indexed interest rate caps. Multifamily is actively engaging with third-party interest rate cap providers to prepare for and understand developments in the market for third-party interest rate caps.

For more information on the transition of existing LIBOR-indexed caps, refer to section 5.5, “Transitioning existing MF LIBOR-indexed ARMs.”

❖ **MBS features**

Fannie Mae has created new ARM plans and subtypes to support SOFR-indexed ARM MBS. These new ARM features have been updated on Fannie Mae’s website. Fannie Mae has also created new pool prefixes, which have been added to the Pool Prefix glossary and are described in Figure 10-4.

**Figure 10-4: Additional MBS pool prefixes**

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF</td>
<td>Conventional Adjustable-Rate Mortgages, Secured Overnight Financing Rate, Actual/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>MF</td>
<td>Conventional Adjustable-Rate Mortgages, Secured Overnight Financing Rate, 30/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>HW</td>
<td>Conventional Adjustable-Rate Supplemental Lien Mortgages, Secured Overnight Financing Rate, Actual/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>XF</td>
<td>Adjustable-Rate Mega backed by Conventional Adjustable-Rate Mortgages indexed to the Secured Overnight Financing Rate; Actual/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>YF</td>
<td>Adjustable-Rate Mega backed by Conventional Adjustable-Rate Mortgages indexed to the Secured Overnight Financing Rate; 30/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>XW</td>
<td>Adjustable-Rate Mega backed by Conventional Adjustable-Rate Supplemental Lien Mortgages indexed to the Secured Overnight Financing Rate; Actual/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>HC</td>
<td>Conventional Hybrid Adjustable-Rate Mortgages; initial Fixed-Rate period followed by an Adjustable-Rate period for the remaining term; Secured Overnight Financing Rate, Actual/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>MC</td>
<td>Conventional Hybrid Adjustable-Rate Mortgages; initial Fixed-Rate period followed by an Adjustable-Rate period for the remaining term; Secured Overnight Financing Rate, 30/360 interest day basis calculation; Multifamily</td>
</tr>
<tr>
<td>HU</td>
<td>Conventional Hybrid Adjustable-Rate Supplemental Lien Mortgages; initial Fixed-Rate period followed by an Adjustable-Rate period for the remaining term; Secured Overnight Financing Rate, Actual/360 interest day basis calculation; Multifamily</td>
</tr>
</tbody>
</table>
10.4 Preparation for MF SOFR-indexed ARMs

❖ **Originating and underwriting MF SOFR-indexed ARMs**

Originators and underwriters are impacted by the change in index as well as new terms that arise from SOFR-indexed ARM loan products. Originators also play a central role in educating Multifamily borrowers on Fannie Mae ARM products and impacts resulting from the transition from LIBOR. Specific product terms have been publicly announced and are available on Fannie Mae’s website.

❖ **Key updates**

- Index publication source
- Floating-rate adjustment period
- Cap structure
- Product terms of SOFR-indexed ARMs

*Figure 10-5: Necessary actions for origination and underwriting MF SOFR-indexed ARMs*

<table>
<thead>
<tr>
<th>Focus area</th>
<th>Necessary actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrower communications</td>
<td>Work with Fannie Mae to develop communication plans to explain changes resulting from the LIBOR transition and availability of SOFR-indexed ARMs to Multifamily borrowers</td>
</tr>
</tbody>
</table>
| System identification and update | Conduct an inventory of impacted processes and systems  
|                           | Update origination processes and underwriting systems to accommodate MF SOFR-indexed ARMs |
| Information              | Follow industry developments and announcements and determine impacts to origination and underwriting that may arise  
|                           | Read Multifamily communications and attend product trainings related to MF SOFR-indexed ARMs |

❖ **Helpful links**

The Multifamily Guide has been updated to reflect MF SOFR-indexed ARMs. For more information on LIBOR transition impacts to origination and underwriting, refer to the following resources:

- [ARRC website](#)
- [Multifamily Guide](#)

❖ **Selling and delivering MF SOFR-indexed ARMs**

The process for selling and delivering SOFR-indexed ARMs does not vary substantially from the previous process for LIBOR-indexed ARMs. Updates to Fannie Mae systems have been made to align with the availability of SOFR-indexed ARMs.

Lenders should reach out to Fannie Mae to address any issues that may arise from selling and delivering a SOFR-indexed ARM.
Key updates

- LIBOR-indexed ARMs can no longer be purchased at Fannie Mae
- Fannie Mae systems reflect options and dropdowns for SOFR-indexed ARMs
- Options and dropdowns for LIBOR-indexed loan products are no longer available in the systems

Figure 10-6: Necessary actions for selling and delivering MF SOFR-indexed ARMs

<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Necessary actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>System identification and update</td>
<td>▪ Conduct an inventory of impacted processes and systems</td>
</tr>
<tr>
<td></td>
<td>▪ Update selling and delivery systems and processes to accommodate SOFR-indexed ARMs</td>
</tr>
<tr>
<td></td>
<td>▪ LIBOR-indexed ARM fields and forms should be removed from selling and delivery systems</td>
</tr>
<tr>
<td>Information</td>
<td>▪ Attend trainings and read FAQs and job aids released by Fannie Mae providing details related to selling and delivering SOFR-indexed ARMs</td>
</tr>
</tbody>
</table>

Helpful links

For more information on selling and delivering, refer to the following resource:

- Multifamily Learning Center

Securitization of MF SOFR-indexed ARMs

SOFR-indexed MBS issued by Fannie Mae include new attributes to facilitate securitization and accurate disclosure in the capital markets. The process mirrors the issuance of LIBOR-indexed securities. Investors should understand the differences between LIBOR- and SOFR-indexed ARMs that underpin the MBS they invest in.

Key updates

- As detailed in previous sections, new MF ARM plans have been created and added to Multifamily systems to represent SOFR-indexed ARMs
- Pool prefixes have been created to detail security characteristics
- Legal documentation has been updated to note the inclusion of SOFR as a valid underlying index

Figure 10-7: Necessary actions for securitizing MF SOFR-indexed ARMs

<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Necessary actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor awareness</td>
<td>▪ Investors should maintain awareness of market developments and impacts that a new underlying index may have when investing in SOFR-indexed MBS</td>
</tr>
<tr>
<td>Legal documentation</td>
<td>▪ Review updates to base prospectus documents</td>
</tr>
<tr>
<td>Security characteristics</td>
<td>▪ Note the inclusion of pool prefixes and subtypes to represent new SOFR-indexed ARM characteristics</td>
</tr>
</tbody>
</table>
Helpful links
For more information on LIBOR transition impacts to securitization of MF SOFR-indexed ARMs, refer to the following resource:

- DUS Disclose

Servicing MF SOFR-indexed ARMs
Servicers are required to manage ARM payments throughout the life of newly originated SOFR-indexed loans. Servicing systems require updates to manage calculations and reconciliations for borrower payments using the new index rate. If a servicing transfer is necessary, the existing servicer must also be aware of the ability for new servicers to conduct activities using a new index.

Key updates
- Interest payments calculated based on SOFR
- New index location
- Relevant systems and processes require updates to reflect the new index and adjustment period

Figure 10-8: Necessary actions for servicing MF SOFR-indexed ARMs

<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Necessary actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest payment calculations</td>
<td>- Update and test systems, reporting and other processes or activities so that they may:</td>
</tr>
<tr>
<td></td>
<td>o Process/incorporate the SOFR index</td>
</tr>
<tr>
<td></td>
<td>o Adjust interest accrual calculations for changes in the underlying index, reset periods and subsequent caps</td>
</tr>
<tr>
<td>Transfer of servicing</td>
<td>- Ensure that potential servicing transferees have the capability to service SOFR-indexed ARMs</td>
</tr>
<tr>
<td>System updates</td>
<td>- Catalogue impacted systems and execute system updates for the delivery of SOFR-indexed ARMs</td>
</tr>
</tbody>
</table>

Helpful links
For more information on LIBOR transition impacts to servicing SOFR-indexed ARMs, refer to the following resources:

- Practical Implementation Checklist for SOFR Adoption
- CRE Finance Council LIBOR Transition Updates
- Multifamily Learning Center
- DUS Guide
11. Appendix: Multifamily CRTs

11.1 Introduction

The purpose of this chapter is to provide market participants guidance on new SOFR-indexed MF CRT issuances, which are known as Multifamily Structured Credit Risk Notes (“Multifamily SCR Notes” or “MSCR Notes”) for Freddie Mac and Multifamily Connecticut Avenue Securities (MCAS) for Fannie Mae.

