ARRC CONSULTATION
REGARDING MORE ROBUST LIBOR FALLBACK CONTRACT LANGUAGE FOR NEW ORIGINATIONS OF LIBOR BILATERAL BUSINESS LOANS December 7, 2018

TABLE OF CONTENTS

Part I: ARRC Consultation Overview....1

A. Background....1

B. An Explanation of SOFR and Differences between SOFR and LIBOR....3

C. Differences between Proposed Fallback Provisions for Cash Products and Derivatives....4

Part II: Bilateral Business Loans Consultation Questions....4

A. General Approach of the Two Fallback Proposals....4

B. Triggers....7

C. The Replacement Benchmark....8

D. Spread adjustments....11

E. The role of the Lender....12

F. Operational considerations....13

G. Hedged loans....14

H. General feedback....15

I. Response Procedures / Next Steps....15

Appendix I DRAFT AMENDMENT APPROACH FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF LIBOR BILATERAL BUSINESS LOANS....17

Appendix II DRAFT HARDWIRED APPROACH FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF LIBOR BILATERAL BUSINESS LOANS....21

Appendix III SUMMARY OF THE PACED TRANSITION PLAN....28

Appendix IV SUMMARY OF ISDA'S APPROACH TO FALLBACKS FOR DERIVATIVES....29

Appendix V GLOSSARY OF TERMS....31

Appendix VI EXAMPLE FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF HEDGED LIBOR BILATERAL BUSINESS LOANS....33

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 III.

The ARRC's Second Report noted that most contracts for cash (non-derivative) products referencing LIBOR do not appear to have envisioned the 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 hardwired approach proposal[4] 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. The hardwired approach proposal also references spreads and other technical aspects of fallbacks for derivatives that the International Swaps and Derivatives Association, Inc. ("ISDA") intends

---

[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.

[4] This adjustment would be intended to minimize overall transfer of value between Borrowers and Lenders from the switch from LIBOR to the alternate benchmark.

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 recently consulted 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.

Previously, consultations have been issued for Floating Rate Notes and Syndicated Business Loans, available here and here, respectively. For readers' convenience, the most important areas of difference between the consultation for Syndicated Business Loans and this consultation include:

- The Syndicated Business Loans consultation makes numerous references to actions by "Administrative Agent" and "Required Lenders," parties and concepts that are typical in syndicated structures but not in bilateral business loans. For related information applicable to bilateral business loans, see "Triggers" and "The role of the Lender" below.

- This consultation includes specific discussion and questions related to hedging in connection with business loans. Though not necessarily limited in application to bilateral loans, this discussion may be of particular interest to participants in the bilateral loan market. See "Hedged loans" below.

- In the "amendment approach," the draft contract language included in the Syndicated Business Loans consultation permits the Borrower to trigger a Benchmark Transition Determination. In this consultation, only the Lender can trigger a Benchmark Transition Determination.

- In the "hardwired approach" to determining the appropriate fallback (one of two alternative proposed fallback approaches to deal with LIBOR cessation), this consultation offers a different mechanism for determination of the "Replacement Benchmark" if neither of the two alternative versions of SOFR (term or compounded) is available as of any Benchmark Reset Date. The Syndicated Business Loans consultation proposes that the Borrower and the Administrative Agent agree on a replacement benchmark if neither of those SOFR-based alternatives is available, and this consultation provides that the Lender will select, in its sole discretion, an alternate rate of interest as the Benchmark [giving due consideration to any rate and spread adjustment reflecting any evolving or then existing convention for similar U.S. dollar denominated credit facilities, which may include any spread adjustment that is selected, endorsed or recommended as the replacement for such Benchmark by the Relevant Governmental Body][, which becomes effective unless the Borrower delivers to the Lender, within [five][ten] Business Days of receipt of notice of the Lender's selection, a written notice to

the Lender rejecting such amendment]. See "Effect of Benchmark Discontinuance Event" and the definition of "Replacement Benchmark" in Appendix II, below.[5]

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

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 next, 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.[6]

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

[5] This summary of certain key differences between this consultation and the previously published consultation on Syndicated Business Loans is provided for convenience only. Readers are encouraged to review this consultation in its entirety for all information relevant to bilateral business loans.

[6] 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).

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 proposals 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 IV hereto.

However, ISDA has not analyzed the appropriateness of its proposed fallbacks for products other than 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.[7] Also, cash products may reference a forward-looking term rate while derivatives are generally expected to reference a fallback based on the overnight rate.[8] 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.

Finally, certain cash products or markets may have unique needs. For instance, unlike many cash products, bilateral (single Lender) business loans are a flexible product which may be amended over their lifetime. The fundamental flexibility may mean market participants prefer to negotiate the specifics of a replacement rate at a future date when more is known about term SOFR rates and credit spread methodologies; this is the philosophical foundation of the amendment approach. Request for feedback regarding these questions, and the approaches taken in the two proposals of fallback language covered by this consultation, are highlighted in the feedback requested in **Part II** below.

Part II: Bilateral Business Loans Consultation Questions

A. General Approach of the Two Fallback Proposals

Based on recommendations by the ARRC Business Loans Working Group, the ARRC has proposed two different approaches to develop more robust bilateral loan fallback language which are covered in this consultation and on which feedback is requested below. The first is an "amendment approach", which

[7] 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.
[8] 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?"

would provide a streamlined amendment mechanism for negotiating a replacement benchmark in the future and could serve as an initial step towards adopting a hardwired approach (see Appendix I). Second is a "hardwired approach", which would provide market participants with more clarity as to a how a potential replacement rate will be identified and implemented (see Appendix II).
The amendment approach and the hardwired approach each have their pros and cons, and they may behave differently in different market environments. The amendment approach uses bilateral loans' flexibility to create a simpler, streamlined amendment process. It is similar to the "LIBOR replacement" language that has developed in the syndicated loan market in the past year, and it maximizes flexibility. However, it may simply not be feasible to use the amendment approach if thousands of loans must be amended simultaneously due to an unexpected LIBOR cessation. This could create the very real possibility of disruption in the loan market, absent significant pre-planning and guidelines to prevent disruption. Additionally, the amendment approach may create winners and losers in different market cycles. In a Borrower-friendly market, a Borrower may be able to extract value from the lender by refusing to include a compensatory spread adjustment when transitioning to SOFR. In a Lender-friendly market, the Lender might block a new proposed rate, forcing the Borrower to pay a higher interest rate, such as the alternate base rate[9] for a period of time. The amendment approach does not require the Lender to propose a replacement benchmark at any time, creating the possibility that loans could bear interest at the alternate base rate (or other fallback already included in the contract) until the loan matures. For these reasons, working group members who are proponents of use of the amendment approach at the current time generally believe that eventually some version of a hardwired approach will be more appropriate. Market participants who choose to adopt the proposed amendment approach should therefore expect that future amendments to those provisions, if possible, may be desirable prior to any LIBOR cessation.

