ARRC CONSULTATION
REGARDING MORE ROBUST LIBOR FALLBACK CONTRACT LANGUAGE FOR
NEW ISSUANCES OF LIBOR FLOATING RATE NOTES
September 24, 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 one or more sets of recommended 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.

[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. While ISDA expects to include SOFR as the successor rate for USD LIBOR in anticipated revisions to its standard documentation for derivatives and anticipates that SOFR will be adopted as the successor rate for USD LIBOR as part of a "protocol" to amend existing derivatives contracts, it has not finalized those proposals and is in the process of consulting market participants with respect to the spreads and other technical aspects that would apply to the fallbacks in other currencies.

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. An Explanation of SOFR and Differences between SOFR and LIBOR

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 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).

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

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. 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, 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 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 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.

Part II: FRN Consultation Questions

[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.

[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?"

A. General Approach of the FRN Fallback Provisions

Based on the recommendations of its Floating Rate Notes Working Group, the ARRC has proposed an approach to more robust fallback language for new LIBOR issuances of floating rate notes ("FRNs"), including fixed-to-floating rate notes during the floating rate period for such notes. The proposed fallback language for FRNs is set forth in Appendix I hereto. This ***Part II*** contains a description of the FRN fallback provisions and specific questions that market participants are asked to consider.

Note that in most FRN contracts, there is an existing waterfall that would first revert to the average of quotes obtained by polling banks and then 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 waterfall, this implies that most existing FRNs would effectively convert to fixed rate instruments paying the last published value of LIBOR upon a permanent or indefinite cessation of LIBOR. The ARRC's proposed contract language is meant to provide a safer waterfall that would allow for a more economically appropriate replacement rate.

The FRN 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 can make any future changes, may result in divergent outcomes, disputes and ambiguity. To provide clarity and consistency, the FRN fallback proposal therefore uses clear and observable triggers and fallback rates/spread adjustments, subject to some flexibility at the end of the rate and spread waterfalls, as described herein.

Finally, investors and issuers often enter into interest rate swaps to offset or hedge their floating rate exposure. In order to reduce a mismatch between FRNs and swap instruments, the proposed fallback language for FRNs is consistent in many ways with the approach ISDA presently anticipates implementing for derivatives. In certain key respects, however, the proposal for FRN fallbacks differs, including with respect to spread adjustments, which is covered below.

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). Note that if LIBOR is unavailable, but the conditions set forth in the "triggers" have not been met, this is treated as a temporary discontinuance of LIBOR and the contracts for many FRNs, as well as the ARRC's proposed fallback provisions, reference the last printed LIBOR. However, market participants may take different approaches in these circumstances.

ISDA Triggers

The first and second triggers in the ARRC's proposed FRN fallback provisions ("Benchmark Discontinuance Event" clauses (1) and (2)) are intended to match the fallback triggers that ISDA

[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.

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

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 will not apply until 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 adjustments to the ISDA triggers, those adjustments will be incorporated in the final ARRC recommendation.

Pre-cessation Triggers

Market participants in FRNs may want to include one or more of the additional proposed "pre-cessation" triggers ("Benchmark Discontinuance Event" clauses (3), (4) and (5) in square brackets) in order to transition to a SOFR-based alternative rate in the absence of a permanent discontinuation of LIBOR and prior to the derivatives market. These pre-cessation triggers are intended to describe events that signal an unannounced stop to LIBOR (trigger 3), a material change in LIBOR (trigger 4), or a shift in the regulatory judgment of the quality of LIBOR that would likely have a significant negative impact on its liquidity and usefulness to market participants (trigger 5). As described in greater detail below, while the third trigger would only be invoked if LIBOR was unavailable, the fourth and fifth triggers would apply in situations in which LIBOR was still available but its quality had materially deteriorated in objectively measurable ways. Note that including any of these pre-cessation triggers in FRNs could result in basis risk with standard derivatives. As a result, if one or more of these pre-cessation triggers results in a "Benchmark Replacement Date" occurring with respect to the FRNs, a party seeking to effectively hedge the FRNs 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 and fallbacks to their derivatives to avoid this type of basis risk. ISDA has indicated that it would offer templates or other tools to derivatives market participants who wish to take this approach. In addition, triggers that are applicable only in a certain market (e.g. the UK/EU markets trigger but the US/other markets do not) would also create basis risk.

