ARRC CONSULTATION
NEW ISSUANCES OF LIBOR SECURITIZATIONS
December 7, 2018

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PART I: ARRC CONSULTATION OVERVIEW

A. Background

The Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee ("ARRC") in 2014 to identify alternative reference rates for U.S. dollar (USD) LIBOR ("LIBOR"), identify best practices for contract robustness in the interest rate market, and create an implementation plan to support an orderly adoption of new reference rates. After accomplishing its initial set of objectives by selecting an alternative reference rate (which is the Secured Overnight Financing Rate or "SOFR") and setting out a Paced Transition Plan with respect to derivatives, the ARRC was reconstituted in 2018 with an expanded membership to help ensure the successful implementation of the Paced Transition Plan and to serve as a forum to coordinate cash and derivatives markets as they address the risk that LIBOR may not exist beyond 2021. The ARRC now serves as a forum to address the impact of a possible LIBOR cessation on market participants currently using LIBOR and the development of SOFR-based products across cash and derivatives markets. A brief summary of the Paced Transition Plan is set forth in Appendix II.

The ARRC's Second Report noted that most contracts for cash (non-derivative) products referencing LIBOR do not appear to have envisioned a permanent or indefinite cessation of LIBOR and have fallbacks that would not be economically appropriate if this event occurred. The ARRC formed several working groups to focus on various markets and published its Guiding Principles for More Robust LIBOR Fallback Contract Language to create a framework for fallback language in cash products. In furtherance of these objectives, the ARRC will publish a set of documents recommending fallback language for market participants to consider for new issuances of various types of cash products referencing LIBOR. These proposals are intended to set forth robust fallback provisions that define the trigger events,[1] and allow for the selection of a successor rate[2] and a spread adjustment between LIBOR and the successor rate to account for differences between these two benchmarks. These proposals are also intended to address timing and operational mechanics so that the fallbacks function effectively.

It is important to note that the suggested fallback language proposed by each of the working groups includes some terms that do not yet exist but are anticipated to exist at a future date. For example, the proposals reference a forward-looking term SOFR selected, endorsed or recommended as the replacement by the Relevant Governmental Body,[3] as well as other potential fallback rates that do not currently exist. Similarly, the "Replacement Benchmark Spread" referenced in the proposals would default first to a spread or spread methodology selected, endorsed or recommended by the Relevant Governmental Body, in addition to other potential spread methodologies if such a spread does not exist.

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[1] A trigger event is an occurrence that precipitates the conversion from LIBOR to a new reference rate.

[2] The successor rate is the reference rate that would replace LIBOR in contracts. The ARRC has recommended SOFR as the successor rate for U.S. dollar contracts.

[3] "Relevant Governmental Body" is defined as the Federal Reserve Board ("Federal Reserve"), the Federal Reserve Bank of New York ("FRBNY") or a committee established by the Federal Reserve or FRBNY such as the ARRC.

The suggested language proposals also reference spreads and other technical aspects of fallbacks for derivatives that the International Swaps and Derivatives Association, Inc. ("ISDA") intends to include in its standard documentation. ISDA has recently completed a consultation of market participants with respect to fallbacks in other currencies, and while the consultation included some questions on USD LIBOR, ISDA has not yet formally consulted on USD LIBOR. While ISDA expects to implement SOFR as the successor rate in fallbacks for USD LIBOR, it has not finalized the spreads and other technical aspects that would apply to the fallbacks it intends to publish in its standard documentation for derivatives.

The ARRC has already released consultations on fallback language for floating rate notes and syndicated loans, and is now releasing a consultation on bilateral business loans and this consultation on securitizations. Proposals regarding fallbacks for consumer products will come at a later stage, and the ARRC's guiding principles recognize that there are special considerations for consumer products that should be taken in consideration for those products. While they may mirror some of the basic structures proposed for other cash products, they are also likely to be simpler and involve less optionality and complexity, and any proposals would only be made after wide consultation with consumer advocacy groups, market participants, and the official sector.

The extent to which any market participant decides to implement or adopt any suggested contract language is completely voluntary. Therefore, each market participant should make its own independent evaluation and decision about whether or to what extent any suggested contract language is adopted.

B. <u>An Explanation of SOFR and Differences between SOFR and LIBOR</u>

On June 22, 2017, the ARRC identified SOFR as its recommended alternative to LIBOR after considering a comprehensive list of potential alternatives, including other term unsecured rates, overnight unsecured rates such as the Effective Federal Funds Rate ("EFFR") and the Overnight Bank Funding Rate ("OBFR"), other secured repurchase agreements ("repo") rates, U.S. Treasury bill and bond rates, and overnight index swap rates linked to EFFR. After extensive discussion, the ARRC preliminarily narrowed this list to two rates that it considered to be the strongest potential alternatives: OBFR and some form of overnight Treasury repo rate. The ARRC discussed the merits of and sought feedback on both rates in its 2016 Interim Report and Consultation and in a public roundtable. The ARRC made its final choice of SOFR after evaluating and incorporating feedback from the consultation and from the broad set of end users on its Advisory Group.

SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities. SOFR is determined based on transaction data composed of: (i) tri-party repo, (ii) General Collateral Finance (GCF) repo, and (iii) bilateral Treasury repo transactions cleared through Fixed Income Clearing Corporation (FICC). In terms of the volume of transactions underpinning SOFR, SOFR has the widest coverage of any Treasury repo rate available. Averaging nearly $800 billion of daily trading since it began publication, transaction volumes underlying SOFR are far larger than the transactions in any other U.S. money market and dwarf the volumes underlying LIBOR. Additional information about SOFR and other Treasury repo reference rates is available at https://www.newyorkfed.org/markets/treasury-repo-reference-rates-information. As the administrator and producer of SOFR, the FRBNY began

publishing SOFR on April 3, 2018. SOFR is published on a daily basis on the FRBNY's website at approximately 8:00 a.m. eastern time.[4]

SOFR is representative of general funding conditions in the overnight Treasury repo market. As such, it will reflect an economic cost of lending and borrowing relevant to the wide array of market participants active in the financial markets. However, SOFR is fundamentally different from LIBOR. SOFR is an overnight, secured nearly risk-free rate, while LIBOR is an unsecured rate published at several different maturities (overnight/spot, one week, one month, two months, three months, six months and one year). As described in the Paced Transition Plan, the ARRC has set the goal of the development of forward-looking term rates based on SOFR derivatives markets.[5]

Because LIBOR is unsecured and therefore includes an element of bank credit risk, it is likely to be higher than SOFR and prone to widen when there is severe credit market stress. In contrast, because SOFR is secured and nearly risk-free, it is expected to be lower than LIBOR and may stay flat (or potentially even tighten) in periods of severe credit stress due to its Treasury "flight-to-quality" nature. Market participants are considering certain adjustments, referenced in the fallback proposal as the applicable "Replacement Benchmark Spread," which would be intended to mitigate some of the differences between LIBOR and SOFR.

C. Differences between Proposed Fallback Provisions for Cash Products and Derivatives

As described in the ARRC's guiding principles, there are several benefits to consistency across cash and derivatives products. Specifically, if fallbacks are aligned across the derivatives, loan, bond and securitization markets such that products operate in a consistent fashion upon a LIBOR cessation, then operational, accounting, legal, and basis risk (particularly where derivatives are used to hedge interest rate risk in cash products) will be reduced. Therefore, the fallback language developed by the ARRC working groups for cash products is intended to be consistent in certain respects with the approach ISDA intends to take for derivatives. A brief summary of ISDA's approach to the fallbacks for derivatives is set forth in Appendix III hereto.

However, ISDA has not analyzed the appropriateness of its proposed fallbacks for non-derivatives and it may be the view of market participants that cash product fallbacks should differ in some respects from derivative fallback provisions. For example, ISDA's proposed fallback triggers will require a permanent cessation of LIBOR while market participants in cash products may wish to use fallback provisions to transition from LIBOR prior to its permanent discontinuance.[6] Also, cash products may reference a

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[4] To view the rate, visit: https://apps.newyorkfed.org/markets/autorates/sofr.

[5] The ARRC has also set plans to produce indicative term rates that could help market participants understand how these rates are likely to behave before it is possible to produce a set of robust, IOSCO-compliant term reference rates that could be used in financial contracts. Preliminary data can be found in slide 6 of the presentation by the Chair of the ARRC at its July 2018 roundtable (www.newyorkfed.org/medialibrary/Microsites/arrc/files/2018/OConnor-Slides-ARRC-Roundtable.pdf).