In contrast, the hardwired approach provides clarity upfront. Lenders and Borrowers know that they will receive a version of SOFR plus a Replacement Benchmark Spread upon LIBOR discontinuance.[10] Upon a LIBOR cessation event, neither Borrowers nor Lenders will be able to take advantage of the then-current market environment to capture economic value. However, Term SOFR and the Replacement Benchmark Spread do not yet exist, so it may be hard to determine today what the ultimate replacement rate would look like. That said, other products may determine that this is an acceptable risk, for instance, the hardwired approach proposal is closely aligned with the ARRC's fallback proposal for floating rate notes in the recent consultation.

Appendix I provides proposed contractual language for the "amendment" approach, while Appendix II provides proposed contractual language for the "hardwired" approach. It is recommended that respondents read both Appendices prior to answering the consultation questions. However, for ease of use, a high-level comparison of the amendment approach and hardwired approach is provided below. This grid illustrates the major differences in the trigger events, replacement reference rates, replacement benchmark spreads and amendment mechanisms. In addition, a glossary of terms used in this consultation is set forth in Appendix V.

---

[9] The "Alternate Base Rate" or ABR is commonly defined in credit agreements as the highest of (x) Prime Rate, (y) Fed Funds + .50% and (z) 1 month LIBOR + 1% (prong (z) would be disregarded if LIBOR is no longer available).
[10] If none of the SOFR-based Replacement Benchmarks can be determined, there is a streamlined negotiation process built into the language as a backup.

	Trigger	Replacement Reference Rate	Replacement Benchmark Spread (adjustment)	Mechanism to Amend Credit Agreement
Amendment Approach	A) Benchmark Discontinuance Event or B) Determination by Lender that new or amended bilateral loans are incorporating a new benchmark interest rate to replace LIBOR.	1) Alternate benchmark rate [set forth in applicable amendment] [agreed between Borrower and Lender] (which may include Term SOFR, to the extent publicly available quotes of Term SOFR exist at relevant time), giving due consideration to [i) market convention or ii)] selection, endorsement or recommendation by Relevant Governmental Body	A spread adjustment or method of calculating a spread adjustment set forth in applicable amendment, giving due consideration to [i) market convention or ii)] selection, endorsement or recommendation by Relevant Governmental Body	For Trigger A and B, amendment delivered by Lender to Borrower[, subject to negative consent by Borrower.]
Hardwired Approach	A) Benchmark Discontinuance Event or B) at least [two] outstanding publicly filed syndicated loans are priced over Term SOFR subject, in the case of Trigger (B), to negative consent by Borrower	A waterfall approach: 1) First, term SOFR or, if not available for the appropriate tenor, interpolated SOFR. If not available, then: 2) Compounded SOFR. If not available, then 3) Lender selects an alternate rate [giving due consideration to market convention or selection, endorsement or recommendation by Relevant Governmental Body].	A spread adjustment or method of calculating a spread adjustment that has been selected, endorsed or recommended by the Relevant Governmental Body. If not available, the spread adjustment or method for calculating the spread adjustment selected by ISDA. If Replacement Benchmark determined in accordance with clause 3 thereof, a spread adjustment selected by the Lender.	No consent of Borrower [unless Replacement Benchmark is determined in accordance with clause 3 thereof (Lender selects rate and spread)] in which case amendment will be subject to negative consent by Borrower.]

The consultation requests information on a series of issues, but not every issue is addressed herein. Additionally, it is also important to keep in mind that the current LIBOR-based lending model is a "cost-plus" funding model and SOFR may or may not be reflective of a bank's internal funding costs. There are a number of customary credit agreement provisions that have developed around the historical construct of LIBOR and such provisions, e.g. break-funding, increased costs, and illegality may need to be reconsidered if LIBOR is not the reference rate. While the proposals contained in this consultation offer complete fallback solutions, such changes to other operative provisions are outside the scope of the proposals.

In the interest of broad consistency of approach, the two fallback proposals in this consultation draw significantly on the analogous sections of the consultation on Syndicated Business Loans. Given the wide variety of transaction structures, terms and contracts in the bilateral business loan market, the ARRC seeks market participants' feedback generally on whether either one or both approaches would be similarly appropriate for the bilateral business loan market.

Question 1. *If the ARRC were to adopt one or more sets of bilateral business loan fallback language, which one or both of the recommended provisions (i.e., amendment approach and/or hardwired approach), in your view, is an appropriate policy? If you believe the amendment approach is more appropriate at present, what specific information (for instance, existence of term SOFR) would you need in order to get comfortable eventually adopting a hard-wired approach? Why?*

***MetLife Response:* We believe that the hardwired approach is the most efficient and straight forward. The Amendment approach would be too contentious and time consuming to affect an amendment. Moreover, the time required to implement the amendment approach increases the potential for basis risk with the derivatives market.**

Question 2. *Beyond your response to Question 1, are there product or transaction types, or methods of documenting transactions, for which either of the fallback approaches would be problematic? If so, please explain. What other approach would you suggest?*

MetLife Response: ***No.***

B. Triggers

A "trigger" is an event that signals the conversion from LIBOR to a new reference rate. Examples of proposed triggers include LIBOR cessation (or statement of LIBOR cessation), LIBOR not being published for a period of time, or the announcement that LIBOR is no longer representative. The triggers (other than the early "opt-in trigger") are set out in the "Benchmark Discontinuance Event" definition in each proposal (see Appendices I and II).

ISDA Triggers

The first and second triggers in the proposals ("Benchmark Discontinuance Event" clauses (1) and (2) in both Appendices I and II) are intended to match the fallback triggers that ISDA anticipates incorporating into the definition (or "floating rate option") for USD LIBOR in 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 a statement/publication 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 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 Appendices I and II) 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). 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 any of these three triggers could result in "basis risk" with interest rate hedges associated with a credit agreement, meaning if the LIBOR-based interest rate was hedged, the hedge may no longer match the new SOFR-based interest rate, unless parties bilaterally agree to include the same pre-cessation triggers in the hedge. (ISDA has indicated that it would offer templates or other tools to derivatives market participants who wish to take this latter approach.)

Question 3. *(a) Should fallback language for bilateral business loans include any of the pre-cessation triggers (triggers 3, 4 or 5)? If so, which ones?*

<u>**MetLife Response:**</u> ***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.***

(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.

<u>**MetLife Response:**</u> ***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.***

(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?