Failure to publish for 5 days

The first pre-cessation trigger (trigger 3) occurs if the Benchmark is not published for five consecutive business days, other than for a temporary reason declared by the administrator or its regulator. As with the two ISDA triggers, in this event there would be no value of the Benchmark published and 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. 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 that continue to be published. Note that this provision does not define a "business day." Rather than hard-wire a definition that may not correspond to the notes 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.

Insufficient number of submissions

The second pre-cessation trigger (trigger 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.[10] Note, however, that the policy can be modified by the administrator.

Not representative or prohibition on use

The last pre-cessation trigger (trigger 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 new use of a Benchmark if it is determined that the Benchmark is "no longer representative of the underlying market or economic reality." In the case of LIBOR, the relevant regulator is the UK Financial Conduct Authority. As such, this trigger would not capture such a determination by another regulator (such as a US regulator of the FRN issuer).

Questions about Pre-cessation Triggers

Question 1(a): *Should fallback language for FRNs include any of the pre-cessation triggers (triggers 3, 4 and 5)? If so, which ones?*

MetLife Response: ***We believe that Pre-cessation triggers 3 (Failure to publish for 5 days) and 5 (Not representative or prohibition on use) should both be included.***

Question 1(b): *Please indicate whether any concerns you have about these pre-cessation triggers relate to differences between these triggers and those for standard derivatives or relate specifically to the pre-cessation triggers themselves.*

MetLife Response: ***We believe that pre-cessation trigger number 4 (Insufficient Number of Submissions) should be excluded since there is no correlation between the number of banks providing LIBOR submissions and the objectivity of a particular LIBOR submission. If trigger number 4 is to be included there needs to be some weighting criteria in addition to the number of banks providing submissions; for example fewer than 4 banks which have executed less than a threshold amount of LIBOR financing over the last 90 day period.***

Question 1(c): *If pre-cessation triggers are not included, what options would be available to market participants to manage the potential risks involved in continuing to reference a Benchmark whose regulator has publicly determined that it is not representative of the underlying market or a Benchmark permanently or indefinitely based on a number of submissions that the Benchmark's administrator acknowledges to be insufficient to allow for production in a standard manner?*

MetLife Response: ***We support the inclusion of pre-cessation triggers 3 and 5 as***

written and the inclusion of pre-cessation trigger to the extent modified to provide some form of weighting mechanism.

C. <u>Replacement Benchmark</u>

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 FRN 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 FRN proposal encompasses the spread adjustment, which is discussed separately below; the defined term for the rate prior to

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

adjustment is "Unadjusted Replacement Benchmark".) The table below displays the FRN fallback Replacement Benchmark waterfall:

FRN Replacement Benchmark Waterfall
***Step 1*:** Term SOFR recommended by Relevant Governmental Body + Spread
***Step 2*:** Compounded SOFR + Spread
***Step 3*:** Spot SOFR[11] + Spread
***Step 4*:** Replacement rate recommended by Relevant Governmental Body + Spread
***Step 5*:** Replacement rate in ISDA Definitions at such time[12] + Spread
***Step 6*:** Replacement rate determined by issuer or its designee + Spread

<u>Step 1: Forward-Looking Term SOFR</u>

The first priority for the Unadjusted Replacement Benchmark is a forward-looking term SOFR (e.g. 1-month SOFR, 3-month SOFR) 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[13] 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 will fall back to a spot overnight rate, a convexity-adjusted overnight rate or 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.

