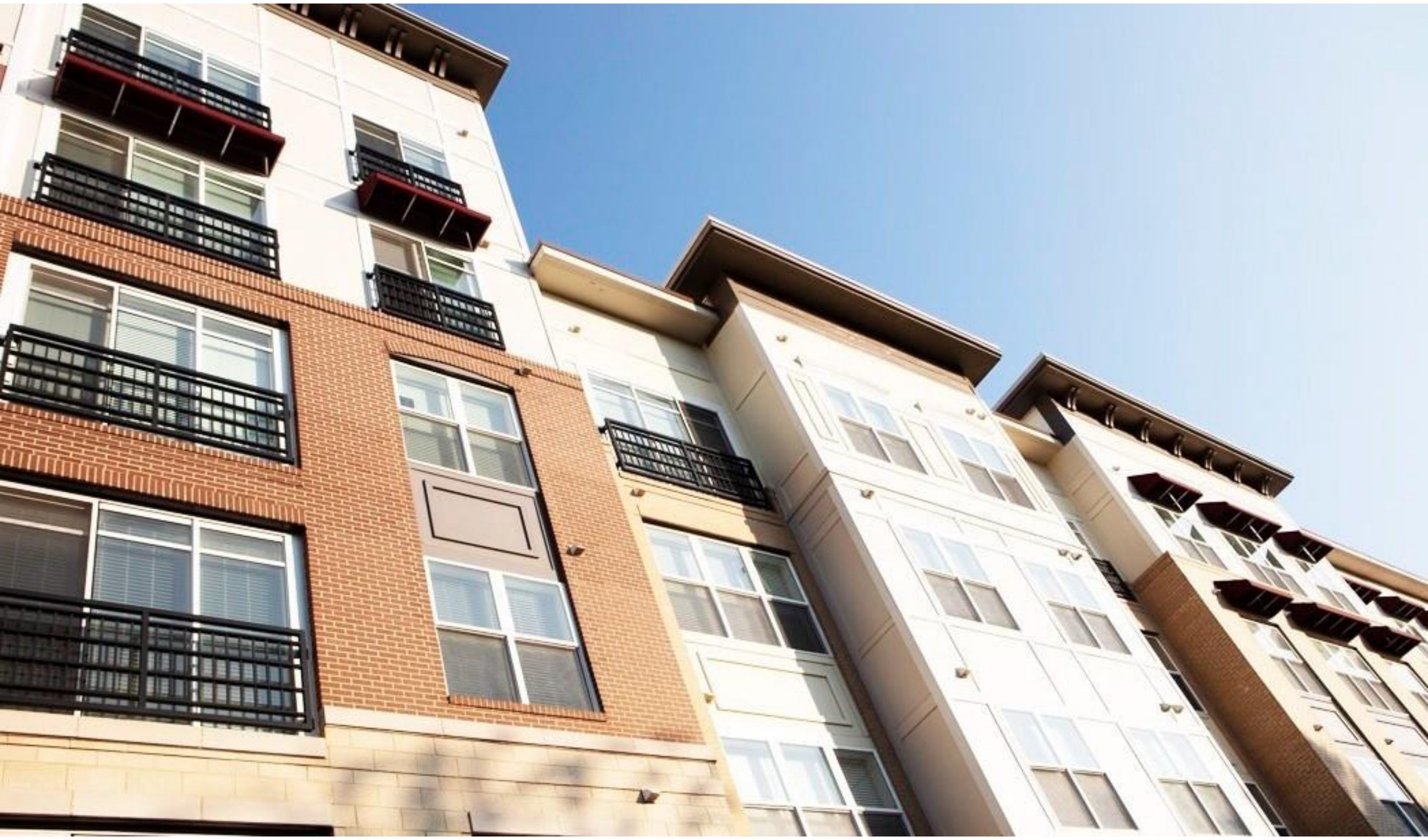

LIBOR Transition Playbook

Collateral Mortgage Obligations (CMO)