11.2 SOFR-indexed CRT new issuance

❖ Objectives

Fannie Mae achieved operational readiness to issue MF SOFR-indexed CRT deals in 2021. Freddie Mac completed its first SOFR-indexed MF CRT issuance, MSCR 2021-MN1, in January 2021. Prior to its first SOFR issuance, Freddie Mac issued three Multifamily SCR Notes, all of which were fixed-rate notes, between 2016 and 2017, so there are no Legacy MF CRT LIBOR securities to transition to a benchmark replacement. Fannie Mae has not yet issued its first SOFR-indexed MF CRT issuance but is operationally ready to do so. Please refer to Section 4.4 Legacy LIBOR-indexed CRTs for more information on Fannie Mae Legacy MF CRT issuances.

❖ SOFR indices

Fannie Mae plans to structure SOFR-indexed MF CRT transactions utilizing the same SOFR based terms and parameters defined in SF’s executed CRT transactions and will remain in line with SF CRT ongoing. Please refer to Appendix 8.2 SOFR-indexed SF CRT new issuance and market developments for more information on SOFR-indexed CRTs.

11.3 Alignment with SF CRT

The GSEs, with the support of FHFA, intend to align to the SF CRT offering and minimize potential disruptions to the CRT market. In addition, Freddie Mac’s STACR program and MSCR programs and Fannie Mae’s MCAS program will be aligned to the following:

- Selection of the index as the replacement of LIBOR for new issuance CRT deals
- Benchmark replacement and methodology
- Fallback triggers and waterfall

Freddie Mac’s Multifamily SCR Notes program is looking to attract large investors from STACR. Thus, alignment with SF CRT is essential to ensure broad market acceptance.
12. Appendix: Multifamily Floating-Rate Loans and Securities (Freddie Mac)

12.1 Introduction

Floating-rate and Hybrid loans are a key component of all Multifamily lines of business: Conventional, Seniors Housing, Targeted Affordable Housing (“TAH”) and Small Balance Loans (“SBL”). Freddie Mac recognizes the importance of offering financing solutions with diverse loan structures and intends to preserve all existing floating-rate products throughout the transition to SOFR.

Product information is available on Freddie Mac’s website.

12.2 Product modifications

Transitioning to SOFR is a complex undertaking, so our objective is to mitigate the complexity by avoiding non-essential product modifications. The summary below includes critical product modifications that support our shared mission to adopt SOFR.

❖ Conventional, Seniors Housing, and TAH

For our Conventional, Seniors Housing, and TAH business lines, SOFR-indexed loans are indexed to a compound average of SOFR. The compound average rate is 30-day Average SOFR (published by the NY Fed), which will then be applied to the upcoming interest accrual period (“SOFR Index”).

Certain SOFR-indexed loans and related securities may include contractual language indicating a benchmark replacement of Term SOFR. Please note that Freddie Mac will refrain from taking any steps that would result in the conversion of any existing SOFR-indexed Floating-Rate Loans and related securities from 30-Day Average SOFR to Term SOFR based on any provision that calls for such conversion when operationally, administratively, and technically feasible.

The NY Fed publishes 30-, 90- and 180-day SOFR averages on their website, along with index values for use in calculating the SOFR average of alternative day counts.

Freddie Mac will use the NY Fed’s published rates on its website for index determination.

Similar to its LIBOR-indexed loan products, Freddie Mac’s SOFR-indexed loans continue to feature calendar-month interest accrual periods. LIBOR is determined on the business day preceding the beginning of the interest accrual period and 30-day Average SOFR is determined after 3:00 p.m. ET on the business day preceding the beginning of the interest accrual period.

Note that even though the SOFR index is determined based on a 30-day “lookback,” the rate is applied “in advance” of the applicable interest accrual period. For example, for a January accrual period, the SOFR index will be determined based on the daily SOFR rates from the 30 days preceding the last business day of December.

That index will be applied to calculate interest throughout January, which will then be payable on February 1.

Freddie Mac generally requires all floating-rate loan borrowers to obtain third-party interest rate caps. For existing and new SOFR-indexed, Floating-Rate Loans, these caps will be indexed to SOFR. For existing LIBOR-indexed Floating-Rate Loans, these caps will be indexed to LIBOR and will transition to a SOFR index only in accordance with their governing documents and the loan documents. To address
the possibility that LIBOR-indexed caps will not be available at any point after December 31, 2021, we asked primary servicers in mid-2021 to encourage borrowers to replace existing LIBOR-indexed caps before that date with LIBOR-indexed caps that expire on or after LIBOR cessation in June 2023. Doing so would ensure that the affected loans and caps are indexed to the same rate prior to LIBOR cessation. If LIBOR-indexed caps are not available for borrowers with maturing LIBOR-indexed caps, those borrowers may purchase SOFR-indexed replacement caps.

As of January 15, 2021, SOFR-indexed, floating-rate loan borrowers were no longer permitted to purchase initial LIBOR-indexed cap agreements. Instead, only SOFR-indexed cap agreements are permitted.

❖ **SBL Hybrid Floating-Rate Loans**

Unlike other Multifamily lines of business, Small Balance Loans offer delegated quoting. SOFR-related modifications to the SBL Hybrid loans origination are minor, however, any changes deemed necessary have been tailored to the delegated quote process. Details on the SOFR-indexed SBL Hybrid loan structure have been included below:

SOFR-indexed SBL Hybrids will be indexed to 30-day Average SOFR during the floating-rate period. Freddie Mac will use the NY Fed’s published rates on its website for index determination.

It is important to note that the rate reset frequency will remain unchanged and will continue to reset every six months during the floating-rate period. Similarly, interest rate protection will remain unchanged and will continue to have an embedded structure.

If any aspect of the SOFR-indexed SBL Hybrid loan structure is not mentioned in this playbook, no change is currently planned relative to the existing loan structure for SBL Hybrids with a floating-rate period indexed to LIBOR.

**12.3 Selling and delivering MF SOFR Floating-Rate Loans**

❖ **What’s changing?**

Loan Documents have been revised to reflect the SOFR index.

❖ **What’s not changing?**

The Delivery process will remain unchanged. SOFR will impact the index language in the legal documents and the Purchase team will review to ensure the appropriate index is referenced as agreed to in the Commitment.

**12.4 MF floating-rate securities indexed to SOFR**

As part of Freddie Mac’s broader LIBOR transition efforts, floating-rate K-Deals now include at least one bond class with a coupon indexed to SOFR. The SOFR-indexed bonds are collateralized by loans indexed to either LIBOR or SOFR.

❖ **KF SOFR bonds with LIBOR-indexed collateral (“LIBOR-SOFR Bonds”)**

Freddie Mac Multifamily priced its first floating-rate K-Deal (KF73) with bonds indexed to SOFR and collateralized by LIBOR-indexed loans in December 2019. The intent was to provide support to the SOFR bond market ahead of a SOFR loan offering, create liquidity, and provide proof of concept, thus easing the ultimate transition to SOFR. KF73 provided such proof of concept.
The classes of securities issued are similar to prior LIBOR floating-rate K-Deals with a couple of changes. First, Class A certificates are split into two pro-rata classes of securities:

- LIBOR-indexed Class AL
- SOFR-indexed Class AS

Second, Class X Interest calculation has also been updated. Class X (formerly split into Class XI and Class XP) certificate holders receive interest-only payments indexed to LIBOR. Solely for the purpose of determining the interest amount payable to the Class X certificate holders, Class AS is calculated as a LIBOR-indexed bond (not a SOFR-indexed bond).