[6] Both cash product and derivatives market participants may wish to transition transactions prior to the cessation of LIBOR and may do so by amending contracts rather than relying on fallback provisions or by incorporating contractual language that contemplates a transition to SOFR independent of the cessation of LIBOR.

forward-looking term rate while derivatives are generally expected to reference a fallback based on the overnight rate.[7] Therefore, the spread adjustment for cash products may not be the same as the spread adjustment for derivatives, especially if the fallback rate in the cash markets is forward-looking term SOFR. Finally, certain cash products or markets may have unique needs. Request for feedback regarding these questions, and the approach taken in the proposed fallback language covered by this consultation, are highlighted in the feedback requested in ***Part II*** below.

Issuers of securitizations will also naturally wish to seek consistency with fallback language in the assets underlying the securitization where possible. To the extent possible, the ARRC will seek to align its recommendations across cash products to minimize potential basis risk. However, there may also be special characteristics of certain products that should reasonably be recognized and that warrant allowing recommendations to differ in certain circumstances. For example, as noted above, the special nature of consumer products may point to simpler fallback structures than for other cash products. Similarly, the structural and legal underpinnings of certain securitization transactions may require differences in the fallback language ultimately adopted. Respondents will need to consider the importance of aligning fallbacks in the underlying assets and the liabilities of the securitized product as well as inherent structural and legal limitations applicable to particular securitized products as they consider the draft proposals and questions in this consultation.

PART II: SECURITIZATION CONSULTATION QUESTIONS

A. General Approach of the Securitization Fallback Provisions

Based on the recommendations of its Securitizations Working Group ("SWG"), the ARRC has proposed an approach to fallback language for new LIBOR-based securities issued in connection with securitizations (including collateralized loan obligations) that is more robust than language that exists in current/legacy securitizations (each, a "Securitization" or "Securitizations"). The proposed fallback language for Securitizations is set forth in Appendix I hereto. This ***Part II*** contains a description of the Securitization fallback provisions and specific questions that market participants are asked to consider.

Note that in many Securitization contracts, there is an existing fallback process for the unavailability of published LIBOR that would first revert to the average of quotes obtained by polling banks and then, in certain contracts, would fall back to the last published value of LIBOR if banks are unwilling to provide such quotes.[8] Because most observers now believe that banks would be unwilling to provide the quotes needed to implement the first stage of this process, this implies that many existing Securitizations would effectively convert to fixed rate instruments paying the last published value of LIBOR upon a permanent or indefinite cessation of LIBOR. Still other Securitization contracts fall back to another existing published rate, subject to a spot adjustment to the overall rate determined at the time of conversion.

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[7] See the ISDA consultation on fallbacks for derivatives FAQ, "Why do the choices for calculating the "adjusted RFR" not include a forward-looking term rate?"

[8] See "LIBOR Fallbacks In Focus: A Lesson In Unintended Consequences" at https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/may/Oliver%20Wyman%20-%20LIBOR%20Fallbacks%20in%20Focus.PDF.

The ARRC's proposed contract language is meant to provide a more robust process that would allow Securitizations to replace LIBOR with a more economically appropriate replacement rate and spread adjustment.

The Securitization fallback provisions proposed in this consultation try to balance several goals of the ARRC principles described in ***Part I: ARRC Consultation Overview***. Flexible fallback provisions, particularly where one party determines how and/or when a conversion to an alternate rate will occur or what alternate rate will apply, may result in divergent outcomes, disputes, and ambiguity. To provide clarity and consistency, the Securitization fallback proposal therefore uses clear and observable triggers and fallback rates/spread adjustments to the benchmark base rate, subject to some flexibility at the end of the rate waterfall, as described herein.

A particular issue that applies to Securitizations relates to the fact that this product type relies on the cash flow from the underlying assets of the securitization vehicle to support the payments on the securities issued by the securitization vehicle. As a result, any fallback language recommended by the ARRC will need to take into account fallback language of the underlying securitized assets and any considerations the market participants (e.g., the borrowers on the underlying assets) may have with the language. The extent to which the Securitization fallback language is able to be aligned with the fallback language of the underlying assets may vary based on the nature of the underlying assets. As already noted, the special nature of consumer products may point to simpler fallback structures than for other cash products and securitizations of these assets would need to take this in to account. As another example, certain Securitizations may include underlying assets that are created a significant period of time prior to the closing of the related Securitization. That may increase the likelihood of differences in the LIBOR conversion mechanics utilized by the Securitization relative to the conversion mechanics of the underlying assets. This may result in a higher likelihood of cash flow mismatches. Barring a structural feature implemented for the particular transaction, any shortfalls in interest that results from such a mismatch would impact the related securities in the same manner, for example, as an interest shortfall occurring as a result of a default in the payments on the underlying assets.

In addition, there are a number of different asset classes that are part of the securitization market and while there are many similarities among different securitized products, there are also differences in the way they are structured and the legal and regulatory rules that apply to a particular asset class. While the SWG has endeavored to develop fallback language with as broad an applicability as possible, certain of the fallback provisions may not be appropriate for all asset classes. As a result, when providing feedback to the ARRC, it is important to specifically identify the basis for any concerns and whether those concerns are particular to an individual asset class or apply broadly across the securitization market.

> ***Question 1:*** *Which securitization asset classes are you referring to in your response to this consultation if limited to only certain asset classes? If there are particular features of these asset classes that shape your responses to the questions in this survey, please describe them to the extent possible.*

B. Triggers

A "trigger" is an event that signals the conversion from LIBOR (or another "Benchmark")[9] to a new reference rate. The triggers are set out in the "Benchmark Discontinuance Event" definition in the proposal (see Appendix I).

ISDA Triggers

The first and second triggers in the ARRC's proposed Securitization fallback provisions ("Benchmark Discontinuance Event" clauses (1) and (2)) are intended to match the fallback triggers that ISDA anticipates incorporating into the definition (or "floating-rate option") for USD LIBOR in an ISDA published definitional booklet for interest rate derivatives called the "2006 ISDA Definitions." Cleared and uncleared over-the-counter derivatives typically incorporate these or other ISDA definitions and therefore include the terms of the relevant floating-rate option(s). These two triggers apply only upon the actual discontinuation of LIBOR (although in some cases the spreads proposed by ISDA in its consultation would be fixed at the time of an announcement that occurs in advance of actual cessation). If there are any revisions to the ISDA triggers, those revisions will be incorporated in the final ARRC recommendation.

> ***Question 2:*** *The ISDA triggers contemplate a permanent cessation of LIBOR as of a date certain which may be announced in advance (the "Cessation Date"), at which point the transition from LIBOR to SOFR would occur. As there may be operational challenges for securitizations as both assets and liabilities will have to be transitioned, some have asked for the ability to transition in advance of the Cessation Date in order to address any operational issues that may arise. Specifically, the Designated Transaction Representative (as defined in Appendix I) will have the ability to pick one date within a 30-day period prior to the Cessation Date to facilitate an orderly transition. Do you feel the inclusion of this ability to transfer prior to the Cessation Date is needed? If so, please explain the specific, critical and tangible needs that support its inclusion?*

Pre-Cessation Triggers

Participants in the securitization market may want to include one or more of the additional proposed "pre-cessation" triggers ("Benchmark Discontinuance Event" clauses (3), (4), (5) and (6)) in order to transition to a SOFR-based alternative rate in the absence of a permanent discontinuation of LIBOR but prior to the derivatives market transitioning. These pre-cessation triggers are intended to describe events that signal an unannounced stop to LIBOR (clause (3)), a failure by the minimum number of reference banks to provide submissions for LIBOR (clause (4)), regulatory judgment that LIBOR is no longer representative or may no longer be used in new transactions (clause (5)), and a material increase in basis risk caused by the underlying assets of a Securitization having converted to an alternate rate (clause (6)). Note that including any of these pre-cessation triggers in Securitizations could result in basis risk with standard derivatives. As a result, if one or more of these pre-cessation triggers results in a

[9] In the consultation proposal, a "Benchmark" is defined as LIBOR or its successor rate, including any spread adjustments thereto (the "Replacement Benchmark").

transition to a SOFR-based alternative rate occurring with respect to a Securitization, a party seeking to effectively hedge such Securitization may be obligated (for contractual reasons) or may want (for economic reasons) to terminate its LIBOR-linked hedges and re-initiate hedges against SOFR and/or amend its LIBOR-linked hedges so that they reference SOFR. Alternatively, counterparties may be able to add corresponding pre-cessation triggers to their derivatives to avoid this type of basis risk. In its recent consultation, ISDA said that it is considering additional derivatives documentation solutions that may be helpful in addressing the adoption of, and transition to, alternative rates prior to a permanent cessation of LIBOR. In addition, triggers that are applicable only in a certain market (e.g., in circumstances where the UK/EU markets trigger a conversion to SOFR but the US/other markets do not) would also create basis risk.