December 2023

Summary of Changes

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

Section	Summary of changes
1. CMOs Additional Considerations	▪ Provided updated guidance on CMO bonds or swaps with interest rate caps transitioning to the ISDA protocol Fallback rate

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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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5. CMOs

5.1 Introduction

On December 22, 2022, the GSEs announced their selection of 30-day Average SOFR plus a fixed tenor spread adjustment as the benchmark replacement for their LIBOR-indexed CMOs following the cessation of LIBOR. This decision aligns with the Board-selected benchmark replacement for cash transactions that are FHFA-regulated-entity contracts and is applicable to CMOs for which the GSEs are responsible for selecting the benchmark replacement.

Certain CMOs issued following July 2020 may include contractual language indicating a benchmark replacement of Term SOFR. Please note that Fannie Mae and Freddie Mac will refrain from taking any steps that would result in the conversion of any existing SOFR-indexed CMOs from 30-Day Average SOFR to term SOFR based on any provision that calls for such conversion when operationally, administratively, and technically feasible.

The following section will help you understand:

- Key milestone dates for transitioning LIBOR-indexed CMOs
- Guidance on benchmark replacements and associated spread adjustments
- High-level considerations for transitioning legacy LIBOR-indexed CMOs
- Guidance on legacy LIBOR-indexed CMOs

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

5.2 Transition milestones

The GSEs defined key dates related to the transition of legacy LIBOR-indexed CMOs. Milestones will continue to be updated as necessary. Figure 5-1 identifies key transition milestones for CMOs.

Figure 5-1: CMO transition timeline

5.3 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 replacement. Based on this, the GSEs will transition from 1-month LIBOR to the 30-day Average SOFR rate published by the NY Fed, plus an applicable tenor spread adjustment

(0.11448% for one month-tenor). 30-Day Average SOFR is published daily on the NY Fed's website, and the all-in replacement rate can be calculated by pulling the applicable 30-Day Average SOFR rate and adding the 0.11448% tenor spread adjustment. The 30-Day Average SOFR rate that is available as of 3:00 p.m. ET should be used for calculations.

The first date on which spread-adjusted 30-day Average SOFR rate will be used as the replacement index for Fannie Mae legacy CMO transactions will be July 21, 2023. The replacement index will be used for calculating accrued interest during July 25 – August 24, 2023 Accrual Period, and the payments will be made to bondholders on the August 25, 2023 Payment Date.

The first date on which spread-adjusted 30-day Average SOFR rate will be used as the replacement index for Freddie Mac CMO transactions will be July 13, 2023. The replacement index will be used for calculating accrued interest during the July 15 – August 14, 2023 Accrual Period, and the payments will be made to bondholders on the August 15, 2023 Payment Dat.

SOFR spread adjustment methodology

Under the LIBOR Act, a pre-determined fixed tenor spread adjustment will be applied to the benchmark replacement immediately following the cessation of LIBOR. Figure 5-2 depicts the LIBOR benchmark replacements and spread adjustment methodology for SF and MF CMOs as defined by the LIBOR Act.

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

Figure 5-2: Benchmark replacement guidance for CMOs

Board Final Rule Category	Current LIBOR Index	Spread-adjusted SOFR Replacement Index	All-In Replacement Rate Calculation
FHFA-Regulated-Entity Contract	1M LIBOR	30-Day Average SOFR + 1-Month Spread Adjustment	30-Day Average SOFR + 0.11448 (percent)

5.4 Administering legacy LIBOR-indexed CMOs

❖ Actions to consider

Investors and vendors will need to maintain awareness of potential impacts of the LIBOR transition including index and calculation changes. The GSEs will transition from 1-month LIBOR to the 30-day Average SOFR rate published by the NY Fed, plus an applicable tenor spread adjustment (0.11448% for one month-tenor).