<u>***MetLife Response:***</u> ***We support the inclusion of pre-cessation triggers 3 and 5 as written and the inclusion of pre-cessation trigger 4 to the extent modified to provide some form of weighting mechanism.***

<u>*Early "Opt-in" Triggers*</u>

The amendment approach proposal includes an "opt-in" trigger (see clause (2) of the definition of "Benchmark Transition Determination" in Appendix I) that allows the Lender, at its election, to determine that business loans in the market are being executed or amended to incorporate or adopt a LIBOR replacement (which need not be Term SOFR). Some market participants believe that this "opt-in" trigger will reduce risk by helping to reduce the inventory of LIBOR-based loans prior to a LIBOR discontinuance event and that some Borrowers may wish to convert prior to LIBOR cessation. This opt-in trigger could be subject to negative consent by the Borrower.

The hardwired approach proposal also has a pre-cessation early "opt-in" feature that the Lender can initiate, but with a different trigger (see clause (2) of the definition of "Benchmark Transition Determination" in Appendix II). The hardwired opt-in is based on a determination that at least [two] outstanding publicly filed syndicated loans are priced over Term SOFR. If the Lender elects to transition, the replacement rate and applicable spread adjustment will be determined as they would be under any of the cessation and pre-cessation triggers and, the Borrower could have a right to negative consent.

Question 4. *(a) Is an "opt-in" trigger appropriate to include? Why or why not?*

(b) Do you believe an "opt-in" trigger should be included in both the hardwired and amendment proposals or only in one (please specify which and explain).

MetLife Response: ***No, an opt-in trigger is not appropriate to include. An opt-in trigger would create uncertainty in the market since it is determined randomly by the lenders or the administrative agent of a particular loan without a consistent objective basis for triggering the opt-in. An opt-in trigger also creates potential basis risk requiring borrowers to re-hedge positions at random intervals.***

Other Triggers

Question 5. *Are there any other trigger events that you believe should be included for consideration? If yes, please explain.*

MetLife Response: ***No.***

C. The 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 hardwired fallback provisions

contain a waterfall within the defined term "Replacement Benchmark" (see Appendix II) to select the particular successor rate to be used. (Note that the defined term "Replacement Benchmark" in the hardwired proposal in Appendix II encompasses the spread adjustment, which is discussed separately below.)

The table below displays the hardwired fallback Replacement Benchmark waterfall. The approach outlined in the table differs from the earlier FRNs and Syndicated Loans consultations in that it does not propose Overnight SOFR + a Spread as a lower 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.

Hardwired Approach Replacement Benchmark Waterfall
***Step 1*:** Term SOFR + Spread
***Step 2*:** Compounded SOFR + Spread
Step 3: Streamlined amendment process to select a Replacement Benchmark

By contrast, the amendment approach proposal does not contain any replacement rate waterfall. The Lender will propose a successor rate, which may or may not be Term SOFR, plus an applicable spread adjustment. The rate and spread adjustment proposed could be subject to negative consent by the Borrower.

Under both proposals, if a trigger event has occurred then the loan would fall back to the Alternate Base Rate until a replacement rate is established. If no replacement rate is established, then the loans would continue to accrue interest at the ABR rate (an overnight rate) until a replacement rate is determined or agreed.

Step 1: Forward-Looking Term SOFR

In the hardwired approach, the first priority replacement rate 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 that a consensus among its members can be reached that a robust, IOSCO-compliant[11] term

[11] 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.

benchmark that meets appropriate criteria set by the ARRC can be produced. It is reasonable to believe that if such term rates have been endorsed by the ARRC, either the public sector or a third party (or both) would publish them. As described in Appendix IV, derivatives are expected to reference overnight versions of SOFR (*e.g.*, a compounded average of the overnight rate) rather than a forward-looking term rate. Market participants that execute interest rate hedges should be aware that loans based on forward-looking term SOFR will not be perfectly hedged.

Question 6. *If the ARRC has recommended a forward-looking term rate, should that rate be the primary fallback for bilateral business loans referencing LIBOR even though derivatives are expected to reference overnight versions of SOFR? Please explain.*

MetLife Response: ***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 derivative 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 hardwired approach attempts 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.

Question 7. *Should the Lender be able to eliminate certain interest period options if there are no equivalent SOFR terms available? If so, consider the following options: (i) the Lender may remove all interest periods for which there is not a published term rate or (ii) the Lender may remove only the interest periods for which there is not a published term rate and a term rate cannot be interpolated. Which of the options do you support? Why?*

MetLife Response: ***We believe that the Lender should only have the ability to eliminate certain interest period options as set forth in option (ii) above when there is not a published term rate and a term rate cannot be interpolated.***

Step 2: " Compounded S OFR"

If the replacement rate cannot be determined under the first step, then the second priority replacement rate is "Compounded SOFR". Compounded SOFR may be either: (i) calculated at the start of the interest period using the historical Compounded SOFR rate for the interest period that ends immediately prior to that date (this payment structure is often termed "in advance" since the payment obligation is determined in advance) or (ii) calculated over the relevant interest period for the loan 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 (this structure is often termed "in arrears"). 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 until the end of the interest period. Other market participants, however, have expressed 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 8. *Should "Compounded SOFR" be included as the second step in the*

waterfall? Why or why not? Would this preference be influenced by whether ISDA implements fallbacks referencing compounded SOFR or overnight SOFR?

<u>**MetLife Response:**</u> ***We take the position that Compounded SOFR in arrears should be implemented as the second step in the waterfall. We further believe that consistency between the cash and derivatives markets is an essential component of the fallback provisions.***

Question 9. *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"?*

<u>**MetLife Response**</u>***:*** ***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.***

<u>*Other Fallback Rates*</u>

Question 10. *As noted, this consultation does not include Overnight SOFR as a final step in the waterfall. Do you believe that Overnight SOFR is an appropriate fallback reference rate for bilateral business loans or should the final step in the replacement rate waterfall be Compounded SOFR (after which the hardwired approach defaults to a streamlined amendment process)?*

MetLife Response: ***Yes, this would be an acceptable option however, due to volatility in the Overnight Rate, this is the least viable option***

Question 11. *Is there any other replacement rate that should be added to the hardwired approach waterfall before parties move to the streamlined amendment process? If so, what is the appropriate rate or rates and at which stage in the waterfall should they be applied? Please explain.*

MetLife Response: ***No.***

D. Spread adjustments

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 and minimize overall transfer of value between the Lenders and Borrowers from the switch to the alternative benchmark. The hardwired approach proposal 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 according to a waterfall in the definition of "Replacement Benchmark Spread." Note that the proposal uses static adjustments selected at each time the Replacement Benchmark is selected in order to encompass all credit, term and other adjustments that may be appropriate for a given tenor. The methodology for calculating these spread adjustments has not been determined, however it is anticipated that the spread will be different for any given tenor. The table below displays the spread waterfall in the hardwired approach:

Hardwired Approach Replacement Benchmark Spread
Step 1: Spread recommended by Relevant Governmental Body
Step 2: Spread in fallbacks for derivatives in ISDA definitions
Step 3: Streamlined amendment process to select a Replacement Benchmark

Step 1: ARRC Spread Adjustment

The first priority of the proposed hardwired approach waterfall is a spread adjustment (or its methodology) as selected, endorsed or recommended by the Relevant Governmental Body, i.e. the Fed

or ARRC. 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 hardwired approach waterfall, 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 bilateral business loans?*

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. Because derivatives are generally expected to reference overnight versions of SOFR[12] and not forward-looking term SOFR, the ISDA spread adjustment for SOFR derivatives will be intended for use with a version of the overnight rate or a compounded overnight rate. While users of cash products could determine that the spread adjustment selected by ISDA to be incorporated in its definitions is also appropriate for their cash instruments, it is important to note that ISDA's definitions are intended for derivatives. 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 a business loan "pre-cessation" trigger prior to the transition of the derivatives market because 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. Note that the spread adjustments for business loans determined based upon ISDA's spread methodology for derivatives 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, when derivatives' fallback provisions will not have been triggered).

Question 13. *Is a spread adjustment applicable to fallbacks for derivatives under the ISDA definitions appropriate as the second priority in the hardwired approach spread waterfall even if bilateral business loans may fall back at a different time or to a different rate from derivatives? Please explain.*

MetLife Response: ***Utilizing the same spread adjustment methodology for derivatives and bilateral business loans is an acceptable approach, notwithstanding a difference in timing or base rates. Consistency in applying the same methodology is an important component to avoid value transfers.***

Other Spread Adjustments

Question 14. *Is there any other spread adjustment that should be added to the hardwired approach spread waterfall before parties move to the streamlined amendment process? If so, what is the appropriate spread and at which stage in the waterfall should it be applied?*

MetLife Response: ***No.***

E. The role of the Lender

Under both proposals, the Lender is involved in selecting and administering the replacement rate.

Question 15. *For respondents that act as Lenders in the bilateral business loan market, would your institution be willing to (i) work with the Borrower to identify a new reference rate or spread adjustment, (ii) determine whether triggers have occurred, (iii)*

---

[12] 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?"

select screen rates where reference rates are to be found, (iv) interpolate LIBOR or term SOFR if there is a missing middle maturity, and (v) execute one-time or periodic technical or operational amendments to appropriately administer the replacement benchmark? Please respond to each and explain.

<u>MetLife Response:</u> ***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.***

The draft fallback language in Appendices I and II includes several situations in which the Lender takes action, subject to the Borrower's right of negative consent.[13]

Question 16. *In any of these situations, should the Lender have the right to take the relevant action, for example to designate loan terms unilaterally within the framework of either Appendix I or Appendix II, simply by notice to the Borrower? Alternatively, should the lender have the right to take such action, subject only to the Borrower's right to withhold consent? Please explain which approach, or what alternative approach, you think would be better.*

<u>MetLife Response:</u> ***Lender should have the right to take unilateral action within the framework of Appendix I and II, subject only to notice to the Borrower. Allowing Borrowers to withhold consent increases the potential for contentious and protracted dispute resolution negotiations between Borrowers and Lenders and increases the potential for basis risk.***

Question 17. *Is it necessary that any replacement rate and/or applicable spread adjustment be published on a screen by a third party? Why or why not?*

<u>MetLife Response:</u> ***Yes, it is necessary that that replacement rates and applicable spread adjustments be published by a disinterested third party. Allowing Lenders to override market endorsed fallback methodologies increases the potential that Lenders 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.***

The current proposals provide for the Lender's ability to execute certain technical or conforming changes in order to appropriately administer the replacement rate. An example of such a change may be moving from months to day count (1 month vs. 30 days) or perhaps an adjustment to the definition of "Interest Period" (see the definitions of "Replacement Benchmark Conforming Changes" in Appendices I and II).

Question 18. *Given that market practices and conventions may change over time, should the Lender's limited ability to make conforming changes be available only at the point of transition or on a periodic, ongoing basis? Why or why not?*

<u>MetLife Response:</u> ***No, the Lender's ability to make conforming changes should be available only at the point of transition. Granting the Lender wider latitude to make***

conforming changes creates uncertainty and potential illiquidity in the market.

F. Operational considerations

Market participants will necessarily face a number of operational challenges as they plan to transition away from LIBOR. Some of the potential issues are raised below.

Question 19. *Are there operational concerns about having the ability to convert many loans over a very short period of time? Please explain.*

Question 20. *Do you see other operational challenges that fallback language should acknowledge or of which the ARRC should be aware? For example, both approaches to fallback language involve various notices from the Lender[14] – do these requirements and the resulting communications between parties impose undue operational burdens? Please explain.*

---

[13] *See* Appendix I, clause (b); Appendix II, clause (d), and definition of "Benchmark Transition Determination;" and analogous provisions of Appendix VI.

[14] *See* Appendix I, clause (c) and definition of "Benchmark Transition Start Date;" Appendix II, clause (b), and definitions of "Benchmark Transition Determination" and analogous provisions of Appendix VI.

G. Hedged loans

Borrowers and Lenders often enter into interest rate swaps to offset or hedge their floating rate exposure. Market participants may wish to avoid basis risk (a mismatch between the terms of the loan and those of the hedge). As noted above, there are several areas in which the draft language proposed for consideration in this consultation may differ from the structure of fallbacks for derivatives that ISDA proposed in its recent consultation.[15] Any differences are likely to introduce mismatches between loans and related hedges that would not have otherwise arisen and that would not have been anticipated. Market participants may also wish to avoid any complications in accounting or tax treatment of such mismatches.[16]

To the extent that loan market participants value consistency between their fallbacks for derivatives and loans, they may wish to consider including loan document language that aligns more closely with ISDA standard form documentation as amended to accommodate the anticipated cessation of LIBOR. To assist market participants in their consideration of the implications of LIBOR cessation for hedged loans, attached as Appendix VI is an example of a draft fallback approach for hedged loans or partially hedged loans that would fall back to the rate and spread selected by ISDA for derivatives in the ISDA definitions.[17] In considering the language, market participants should assess the implications of implementing the contract terms, including impacts to operational steps such as invoicing or payment of interest, potential loan or other accounting issues, and whether there are multiple hedges which amplify the impacts, or partial hedges which introduce other complexities described below.