Question 2: *If the ARRC has recommended a forward-looking term rate, should that rate be the primary fallback for floating rate notes referencing LIBOR even though derivatives are expected to reference overnight versions of SOFR?*

<u>MetLife Response:</u> ***We are cautiously optimistic regarding the evolution of forward***

looking term SOFR rates and support the use of such forward looking term rate as the primary fallback for floating rate notes to the extent such rates exist; however in the absence of any term rate the fallback should be consistent with the fallback utilized in the derivatives market.

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 (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.

[11] As described below, overnight SOFR (not an average) would remain in effect for the duration of the interest period.

[12] With respect to SOFR, the current ISDA definitions would look first to the Relevant Governmental Body recommended replacement rate for SOFR, then to the Overnight Bank Funding Rate and then to the FOMC Target Rate, with each of the latter two rates as published on the Federal Reserve's website.

[13] 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.

Step 2: Compounded SOFR

If the Unadjusted Replacement Benchmark cannot be determined under the first step, then the second priority in the waterfall is Compounded SOFR. "Compounded SOFR" is defined in the proposal as a compounded average daily SOFR over 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. [14]

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 rate that goes into effect at this order of priority is not the USD-SOFR-COMPOUND itself (which contains other fallbacks, as discussed below). If the relevant Compounded SOFR is published as so described, this 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 FRN 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). Some market participants have expressed concern that there may be operational issues that arise in connection with the "in arrears" approach because this rate would not be known at the start of the interest period. Other market participants, however, have expressed strong concerns with the inherent backward-looking nature of the "in advance" approach as this rate is likely to deviate from the forward-looking term rate.

Question 3(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?*

MetLife Response: ***We take the position that Compounded SOFR should be implemented as the second step in the waterfall.***

Question 3(b): *If you believe that Compounded SOFR should be included, which compounding period is preferable ("in arrears" or "in advance")? Would this preference be influenced by whether ISDA implements fallbacks referencing compounded SOFR "in arrears" or "in advance"?*

MetLife Response: ***Our response to ISDA in its consultation regarding this issue was to utilize compounded SOFR in arrears which is consistent with how Risk Free Rate swaps are constructed and correlates well with term OIS, and that it is less volatile that either the Spot Overnight Rate or the Convexity Adjusted Overnight Rate. However, we believe that it is important that the cash and derivatives markets utilize the same convention for determining the fall back rate. Consequently, compound setting in advance is acceptable for the cash market to the extent the same is adopted by the derivatives market.***

Step 3: SOFR (the overnight rate)

If Compounded SOFR cannot be determined, SOFR (the overnight rate) is the third priority for determining the Unadjusted Replacement Benchmark. In this priority of the waterfall, the overnight SOFR rate would be set once, likely at the "Reference Time" just prior to the beginning of the interest period, and remain in effect for the duration of the interest period (e.g., one-month, three-months, etc.) This step in the waterfall may be aligned with the rate selected by ISDA for derivatives but this is

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

unknown at the time of this consultation. Some market participants have expressed concern that using an overnight rate for an extended period would expose issuers and investors to unnecessary risk. The use of an overnight rate could deviate from the average rate over the prior or successive period. In particular, historical SOFR rates have typically spiked on the last business day of the quarter. For example, during 2017, the SOFR rate increased an average of 10 basis points on the last business day of the quarter.[15] Some market participants have suggested that spot SOFR should be replaced with a simple average of SOFR for the applicable period of time, which would mirror the convention used in several initial SOFR-based FRN issuances.[16] However, because it is possible that ISDA could select a version of spot SOFR as the fallback for derivatives in the ISDA definitions, the ARRC decided it was important to include spot SOFR in the proposed waterfall in order to consult on this inclusion and seek market opinions.