The Class X Certificates:
1.) Receive interest-only payments indexed to LIBOR and notional to Classes AL, AS, B, and C
2.) are entitled to Static Prepayment Premiums

Class AL is paid pro rata with Class AS. The Class AL and AS Principal Balances are sized based on investor demand.

*Figure 12-1: LIBOR-SOFR bond structure*<sup>5</sup>

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<sup>5</sup> For illustrative purposes only. Class sizes do not reflect actual bond offering.
❖ **Basis risk guarantee**

Should SOFR exceed LIBOR, an additional Freddie Mac guarantee covers any basis mismatch between the SOFR-indexed bonds and the LIBOR-indexed loans:

- Freddie Mac is providing a Basis Risk Guarantee that is in addition to the standard K- Deal Credit Guarantee
- The Credit Guarantee continues to cover credit losses while the Basis Risk Guarantee covers any cash flow shortfalls to the LIBOR-SOFR bonds due to the mismatch between amounts collected on the LIBOR-indexed loans and amounts due on the SOFR-indexed bonds
- Figure 12-2 illustrates what happens in the event SOFR is greater than LIBOR. LIBOR is assumed to be 2.00%, and SOFR is assumed to be 2.05%. In this example, there is not enough interest on the LIBOR loans to pay the SOFR bond coupon creating an interest shortfall. The 2.00% LIBOR loan interest is passed through to certificate holders, and Freddie Mac provides a Basis Risk Guarantee Cap Payment to cover the shortfall of 0.05%

*Figure 12-2: Payment Example 1: SOFR is greater than LIBOR*

- Interest income received by the Trust from the underlying LIBOR-indexed loans (assumed to be 2.00% for illustrative purposes)
- Interest due to Class AS certificate holders calculated using monthly SOFR (assumed to be 2.05% for illustrative purposes)
- Freddie Mac provides a Guarantee Cap Payment to the Trust to cover the interest shortfall caused by the mismatch between LIBOR loan inflows and SOFR bond outflows due to Class AS certificate holders (0.05%)

Figure 12-3 illustrates the case where LIBOR is greater than SOFR creating an interest excess. LIBOR is assumed to be 2.05%, and SOFR is assumed to be 2.00%. 2.00% of the 2.05% LIBOR loan interest is passed through to certificate holders, and Freddie Mac receives the 0.05% interest excess in the form of a Basis Risk Guarantee Fee.
Interest income received by the Trust from the underlying LIBOR-indexed loans (assumed to be 2.05% for illustrative purposes)

Interest due to Class AS certificate holders calculated using monthly SOFR (assumed to be 2.00% for illustrative purposes)

Freddie Mac receives a Basis Risk Guarantee Fee equal to the interest surplus caused by the mismatch between LIBOR loan inflows and SOFR bond outflows due to Class AS certificate holders (0.05%) . See Section 12.7 for details on how the LIBOR indexed loans and bonds will convert at LIBOR cessation.

**LIBOR-SOFR bond index**

The NY Fed publishes 30-, 90- and 180-day SOFR averages on their website along with index values for use in calculating the SOFR average of alternative day counts. Interest due to LIBOR-SOFR Bond classes will be calculated “in advance” of interest being due.

**K-F73 through K-F76**

Freddie Mac calculates the SOFR rate based on a calendar month compound average using the NY Fed’s published index. Said differently, Freddie Mac built a SOFR calculator based on the [calculation methodology](#) published by the NY Fed/ARRC on November 4, 2019. Freddie Mac discloses the calculated rates on its website (See “Vendor Readiness” section below for instructions).

**K-F77 through K-F94**

The applicable SOFR rate is 30-day Average SOFR, which is published by the [NY Fed](#). The 30-Day Average SOFR rate that is available as of 3:00 p.m. ET should be used for calculations.
LIBOR-SOFR bond index determination

K-F73 through K-F76

The LIBOR-SOFR bond has a SOFR Determination Date on the first business day of the Loan Interest Accrual Period. LIBOR-indexed bonds and LIBOR-indexed loans have a LIBOR Determination Date on the last business day of the month prior to the Loan Interest Accrual Period.

As always, bond payments are made on the 25th day of the calendar month (or the succeeding business day) in which the Loan Payment Date occurs. Figure 12-4 illustrates the loan interest accrual and the bond interest accrual timelines.

*Figure 12-4: LIBOR-SOFR loan and bond interest accrual timelines (K-F73 through K-F76)*

Example Bond Timeline: October Payment

The current LIBOR-indexed bonds have a LIBOR Determination Date the business day prior to the Loan Interest Accrual Period. Since SOFR is published one business day after its effective date, SOFR-indexed bonds have a SOFR Determination Date on the first business day of the Loan Interest Accrual Period.

As with LIBOR-indexed bonds, the SOFR index applicable to the LIBOR-SOFR bonds in K-F73 through K-F94 cannot be less than zero.

K-F77 through K-F94

Similar to LIBOR, the SOFR Determination Date is the business day prior to the Loan Interest Accrual Period.

As always, bond payments are made on the 25th day of the calendar month (or the succeeding business day) in which the Loan Payment Date occurs. Figure 12-5 illustrates the loan interest accrual and the bond interest accrual timelines.
The current LIBOR-indexed bonds have a LIBOR Determination Date the business day prior to the Loan Interest Accrual Period. The SOFR-indexed bonds have a SOFR Determination Date that is also the business day prior to the Loan Interest Accrual Period.

In Figure 12-6, the following assumptions are made for illustrative purposes:

- 30-Day Average SOFR is -1.00%, -0.75% and -0.50%, respectively
- Class AS Margin is 0.25%, 0.50% and 0.75%, respectively

Since the LIBOR-SOFR Bond in K-F77 through K-F94 cannot have a pass-through rate less than zero, the Class AS Pass-Through Rates in Scenarios 1 and 2 are floored at 0.00%. LIBOR-SOFR bonds in K-F77 through K-F94 will in no event have a pass-through rate less than zero.

**Figure 12-6: Class AS LIBOR pass-through rate floor (K-F77 through K-F94)**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>30-Day Avg. SOFR Rate</th>
<th>Class AS Margin</th>
<th>Class AS Pass-Through Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>-1.00%</td>
<td>0.25%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>-0.75%</td>
<td>0.50%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Scenario 3</td>
<td>-0.50%</td>
<td>0.75%</td>
<td>&gt; 0.00%</td>
</tr>
</tbody>
</table>

KF SOFR bonds with SOFR-indexed collateral (“SOFR-SOFR Bonds”)

Freddie Mac Multifamily began offering SOFR-indexed loans on September 1, 2020 and stopped purchasing LIBOR-indexed loans after December 31, 2020. K-F95 was the first floating-rate K-Deal with bonds indexed to SOFR and collateralized by SOFR-indexed loans.

The current bond structure of the securities issued is similar to existing LIBOR floating-rate K-Deals with the principal variance being that the SOFR-SOFR Bonds (Classes AS, BS, CS, and XS) and their SOFR loan collateral is indexed to the 30-day Average SOFR rate.