Closer alignment with derivatives fallbacks may, however, introduce other costs and mismatches between loans and related hedges, for example, by precluding falling back to a forward-looking term rate for the loan. Further possible complications could arise when a loan is only partially hedged, either by a swap that is not coterminous with the loan's maturity or a swap the notional amount of which is less than the loan amount (or the portion of the loan accruing interest based on LIBOR). This situation may pose particular operational complexities that may be difficult to address. Market participants should consider whether, in such a situation, one or more trigger events should result in the entire loan balance converting to the fallback benchmark, or whether it is operationally practical to align only the hedged portion's terms with the terms of the swap. In the latter case, the treatment of interest payments, LIBOR cessation triggers and reference rate conversion mechanics would essentially be

---

[15] *See, e.g.,* "Benchmark Discontinuance Event" clauses (3), (4) and (5) in square brackets in Appendices I and II.

[16] Market participants are encouraged to consider also the implications for "hedge accounting" treatment under Accounting Standards Codification® Topic 815, Derivatives and Hedging, issued by the Financial Accounting Standards Board (FASB). This accounting standard establishes a list of eligible benchmark interest rates for reporting entities wishing to elect hedge accounting treatment for financial assets or liabilities. FASB recently approved the addition of the overnight index swap (OIS) rate based on SOFR to the list of approved benchmarks for U.S. dollar assets and liabilities. FASB has not yet proposed, and might or might not in the future propose, other SOFR-based benchmarks for eligibility in connection with hedge accounting. FASB's announcement appears at: https://www.fasb.org/cs/Satellite?c=FASBContent_C&cid=1176171490795&pagename=FASB%2FFASBContent_C%2FNewsPage.

[17] Note that the language in Appendix VI specifically contemplates that the Borrower and the Lender are also the counterparties to the swap used in the hedge. Maintaining alignment between a loan and a hedge with a counterparty other than the Lender would add significant additional complexity.

tranched through the loan, e.g., different provisions would apply to the unhedged portion and the hedged portion. Moreover, tranching of hedged and unhedged portion might need to be dynamic, e.g., if a hedge were re-sized, or if the portion of the loan accruing interest at the new benchmark changed, the portion of the loan that would be aligned with the swap might need to be re-sized. Depending on the details of the agreement, the same could be true if the swap were terminated.

Market participants will need to judge the benefits, costs, risks and operational considerations of these approaches and determine the approach that best fits their particular needs. The following questions are intended to help the ARRC to understand market preferences regarding these choices and the operational difficulties they may involve.

Question 21. *If bilateral business loans fall back to a different rate from derivatives, how do market participants expect to handle the interplay of loans and their hedges? Would market participants expect that current swaps would be terminated and a new swaps entered into once the loan has transitioned?*

MetLife Response: ***We believe that it is important that the cash and derivatives markets utilize the same convention for determining the fall back rate and expect that cash trades and associated hedges would transition simultaneously. However, recognizing that different fallbacks between the cash and derivatives markets may occur, and to avoid any de-designation of qualified hedges becoming non-qualified, it is likely that any existing derivatives would be terminated and new derivatives executed consistent with cash trade reference rates.***

Question 22. *Would market participants that execute interest rate hedges prefer to fall back to the same rate and spread that becomes operative under the ISDA Definitions even if a term SOFR is available? If so, please provide comments on the proposal for hedged loans set forth in Appendix VI, including a discussion of any operational concerns. Please provide comments on any other approaches you think could be useful in addressing fallbacks in loans and related hedges.*

MetLife Response: ***See response to question 6.***

Question 23. *When a loan is only partially hedged, either by a swap that is not coterminous with the loan's maturity or a swap the notional amount of which is less than the loan amount (or the portion of the loan accruing interest based on LIBOR), should a trigger event result in the entire loan balance converting to the fallback benchmark? Would it be operationally practical to align only the hedged portion's terms with the terms of the swap? What other concerns would market participants anticipate in operationalizing dynamic tranching of a partially hedged loan?*

MetLife Response: ***Yes, even loans with a partial hedge or mismatched hedge maturity should be subject to trigger events and transition to the benchmark fallback. Maintaining a mismatched hedge outweighs the potential basis risk of not maintaining any hedge and / or the operational complexity and cost of attempting to transition only a portion of the hedged loan.***

H. General feedback

Question 24. *Are there any provisions in the fallback language proposals that would significantly impede bilateral business loan originations? If so, please provide a specific and detailed explanation.*

Question 25. *Please provide any additional feedback on any aspect of the proposals.*

I. 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 –Bilateral Business Loans" 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 bilateral business loans for voluntary adoption in the marketplace. The expectation is that market participants will choose whether and when to begin using the bilateral business loans fallback language in new LIBOR transactions as they deem appropriate. As noted above, consultations have previously been issued for Floating Rate Notes and Syndicated Business Loans. Future ARRC consultations on other cash products can be expected to be released as well.

Appendix I

DRAFT AMENDMENT APPROACH FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF LIBOR BILATERAL BUSINESS LOANS[18]

Effect of Benchmark Discontinuance Event

(a) Notwithstanding anything to the contrary in this Agreement[19] or any other Loan Document, at or promptly after a Benchmark Transition Determination, the Lender pursuant to clause (b) of this Section titled "Effect of Benchmark Discontinuance Event" may amend this Agreement to replace LIBOR with an alternate benchmark rate (which may include Term SOFR, to the extent publicly available quotes of Term SOFR exist at the relevant time), including any Replacement Benchmark Spread, in each case giving due consideration to [any evolving or then existing convention for similar U.S. dollar denominated credit facilities for such alternative benchmarks and adjustments or] any selection, endorsement or recommendation by the Relevant Governmental Body with respect to such facilities (any such proposed rate, together with the Replacement Benchmark Spread, a "***Replacement Benchmark***"). Such Replacement Benchmark shall be applied in a manner consistent with market practice or, to the extent such market practice is not administratively feasible for the Lender, in a manner as otherwise reasonably determined by the Lender; provided that in no event shall such Replacement Benchmark be less than zero for purposes of this Agreement.

(b) Any such amendment with respect to an event under clause (1) or (2) of the definition of "Benchmark Transition Determination" shall become effective upon the Lender's determination to seek such amendment and the passage of [five (5)][ten (10)] Business Days following the receipt of such amendment by the Borrower specifying the terms of such amendment including, without limitation, the Replacement Benchmark, (including the Replacement Benchmark Spread)[, unless, prior to the passage of such time, the Borrower has delivered written notice to Lender that it does not accept such amendment].[20] No replacement of LIBOR with a Replacement Benchmark pursuant to this Section titled "Effect of Benchmark Discontinuance Event" shall occur (i) prior to the applicable Benchmark Transition Start Date or (ii) prior to the effective date for such replacement, if any, specified in such amendment.