Failure to Publish for Five (5) Days

The first pre-cessation trigger (clause (3)) occurs if the Benchmark is not published by the Benchmark administrator for five (5) consecutive business days,[10] other than for a temporary reason declared by the administrator or its regulator.[11] As with the two ISDA triggers, in this event there would be no new value of the Benchmark published and thus no value available on screens, but this event is meant to capture the possibility of a failure of the Benchmark that has not been publicly announced as a permanent or indefinite discontinuance as required under one of the first two triggers. However, it would not apply to the cessation of a given Benchmark maturity when the Benchmark is a "middle maturity" that could be interpolated using other maturities (i.e., one maturity that is shorter and one maturity that is longer than the maturity in question) that continue to be published.

Insufficient Number of Submissions

The second pre-cessation trigger (clause (4)) occurs if the administrator of the Benchmark announces that the number of submissions for compiling the Benchmark rate has permanently or indefinitely fallen below the minimum number required by its internal policy. Currently, ICE Benchmark Administration's policy for insufficient submissions for LIBOR is applied when four or fewer panel banks complete submissions for a given currency.[12] Note, however, that the policy can be modified by the administrator.

Not Representative or Prohibition on Use

The third pre-cessation trigger (clause (5)) would occur if the regulator with authority over the administrator of LIBOR (or the relevant Benchmark) announces that the Benchmark is no longer representative or may no longer be used. This trigger is modeled after language of Article 20(3) of the EU Benchmark Regulation to the effect that EU-supervised entities would be prohibited from use of a Benchmark in newly formed contracts if it is determined that the Benchmark is "no longer

[10] Note that this provision does not define a "business day." Rather than hard-wire a definition that may not correspond to the securities or related hedges (or other relevant documents), the parties to a transaction will determine at the time how it should be interpreted relative to the "business day" definition in related hedges or transactions.

[11] If a Benchmark is temporarily unavailable, the last available level will be used unless a Benchmark Discontinuance Event has occurred.

[12] See www.theice.com/publicdocs/ICE_LIBOR_Reduced_Submissions_Policy.pdf

representative of the underlying market or economic reality." In the case of LIBOR, the relevant regulator is the UK Financial Conduct Authority. However, the proposed language also covers such a determination by a regulator having jurisdiction over the Designated Transaction Representative.

Basis Risk

The fourth pre-cessation trigger (clause (6)) is intended to minimize basis risk between securities and the assets underlying these securities by providing that if a certain threshold is met whereby a set percentage of the underlying assets have converted to the Replacement Benchmark or have been replaced by assets bearing interest based on the Replacement Benchmark, the securities will then also convert to the Replacement Benchmark.

This trigger is intended to be tailored to the specifics of a particular Securitization transaction, including the structure of the transaction and the nature of the underlying assets as well as the specific reporting mechanics (i.e., how the Benchmark should be specifically calculated; who should calculate, notify and report the Asset Replacement Percentage; how often and on what date(s)). In addition, different securitized products may wish to revise the Asset Replacement Percentage definition to better fit the particular transaction structure. For example, parties to a managed pool may wish to delete the reference to "Relevant Tenor" because the asset eligibility criteria applicable to the transaction would typically specify tenor requirements for any eligible assets. Finally, there may be certain transactions for which this trigger is inappropriate, such as one that has been specifically designed with LIBOR- based liabilities where the underlying assets bear interest based on another reference rate (e.g., Prime) or on a fixed interest rate, in which the relevant spread between the two was accounted for in the structuring of the transaction.

Questions about Pre-Cessation Triggers

> ***Question 3(a):*** *Should fallback language for Securitizations include any of the pre-cessation triggers (clauses (3), (4), (5) and (6) of the Benchmark Discontinuance Event definition)? If so, which ones? Also, please identify any pre-cessation triggers that you do not believe should be utilized for a particular securitization product and explain why.*
>
> ***Question 3(b):*** *Please indicate whether any concerns you have about these pre-cessation triggers relate to the differences between these securitization triggers and those for standard derivatives or whether your concerns relate specifically to the pre-cessation triggers themselves.*
>
> ***Question 3(c)****: If you believe that the pre-cessation trigger in clause (6) (Asset Replacement Percentage) should not be retained, please note any specific concerns leading to this conclusion. If you believe that it should be retained, are there any changes you believe should be made to this trigger? Please explain.*
>
> ***Question 3(d)****: If you believe the pre-cessation trigger in clause (6) (Asset Replacement Percentage) should be retained, how would you address concerns that it could result in a transfer of value in a transaction where the Designated Transaction Representative has the ability to change the benchmark used on the underlying assets and, as a result, determine the timing of this pre-cessation trigger? Are there other changes that should be made to the Asset Replacement Percentage trigger? Note that this trigger relates to*

a mismatch between the securities and the Securitization assets that results from changes in the assets. A mismatch may also arise from a change in the securities due to a trigger event under these fallback provisions. Any concerns with the latter scenario can be addressed in responses to Question 16.

Question 3(e): *If pre-cessation triggers are not included, are there options available to market participants to manage the potential risks involved in continuing to reference a Benchmark in the circumstances contemplated by each of these pre-cessation triggers?*

C. Benchmark Replacement Date

For several triggers, the date of the announcement of LIBOR discontinuance and the actual Benchmark Replacement Date may be significantly different. For instance, for the Benchmark Discontinuance Event identified in clause (1) and (2) of that definition, the Benchmark Replacement Date is the later of (i) the date of the statement or publication of information and (ii) the date on which the administrator permanently or indefinitely ceases to provide such Benchmark. For the Benchmark Discontinuance Event identified in clause (4) of that definition, the Benchmark Replacement Date is the later of (i) the date of the public statement or publication of information and (ii) the date that the insufficient submissions policy is invoked. For the Benchmark Discontinuance Event identified in clause (5) of that definition, the Benchmark Replacement Date is the later of (i) the date of the public statement and (ii) the date as of which the Benchmark may no longer be used.

If there is a significant period of time between the announcement of LIBOR discontinuance and the Benchmark Replacement Date, there may be operational benefits to permitting the Designated Transaction Representative to transition the securities away from LIBOR earlier than on the actual Benchmark Replacement Date. In order to seek market opinion on this matter, the draft fallback language in this consultation includes bracketed language at the end of the Benchmark Replacement Date definition. Any operational benefits of this approach should be analyzed with the understanding that an earlier effective date may not coincide with the date on which the related assets or related hedges (if any) transition from LIBOR.

Question 4: *Should the proposed securitization fallback language permit the Designated Transaction Representative to transition the securities after a trigger has occurred but before the Benchmark Replacement Date? Should any limitations be placed on its use? Should there be a limited date range (e.g., 60 days) prior to the Benchmark Replacement Date in which this could be used? Should the Designated Transaction Representative be limited in the circumstances under which it could elect to utilize the additional time? If so, what standard should be utilized to assess whether the additional time is necessary? In each case, please explain why.*

D. Replacement Benchmark

In the proposed contract language in this consultation, on the "Benchmark Replacement Date," which may be on or after the occurrence of one of the triggers, references to LIBOR will be replaced by references to an alternative rate. As described below, the proposed Securitization fallback provisions contain a waterfall within the defined term "Replacement Benchmark" to select the particular successor

rate to be used. (Note that the defined term “Replacement Benchmark” in the Securitization proposal encompasses the spread adjustment, which is discussed separately below; the defined term for the rate prior to adjustment is “Replacement Base Rate”.) The table below displays the Securitization fallback Replacement Benchmark waterfall. The approach outlined in the table differs from earlier FRNs and Syndicated Loans consultations in that it does not propose Spot SOFR + a Spread as a third level of the Replacement Benchmark waterfall. Given ISDA’s announcement concerning the results of its consultations for other currencies, it now seems more likely that ISDA would choose to fallback to a compounded SOFR rather than overnight SOFR for USD LIBOR. Further, the responses to the FRNs and Syndicated Loans consultations indicated substantial concerns with use of overnight SOFR as a potential fallback in the waterfall.