Freddie Mac Multifamily may or may not offer LIBOR bonds (Classes AL, BL, CL, and XL) collateralized by LIBOR-indexed loans in the same KF transaction in which SOFR-SOFR bonds are offered. If LIBOR bonds are offered, underlying mortgage loans are group directed such that:

- LIBOR bonds are collateralized exclusively by LIBOR-indexed loans
• SOFR-SOFR bonds are collateralized exclusively by SOFR-indexed loans

Figure 12-7 demonstrates the following characteristics of SOFR-SOFR bond classes:

• The Class XL Certificates 1) receive interest-only payments indexed to LIBOR and notional to Classes AL, BL, and CL, and 2) are entitled to Static Prepayment Premiums
• The Class XS Certificates 1) receive interest-only payments indexed to SOFR and notional to Classes AS, BS, and CS, and 2) are entitled to Static Prepayment Premiums
• MF may not offer Class BL or BS Classes. If Class BL and BS are not offered, Classes AL and AS may extend to the 7.5% credit enhancement level

Figure 12-7: SOFR-SOFR bond structure

❖ SOFR-SOFR bond index

Interest due to SOFR-SOFR bond classes will be calculated “in advance” of interest being due. The applicable SOFR rate is 30-day Average SOFR, which is published by the NY Fed. The 30-Day Average SOFR rate that is available as of 3:00 p.m. ET should be used for calculations.

❖ SOFR-SOFR bond index determination

Similar to LIBOR bonds, the SOFR Determination Date is the business day prior to the loan interest accrual period.

As always, bond payments are made on the 25th day of the calendar month (or the succeeding business day) in which the Loan Payment Date occurs. Figure 12-8 illustrates the loan interest accrual and the bond interest accrual timelines.

6 For illustrative purposes only. Class sizes to not reflect actual bond offerings.
Figure 12-8: SOFR-SOFR loan and bond interest accrual timeline

Current LIBOR-indexed bonds have a LIBOR Determination Date the business day prior to the Loan Interest Accrual Period. SOFR-SOFR bonds have a SOFR Determination Date that is also the business day prior to the Loan Interest Accrual Period.

Similar to LIBOR bonds, the SOFR index applicable to SOFR-SOFR bonds cannot be less than zero. The following assumptions are made in Figure 12-9 for illustrative purposes:

- Interest income received by the Trust from underlying SOFR based loans is 2.00%
- Interest due to SOFR-SOFR (class AS, BS, CS, or XS) bondholders calculated is 2.00%

Figure 12-9: SOFR pass-through rate floor (K-F95+)

Vendor readiness

The NY Fed publishes 30-day Average SOFR on its website on or about 2:30 p.m. ET. The 30-Day Average SOFR rate that is available as of 3:00 p.m. ET should be used for calculations. Freddie Mac discloses the calculated rate on its website via the monthly SOFR rate disclosure. The instructions to retrieve the calculated rate from Freddie Mac’s website are below.

1. Access Freddie Mac’s datafiles via its website
2. In the top right corner, click “Login” to get started. An account must be created prior to accessing the calculated rate
3. After logging in, click the blue dot in the top right corner. From the drop-down menu, select "Data Files and Reports"
4. Using the menu on the left side of the page, select “Reset” from the options below "Multi-Class"
5. Select “Report” at the top of the page (in blue) and then select ”Off-Platform Deal Indices”
6. Click "Year" and select "2023"
7. Click “Month” and select the appropriate month
8. Select the desired file name and save it as a text file
9. For example, for January 2020 the title of the data can be found on the far right of the file
10. Copy all of the text in the string. Paste the test string into an Excel as "Text." This will allow the contents to be sorted into appropriate columns, which will make the file functional

❖ PC securities

On account of its pass-through nature, SOFR-indexed Multi PCs will only be issued if the underlying loan for a PC is SOFR-indexed. Freddie Mac cannot issue a SOFR-indexed Multi PC with an underlying loan indexed to LIBOR. Since a Multi PC is a pass-through, the SOFR index on a PC will be the same as the SOFR index on the underlying loan; index determination will be in sync with the index determination on the underlying loan. SOFR-indexed Multi PCs will have the same accrual period and method as the underlying SOFR-indexed loan with a 55-day delay convention.

Freddie Mac has only issued floating-rate Multi PCs indexed to LIBOR in the past. The transition of such LIBOR-indexed Multi PCs will be addressed to be consistent with other legacy MF LIBOR loan and bond approaches.

12.5 Servicing MF SOFR Floating-Rate Loans

This section focuses on Floating-Rate Loans that have been tied to a SOFR index since origination and will not require conversion upon LIBOR cessation.

❖ Reporting and remitting

Generally, servicing of a SOFR-indexed floating-rate loan is not expected to be materially different from the servicing of a LIBOR-indexed loan. In particular, Freddie Mac does not anticipate there will be any impact to the following:

- Floating-rate calculation
- Servicer reporting and remittance deadlines
- Systems and processes used to report to Freddie Mac
- Data reported to Freddie Mac
- Interest day basis and accrual periods
- Custodial accounts tied to underlying loans

A SOFR-indexed loan does present some fundamental differences compared to a LIBOR-indexed loan, including in the following areas:

- Published source of the index value
- Index value availability timing
- Index determination methodology

❖ Master servicing

The servicing impact for SOFR loans is becoming operationally prepared to calculate a SOFR-based interest rate. This occurs at the primary servicing level. Master servicers will need to become familiar with SOFR index calculation protocols and ensure that their primary servicers are equally capable of processing rate changes under the new SOFR index environment.
❖ **Transfer of servicing**

Similar to any servicing transfer, it is the responsibility of the transferor to ensure the transferee, as the receiving servicer, is aware and able to support SOFR loans without interruption. Particular attention should be taken to confirm transferees know the published source of indices, timing of availability, and calculations.

❖ **What actions may servicers take to be ready?**

Readiness for SOFR requires an assessment of internal processes and systems prior to implementation. There are a number of industry resources that provide guidance on actions and best practices for the implementation of SOFR, including the following:

- CRE Finance Council (“CREFC”) produces [updates and guidance](#) associated with SOFR
- The ARRC published “Practical Implementation Checklist for SOFR Adoption” in September 2019

Additionally, the following considerations apply to servicers:

- Servicers should anticipate that more than one SOFR index may be offered (e.g., 30-day, 90-day, calendar month, etc.)
- Servicers should understand how the applicable index is determined and calculated and know the officially published sources for the index
- Servicers will need to determine if their systems are operationally able to process the monthly recalculation of the SOFR index
- Servicers will need to determine if this recalculation can be done automatically or manually to correctly have the entire accrual period calculated using the new floating-rate

### 12.6 Discontinuation of originating and selling MF LIBOR Floating-Rate Loans

❖ **Timeline leading up to the cessation of purchasing LIBOR Floating-Rate Loans**

Below are the milestones that have passed relating to our transition of our new products from LIBOR to SOFR.

- **September 1, 2020**: Freddie Mac ceased issuing quotes for LIBOR-indexed loans; all new floating-rate quotes are for SOFR-indexed loans. For SBL, Optigo® lenders can no longer issue applications for SBL hybrid loans with a floating-rate period indexed to LIBOR; all new hybrid loan applications issued are SOFR-indexed
- **November 9, 2020**: The last day for submission of underwriting package for LIBOR-indexed floating-rate and hybrid loans to Freddie Mac
- **December 11, 2020**: Last day for submission of final delivery package for LIBOR-indexed floating-rate and hybrid loans to Freddie Mac
- **December 31, 2020**: Last day for Freddie Mac to purchase LIBOR-indexed floating-rate and hybrid loans, regardless of the loan application or the date of the note

❖ **What’s not changing?**

The Delivery process will remain unchanged. The Purchase team will review to ensure the appropriate
index is referenced as agreed to in the Commitment. As loans are designated for securitization, the Loan Sales team will package the applicable mortgage and servicing files and forward them to the Trustees and Master Servicers.

12.7 Multifamily Legacy LIBOR Transition

Fred Mac Multifamily securities will all transition to a spread-adjusted 30-Day Average SOFR rate with some nuances to consider:

1. **Legacy Floating-Rate K-Deals through KF72, Floating-Rate Multi PCs® and Q008** – These deals only include certificates and underlying loans indexed to 1MO LIBOR. All certificates and bonds will convert to the 30-day Average SOFR plus the 1MO Adjustment Factor upon LIBOR cessation. Please note that the loans collateralizing Q008 are Hybrid ARMs that have all converted to floating-rate and are currently indexed to 1MO LIBOR.