(c) The Lender will promptly notify Borrower of the occurrence of any Benchmark Unavailability Period. The Borrower may revoke any request for a Eurodollar Borrowing of, conversion to or continuation of Eurodollar Loans to be made, converted or continued during any Benchmark Unavailability Period and, if no such revocation is timely sent by the Borrower, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to ABR Loans (subject to the next sentence). During any Benchmark Unavailability Period, the LIBO Rate component shall not be used in any determination of ABR.

---

[18] This language assumes a U.S. Dollar only facility. Adjustments to these provisions will need to be made for multicurrency facilities.

[19] Capitalized terms used herein but not defined shall have the meanings ascribed in the relevant credit agreement. Such terms are included herein for illustrative purposes only and should be coordinated with definitions in the relevant credit agreement.

[20] Include bracketed language if the Borrower will have negative consent right for Replacement Benchmark selection (including the Replacement Benchmark Spread).

(d) The Lender shall have the right upon making a Benchmark Transition Determination [from time to time] to make any Replacement Benchmark Conforming Changes and, notwithstanding any other provision of this Agreement to the contrary, any amendment[s] implementing such Replacement Benchmark Conforming Changes shall become effective without any further action or consent of the Borrower.

(e) As used in this Section titled "Effect of Benchmark Discontinuance Event":

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

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

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

(3) [a LIBOR rate is not published by the administrator of LIBOR for five consecutive Business Days and such failure is not the result of a temporary moratorium, embargo or disruption declared by the administrator of LIBOR or by the regulatory supervisor for the administrator of LIBOR;]

(4) [a public statement or publication of information by the administrator of LIBOR 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 LIBOR or any Governmental Authority having jurisdiction over the Lender announcing that LIBOR is no longer representative or may no longer be used.]

"***Benchmark Replacement Date***" means (a) for purposes of clauses (1) and (2) of the definition of "Benchmark Discontinuance Event," the later of (i) the date of such public statement or publication of information and (ii) the date on which the administrator of LIBOR permanently or indefinitely ceases to provide LIBOR, (b) for purposes of clause (3) of the definition of "Benchmark Discontinuance Event," the first Business Day following such five consecutive Business Days, (c) for purposes of clause (4) of the definition of "Benchmark Discontinuance Event," the later of (i) the date of such public statement or publication of information and (ii) the date such insufficient submissions policy is invoked, and (d) for purposes of clause (5) of the definition of "Benchmark Discontinuance Event," the later of (i) the date of such public statement and (ii) the date as of which LIBOR may no longer be used (or, if applicable, is no longer representative).

*"**Benchmark Transition Determination**"* means:

(1) a determination of the Lender (which determination shall be conclusive absent manifest error) that one or more Benchmark Discontinuance Events has occurred with respect to LIBOR; or

(2) a determination of the Lender (which determination shall be conclusive absent manifest error) that bilateral business loans being executed at such time, are being executed or amended (as applicable) [(in any case, as evidenced by among other things, the Lender's practices with respect to bilateral business loans to which it is a party)] to incorporate or adopt a new benchmark interest rate to replace LIBOR.

"***Benchmark Transition Start Date***" means (a) for purposes of a Benchmark Discontinuance Event pursuant to clause (1) of the definition of "Benchmark Transition Determination", the earlier of (i) the applicable Benchmark Replacement Date and (ii) if such Benchmark Discontinuance Event is a statement or publication of a prospective event, the [90th] day prior to the expected date of such event as of such statement or publication (or if the expected date of such prospective event is fewer than [90] days after such statement or publication of information, the date of such statement or publication of information) and (b) for purposes of clause (2) of the definition of "Benchmark Transition Determination", the date specified by the Lender by notice to the Borrower.

"***Benchmark Unavailability Period***" means the period:

(x) beginning at the time that either (A) a Benchmark Replacement Date has occurred or (B) a LIBOR rate is not published by the administrator of LIBOR, if, at any such time, either (i) no amendment to this Agreement setting forth a Replacement Benchmark has been made effective or (ii) in the determination of the Lender, adequate and reasonable means do not exist for determining the Replacement Benchmark that has replaced LIBOR pursuant to a then-effective amendment to this Agreement and

(y) ending at the time that either (A) both (i) an amendment to this Agreement setting forth a Replacement Benchmark has been made effective and (ii) in the determination of the Lender, adequate and reasonable means exist for determining the Replacement Benchmark that has replaced LIBOR pursuant to a then-effective amendment to this Agreement or (B) solely with respect to a period beginning pursuant to clause (x)(B) of this definition, a LIBOR rate is published by the administrator of LIBOR.

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

"***Governmental Authority***" means the government of the United States of America, any other nation or any political subdivision or any 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.

"***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 Conforming Changes***" means, with respect to any proposed Replacement Benchmark, any conforming changes to the definition of "Base Rate", the definition of "Interest Period", timing and frequency of determining rates and making payments of interest and other administrative matters as may be appropriate, in the discretion of the Lender [in consultation with the Borrower], to reflect the adoption of such Replacement Benchmark and to permit the administration thereof by the Lender in a manner substantially consistent with market practice (or, if the Lender determines that adoption of any portion of such market practice is not administratively feasible or that no market practice for the administration of the Replacement Benchmark exists, in such other manner of administration as the Lender determines is reasonably necessary in connection with the administration of this Agreement).

"***Replacement Benchmark Spread***" means, with respect to any replacement of LIBOR with an alternate benchmark rate for each applicable Interest Period, a spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) as set forth in the applicable amendment, in each case giving due consideration to any evolving or then existing convention for similar U.S. dollar denominated credit facilities for such adjustments, which may include any selection, endorsement or recommendation by the Relevant Governmental Body with respect to such facilities for the applicable alternate benchmark 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.

"***Term SOFR***" means the forward-looking term SOFR rate, for a term equal to the applicable Interest Period, that is selected, endorsed or recommended as the replacement for LIBOR by the Relevant Governmental Body [in each case as displayed on a screen or other information service that publishes such rate from time to time as selected by the Lender in its reasonable discretion].

Appendix II

DRAFT HARDWIRED APPROACH FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF LIBOR BILATERAL BUSINESS LOANS[21]

Effect of Benchmark Discontinuance Event

(a) Notwithstanding anything to the contrary in this Agreement[22] or any other Loan Document, following a Benchmark Transition Determination, on any Benchmark Reset Date the base rate for determining interest for any Eurodollar Borrowing in accordance with *[Section relating to Interest]* shall be the Replacement Benchmark.