Fannie Mae has a few Collateralized Mortgage Obligations (CMOs) with interest rate caps or swaps that have corresponding derivatives. The corresponding derivatives for Single-Family and Multifamily CMO CUSIPs transitioned to the ISDA-recommended LIBOR replacement rate (this rate was also selected by the Federal Reserve Board as the replacement rate for derivatives transactions in its final rules), the

30-day Average SOFR calculated in arrears of the interest rate period.

As a result, there may be a mismatch between payments owed on the Fannie Mae CMOs and the derivatives beginning with the August 25, 2023 payment. Under certain circumstances, such a mismatch could result in lower payments on the derivative. Under those circumstances, this could result in lower or delayed payments on the CMO certificates. As specified in the relevant prospectus supplement, the guaranty from Fannie Mae does not apply to amounts owing on the derivative.

Figure 5-3: Actions to consider when Administering CMOs

Focus areas	Actions to consider
Investor awareness	▪ Investors should maintain awareness of the updates to impacted CMOs
Use of a new index in rate and payment calculations	▪ Upon evaluation, update and test systems, reporting and other processes or activities related to interest rate adjustment calculations to incorporate the benchmark replacement as necessary

9. Appendix: CMOs

9.1 Introduction

The ARRC endorsed SOFR as its recommended benchmark replacement to LIBOR in anticipation of the cessation of LIBOR.

To prepare for the cessation of LIBOR, the GSEs adopted a modified version of the ARRC securitization waterfall for new-issue LIBOR-indexed CMOs. The GSEs started offering SOFR-indexed CMOs for settlement in July 2020. Additionally, under the guidance of FHFA, Freddie Mac and Fannie Mae ceased offering new LIBOR-indexed CMOs for issuance. This includes resecuritizations of existing LIBOR-indexed CMOs (both Single-Family and Multifamily) and MBS/PCs into new-issuance LIBOR-indexed bonds effective June 30, 2022. The resecuritization of LIBOR-indexed CMOs and MBS/PCs into appropriately structured new-issue SOFR bonds will continue to be permitted.

9.2 Overview

The GSEs have structured new-issue Delay and Non-Delay SOFR-indexed CMOs that use 30-day Average SOFR published by the NY Fed as the reference rate, with a Determination Date of 2 Business Days (2BD) prior to the beginning of the accrual period for 45-, 55- and 75-day Delay and Non-Delay securities (same as current LIBOR-indexed CMOs).

Certain CMOs issued following July 2020 may include contractual language indicating a benchmark replacement of Term SOFR. Please note that Freddie Mac and Fannie Mae will refrain from taking any steps that would result in the conversion of any existing SOFR-indexed CMOs from 30-Day Average SOFR to Term SOFR based on any provision that calls for such conversion when operationally, administratively, and technically feasible.

9.3 Eligible collateral

For new-issue SOFR-indexed CMOs, the GSEs will accept all collateral that is currently acceptable for LIBOR-indexed structures at each respective entity. For more information on how collateral may be affected by the transition, refer to "Securitization of SOFR ARMs" in section 2.4, "Preparation for SF SOFR ARMs."

9.4 Issuance

- **Delay and Non-Delay (30-day Average SOFR)**

The Determination Date for 45-, 55- and 75-day Delay and Non-Delay securities based on 30-day Average SOFR is 2BD prior to the beginning of the accrual period. This is the same as the practice that was used for LIBOR-indexed securities.

9.5 Administration

- **Key updates for 45-day, 55-day and 75-day Delay CMOs**

For 45-, 55- and 75-day Delay CMOs based on 30-day Average SOFR (or "Compounded SOFR" per the subsequent timelines), the Determination Date will be 2BD prior to the beginning of the accrual period. This is the same as for LIBOR-indexed CMOs, which also have a Determination Date of 2BD prior to the accrual period (prior month). The graphics on the subsequent pages display the timing.