2. **KSKY and Floating-Rate KL, KJ, KS (excluding KS09 and KS19) and SASB K-Deals** – These esoteric deals may contain both fixed and floating-rate certificates. The floating-rate certificates and their underlying loan collateral are indexed to 1MO LIBOR and will convert to 30-day Average SOFR plus the 1MO Adjustment Factor upon LIBOR cessation. Please note that KSKY is collateralized by taxable and tax-exempt municipal housing bonds issued by the New York State Housing Finance Agency (“NYSFHA”). Pursuant to the underlying municipal housing bond documents, Bank of New York Mellon, in its role as Bond Trustee, selects the fallback rate upon LIBOR cessation with the consent of Freddie Mac. No basis mismatch is expected to exist between the underlying municipal housing bonds and the KSKY certificates.

3. **KF73-KF76** – The Class AS certificates are indexed to the calendar month compounded average of published SOFR rates calculated and published by Freddie Mac and will continue to be for the life of each deal. The Class AL and subordinate certificates and all of the underlying loans are indexed to 1MO LIBOR and will convert to 30-Day Average SOFR plus the 1MO Adjustment Factor similar to the legacy LIBOR deals discussed above. The Basis Risk Guarantee for these Class AS certificates will apply for the life of each deal. Any excess interest will flow to the Basis Risk Guarantee Fee paid to Freddie Mac.

4. **KF77-KF94 and KS14** - The Class AS certificates are indexed to 30-day Average SOFR. The Class AL and subordinate certificates and all of the underlying loans are indexed to 1MO LIBOR and will convert to the 30-day Average SOFR plus the 1MO Adjustment Factor similar to the legacy LIBOR deals discussed above. The Basis Risk Guarantee for the Class AS certificates will apply for the life of each deal. Any excess interest resulting from the Adjustment Factor that will be added to the fallback index on the loans will flow to the Basis Risk Guarantee Fee paid to Freddie Mac.

5. **KF95-KF98 and KF100** - The Class AS certificates and their underlying loans are indexed to 30-day Average SOFR. The Class AL certificates and their underlying loans are indexed to 1MO LIBOR and will convert to 30-day Average SOFR plus the 1MO Adjustment Factor similar to the legacy LIBOR deals discussed above. The subordinate certificates are WAC capped meaning they interest paid to investors will not exceed the weighted-average coupon (“WAC”) of the underlying loans.

6. **Legacy Small Balance FRESB Deals through SB82 (excluding SB3)** – These transactions contain Hybrid certificates at different tenors (5-, 7-, and 10-yr) that pay a fixed-rate until the last underlying Hybrid ARM loan in each related Hybrid ARM loan group converts to a floating-rate
indexed to 6MO LIBOR, at which point, the related, guaranteed Hybrid bonds will convert to 1MO LIBOR. All guaranteed Hybrid bonds and Hybrid ARM loans that have converted to either 1MO or 6MO LIBOR will transition to 30-day Average SOFR plus either the 1MO or 6MO Adjustment Factor as applicable upon LIBOR cessation. Otherwise, the guaranteed Hybrid bonds and Hybrid ARM loans still paying a fixed-rate as of the LIBOR Cessation Date will convert to 30-day Average SOFR plus either the 1MO or 6MO Adjustment Factor as applicable on their respective conversion dates. The Hybrid bonds will continue to be WAC capped. Please note that the FRESB subordinate Class B certificates will receive a fixed-rate from each loan group until the related Hybrid certificates convert to floating-rate indexed to 1MO LIBOR, at which point the rate contributed to the Class B certificates from the related Hybrid ARM loan groups will convert to a floating-rate indexed to 6MO LIBOR. Upon LIBOR cessation, the rate contributed to the Class B certificates from the related Hybrid ARM loan groups will be indexed to 30-day Average SOFR plus the 6MO Adjustment Factor. Any excess interest will flow to the IO bonds.

7. **SB83-SB92** – These transactions **do not include floating-rate certificates indexed to LIBOR.** That said, they do contain Hybrid certificates at different tenors (5-, 7-, and 10-yr) that pay a fixed-rate until the last underlying Hybrid ARM loan in each related Hybrid ARM loan group converts to a floating-rate, which may be indexed to either 6MO LIBOR or 30-day Average SOFR. All Hybrid ARM loans indexed to 6MO LIBOR will convert to 30-day Average SOFR plus the 6MO Adjustment Factor on their respective conversion dates, all of which occur after the LIBOR Cessation Date. All Hybrid ARM loans indexed to 30-day Average SOFR will transition to 30-day Average SOFR on their respective conversion dates. The related guaranteed Hybrid Certificates will convert to a floating-rate indexed to 30-day Average SOFR once the last underlying Hybrid ARM loan in each related Hybrid ARM loan group converts to its respective floating rate and will be WAC capped. Please note that the subordinate Class B certificates will receive a fixed-rate from each loan group until the related Hybrid certificates convert to floating-rate, at which point, the rate contributed to the Class B certificates from the related Hybrid ARM loan groups will convert to a floating-rate indexed to 30-day Average SOFR. Any excess interest will flow to the IO bonds.

8. **SB3** - This 3rd-party transaction contains Hybrid certificates at different tenors (3-, 5-, 7-, and 10-yr) that pay a fixed-rate until the last underlying Hybrid ARM loan in each related Hybrid ARM loan group converts to a floating-rate indexed to 12MO LIBOR, at which point the related Hybrid certificates will convert to a floating-rate indexed to 1MO LIBOR and are WAC capped. All existing Hybrid certificates and Hybrid ARM loans that have converted to LIBOR will transition to 30-day Average SOFR plus the applicable 1MO or 12MO Adjustment Factor upon LIBOR cessation. Otherwise, the existing Hybrid certificates and Hybrid ARM loans still paying a fixed-rate as of the LIBOR Cessation Date will convert to 30-day Average SOFR plus the applicable 1MO or 12MO Adjustment Factor on their respective conversion dates. The Hybrid bonds will continue to be WAC capped. Please note that the FRESB subordinate Class B certificates will receive a fixed-rate from each loan group until the related Hybrid certificates convert to floating-rate, at which point, the rate contributed to the Class B certificates from the related Hybrid ARM loan groups will convert to a floating-rate indexed to 6MO LIBOR. Upon LIBOR cessation, the rate contributed to the Class B certificates from the related Hybrid ARM loan groups will be indexed to 30-day Average SOFR plus the 6MO Adjustment Factor.
9. **ML01-ML04, KS09 and KW04** – These deals include floating-rate Class A certificates indexed to 1MO LIBOR. The underlying loans are fixed-rate. The certificates will transition to 30-day Average SOFR plus the 1MO Adjustment Factor upon LIBOR cessation. The Basis Risk Guarantee for the floating-rate Class A certificates will apply for the life of each deal.

10. **Q003, Q007, Q010, Q011, Q013** – Each class of certificates pays a floating-rate based on the WAC of the related loan group collateralizing each class of certificates. The underlying 3rd-party Hybrid ARM loan collateral in each related loan group converts to a floating-rate indexed to either 12MO LIBOR or 6MO LIBOR. All existing Hybrid ARM loans that have converted to either 12MO LIBOR or 6MO LIBOR will transition to 30-day Average SOFR plus the applicable 12MO Adjustment Factor or 6MO Adjustment Factor upon LIBOR cessation. Otherwise, the existing Hybrid ARM loans still paying a fixed-rate as of the LIBOR Cessation Date will convert to 30-day Average SOFR plus the applicable 12MO Adjustment Factor or 6MO Adjustment Factor on their respective conversion dates. The Hybrid bonds will continue to be based on the WAC of the related loan group.