Securitizations Replacement Benchmark Waterfall
***Step 1*: Term SOFR recommended by Relevant Governmental Body + Spread**
***Step 2*: Compounded SOFR + Spread**
***Step 3*: Replacement rate recommended by Relevant Governmental Body + Spread**
***Step 4*: Replacement rate in then-current ISDA Definitions[13] + Spread**
***Step 5*: Replacement rate proposed by the Designated Transaction Representative + Spread**

Step 1: Forward-Looking Term SOFR

The first priority for the Replacement Base Rate is a forward-looking term SOFR (e.g., one-month SOFR, three-month SOFR, etc.) that is selected, endorsed or recommended by the Relevant Governmental Body. While there is currently no commitment by a regulatory authority or third party to publish forward-looking term SOFR rates, the ARRC intends to endorse forward-looking term SOFR rates provided a consensus among its members can be reached that a robust, IOSCO-compliant term[14] benchmark that meets appropriate criteria set by the ARRC can be produced. As described in Appendix III, derivatives are expected to reference overnight versions of SOFR and therefore are expected to fall back to a compounded average of the overnight rate rather than a forward-looking term rate. Market participants that execute interest rate hedges may prefer to fall back to the same rate that becomes operative under the ISDA definitions even if a term SOFR is available.

In the event that a trigger occurs and at the time of the replacement, forward-looking term SOFR rates exist - but not for a maturity matching the existing LIBOR maturity - then the proposed fallback provisions attempt to identify an interpolated SOFR term rate, using the available SOFR term periods

[13] The alternative rate would be determined by the ISDA Definitions in effect as of the replacement and for the Benchmark being replaced, as discussed below.

[14] Prior to 2016, global groups focusing on benchmark reform had noted the need for more robust fallback provisions in derivatives and other financial instruments. Principle 13 of the *IOSCO Principles for Financial Benchmarks* provides that users should be encouraged by administrators to “take steps to make sure that contracts or other financial instruments that reference a benchmark have robust fallback provisions in the event of [cessation of] the referenced benchmark.” See https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf, page 24.

(e.g., create a three-month SOFR from one-month and six-month SOFR). However, it is possible in these circumstances that other SOFR term periods may also be unavailable which would make interpolation impossible.

> ***Question 5(a):*** *If the ARRC has recommended a forward-looking term rate, should that rate be the primary fallback for the securities referencing LIBOR even though derivatives are expected to reference overnight versions of SOFR? Please explain why.*
>
> ***Question 5(b):*** *Is there a specific reason that the securitization market should first fall back to forward-looking term SOFR instead of another rate? Please explain why.*
>
> ***Question 5(c):*** *Is the use of an Interpolated Period appropriate in the securitization markets? Please explain any limitations that should be applied to the use of an Interpolated Period.*
>
> ***Question 5(d):*** *In the event a Replacement Benchmark is determined other than under Step 1 of the waterfall, should the waterfall provide that the Replacement Benchmark be changed in the future as soon as a rate can be established under Step 1 of the waterfall?*

Step 2: Compounded SOFR

If the Replacement Benchmark cannot be determined as of the Benchmark Replacement Date under Step 1, then the second priority in the waterfall is Compounded SOFR. "Compounded SOFR" is defined in the proposal as a compounded average of daily SOFR calculated over a Relevant Tenor or Interpolated Period, as applicable, for the relevant compounding period ("in advance" or "in arrears," as discussed below) for the relevant period of days/months (e.g., one-month, three months, etc.) depending on the term of the Benchmark being replaced.[15]

The proposal prescribes the method for compounding daily SOFR by referring to the *methodology* used in the ISDA definition of USD-SOFR-COMPOUND, but the actual Replacement Base Rate that goes into effect at this order of priority is not the USD-SOFR-COMPOUND itself (which contains other fallbacks imbedded in the terms of that rate, as discussed below). If there is an eligible source that calculates and publishes Compounded SOFR in this manner, that rate would be used. Otherwise, one of the parties to the transaction (or a third party) would need to calculate Compounded SOFR according to that method.

If Compounded SOFR is being used (whether published or calculated), the rate will either: (i) be calculated over the relevant interest period for the Securitization with a lock up period prior to the end of the interest period, in which case the rate will not be known at the start of the interest period ("in arrears") or (ii) be calculated at the start of the interest period using the historic Compounded SOFR rate for the period that ends immediately prior to that date (this payment structure is often termed "in advance" since the accrual rate is determined in advance). The different methodologies each have advantages and disadvantages. For example, the "in arrears" approach reflects actual daily interest rate movements during the relevant period and captures factors that have the potential to move rates, such as the market pricing in a potential rate increase by the Federal Reserve. However, when utilizing the

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[15] An example of a compounded (geometric) average of SOFR can be found at https://apps.newyorkfed.org/markets/autorates/~/media/b0b4d847295143f9858c6fb946412f00.ashx

"in arrears" methodology, the information needed to determine the rate is not available at the start of the relevant period, creating operational challenges from a timing perspective as the interest rate will have to be calculated on or near the payment date. In addition, actual interest rate movements may not reflect the prior expectations of interest rate movements over the interest period. The "in advance" methodology is set in advance so it is available at the beginning of the interest period and reflects actual daily interest-rate movements over a comparable period. However, the rate is inherently backward looking and does not take into account future expectations of interest-rate movements by market participants, which may prove problematic in an upward sloping yield curve as it will track behind the market. To illustrate, LIBOR is a term rate based on expectations as to the future direction of the rate. Therefore, LIBOR would be expected to capture the potential, for example, of an interest-rate increase by the Federal Reserve on a going-forward basis, whereas the "in advance" methodology, given that it's backward looking, may not incorporate the possibility of such an increase.

> ***Question 6(a):*** *Should Compounded SOFR be the second step in the waterfall? Would this preference be influenced by whether ISDA implements fallbacks referencing Compounded SOFR or overnight SOFR?*
>
> ***Question 6(b):*** *If you believe that Compounded SOFR should be included, which compounding period is preferable ("in arrears" or "in advance")? Please explain why. Would this preference be influenced by whether ISDA implements fallbacks referencing Compounded SOFR "in arrears" or "in advance?" Please explain whether your preference is based on operational concerns in implementing a particular approach or on economic concerns.*
>
> ***Question 6(c):*** *If it was necessary to calculate Compounded SOFR and a third party was not available to perform those calculations, are there parties to the Securitization transactions with sufficient resources to perform those calculations accurately and efficiently? Are there other considerations relating to the calculation of Compound SOFR that would make it an undesirable Replacement Benchmark without the availability of a third party provider?*

Step 3: ARRC Replacement Rate

If the Replacement Benchmark cannot be determined under Step 2, the third priority of the proposed waterfall is a replacement benchmark selected, endorsed or recommended by the Relevant Governmental Body. This language mirrors the first fallback for SOFR embedded in the ISDA definitions. The rationale is that if a SOFR-based rate is discontinued, it is possible that a committee similar to the ARRC would be formed to recommend a replacement for such SOFR-based rate.

> ***Question 7:*** *As noted, this consultation does not include Spot SOFR as a third step in the waterfall. Do you believe that Spot SOFR is an appropriate fallback reference rate for Securitization contracts or should the second step in the replacement rate waterfall be Compounded SOFR , after which the replacement rate would be, first, recommended by the Relevant Governmental Body, second, default to then-current ISDA Definitions, and third, proposed by the Designated Transaction Representative?*

> ***Question 8:*** *In the future circumstance where there is no SOFR-based fallback rate, is the replacement rate determined by the Relevant Governmental Body the best alternative at this level of the waterfall? Please explain why.*

<u>*Step 4: ISDA Fallback for SOFR*</u>

If the Replacement Benchmark cannot be determined under Step 3, the alternative rate would be determined according to the ISDA Definitions in effect at the time and the Benchmark being replaced. For example, if "term SOFR" was being replaced and, at that time, the ISDA Definitions included a definition with fallbacks for "term SOFR," then those fallbacks would apply. Current ISDA Definitions only include a definition for compounded SOFR (described above). Accordingly, the current ISDA fallback rates at this level of the waterfall would first be the Overnight Bank Funding Rate and then the FOMC Target Rate, both of which are overnight rates.