(b) The Lender will promptly notify the Borrower of the occurrence of any Benchmark Unavailability Period. The Borrower may revoke any request for a Eurodollar Borrowing of, conversion to or continuation of Eurodollar Loans to be made, converted or continued during any Benchmark Unavailability Period and, if no such revocation is timely sent by the Borrower, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to ABR Loans (subject to the next sentence). During any Benchmark Unavailability Period, the LIBO Rate component shall not be used in any determination of ABR.

(c) The Lender shall have the right upon making a Benchmark Transition Determination [from time to time] to make any Replacement Benchmark Conforming Changes and, notwithstanding any other provision of this Agreement to the contrary, any amendment[s] implementing such Replacement Benchmark Conforming Changes shall become effective without any further action or consent of the Borrower.

(d) If the Benchmark is determined in accordance with clause (3) of the definition of "Replacement Benchmark," the Lender shall deliver to the Borrower an amendment to this Agreement to reflect such alternate rate of interest. Such amendment shall become effective without any further action or consent by the Borrower [five][ten] Business Days following receipt of such amendment by the Borrower [unless the Borrower delivers to the Lender, within [five][ten] Business Days of receipt of such amendment, a written notice to the Lender rejecting such amendment].[23]

(e) As used in this Section titled "Effect of Benchmark Discontinuance Event":

"***Benchmark***" means the LIBO Rate, provided that if a Benchmark Replacement Date shall have occurred with respect to such LIBO Rate, then the term "Benchmark" shall mean the applicable Replacement Benchmark.

---

[21] This language assumes a U.S. Dollar only facility. Adjustments to these provisions will need to be made for multicurrency facilities.

[22] Capitalized terms not defined herein shall have the meanings ascribed in the relevant promissory note or credit agreement. Such terms are included herein for illustrative purposes only and should be coordinated with definitions in the relevant promissory note or credit agreement.

[23] Include bracketed language if the Borrower will have negative consent right when the replacement benchmark rate is selected by Lender pursuant to clause (3) of the definition of "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 such 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;]

(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 any Governmental Authority having jurisdiction over the Lender stating that such Benchmark is no longer representative or may no longer be used.]

"Benchmark Replacement Date" shall mean:

(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 (2) of the definition of "Benchmark Transition Determination," the [fifth] Business Day after the Term SOFR Election Notice is provided to Borrower.

"Benchmark Reset Date" means, in respect of any Eurodollar Borrowing, upon the occurrence of a Benchmark Replacement Date, the next interest reset date and all subsequent interest reset dates for which the LIBO Rate would have to be determined.

"Benchmark Transition Determination" means:

(1) a determination of the Lender (which determination shall be conclusive absent manifest error) that one or more Benchmark Discontinuance Events has occurred with respect to a Benchmark; or

(2) (a) a determination of the Lender (which determination shall be conclusive absent manifest error) that at least [two] currently outstanding syndicated loans in the United States at such time contain (as a result of amendment or as originally executed) as a base rate, in lieu of the LIBO Rate, Term SOFR (and such syndicated loans are identified in such notice and are publicly available for review), and (b) the Lender has elected to declare that a Benchmark Transition Determination under this clause (2) has occurred and has provided notice of such election to the Borrower (a ***"Term SOFR Election Notice"***), provided, that such Term SOFR Election Notice shall be effective only if [(x)] the Unadjusted Replacement Benchmark as determined pursuant to the definition of Replacement Benchmark as of the Benchmark Replacement Date with respect to such election is Term SOFR [and (y) the Borrower has not delivered to the Lender, within [five][ten] Business Days following receipt of such Term SOFR Election Notice by the Borrower, a written notice to the Lender rejecting such election].[24]

"Benchmark Unavailability Period" means the period:

(x) beginning at the time that either (A) a Benchmark Replacement Date pursuant to clauses (1) through (4) of the definition thereof has occurred or (B) a Benchmark rate is not published by the administrator of such Benchmark, if, at such time, no Replacement Benchmark has been determined in accordance with the Section titled "Effect of Benchmark Discontinuance Event" for which, in the determination of the Lender, adequate and reasonable means exist for determination thereof and

(y) ending at the time that (A) a Replacement Benchmark has been determined in accordance with the Section titled "Effect of Benchmark Discontinuance Event" for which, in the determination of the Lender, adequate and reasonable means exist for determination thereof or (B) solely with respect to a period beginning pursuant to clause (x)(B) of this definition, a Benchmark rate is published by the administrator of such Benchmark.

"Compounded SOFR" means, for the applicable Interest Period, a compounded average of daily SOFR calculated on the [first][last] day of the applicable interest period[25] as published by the Federal Reserve Bank of New York or any entity that assumes responsibility for publishing such rate.

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

[24] Include bracket provisions if the Borrower will have negative consent right for the "early opt-in" of SOFR.

[25] The decision of whether this definition will refer to a compounding period done "in advance" or "in arrears" will reflect the responses to this consultation.

the applicable term period of maturity for LIBOR.

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

"Governmental Authority" means the government of the United States of America, any other nation or any political subdivision or any 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.

"Impacted SOFR Interest Period" means an Interest Period for which the Lender has determined (which determination shall be conclusive and binding absent manifest error) that Term SOFR for a term equal to the applicable Interest Period cannot be determined, unless Interpolated SOFR has been determined for such Interest Period.

"Interest Period" means with respect to any Eurodollar Borrowing, the period commencing on the date of such Borrowing and ending on the numerically corresponding day in the calendar month that is one, two, three, six or twelve months thereafter, as the Borrower may elect; provided, that (i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless, in the case of a Eurodollar Borrowing only, such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day and (ii) any Interest Period pertaining to a Eurodollar Borrowing that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period. For purposes hereof, the date of a Borrowing initially shall be the date on which such Borrowing is made and, in the case of a Revolving Borrowing, thereafter shall be the effective date of the most recent conversion or continuation of such Borrowing.

"Interpolated LIBO Rate" means, at any time, for any Interest Period, the rate per annum (rounded to the same number of decimal places as the LIBO Screen Rate) determined by the Lender (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the LIBO Screen Rate for the longest period (for which the LIBO Screen Rate is available) that is shorter than the Impacted LIBO Rate Interest Period; and (b) the LIBO Screen Rate for the shortest period (for which that LIBO Screen Rate is available) that exceeds the Impacted LIBO Rate Interest Period, in each case, at such time.

"Interpolated SOFR" means, at any time, for any Interest Period, the rate per annum determined by the Lender (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) Term SOFR for the longest period (for which Term SOFR is available) that is shorter than the Impacted SOFR Interest Period; and (b) Term SOFR for the shortest period (for which Term SOFR is available) that exceeds the Impacted SOFR Interest Period, in each case, at such time.