Question 4(a): *Would an overnight rate that remains in effect for the entire interest period be an acceptable option for investors, issuers and agents?*
MetLife Response: ***Yes, this would be an acceptable option however, due to***

volatility in the Overnight Rate, this is the least viable option.

Question 4(b): *Should the waterfall include Compounded SOFR (step 2) and spot SOFR (step 3) and/or a simple average of SOFR (not in the waterfall at this time)? If only one of these options is included, which is preferable? Would this preference be influenced by whether ISDA implements fallbacks referencing compounded SOFR or overnight SOFR?*

MetLife Response***: We take the position that Compounded SOFR in Arrears is the preferred method. As indicated previously, we believe that Compound Setting in Arrears is consistent with the construction of Risk Free Rate Swaps, correlates well with term OIS and is less volatile than the Spot Overnight rate. We further believe that consistency between the cash and derivatives markets is an essential component of the fallback provisions.***

Step 4: ARRC Replacement Rate

If the Unadjusted Replacement Benchmark cannot be determined on the basis of a SOFR-based replacement rate, the fourth 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 5: *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?*

MetLife Response: ***To the extent that no SOFR-based fallback rate is available, a replacement rate determined by a Relevant Government Body is the best alternative at this level of the waterfall. Reliance on a rate determination by a Government Body would foreclose the possibility of disruptive and protracted dispute resolution negotiations between are large number of borrowers and lenders. Additionally, uncertainty regarding the outcome of fallback resolution disputes could have a chilling effect on credit markets.***

Step 5: ISDA Fallback for SOFR

If the Relevant Governmental Body has not recommended a replacement for the SOFR-based rate, the waterfall moves to the fallbacks for SOFR-based derivatives embedded in the ISDA Definition of "USD-SOFR-COMPOUND" (as written at the time of a SOFR cessation, allowing for future modifications to the ISDA fallbacks for SOFR), although that rate may be over-ridden as described in Step 6 below. The ISDA fallback for SOFR embedded in the ISDA definition of "USD-SOFR-COMPOUND" is a waterfall that looks first to the Relevant Governmental Body recommended replacement rate for SOFR, then to OBFR and

[15] See data available at https://apps.newyorkfed.org/markets/autorates/bgcr.

[16] SOFR-based debt issuances in 2018 by Fannie Mae, the World Bank, and Credit Suisse used a simple average of SOFR.

then to the FOMC Target Rate[17], with each of the latter two rates as published on the Federal Reserve's website. ARRC members debated whether it was appropriate to explicitly refer to these two rates in the proposed language for FRNs, or to add potential flexibility and recognize that ISDA's fallbacks for SOFR could change in the future by instead referring to the ISDA definitions in place at the time that SOFR is discontinued.

> ***Question 6(a):*** *In the future circumstance where there is no SOFR-based fallback rate and the Relevant Governmental Body has not recommended a replacement rate for FRNs, is the fallback for SOFR-linked derivatives set forth in the ISDA definitions the best alternative at this level of the waterfall?*
>
> **MetLife Response:** ***Yes.***
>
> ***Question 6(b):*** *Should this step in the waterfall refer expressly to OBFR and then the FOMC Target Rate rather than refer to the fallback rate for SOFR-linked derivatives in the ISDA definitions (which could change in the future)?*
>
> **MetLife Response:** ***No. One of the goals of the FRN fallback provisions should be to mitigate basis risk between the derivatives market and the cash market. Inclusion of intermediate steps before a fallback to the ISDA definitions potentially creates market confusion and basis risk.***

Step 6: Issuer (or its designee) Determined Rate

If the issuer (or its designee) determines that the ISDA fallback for SOFR-based derivatives in the ISDA definitions is not an industry-accepted successor rate for floating rate note issuances at such time, then the issuer or its designated agent may select a replacement rate. Note, however, that neither the issuer nor any designee is obligated to make any of these determinations and if they do not do so, the ISDA fallback for SOFR-linked derivatives at such time will be the replacement rate.