> ***Question 9:*** *In the future circumstance where there is no SOFR-based fallback rate and the Relevant Governmental Body has not recommended a replacement rate for Securitizations, is the fallback for SOFR-linked derivatives set forth in the ISDA definitions at the time of cessation the best alternative at this level of the waterfall? Is this fallback appropriate if ISDA Definitions only include overnight fallback rates? Please explain why.*

<u>*Step 5: Proposed Replacement Benchmark*</u>

If the Replacement Benchmark cannot be determined under any of Steps 1 through 3 above and either (a) the Replacement Benchmark cannot be determined under Step 4 above or (b) the Designated Transaction Representative determines in its sole discretion that the Replacement Benchmark determined under Step 4 above is not an industry-accepted successor rate for determining the rate of interest for securitization issuances at that time, then the Designated Transaction Representative would propose a Replacement Benchmark (referred to as the "Proposed Replacement Benchmark," which includes both the replacement rate and replacement spread). In effect, this provision gives the Designated Transaction Representative the ability to over-ride a Replacement Benchmark that is based upon the ISDA fallback or to designate a Replacement Benchmark in the highly unlikely scenario where there is no ISDA fallback. The Proposed Replacement Benchmark would be subject to investor approval or veto. The specific provisions relating to the manner in which security holders would approve or veto the Proposed Replacement Benchmark would be determined by the transaction parties for a particular Securitization, and may have to be specifically tailored to the decisions under Step 5. In considering any benefit provided under Step 5, consideration should be given to the voting mechanics that would have to be utilized, including the inherent difficulties in managing a voting process when the securities are held in book entry form in DTC or another depository and the appropriate percentage of security holders to consent or veto the Proposed Replacement Benchmark.

If approved in accordance with the mechanics provided for in the particular Securitization, the Proposed Replacement Benchmark will go into effect. If rejected, the Interim Benchmark would remain as the Replacement Benchmark, unless at that time another Replacement Benchmark "higher in the waterfall" has become available (a so-called "re-testing" of the waterfall). For ease of reference, see the diagram on Appendix IV that illustrates the operation of the fallback language relating to the Interim Benchmark and the Proposed Replacement Benchmark, as set forth in Clause (5) of the "Replacement Benchmark" definition and paragraph (3) under "Inability to Determine Benchmark."

> ***Question 10(a)**: Since it is unlikely that there will be no ISDA fallback (clause (a) above), this provision is more likely to occur (if at all) when the ISDA fallback is deemed not appropriate for securitization securities (clause (b) above). In that scenario, is this provision appropriate as the final step in the Replacement Benchmark waterfall? Please explain why.*
>
> ***Question 10(b)**: Should the provision allow for "re-testing" the waterfall to determine whether another Replacement Benchmark has become available in the scenario where investors have rejected the Proposed Replacement Benchmark? Should the waterfall be re-tested in any other circumstances (e.g., any time the Replacement Benchmark has been determined under a "less-desirable" clause)? How often? Please explain why.*

E. <u>Replacement Benchmark Spread</u>

As described above in ***Part I: ARRC Consultation Overview***, LIBOR and SOFR are different rates and thus the transition to SOFR will require a "spread adjustment" to produce more comparable rate levels. The proposed fallback language provides for a spread adjustment (which may be a positive or negative value or zero) to be included in the determination of any Replacement Benchmark. The particular spread adjustment to be used is selected at the time that the Replacement Benchmark is selected according to a waterfall in the definition of "Replacement Benchmark Spread."

Note that a single adjustment (or methodology) is determined at the time of replacement for each tenor of the replacement benchmark to encompass all credit, term and other adjustments that may be appropriate for that tenor. The table below displays the Securitizations spread waterfall:

Securitizations Replacement Benchmark Spread Waterfall
Step 1: Spread recommended by Relevant Governmental Body
Step 2: Spread in fallbacks for derivatives in ISDA definitions

There are various methodologies currently being discussed as potential methods for determining the spread adjustment, including, among others, those described below that were part of the ISDA consultation that recently concluded. In addition, current market practice for a number of legacy securitized products with existing fallback language is to determine the spread adjustment based on the difference between LIBOR and the Replacement Benchmark at the time of conversion, a so-called "spot rate comparison."

> ***Question 11**: Are there any concerns if a spread adjustment was utilized with cash products that was calculated by a spot rate comparison of the difference between LIBOR and the Replacement Base Rate at the time of conversion? Should this option be included in the spread waterfall? If so, where?*

<u>Step 1: ARRC Spread Adjustment</u>

The first priority of the proposed waterfall is a spread adjustment (or its methodology) selected, endorsed or recommended by the Relevant Governmental Body. If participants in cash markets conclude that it is useful to market functioning for the ARRC to recommend one or more spread adjustments for selected cash products, the ARRC could elect to recommend a spread adjustment.

Under the proposed waterfall in this consultation, if the ARRC does recommend a spread adjustment, it is this adjustment that would be incorporated.

> ***Question 12:*** *Do you believe that the ARRC should consider recommending a spread adjustment that could apply to cash products, including Securitizations?*

Step 2: ISDA Spread Adjustment

If there is no such spread adjustment selected, endorsed, or recommended by the Relevant Governmental Body available, the second priority in the waterfall is a spread adjustment (or its methodology) applicable to fallbacks for derivatives that ISDA anticipates implementing in its definitions. Note that the ISDA spread adjustment for SOFR derivatives will be intended for use with the particular version of the fallback rate selected by ISDA based upon the outcome of its consultation (e.g., a compounded average of the overnight rate). However, ISDA has not analyzed, and will not analyze, whether the fallbacks it anticipates implementing, including spread adjustments in the fallbacks, would be appropriate for non-derivatives.

As discussed in ***Part I: ARRC Consultation Overview***, any spread adjustment for derivative fallbacks in the ISDA definitions will become effective only upon a permanent discontinuance of USD LIBOR (although in some cases the spreads proposed by ISDA in its consultation would be fixed at the time of the occurrence of the trigger, which could be much earlier). However, ISDA anticipates that a third party vendor will eventually publish the spread adjustment on a daily basis up until the time an ISDA trigger event has occurred. In that case, the ISDA spread adjustment could be utilized in connection with a Securitization "pre-cessation" trigger prior to transition of the derivatives market. However, that spread adjustment will be different than the spread for derivatives, which will be determined at the time of a permanent cessation.

> ***Question 13(a):*** *Is a spread adjustment applicable to fallbacks for derivatives under the ISDA definitions appropriate as the second priority in the spread waterfall? Please explain why.*
>
> ***Question 13(b):*** *If the ARRC has recommended a forward-looking term SOFR but has not recommended a corresponding spread adjustment under Step 1 above, do you believe that the ISDA spread adjustment described in Step 2 (which may be intended to apply to a different Replacement Base Rate) should apply to Securitizations? Please explain why.*
>
> ***Question 13(c):*** *Given that ISDA has not yet decided upon the spread calculation methodology[16], should Step 2 be excluded from the waterfall? Please explain why.*

F. Responsibility for Calculations

In general, the Securitization fallback proposal provides detail about a trigger, rate or spread in order to minimize the exercise of discretion in the event of a LIBOR cessation and the need for interpretative guidance from courts. Such an outcome could result in a large number of disputes and increase systemic risk, which would not be in the best interests of the market. Nonetheless, there will still need to be a

[16] See Appendix III and preliminary results of the ISDA consultation.

discussion among issuers, sponsors, servicers, managers, and agents, and perhaps other third parties, to agree on, for example, who will determine whether a Benchmark Discontinuance Event has occurred and what is the applicable Replacement Base Rate and Replacement Benchmark Spread. The proposal uses the placeholder defined term "Designated Transaction Representative" to allow the parties to a transaction to assign responsibility for making such determinations to the party most appropriate in the specific transaction and in a manner that is consistent with other provisions of their transaction. In addition, the proposal provides some flexibility at the end of the waterfalls for the Designated Transaction Representative to exercise discretion to make a determination with respect to the Proposed Replacement Benchmark.

> ***Question 14(a):*** *What type of institution can and should take on the responsibility to (i) determine whether the proposed triggers have occurred, (ii) select screens where reference rates or spreads are to be found, (iii) make calculations of a rate or spread in the absence of published screen rates, (iv) interpolate term SOFR if there is a missing middle maturity and/or (v) elect to cause an early transition under the proviso to the definition of Benchmark Replacement Date?*
>
> ***Question 14(b):*** *Whether as issuer, sponsor, servicer or calculation agent, would your institution be willing to (i) determine whether the proposed triggers have occurred, (ii) select screens where reference rates or spreads are to be found, (iii) make calculations of a rate or spread in the absence of published screen rates, (iv) interpolate term SOFR if there is a missing middle maturity and/or (v) elect to cause an early transition under the proviso to the definition of Benchmark Replacement Date?*

G. General Feedback

> ***Question 15:*** *Is there any provision in the proposal that would significantly impede Securitization issuances? If so, please provide a specific and detailed explanation.*
>
> ***Question 16:*** *Given the fallback language for the Securitization and the underlying assets may operate independently, please identify any sources of misalignment between those components that are not addressed in the consultation.*
>
> ***Question 17***: Are there specific operational challenges that implementing the proposed fallback language might create for securitizations? If so, what are those challenges and under what circumstances might they occur? How might they be mitigated?
>
> ***Question 18:*** Please provide any additional feedback on any aspect of the proposal.