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### Figure 12-10: Summary of Freddie Mac Multifamily Securities replacement indices

<table>
<thead>
<tr>
<th>Deal Name</th>
<th>LIBOR Bond Applicable LIBOR Rate</th>
<th>Replacement Index</th>
<th>SOFR Bond Applicable SOFR Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legacy PPM Deals through KF72</strong></td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>NA</td>
</tr>
<tr>
<td>S698, KS99, KI, KL, and KS (excluding KS93 and KS94)</td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>NA</td>
</tr>
<tr>
<td>KF73-KF76</td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>Average of published SOFR rates</td>
</tr>
<tr>
<td>KF77-KF80, KS83</td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>Published 30-day SOFR average</td>
</tr>
<tr>
<td><strong>Legacy Small Balance PPM Deals through S692 (excluding S693)</strong></td>
<td>The guaranteed bond classes are indexed to 1 month LIBOR. Class B bonds are indexed to 6 month LIBOR. All new WAC capped. <strong>Note:</strong> The S696, S699, S692, and S556 certificates are composed of multiple components.</td>
<td>The guaranteed bonds will transition to Published 30-day SOFR average + 1 month Adjustment Factor and remain WAC capped. Class B Bonds will transition to Published 30-day SOFR average + 6 month Adjustment Factor. <strong>Note:</strong> The underlying loans will convert to Published 30-day SOFR average + 6 month Adjustment Factor.</td>
<td>NA</td>
</tr>
<tr>
<td>S693</td>
<td>The guaranteed bond classes are indexed to 1 month LIBOR. Class B bonds are indexed to 6 month LIBOR. All new WAC capped. <strong>Note:</strong> The underlying loans will convert to Published 30-day SOFR average + 6 month Adjustment Factor.</td>
<td>The guaranteed bonds will transition to Published 30-day SOFR average + 12 month Adjustment Factor and remain WAC capped. Class B Bonds will transition to Published 30-day SOFR average + 12 month Adjustment Factor. <strong>Note:</strong> The underlying loans will convert to Published 30-day SOFR average + 12 month Adjustment Factor.</td>
<td>NA</td>
</tr>
<tr>
<td><strong>ML0H-ML04, KS09 and KW04</strong></td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Q003, Q007, Q010, Q011, Q013</strong></td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Q003, Q007, Q010, Q011, Q013</strong></td>
<td>The Hybrid Bonds will continue to be based on the WAC of the related loan group. Loans in all loan applicable loan groups will convert to the 30-Day SOFR average + 12 month Adjustment Factor.</td>
<td>The Hybrid Bonds will continue to be based on the WAC of the related loan group. Loans in all loan applicable loan groups will convert to the 30-Day SOFR average + 12 month Adjustment Factor.</td>
<td>NA</td>
</tr>
<tr>
<td><strong>MV005 and MV001</strong></td>
<td>1 month LIBOR</td>
<td>Published 30-day SOFR average + 1 month Adjustment Factor</td>
<td>NA</td>
</tr>
</tbody>
</table>
13. Appendix: Multifamily Credit Risk Transfer Transactions (Freddie Mac)

13.1 Introduction

The purpose of this chapter is to provide market participants guidance on transitioning LIBOR-based MF CRT, which are known as Multifamily Structured Credit Risk Notes ("Multifamily SCR Notes" or "MSCR Notes"), to SOFR-indexed indices.

Freddie Mac completed its first SOFR-indexed MF CRT issuance, MSCR 2021-MN1, in January 2021. Prior to its first SOFR issuance, Freddie Mac issued three Multifamily SCR Notes, all of which were fixed-rate notes, between 2016 and 2017, so there are no Legacy MF CRT LIBOR securities to transition to a benchmark replacement.
## 14. Summary of Prior Changes

<table>
<thead>
<tr>
<th>Section</th>
<th>Summary of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>June 2020</strong></td>
<td></td>
</tr>
<tr>
<td>1.2 LIBOR transition milestones</td>
<td>▪ Updated the date of the first SOFR-indexed CMO issuance from June 2020 to July 2020</td>
</tr>
</tbody>
</table>
| 4. Collateralized Mortgage Obligations | ▪ Updated the date of the first SOFR-indexed CMO issuance from June 2020 to July 2020  
▪ Changed the “Determination Date” to 2 Business Days (2BD) prior to the beginning of the accrual period  
▪ Updated graphics to reflect a Determination Date of 2 BD prior to the beginning of the accrual period for 45-day, 55-day and 75-day delay and Non-Delay Compounded SOFR-indexed securities (per investor deck) |
| **July 2020** | |
| 3. Single-Family Credit Risk Transfer transactions | ▪ Specified that the Determination Date will be 2 Business Days (2BD) prior to the beginning of the accrual period for CRT securities |
| 5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities | ▪ Clarified that Fannie Mae is currently designing a new MF SOFR-indexed “capped” ARM  
▪ Specified that MF SOFR-indexed product terms will be publicly announced in the third quarter of 2020 |
| 7. Fannie Mae Multifamily Credit Risk Transfer transactions | ▪ Specified that the Determination Date will be 2 Business Days (2BD) prior to the beginning of the accrual period for CRT securities |
| **August 2020** | |
| 1. Overview | ▪ Freddie Mac Multifamily – Updated LIBOR product dates |
| 2. Single-Family Adjustable-Rate Mortgages and Securities | ▪ Updated language to reflect that Fannie Mae is now accepting delivery of SOFR-indexed ARMs |
| 4. Collateralized Mortgage Obligations | ▪ Updated language to reflect that Fannie Mae and Freddie Mac are now issuing SOFR-indexed CMOs |
| 6. Freddie Mac Multifamily Floating-Rate Loans and Securities | ▪ Updated SOFR-indexed loan offering details, including loan structure, interest rate protection, and origination and underwriting process changes |
| **September 2020** | |
1. Overview
- Updated the date to offer SF ARMs and securities products for Freddie Mac from Nov. 16, 2020 to Nov. 9, 2020
- Updated Freddie Mac cessation of SF LIBOR ARMs and securities to include the last LIBOR ARM settlement on Dec. 31, 2020 and the last LIBOR ARM Guarantor PC issue date on Dec. 1, 2020

2. Single-Family Adjustable-Rate Mortgages and Securities
- Updated the announcement regarding the last MBS/Guarantor PC issue date to indicate that it would be for LIBOR ARMs with a latest settlement date of Dec. 31, 2020
- Changed date from Nov. 16, 2020 to Nov. 9, 2020 for Loan Selling Advisor system updates and made a minor word change (i.e., “similar to” to “like”)
- Inserted language and dates regarding Loan Product Advisor’s availability
- Deleted “Fannie Mae only” and “Freddie Mac only” language under actions to consider in GSE systems for preparation for SF SOFR ARMs section
- Made a minor word change (i.e., “accept” to “purchase”) in Cessation of Purchase of SF LIBOR ARMs section

4. Collateralized Mortgage Obligations
- Updated to indicate that the cessation will not apply to RCR/MACR exchange or resecuritizations of previously issued LIBOR-indexed certificates (whether CMO or ARM certificates) as long as such resecuritizations do not increase the exposure of LIBOR-indexed certificates

5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities
- Updated to indicate that Fannie Mae has developed the Structured ARM, 7/6 ARM, Hybrid ARM and a new MF capped ARM product and released them on Sep. 1, 2020
- Updated to indicate that Fannie Mae has the capability to purchase SOFR-indexed ARMs beginning Sep. 1, 2020
- Specified that product-specific features were made available on Fannie Mae’s Multifamily website as well as during external training sessions
- Noted that at this time, at least one cap provider is prepared to issue SOFR-indexed interest rate caps
- Removed margin resulting from change in index from key update in originating and underwriting MF SOFR-indexed ARMs
- Specified that the Multifamily Guide has been updated
- Updated that Fannie Mae systems reflect options and dropdowns for SOFR-indexed ARMs
- Specified that servicers are required to manage ARM payments throughout the life of newly originated SOFR-indexed loans
- Specified that servicing systems require updates to manage calculations and reconciliation for borrower payments using the new rate