> ***Question 7:*** *Should the issuer or its designee have the ability to over-ride the ISDA fallback for SOFR-linked derivatives in the ISDA definitions at this level of the waterfall if it determines that another rate that is an industry-accepted successor rate for FRNs exists at such time?*
>
> **MetLife Response:** ***Yes. Market participants should still have the flexibility to seek bilateral amendments to agreements in a manner consistent with standards particular to their market. However, an issuer should not have the ability to unilaterally impose a replacement rate.***

D. Replacement Benchmark Spread

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 make the rate levels more comparable.[18] 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 the proposal uses static

adjustments for each tenor of the benchmark selected at the time the Replacement Benchmark is

[17] "FOMC Target Rate" is the short-term interest rate target set by the Federal Open Market Committee and published on the Federal Reserve's website or, if the Federal Open Market Committee does not target a single rate, the mid-point of the short-term interest rate target range set by the Federal Open Market Committee and published on the Federal Reserve's website (calculated as the arithmetic average of the upper bound of the target range and the lower bound of the target range, rounded, if necessary, to the nearest two decimal places (with .005 being rounded upwards (e.g., .674 being rounded down to .67 and .675 being rounded up to .68)).

[18] Note that similar differences exist between LIBOR versus OBFR and LIBOR versus the FOMC Target Rate, either of which could become the replacement rate in the event SOFR is discontinued pursuant to the fifth priority of the FRN Replacement Benchmark waterfall which looks to the current 2006 ISDA Definitions fallback for SOFR.

selected in order to encompass all credit, term and other adjustments that may be appropriate for a given tenor of the benchmark rate. The table below displays the FRN spread waterfall:

FRN Replacement Benchmark Spread Waterfall
Step 1: Spread recommended by Relevant Governmental Body
Step 2: Spread in fallbacks for derivatives in ISDA definitions[19]
Step 3: Spread determined by issuer or its designee

Step 1: ARRC Spread Adjustment

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 8:*** *Do you believe that the ARRC should consider recommending a spread adjustment that could apply to cash products, including FRNs?*
>
> **MetLife Response:** ***Yes. Endorsement by a Relevant Government Body reduces the potential of market participants employing divergent spread adjustment methodologies which could result in value transfers on the trigger date.***

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. However, 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 spot overnight rate, a convexity-adjusted overnight rate, or a compounded average of the overnight rate). Therefore, the ISDA spread adjustment will only be applicable under step 2 of the proposed waterfall if the Unadjusted Replacement Benchmark is equivalent to the fallback rate selected by ISDA (defined in the proposal as the "ISDA Fallback Rate").[20] It is important to note that 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). This spread adjustment could, however, be utilized in connection with an FRN "pre-cessation" trigger prior to transition of the derivatives market because ISDA anticipates that a third party vendor will eventually publish the spread adjustment on a

[19] This step 2 is applicable only where the Unadjusted Replacement Benchmark is equivalent to the ISDA Fallback Rate, as described below.

[20] 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?"

daily basis up until the time an ISDA trigger event has occurred. Note that spread adjustments for FRNs determined based upon the spread methodology for derivatives in the ISDA definitions would result in different spreads than those used for standard derivatives if such calculations are performed at a time prior to the permanent cessation of LIBOR (i.e. in connection with one of the "pre-cessation" triggers).

> ***Question 9:*** *Is a spread adjustment applicable to fallbacks for derivatives under the ISDA definitions appropriate as the second priority in the spread waterfall when the Unadjusted Replacement Rate is equivalent to the ISDA fallback rate?*
>
> **MetLife Response:** ***Yes.***

Step 3: Issuer (or its designee) Determined Spread

If (i) the Unadjusted Replacement Rate is not equivalent to the ISDA Fallback Rate or (ii) the issuer, or its designee, determines that such spread adjustment for derivatives does not produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time, then the responsibility falls to the issuer or its designee to select a Replacement Benchmark Spread (or modify the ISDA Spread Adjustment, if available) in order to produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time.