H. Response Procedures/ Next Steps

Market participants may submit responses to the consultation questions by email to the ARRC Secretariat (arrc@ny.frb.org) no later than February 5, 2019. Please coordinate internally and provide only one response per institution. Please attach your responses in a PDF document and clearly indicate "Consultation Response – Securitizations" in the subject line of your email. Comments will be posted on the ARRC's website as they are received without alteration except when necessary for technical reasons. Comments will be posted with attribution unless respondents request anonymity. If your institution is

requesting anonymity, please clearly indicate this in the body of your email and please ensure that the PDF document you submit is anonymized. Questions regarding the consultations should also be sent to the ARRC Secretariat (arrc@ny.frb.org) and will not be posted for attribution.

Following this market-wide consultation, the ARRC plans to recommend fallback language for Securitizations for voluntary adoption in the marketplace. The expectation is that market participants will choose whether and when to begin using the Securitization fallback language in new issuances of LIBOR transactions as they deem appropriate.

APPENDIX I

DRAFT FALLBACK LANGUAGE FOR NEW ISSUANCES OF LIBOR SECURITIZATIONS

Inability to Determine Benchmark

(1) *Prior to Benchmark Replacement Date*. If the Benchmark cannot be determined as of the Reference Time on any date of determination, the Benchmark for that date shall be the Benchmark as of the first preceding day for which the Benchmark was determined unless (a) such Benchmark can be determined using an Interpolated Period or (b) a Benchmark Replacement Date shall have occurred prior to such Reference Time. For purposes of the preceding clause (b), if a Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time for any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

(2) *Following a Benchmark Replacement Date*. If a Benchmark Replacement Date shall have occurred prior to the Reference Time for any determination of the Benchmark, the Replacement Benchmark shall be selected and such determination and all subsequent determinations will be made using the Replacement Benchmark as of the Reference Time for such Replacement Benchmark, except if the following paragraph (3) is applicable.

(3) *Proposed Replacement Benchmark.* This paragraph (3) shall be applicable if and when required by clause (5) of the definition of "Replacement Benchmark."

The Designated Transaction Representative may in its sole discretion (in the case of clause (5)(a) of the definition of "Replacement Benchmark") and shall (in the case of clause (5)(b) of such definition) select a Proposed Replacement Benchmark, in which case it shall give written notice to the securityholders not later than the third business day following the Benchmark Replacement Date specifying such benchmark and the terms of this paragraph (3). The securityholders shall have the right to [approve][veto] the Proposed Replacement Benchmark prior to the Interim Benchmark Expiration Date [in accordance with the [*voting provisions*]].[17] *Choose [A] or [B]*: [A] If the securityholders have approved the Proposed Replacement Benchmark, it shall become the Replacement Benchmark on the first interest rate reset date following the date on which the results of the securityholder vote are final.[18] [B] If the securityholders have not vetoed the Proposed Replacement Benchmark by the Interim Benchmark Expiration Date, it shall become the Replacement Benchmark on the first interest rate reset date on or following the Interim Benchmark Expiration Date.

If the securityholders have [A: not approved][B: vetoed] the Proposed Replacement Benchmark by the Interim Benchmark Expiration Date, then the Replacement Benchmark shall be determined in

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[17] Details regarding whether securityholders have a right of consent or veto, the requisite percentage, etc. could be included in this language OR could vary in individual transaction documents.

[18] The intent here is that if the investors have approved the rate, it can become applicable on a reset date that occurs sooner than the Interim Benchmark Expiration Date.

accordance with the definition thereof without regard to clause (5) thereof (as if the Interim Benchmark Expiration Date were the Benchmark Replacement Date); provided that if the Replacement Benchmark cannot be determined in accordance with clause (1), (2), (3) or (4) of such definition, then the Replacement Benchmark shall be the Interim Benchmark selected as of the Interim Benchmark Expiration Date.

(4) _Certain Defined Terms_. As used in this section "*Inability to Determine Benchmark*," the following terms shall have the following meaning:

"Asset Replacement Percentage" means, on any date of calculation, a fraction (expressed as a percentage) where the numerator is the outstanding principal balance of the assets that were indexed to the Replacement Benchmark [for the Relevant Tenor] as of such calculation date and the denominator is the outstanding principal balance of the assets as of such calculation date.

"*Benchmark*" means, initially, LIBOR; provided that if a Benchmark Replacement Date shall have occurred with respect to the then applicable Benchmark (including, but not limited to, LIBOR), then the term "Benchmark" shall mean the applicable Replacement Benchmark.

"Benchmark Discontinuance Event" means the occurrence of one or more of the following events with respect to the Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the central bank for the currency of the Benchmark, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(3) a Benchmark rate is not published by the Benchmark administrator for five consecutive business days and such failure is not the result of a temporary moratorium, embargo or disruption declared by the Benchmark administrator or by the regulatory supervisor for the Benchmark administrator;

(4) a public statement or publication of information by the administrator of such Benchmark that it has invoked or will invoke, permanently or indefinitely, its insufficient submissions policy;

(5) a public statement by the regulatory supervisor for the administrator of the Benchmark [or another regulator or Governmental Authority with jurisdiction over the Designated Transaction Representative] announcing that such Benchmark is no longer representative or may no longer be used; or

(6) the Asset Replacement Percentage is greater than [50]%, as reported in the most recent servicer report.

"Benchmark Replacement Date" means:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement or publication of information and (b) the date on which the administrator of the relevant Benchmark permanently or indefinitely ceases to provide such Benchmark,

(2) for purposes of clause (3) of the definition of "Benchmark Discontinuance Event," the first business day following such five consecutive business days,

(3) for purposes of clause (4) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement or publication of information and (b) the date such insufficient submissions policy is invoked,

(4) for purposes of clause (5) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement and (b) the date as of which the Benchmark may no longer be used (or, if applicable, is no longer representative), and

(5) for purposes of clause (6) of the definition of "Benchmark Discontinuance Event," the [X] business day following the date of such servicer report;

[provided, however, that on or after the 60th day preceding the date on which such Benchmark Replacement Date would otherwise occur (if applicable), the Designated Transaction Representative may give written notice to securityholders in which the Designated Transaction Representative designates an earlier date (but not earlier than the 30th day following such notice) and represents that such earlier date will facilitate an orderly transition of the transaction to the Replacement Benchmark, in which case such earlier date shall be the Benchmark Replacement Date.[19]]

"Compounded SOFR" means a compounded average of daily SOFR calculated over a Relevant Tenor or Interpolated Period, as applicable, that ends on the second New York business day preceding the [first][last][20] day of the applicable interest period, compounded according to the provisions describing the methodology for compounding set forth under "USD-SOFR-COMPOUND" of the ISDA Definitions.

"Designated Transaction Representative" means, with respect to a particular Securitization transaction and a particular obligation to be performed in connection with the transition to a Replacement Benchmark, the party identified by the transaction documents to perform that obligation.[21]

"Federal Reserve Bank of New York's Website" means the website of the Federal Reserve Bank of New York at http://www.newyorkfed.org, or any successor source.

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[19] This proviso is optional. Transaction parties may prefer not to use it if, e.g., it would raise tax issues in a REMIC transaction or otherwise.

[20] The decision whether this definition will refer to a compounding period done "in advance" or "in arrears" will be made based on the results of this consultation.

[21] The terms of the transaction documents will identify a specific transaction party that will be responsible for the specified duties of the Designated Transaction Representative.

"Governmental Authority" means the government of the United States of America, any other nation or any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government.

"Interim Benchmark" means:

(1) in the case of clause (5)(a) of the definition of "Replacement Benchmark," [the Benchmark as of the last preceding day for which the Benchmark was determined][22] and

(2) in the case of clause (5)(b) of the definition of "Replacement Benchmark," the ISDA Fallback Rate plus the applicable Replacement Benchmark Spread.

"Interim Benchmark Expiration Date" means the [90th] day following the Benchmark Replacement Date.