Figure 9-1: 45-day Delay CMOs

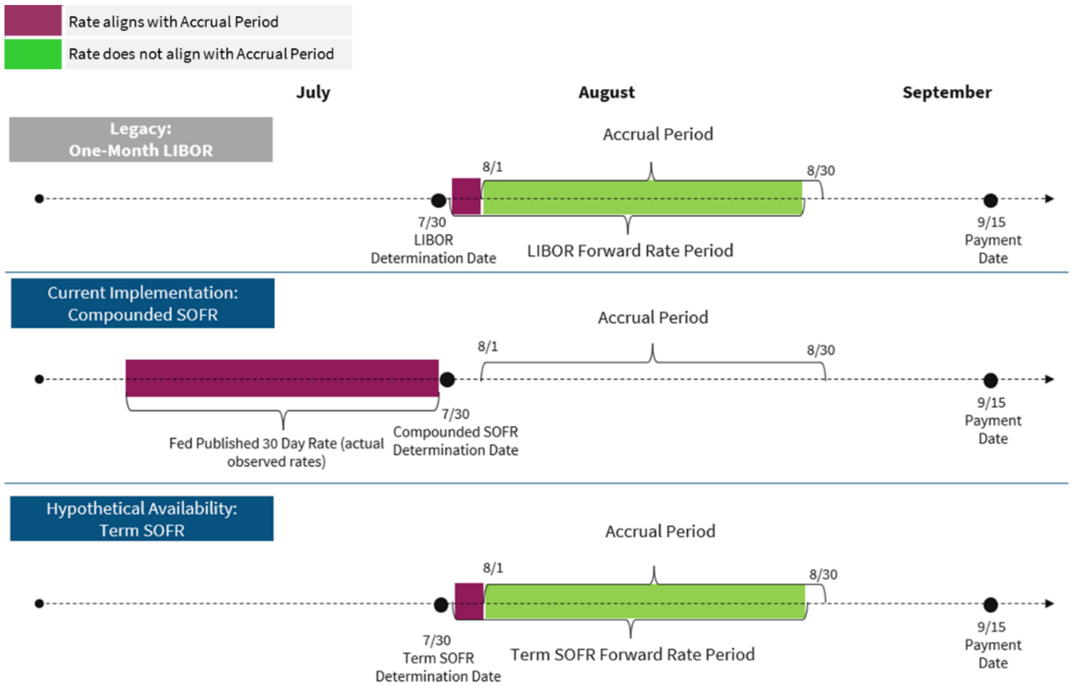


Figure 9-2: 55-day Delay CMOs

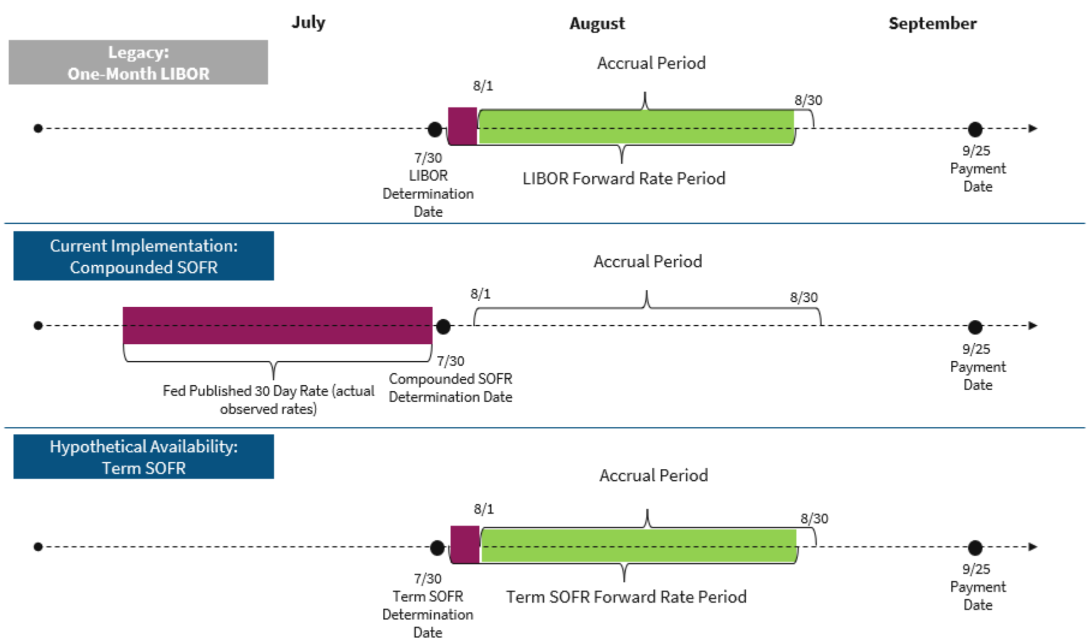
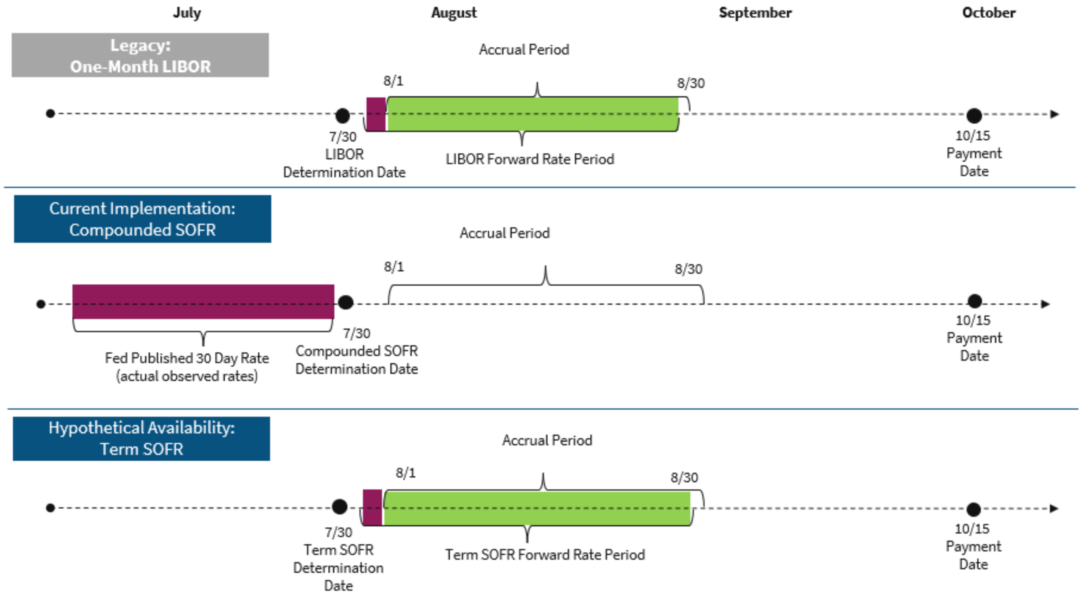


Figure 9-3: 75-day Delay CMOs



❖ Key updates for 45-day, 55-day and 75-day Non-Delay CMOs

For 45-, 55- and 75-day Non-Delay CMOs based on 30-day Average SOFR, the Determination Date will be 2BD prior to the beginning of the accrual period. This is the same as for LIBOR-indexed CMOs, which have a Determination Date of 2BD prior to their respective accrual periods (the 13th for 45-day, or the 23rd for 55-day) of the month preceding payment, or the 13th (75-day) of the second month preceding payment. The graphics on the subsequent pages display the timing.