6. Freddie Mac Multifamily Floating-Rate Loans and Securities
- Updated Interest rate protection section with details on availability and interest rate caps. Also updated Small Balance Loan Hybrid Floating-Rate Loans section
- Deleted details regarding overlap period in the Conventional, Seniors Housing, TAH section. Updated link for “Refinance Test”
- Updated to indicate that as of Sep. 1, 2020, Freddie Mac ceased issuing quotes for LIBOR-indexed loans
- Made grammatical and tense changes to the section 6
### October 2020

<table>
<thead>
<tr>
<th>Topic</th>
<th>Details</th>
</tr>
</thead>
</table>
| 1.2 LIBOR transition timelines | - Added a footnote to clarify that the GSEs will no longer accept LIBOR-indexed pool deliveries after December 31, 2020. However, the GSEs may continue to issue LIBOR-indexed MBS products after December 31, 2020 using cash loans with application dates of September 30, 2020 or earlier in its portfolio  
- Revised footnote 3 to reflect GSE’s continued issuance of resecuritizations of previously issued LIBOR-indexed certificates and include details of total unpaid balance of LIBOR-indexed certificates. |
| 2. Single-Family Adjustable-Rate Mortgages and Securities | - Updated language to clarify that December 1, 2020 is the last issue date for LIBOR-indexed ARM MBS/Guarantor PCs to be delivered to the GSEs with a latest LIBOR-indexed ARM settlement date of December 31, 2020  
- Updated language to indicate that the GSEs have stopped accepting LIBOR ARMs with Application Received Dates after September 30, 2020  
- Updated the transition timeline graph to clarify the milestone description for December 31, 2020  
- Removed language calling out specific plan that the GSEs will stop purchasing after December 31, 2020 |
| 4. Collateralized Mortgage Obligations | - Updated language to indicate that Freddie Mac and Fannie Mae have ceased offering new LIBOR-indexed CMOs for issuance  
- Updated the graphs in the administration section to indicate that LIBOR is no longer the current state and Compounded SOFR is no longer a hypothetical implementation |
| 4.7 Approach for transitioning legacy CMOs | - Updated language to reflect next steps for legacy LIBOR-indexed CMOs |
| 5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities | - Updated language to reflect that Fannie Mae now has new SOFR-indexed product offerings available |
| 6. Freddie Mac MF Credit Risk Transfer Transactions | - Removed “In the event that Freddie Mac believes it is necessary to issue new SCR Notes again prior to market readiness and interest in MF CRT Floating-Rate securities based on an ARR, Freddie Mac expects the SCR Notes will be a LIBOR Floating-Rate CRT issuance and will be structured in alignment with the STACR program.” |

### November 2020

<table>
<thead>
<tr>
<th>Topic</th>
<th>Details</th>
</tr>
</thead>
</table>
| 1. Overview | - Updated dates and details around SOFR and LIBOR product offerings for Fannie Mae MF ARMs and MBS  
- Removed references to specific ARRs for existing contracts from the overview section and added them to the product-specific sections |
<p>| 2. Single-Family Adjustable-Rate Mortgages and Securities | - Updated the transition timeline graph to clarify delivery milestones in December 2020 and updated the transition of existing LIBOR ARM loans to TBD |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Updates</th>
</tr>
</thead>
</table>
| 3. Single-Family Credit Risk Transfer transactions                      | ▪ Updated language to indicate Fannie will have the capability to issue SOFR-indexed CRT deals in Q1 2021  
▪ Updated outstanding SF CRT notes that are indexed to one-month LIBOR as of September 30, 2020 at Fannie Mae ($25.6 billion) and at Freddie Mac ($27.5 billion)  
▪ Updated the language and SF CRT timeline to indicate the issuance of Freddie Mac’s SOFR-indexed CRT |
| 4. Collateralized Mortgage Obligations                                  | ▪ Added language on SOFR-indexed CMOs, transitioning from 30-day Average SOFR to Term SOFR, when Term SOFR becomes available                                                                                       |
| 5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities | ▪ Updated language to indicate that Fannie Mae has stopped accepting LIBOR loans with commitment dates after September 30, 2020  
▪ Updated language to indicate that Fannie Mae has stopped issuing LIBOR-indexed ARM pools with MBS pool issue dates after December 1, 2020  
▪ Updated transition milestone timeline to indicate that timeline for the legacy conversion to an ARR at MF’s discretion is TBD  
▪ Updated language to clarify that Fannie Mae will purchase both LIBOR- and SOFR-indexed ARMs through the end of 2020 |
| 6. Freddie Mac Multifamily Floating-Rate Loans and Securities          | ▪ Updated language to include SOFR-indexed bonds  
▪ Added details on K-F-73, K-F76, K-F77, K-F94, SOFR-SOFR bonds  
▪ Updated verbiage and added explanation of remaining key dates |
| 7. Fannie Mae Multifamily Credit Risk Transfer transactions            | ▪ Updated the “as of date” for the $0.9 billion outstanding CRT notes indexed to one-month LIBOR from June 30, 2020 to September 30, 2020 (exposure remained the same since June) |

**March 2021**

<table>
<thead>
<tr>
<th>Section</th>
<th>Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overview</td>
<td>▪ Incorporated updates related to recent industry announcements regarding LIBOR cessation</td>
</tr>
</tbody>
</table>
| 2. Single-Family Adjustable-Rate Mortgages and Securities              | ▪ Updated transition timelines to reflect latest market announcements and consultations  
▪ Updated and removed language to reflect the GSEs no longer purchasing SF LIBOR-indexed ARMs |
| 3. Single-Family Credit Risk Transfer                                  | ▪ Updated figures to reflect the GSEs’ current outstanding legacy SF CRT notes  
▪ Updated language around the discontinuation of LIBOR-indexed SF CRT deals at the end of Q4 2020 and current structure of SOFR-indexed CRT transactions |
| 5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities | ▪ Updated and removed language to reflect Fannie Mae no longer purchasing MF LIBOR-indexed ARMs  
▪ Updated language around legacy LIBOR-indexed ARM product conversion  
▪ Included new actions to consider for selling and delivering MF SOFR-indexed ARMs |
<table>
<thead>
<tr>
<th>Section</th>
<th>Updates</th>
</tr>
</thead>
</table>
| 6. Freddie Mac Multifamily Floating-Rate Loans & Securities | - Updated language to address termination of LIBOR Cap option; removed requirements for purchasing a LIBOR-indexed Cap  
- Modified tenses to reflect what has been done and what is still to be done  
- Updated language to indicate that the SOFR-SOFR bond structure that started in K-F95 is the current structure in use  
- Removed various subsections that contained outdated information  
- Removed pipeline management, communications, and borrower outreach best practices from section 6.6 |
| 7. Fannie Mae Multifamily Credit Risk Transfer | - Updated figures to reflect Fannie Mae’s current outstanding legacy MF CRT notes |
| 8. Freddie Mac MF CRT Transactions | - Updated content to reflect completion of Freddie Mac’s first SOFR-indexed MF CRT issuance  
- Removed “Timeline and milestones” section  
- Updated Legacy CRT transition section to reflect the plan to not issue any LIBOR based CRT deals in the future |
| **October 2021** | |
| All Sections | - Updated formatting throughout document |
| 1. Overview | - Updated the cessation date of key LIBOR tenors; added the ARRC’s endorsement of the CME Term SOFR Rates to the list of SOFR milestones with a link to the original announcement |
| 2. Single-Family Adjustable-Rate Mortgages and Securities | - Figure 2-1: Added a milestone for the ARRC’s selection of Refinitiv as the vendor for benchmark replacements and updated language in timeline  
- 2.4 Preparation for SF SOFR ARMs: Updated Freddie Mac’s Loan Product Advisor timelines; updated language around 30-day Average SOFR Hybrid ARM Index codes and the SF MBS Disclosures Guide; removed Freddie Mac’s guidance to sellers on IFI J23 for non-SOFR-indexed ARMs  
- 2.5 Transition Existing SF LIBOR ARMs: Added a statement for servicers about non-standard notes |
| 3. Single-Family Credit Risk Transfer | - 3.2 SOFR-indexed CRT new issuance: Updated language to reflect the availability of Term SOFR, the issuance of SOFR-indexed CRT transactions, and added language about the determination of the administrative feasibility of Term SOFR  
- Figure 3-1: Updated timeline to reflect Fannie Mae’s operational readiness for SOFR-indexed SF CRT issuance  
- 3.3 Timeline and milestones: updates to reflect availability of Term SOFR  
- 3.4 Legacy SF CRT transition: Updated estimates of outstanding SF CRT notes indexed to one-month LIBOR |
| 4. Collateralized Mortgage Obligations | - 4.2 Overview: Updated information related to Term SOFR; added language about the determination of the administrative feasibility of Term SOFR  
- 4.7 Approach for transition legacy CMOs: Added language about the determination of the administrative feasibility of Term SOFR |
5. Fannie Mae Multifamily Adjustable-Rate Mortgages and Mortgage-Backed Securities