"Interpolated Period" with respect to a Benchmark means the period determined by interpolating on a linear basis between: (1) such Benchmark for the longest period (for which such Benchmark is available) that is shorter than the Relevant Tenor and (2) such Benchmark for the shortest period (for which such Benchmark is available) that is longer than the Relevant Tenor.

"ISDA" means the International Swaps and Derivatives Association, Inc. or any successor thereto.

"ISDA Definitions" means the 2006 ISDA Definitions published by ISDA, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published by ISDA from time to time.

"ISDA Fallback Rate" means the rate to be effective upon the occurrence of an "index cessation event" with respect to the Benchmark according to (and as described in) the ISDA Definitions, where such rate may have been adjusted for a tenor equal to the Relevant Tenor or Interpolated Period, but without giving effect to any additional spread adjustment to be applied according to such ISDA Definitions.

"***LIBOR***" means, with respect to any date of determination, the rate as published by Bloomberg Financial Markets Commodities News (or any successor source), for Eurodollar deposits for the Relevant Tenor that are compiled by the ICE Benchmark Administration or any successor thereto, as of the applicable Reference Time.[23]

"Proposed Replacement Benchmark" means, as of the Benchmark Replacement Date, the rate selected by the Designated Transaction Representative in good faith as an alternate rate of interest plus a spread adjustment, or method for calculating or determining the spread adjustment (which spread adjustment may be a positive or negative value or zero) that produces an industry-accepted successor rate for securitization issuances at such time.

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[22] This clause (1) is a placeholder that can be replaced in the transaction documents with the Prime Rate or any other rate that will apply during the interim period or, absent securityholder approval under Paragraph (3) above, permanently.

[23] This definition is included as an example for illustrative purposes only. Industry participants should consider defining "LIBOR" consistent with market convention for their particular asset sector at the time of deal issuance.

"Reference Time" with respect to any determination of a Benchmark means (1) in the case of LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such determination, (2) in the case of a forward-looking term SOFR, [as [published at] approximately 3:00 p.m. (New York time)] on the day that is [two New York] business days preceding the date of such determination, and (3) in the case of any other Benchmark, [as of approximately 8:00 a.m. (New York time)] on the day that is [two New York] business days preceding the date of such determination.

"Relevant Governmental Body" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"Relevant Tenor" means (1) with respect to LIBOR, [X months/days] and (2) with respect to any Replacement Benchmark, the period or maturity (including overnight) having approximately the same length (disregarding business day adjustments) as the Relevant Tenor for LIBOR.

"Replacement Base Rate" means the Replacement Benchmark excluding the applicable Replacement Benchmark Spread.

"Replacement Benchmark" means:

(1) the sum of: (a) the forward-looking term SOFR rate for the Relevant Tenor (or, if there is no SOFR rate for the Relevant Tenor, such rate for the Interpolated Period) that shall have been selected, endorsed or recommended as the forward-looking term SOFR for such Relevant Tenor by the Relevant Governmental Body and (b) a Replacement Benchmark Spread, if any; provided that:

(2) if the Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) above, then the Replacement Benchmark shall be the sum of: (a) Compounded SOFR and (b) the applicable Replacement Benchmark Spread, if any; provided, further, that:

(3) if the Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) or (2) above, then the Replacement Benchmark shall be the sum of: (a) such other alternate, substitute or successor rate as shall have been selected, endorsed or recommended by the Relevant Governmental Body as the replacement for such Replacement Benchmark, and (b) the applicable Replacement Benchmark Spread, if any; provided, further, that:

(4) [if the Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clause (1), (2) or (3) above, then the Replacement Benchmark shall be sum of: (a) the ISDA Fallback Rate and (b) the applicable Replacement Benchmark Spread, if any; provided, further, that:]

(5) [if, as of the Benchmark Replacement Date, the Replacement Benchmark cannot be determined in accordance with clause (1), (2) or (3) above and (a) the Replacement Benchmark cannot be determined in accordance with clause (4) above or (b) the Designated Transaction Representative or its designee shall have determined in its sole discretion that the Replacement Benchmark determined in accordance with clause (4) above is not an industry-accepted successor rate for determining the rate of interest as a replacement to the Benchmark for securitization issuances at

such time, then the Replacement Benchmark shall be the Interim Benchmark unless and until otherwise required by paragraph (3) under "Inability to Determine Benchmark."]

"Replacement Benchmark Spread" means, in respect of any interest reset date:

(1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that shall have been selected, endorsed or recommended by the Relevant Governmental Body for the applicable Replacement Base Rate, provided that:

(2) if the Replacement Benchmark Spread cannot be determined as of the Benchmark Replacement Date in accordance with clause (1), then the Replacement Benchmark Spread shall be the spread adjustment, or method for calculating or determining the spread adjustment, (which may be a positive or negative value or zero) ("ISDA Spread Adjustment") that shall have been selected by ISDA as the spread adjustment that would apply to the ISDA Fallback Rate.

"***SOFR***" means the daily Secured Overnight Financing Rate provided by the Federal Reserve Bank of New York, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's Website.

APPENDIX II

SUMMARY OF THE PACED TRANSITION PLAN

To facilitate a smooth and orderly transition from USD LIBOR to SOFR, the ARRC published a plan (the Paced Transition Plan), which outlines the key milestones until the end of 2021.

The first step in the Paced Transition Plan, targeted for 2018 and early 2019, is focused on creating a baseline level of liquidity for derivatives contracts referencing SOFR. End users cannot be expected to choose or transition cash products to a benchmark that does not have at least a threshold level of liquidity in derivatives markets required for hedging of interest rate risk.

The second step planned for over the course of the year 2019 is increased trading activity in futures and overnight index swap ("OIS") markets which should foster accumulation of price histories that will help market participants develop an understanding of the term-structure dynamics of longer-dated exposures in SOFR. This would allow central counterparty clearing houses ("CCPs") to provide their members with a choice of clearing some instruments with discounting and price alignment interest based on SOFR by the first quarter of 2020. CCPs would then gradually lengthen the maturity of contracts allowed to clear into the new environment as liquidity in longer-term SOFR derivatives developed.

Finally, in 2021, once the initial steps of the Paced Transition Plan are successfully accomplished and liquid derivative markets referencing SOFR have developed, the final step in the Paced Transition Plan is the creation of forward-looking term reference rates based on SOFR-linked derivative markets. (While it is the last step in the Paced Transition Plan, it is very possible that the term reference rates will be developed well earlier than the end of 2021.) Availability of a forward-looking term structure for SOFR may be necessary to transition cash products from USD LIBOR to SOFR to ensure certainty of cashflows for retail and corporate end users. With the availability of SOFR term rates and liquid derivative markets, it is expected it will be possible to use SOFR for cash products before the end of 2021.

Subsequent to the publication of SOFR on April 3, 2018, a number of notable steps in line with the Paced Transition Plan have already been made by the industry. These include CME Group successfully launching 1-month and 3-month SOFR futures on May 7, 2018, clearing of SOFR OIS and basis swaps at LCH beginning July 18, 2018, the release of an "indicative" 3-month SOFR on July 19, 2018, the announcement that CME Group would clear SOFR swaps in the third quarter of 2018, and several SOFR bond issuances in July and August of 2018.

APPENDIX III

SUMMARY OF ISDA'S APPROACH TO FALLBACKS FOR DERIVATIVES

At the request of the Financial Stability Board ("FSB") Official Sector Steering Group ("OSSG") ISDA intends to amend certain "floating-rate options" in the 2006 ISDA Definitions to include fallbacks that would apply upon the permanent discontinuation of certain key IBORs, including USD LIBOR. As it has done previously, ISDA plans to amend the 2006 ISDA Definitions by publishing a "Supplement" (or "Supplements"). Upon publication of the Supplement for the relevant IBOR, transactions incorporating the 2006 ISDA Definitions that are entered into on or after the date of the Supplement (*i.e.,* the date that the 2006 ISDA Definitions are amended) will include the amended floating-rate option (*i.e.,* the floating-rate option with the fallback). Transactions entered into prior to the date of the Supplement (so called "legacy derivative contracts") will continue to be based on the 2006 ISDA Definitions as they existed before they were amended pursuant to the Supplement, and therefore will not include the amended floating-rate option with the fallback.

ISDA also expects to publish a protocol (or protocols) to facilitate multilateral amendments to include the amended floating-rate options, and therefore the fallbacks, in legacy derivative contracts for adhering parties. The fallbacks included in legacy derivative contracts by adherence to the protocol will be exactly the same as the fallbacks included in new transactions that incorporate the 2006 ISDA Definitions.