Figure 9-4: 45-day Non-Delay CMOs

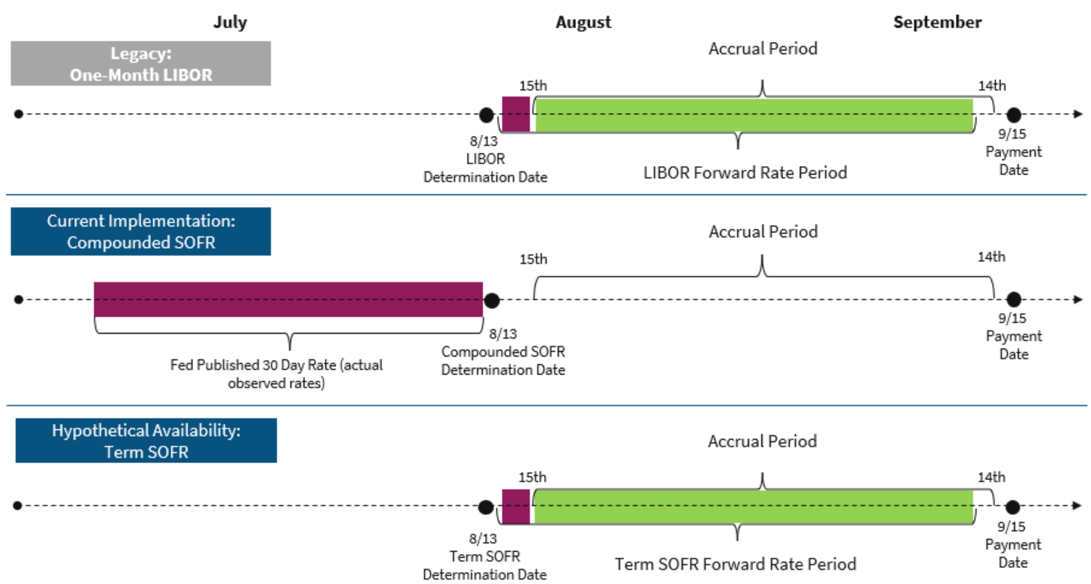


Figure 9-5: 55-day Non-Delay CMOs

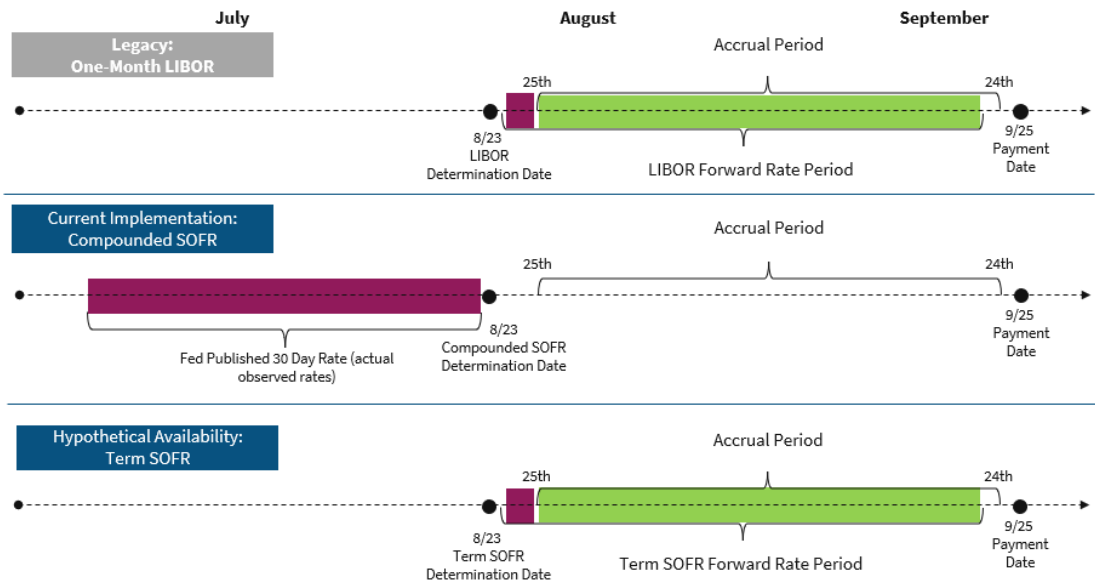
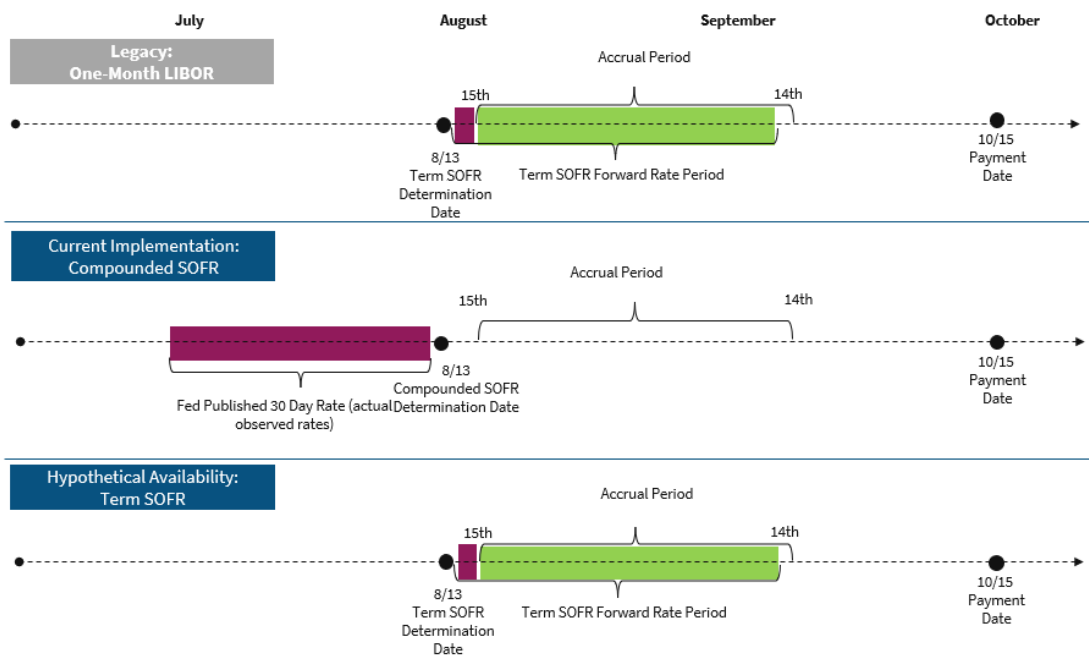


Figure 9-6: 75-day Non-Delay CMOs



9.6 Disclosure changes

❖ Key updates

Index rate disclosure files now contain a new column titled “Current Month Payment Indicator” which contains a “Y” if the rate applies to the current month’s payment factor calculation and an “N” if it does not.

CSS will publish index rate files on the first business day of the month (for all Delay securities), on the

15th of the month minus two business days (for Non-Delay 45- and 75-day securities), and on the 25th of the month minus two business days (for Non-Delay 55-day securities) at 6:30 p.m. ET; the previous schedule had the posting of files at 4:30 p.m. ET for Freddie Mac.

❖ **Actions to consider**

Discuss changes to disclosures with your disclosure vendor to ensure that your system can correctly apply the new "Current Month Payment Indicator" value.

14. Summary of Prior Changes

Section	Summary of changes
June 2020	
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)
August 2020	
4. Collateralized Mortgage Obligations	▪ Updated language to reflect that Fannie Mae and Freddie Mac are now issuing SOFR-indexed CMOs
September 2020	
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
October 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
November 2020	
4. Collateralized Mortgage Obligations	▪ Added language on SOFR-indexed CMOs, transitioning from 30-day Average SOFR to Term SOFR, when Term SOFR becomes available
October 2021	
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
June 2022	
4. Collateralized Mortgage Obligations	▪ 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
January 2023	
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

April 2023	
3. CMOs	▪ Updated index description and all-in replacement rate calculation information in Section 5.3