> ***Question 10:*** *If the ARRC does not recommend a spread adjustment, should the issuer (or its designee) have the ability to determine the spread adjustment (or, if step 2 is applicable, over-ride the spread adjustment for derivatives fallbacks in the ISDA definitions) and select a spread adjustment that would result in a rate that is an industry-accepted successor rate in floating rate notes at such time?*
>
> **MetLife Response:** ***No. Allowing issuers to override market endorsed fallback methodologies increases the potential that issuers may employ divergent spread adjustment methodologies which could result in value transfers on the trigger date, as well as increase the potential for contentious dispute resolution negotiations between borrowers and lenders.***

E. Responsibility for Calculations

In general, the FRN fallback proposal minimizes the number of references to an agent in favor of providing more detail about a trigger, rate or spread, in order to minimize the exercise of discretion in the event of a LIBOR cessation and potentially needing to seek guidance from courts to interpret the fallback provisions. 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 discussion among issuers 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 Benchmark and Replacement Benchmark Spread. The proposal allows the parties to a transaction to assign responsibility for making such determinations 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 issuer or its designee (which may be an affiliate of the issuer, or some other agent) to exercise discretion to make a determination with respect to the Replacement Benchmark or the Replacement Benchmark Spread.

> ***Question 11:*** *Whether as issuer or as 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 (v) make the decisions in step 6 of the Replacement Benchmark waterfall and step 3 of the Replacement Benchmark Spread waterfall?*
>
> **MetLife Response:** ***No. We take the position that any unilateral action by a single institution with a financial stake in the outcome of such action is a potential conflict of interest. The occurrence of a trigger event should be determined by an ISDA committee, regulatory body or other disinterested party. The execution of calculation and spread methodologies should be carried out by disinterested third party vendors to avoid any potential conflict of interest issues.***

F. General Feedback

> ***Question 12:*** *Is there any provision in the proposal that would significantly impede FRN issuances? If so, please provide a specific and detailed explanation.*
>
> ***Question 13:*** *Please provide any additional feedback on any aspect of the proposal.*

G. Response Procedures/ Next Steps

Market participants may submit responses to the consultation questions by email to arrc@ny.frb.org until November 8, 2018. Please attach your responses in a Word or PDF document and clearly indicate "Consultation Response – FRNs" in the subject line of your email. Please coordinate internally and provide only one response per institution. Responses will be posted on the ARRC's website, but may be anonymized upon request.

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

appropriate. (A simultaneous consultation is being issued for syndicated business loans. Future ARRC consultations on other cash products, including bilateral business loans, can be expected to be released as well.)

Appendix I

DRAFT FALLBACK LANGUAGE FOR NEW ISSUANCES OF LIBOR FLOATING RATE NOTES

Effect of Benchmark Discontinuance Event

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.

"Benchmark" means LIBOR; provided that if a Benchmark Replacement Date shall have occurred with respect 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 a Benchmark:

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

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

(3) [a Benchmark rate is not published by the administrator of such Benchmark for five consecutive business days and such failure is not the result of a temporary moratorium, embargo or disruption declared by the administrator of such Benchmark or by the regulatory supervisor for the administrator of such Benchmark and the Benchmark cannot be determined by reference to an Interpolated Period;]

(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; or]

(5) [a public statement by the regulatory supervisor for the administrator of such Benchmark announcing that such Benchmark is no longer representative or may no longer be used.]

"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, and

(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).

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 and such determination will be made using the applicable Replacement Benchmark.

"Compounded SOFR" means a compounded average of daily SOFR calculated over a Corresponding Period or Interpolated Period, as applicable, that ends on the second New York business day preceding the [first][last] [A] 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.

"Corresponding Period" with respect to a Replacement Benchmark means a period or maturity (including overnight) having approximately the same length (disregarding business day adjustments) as the term period for LIBOR.