ISDA hopes to implement fallbacks for derivatives as described above in 2019. Exact timing is still uncertain and implementation timing may not be the same for all IBORs.

In July of 2018, ISDA launched a global consultation on certain aspects of fallbacks for derivatives referencing key IBORs. The purpose of the ISDA consultation is to determine the technical approach for calculating adjustments to the underlying fallback rates and spread adjustments that would apply if an IBOR is permanently discontinued and derivatives fallbacks are triggered. While the ISDA consultation pertains to GBP, JPY and CHF LIBOR derivatives, it will inform a subsequent consultation for USD LIBOR-based derivatives. The comment period of the consultation closed on October 22nd and ISDA published a statement summarizing the preliminary results of its consultation on November 27, 2018.

As explained in ISDA's FAQs on the consultation, it is intended that the same fallback rate will apply to all tenors of a particular IBOR even though the fallback rates are overnight rates and the IBORs have a variety of terms. However, to account for the move from a "term" rate (i.e., the IBOR) to an overnight "risk-free" rate (i.e*.,* the overnight RFRs), the fallbacks ISDA implements may apply an adjustment to the relevant overnight RFR so that the "adjusted RFR" is more comparable to the relevant IBOR. Based on the approaches under consideration and the responses received, the adjusted RFR is expected to be an overnight rate compounded in arrears for the relevant period. Therefore, derivatives fallbacks will not be to forward-looking term rates, irrespective of whether the ARRC recommends a forward-looking term rate for SOFR or any of the other risk-free rate working groups recommend forward-looking term rates for the identified alternative risk-free rates in other currencies.

The ISDA consultation also requested feedback on the approach for calculating the spread adjustment that would apply to the adjusted RFR if the derivatives fallbacks are triggered. ISDA anticipates that a third party vendor will eventually publish the spread adjustment. This spread adjustment will generally

be "static" and will become set at the time of the trigger. However, it is important to note that the fallbacks will not apply (and the spread adjustment will therefore not be applicable) until the actual IBOR cessation date (if later than the time of the announcement or publication of information triggering the fallbacks).

The three methods under consideration in the ISDA consultation for calculating the spread adjustment include: (i) a forward approach that takes the difference between the forward curve for the IBOR and the forward curve for the relevant RFR; (ii) a historical mean or median approach that takes the historical difference between the IBOR and the relevant RFR over a long period; and (iii) a simple spot spread approach that would take the difference between the two rates at the time the fallback is triggered.[24] The ISDA consultation sets out the details of each approach.

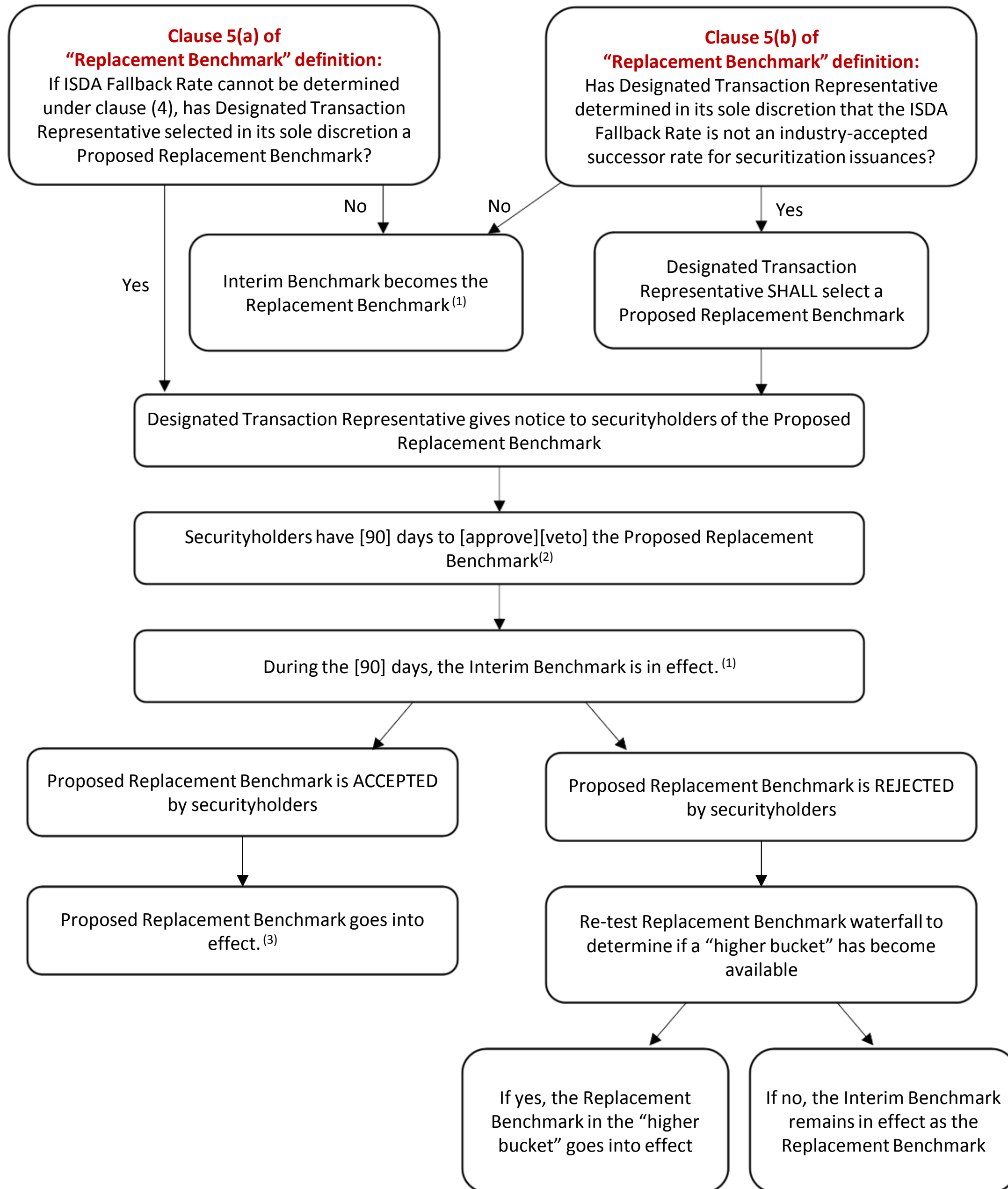
As noted above, ISDA is amending the 2006 ISDA Definitions to include fallbacks that would apply upon a *permanent discontinuation* of the relevant IBOR. Market participants that reference IBORs in derivatives and other financial contracts may decide to include contractual triggers pursuant to which their contracts would move to different rates prior to such time. Additionally, regulation in the European Union (and potentially in other jurisdictions) gives certain regulators the right to prohibit use of IBORs by market participants subject to such regulation, even if the IBORs continue to be published. Any such voluntary or mandatory amendments that occur prior to a permanent discontinuation are beyond the scope of the fallbacks that ISDA is implementing in the 2006 ISDA Definitions and therefore beyond the scope of ISDA's work to identify an approach for calculating spread adjustments for derivatives fallbacks.

For more information about the ISDA Consultation, including specific descriptions of the approaches under consideration, see the consultation, related FAQs.

On November 27, ISDA released a statement providing an initial summary of the responses to its consultation. According to the statement, an overwhelming majority of respondents preferred use of a compound average in arrears rate as the adjusted risk-free rate and a significant majority preferred a spread adjustment based on the historical mean or median approach. ISDA stated that it expected to amend its definitions based on these preferences. Although ISDA still must consult on USD LIBOR, respondents to the current consultation also expressed a preference that risk-free rate and spread adjustments be harmonized across currencies.

[24] Given ISDA's announcement concerning the results of its consultations for other currencies, it now seems more likely that ISDA would choose to fallback to a compounded SOFR rather than overnight SOFR for USD LIBOR.

APPENDIX IV
ILLUSTRATION OF INTERIM BENCHMARK AND PROPOSED REPLACEMENT BENCHMARK



(1) In the case of Clause 5(a), the "Interim Benchmark" is the last quoted benchmark, or any other rate specified in the transaction documents. In the case of Clause 5(b), the "Interim Benchmark" is the ISDA Fallback Rate.
(2) Documents for individual transactions will specify approval vs veto, requisite percentage, and other details.
(3) In the case of an affirmative approval process, the effective date is the first interest reset date following the final vote. In the case of a veto process, the effective date is the first interest reset date occurring on or after the [90] day voting period.