- Figure 5-1: Updated the conversion date for LIBOR-indexed MF ARMs
- 5.4 Preparation for MF SOFR-indexed ARMs: Updated index publication source language to show there have not been any recent updates

6. Freddie Mac Multifamily Floating-Rate Loans and Securities

- 6.2 Planned product modifications: Added language about the use of Term SOFR and the determination of its administrative feasibility; added a statement about the availability of LIBOR-indexed interest rate caps
- Figure 6-1: Moved clarification from figure to footnotes
- 6.4 MF Floating-Rate securities indexed to SOFR: Removed an outdated statement about the conversion of LIBOR-indexed loans and bonds
- Figure 6-7: Moved clarification from figure to footnotes

7. Fannie Mae Multifamily Credit Risk Transfer

- 7-2 SOFR-indexed CRT new issuance: Provided updates related to Term SOFR; added language about the determination of the administrative feasibility of Term SOFR
- Figure 7-1: Updated timeline to reflect Fannie Mae’s operational readiness for SOFR-indexed MF CRT issuance
- 7-3 Legacy CRT transition: updated the “as of” date for estimated outstanding CRT notes indexed to one-month LIBOR

**June 2022**

<table>
<thead>
<tr>
<th>All Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated formatting, diction, and abbreviations throughout for consistency</td>
</tr>
<tr>
<td>Updated language to reflect the Adjustable Interest Rate (LIBOR) Act</td>
</tr>
<tr>
<td>Updated language across all products to reflect the GSEs’ plan to make an official announcement on their final transition strategies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated titles and links to key resources</td>
</tr>
<tr>
<td>Updated footnotes to reflect the cessation of resecuritizing existing LIBOR-indexed Single-Family and Multifamily CMOs and MBS/PCs into new-issuance LIBOR-indexed bonds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Single-Family Adjustable-Rate Mortgages and Securities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removed language about final LIBOR-indexed SF ARM settlement date</td>
</tr>
<tr>
<td>Added milestones for the Board’s proposed and final rulemaking and the rulemaking to the SF timeline</td>
</tr>
<tr>
<td>Updated timeline to include year 2022 and tentative plans for a legacy transition announcement</td>
</tr>
<tr>
<td>Updated margin features for Fannie Mae SF SOFR ARMs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Single-Family Credit Risk Transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated to reflect Fannie Mae beginning to issue SF SOFR-indexed CRTs</td>
</tr>
<tr>
<td>Updated timeline to include year 2022 and tentative plans for a final legacy transition strategy announcement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Collateralized Mortgage Obligations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated language to reflect the cessation of resecuritizing existing LIBOR-indexed Single-Family and Multifamily CMOs and MBS/PCs into new-issuance LIBOR-indexed bonds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Fannie Mae Multifamily Credit Risk Transfer</th>
</tr>
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<tbody>
<tr>
<td>Shortened section to emphasize similarities to Section 3, “Single-Family Credit Risk Transfers,” and align with the structure of Section 8, “Freddie Mac Multifamily Credit Risk Transfer Transactions”</td>
</tr>
<tr>
<td>January 2023</td>
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</tbody>
</table>
| **All Sections** | ▪ Updated formatting, diction, and abbreviations throughout for consistency  
▪ Updated language to reflect implementation of the Adjustable Interest Rate (LIBOR) Act  
▪ Updated all sections to add details related to the legacy transition for each product  
▪ Prior sections of the playbook focused on new products have been moved to the appendix  |
| **1. Overview** | ▪ Updated titles and links to key resources  
▪ Added section defining the LIBOR Act  
▪ Added new section on key industry and regulatory milestones  
▪ Updated LIBOR transition timeline view  |
| **2. Single-Family Adjustable-Rate Mortgages and Securities** | ▪ Updated introduction to reflect GSE announcement of CME Term SOFR selection  
▪ Updated transition milestones timeline  
▪ Updated sections 2.3-2.6 to focus on legacy LIBOR-indexed SF products  
▪ Updated milestones for the Board’s final rulemaking on the SF timeline  |
| **3. MF ARMs and Securities** | ▪ Combined Fannie Mae and Freddie Mac MF ARMs and Securities information into one section  
▪ Added consolidated transition milestone timeline  
▪ Updated content throughout to describe the replacement rate determination and other details related to the transition of LIBOR-indexed MF products  |
| **4. CRT Transactions** | ▪ Consolidated Fannie Mae and Freddie Mac details for SF and MF CRTs into one section  
▪ Added consolidated transition milestone timeline  
▪ Updated content throughout to describe the replacement rate determination and other details related to the transition of LIBOR-indexed CRTs  
▪ Clarified plan to keep all SOFR-indexed CRTs indexed to 30-Day Average SOFR  |
| **5. CMOs** | ▪ Moved CMO details to section 5  
▪ Added consolidated transition milestone timeline  
▪ Updated content throughout to describe the replacement rate determination and other details related to the transition of LIBOR-indexed CMOs  
▪ Clarified plan to keep all SOFR-indexed CMOs indexed to 30-Day Average SOFR  |

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<th>April 2023</th>
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<tbody>
<tr>
<td><strong>All Sections</strong></td>
<td>▪ Updated Replacement rate determination sections to include finalized replacement index names, Refinitiv Instrument Codes (for SF) and all-in replacement rate calculations</td>
</tr>
</tbody>
</table>
| **1. Overview** | ▪ Added Replacement rate determination summary section, providing a consolidated view of benchmark replacement rate information for all products  
▪ Adjusted all instances of “static spread” to “fixed tenor spread” to clarify the application of spread adjustments to replacement rates  |
<table>
<thead>
<tr>
<th>Section</th>
<th>Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. SF ARMs and MBS/PCs</td>
<td>Updated index description and all-in replacement rate calculation information in Section 2.3</td>
</tr>
</tbody>
</table>
| 3. MF ARMs and Securities | - Updated section 3 to reflect naming conventions for Freddie Mac Multifamily Floating Rate Loans  
- Updated index description and all-in replacement rate calculation information in Section 3.3  
- Updated and restructured Section 3.4 to include additional illustrations of the impact of the transition on Fannie Mae Multifamily MBS products |
| 4. CRT Transactions | - Updated 4.3 with additional clarity on spread adjustment to align with updates made to the FAQs  
- Updated index description and all-in replacement rate calculation information in Section 4.3 |
| 4. CMOs | Updated index description and all-in replacement rate calculation information in Section 5.3 |