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

"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 Corresponding Period and (2) such Benchmark for the shortest period (for which such Benchmark is available) that is longer than the Corresponding Period.

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

[A] To be determined to reference an "in advance" or "in arrears" compounding period following this consultation.

"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 defined in) the ISDA Definitions, where such rate may have been adjusted for a tenor equal to the Corresponding Period or Interpolated Period, but without giving effect to any additional spread adjustment to be applied according to such ISDA Definitions.

"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.

"LIBOR" means, the offered rate for deposits in U.S. dollars having a maturity of [days/months], as published by ICE Benchmark Administration Limited, a company incorporated in England, or a comparable or successor regulated quoting service, as of the Reference Time (or, if LIBOR has not been published as of the Reference Time, as of the first preceding day for which LIBOR was published); provided that if LIBOR having the maturity of [days/months] shall not be available at the Reference Time, then LIBOR shall mean LIBOR for the Interpolated Period.

"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 8 a.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 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.

"Replacement Benchmark" means:

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

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

(3) if the Unadjusted 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 SOFR determined as of the Reference Time and remaining in effect for the duration of the Corresponding Period, plus the applicable Replacement Benchmark Spread; provided,

further, that:

(4) if the Unadjusted 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 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, plus the applicable Replacement Benchmark Spread; provided, further, that:

(5) if the Unadjusted Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clause (1), (2), (3) or (4) above, then the Replacement Benchmark shall be the fallback rate that is applicable under "USD-SOFR-COMPOUND" following the occurrence of a SOFR Index Cessation Event (as such terms are defined in the ISDA Definitions), plus the applicable Replacement Benchmark Spread; provided, further, that:

(6) if the Unadjusted Replacement Benchmark cannot be determined in accordance with clause (1), (2), (3) or (4) above as of the Benchmark Replacement Date and the issuer, or its designee, (a) shall have determined, in its sole discretion, that the Unadjusted Replacement Benchmark determined in accordance with clause (5) above, if any, is not an industry-accepted successor rate for determining the rate of interest as a replacement to the Benchmark for floating rate note issuances at such time and (b) shall have selected, in its sole discretion, as of the Benchmark Replacement Date an alternate rate of interest to replace the Benchmark that is an industry-accepted successor rate for determining a rate of interest as a replacement to the Benchmark for floating rate notes at such time, then the Replacement Benchmark shall be the rate so determined in clause (b), plus the applicable Replacement Benchmark Spread.

"Replacement Benchmark Spread" with respect to any Replacement Benchmark, means:

(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 Unadjusted Replacement Benchmark, provided that:

(2) if the Replacement Benchmark Spread cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) above and the applicable Unadjusted Replacement Benchmark is equivalent to the ISDA Fallback Rate, then the Replacement Benchmark Spread shall be the spread adjustment, or method for calculating or determining such 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 such ISDA Fallback Rate, provided, further, that:

(3) if (a) the Replacement Benchmark Spread cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) or (2) above or (b) the issuer, or its designee,

shall have determined, in its sole discretion as of the Benchmark Replacement Date, that the ISDA Spread Adjustment determined in accordance with clause (2) above does not produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time, then the Replacement Benchmark Spread shall be the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) determined by the issuer, or its designee, in its sole discretion (that modifies the ISDA Spread Adjustment, if available) to produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time.

"*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.

"Unadjusted Replacement Benchmark" means the Replacement Benchmark excluding the applicable Replacement Benchmark Spread.

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. In its outstanding consultation, ISDA has also encouraged market participants to give preliminary feedback on USD LIBOR in their responses, which will be accepted until October 12th.

As explained in ISDA's FAQs on the pending 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, the adjusted RFR will be a spot overnight rate, a convexity-adjusted overnight rate or an overnight rate compounded in arrears or in advance 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 requests 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. 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 and related FAQs.