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

"LIBO Rate" means, with respect to any Eurodollar Borrowing for any Interest Period, the

LIBO Screen Rate at approximately 11:00 a.m., London time, two Business Days prior to the commencement of such Interest Period; provided that if the LIBO Screen Rate shall not be available at such time for such Interest Period (an ***"Impacted LIBO Rate Interest Period"***) then the LIBO Rate shall be the Interpolated LIBO Rate; provided, further, that if a Benchmark Replacement Date occurs with respect to the LIBO Rate, then the LIBO Rate shall be determined in accordance with the Section titled "Effect of Benchmark Discontinuance Event".

"LIBO Screen Rate" means, for any day and time, with respect to any Eurodollar Borrowing for any Interest Period, the London interbank offered rate as administered by ICE Benchmark Administration (or any other Person that takes over the administration of such rate) for a period equal in length to such Interest Period (***"LIBOR"***) as displayed on such day and time on pages LIBOR01 or LIBOR02 of the Reuters screen that displays such rate (or, in the event such rate does not appear on a Reuters page or screen, on any successor or substitute page on such screen that displays such rate, or on the appropriate page of such other information service that publishes such rate from time to time as selected by the Lender in its reasonable discretion); provided that if the LIBO Screen Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"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 Replacement 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) Term SOFR for the applicable Interest Period (or, if an Impacted SOFR Interest Period, the Interpolated SOFR Rate) as of the applicable Reference Time, plus the Replacement Benchmark Spread for the applicable Interest Period; provided that:

(2) if the Lender determines on the applicable Benchmark Reset Date (which determination shall be conclusive and binding absent manifest error) that the Unadjusted Replacement Benchmark cannot be determined in accordance with clause (1) above, then Compounded SOFR for the applicable Interest Period as of the applicable Reference Time, plus the Replacement Benchmark Spread for the applicable Interest Period[; provided, further, that:

(3) if the Lender determines on the applicable Benchmark Reset Date (which determination shall be conclusive and binding absent manifest error) that the Replacement Benchmark cannot be determined in accordance with clause (1) or (2) above, then an alternate rate of interest to replace the Benchmark that shall be selected by the Lender, in its sole discretion, [giving due consideration to any unadjusted rate reflecting any evolving or then existing convention for

similar U.S. dollar denominated credit facilities, which may include any unadjusted rate that is selected, endorsed or recommended as the replacement for such Benchmark by the Relevant Governmental Body,] plus the applicable Replacement Benchmark Spread.

If the Replacement Benchmark as determined pursuant to clause (1), (2) or (3) above would be less than zero, such Replacement Benchmark shall be deemed to be zero for the purposes of this Agreement.

"Replacement Benchmark Conforming Changes" means, with respect to any proposed Replacement Benchmark, any technical or operational changes (including, for the avoidance of doubt, changes to the definition of "Interest Period"), in the discretion of the Lender, to reflect the adoption of such Replacement Benchmark and to permit the administration thereof by the Lender in a manner substantially consistent with market practice (or, if the Lender determines that adoption of any portion of such market practice is not administratively feasible or that no market practice for the administration of the Replacement Benchmark exists, in such other manner of administration as the Lender determines is reasonably necessary in connection with the administration of this Agreement)[, (but for the avoidance of doubt, such changes shall not include a reduction of the [Interest Rate][Margin])].

"Replacement Benchmark Spread" means, on any day,

(1) for purposes of clauses (1) or (2) of the definition of "Replacement Benchmark",

(a) 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, to be added to the applicable replacement rate to account for the effects of the transition to the Replacement Benchmark for the applicable Interest Period and corresponding to the Corresponding Period, as of the applicable Reference Time, provided that:

(b) if the Replacement Benchmark Spread cannot be determined in accordance with clause (1)(a) above as of the applicable Reference 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) that shall have been selected by ISDA as the spread adjustment for the fallback to such Benchmark, for the applicable Interest Period and corresponding to the Corresponding Period, as of the applicable Reference Time; or

(2) for purposes of clause (3) of the definition of "Replacement Benchmark", a spread adjustment (which may be a positive or negative value or zero) that shall be selected by the Lender, in its sole discretion [giving due consideration to any spread adjustment reflecting any evolving or then existing convention for similar U.S. dollar denominated credit facilities, which may include any spread adjustment that is selected, endorsed or recommended as a spread to be used in connection with the applicable Unadjusted Replacement Benchmark for the applicable Benchmark by the Relevant Governmental Body];

and in the case of clause (1), as displayed on a screen or other information service that publishes such Replacement Benchmark Spread from time to time as selected by the Lender in its reasonable discretion.

If the Replacement Benchmark Spread cannot be determined in accordance with clause (1) above then the Replacement Benchmark cannot be determined for purposes of clauses (1) or (2) of the definition of "Replacement Benchmark."

"*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.

"*Term SOFR*" means the forward-looking term SOFR rate, for a term equal to the applicable Interest Period, that is selected, endorsed or recommended as the replacement for such LIBO Rate by the Relevant Governmental Body in each case, as displayed on a screen or other information service that publishes such rate from time to time as selected by the Lender in its reasonable discretion.

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

Appendix III

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 IV

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 recently concluded consultation, ISDA has also encouraged market participants to give preliminary feedback on USD LIBOR in their responses, which were accepted until October 22nd.

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 will 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 calculated based on an overnight version of the rate (*e.g.*, a rate compounded in arrears). 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.

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.

Appendix V

GLOSSARY OF TERMS

Definitions Pertaining to Fallback Approaches

"Fallback" is the contractual provisions that set forth the means by which a financial contract would transition from LIBOR to a new benchmark rate. A fallback typically contains four components: A trigger (which defines the event that starts the transition process), a new benchmark reference rate (such as SOFR), a replacement benchmark spread (which is meant to approximately compensate the difference between LIBOR and the new benchmark reference rate) and, in certain approaches, an amendment protocol.

"Amendment Approach" is a fallback approach that would uses loans' flexibility to provide a streamlined amendment mechanism for negotiating a replacement benchmark. It is similar to the "LIBOR replacement" language that has developed in the syndicated loan market in the past year, but offers additional specificity with respect to potential replacement benchmark rates and replacement benchmark spreads. It maximizes flexibility and it also does not rely on a rate (such as term SOFR) and spread adjustment methodology that does not yet exist. However, it may not be feasible to use the amendment approach if thousands of loans must be amended simultaneously due to LIBOR cessation. Additionally, the amendment approach may create the opportunity for different market participants to game the outcome in different market environments.

"Hardwired Approach" is a fallback approach that defines all terms at the inception of a credit agreement. The trigger events, fallback rate and replacement benchmark spread are all defined upfront, creating clarity of outcome in the event of LIBOR cessation. Because the hardwired approach does not rely on amendments, it should be possible to transition thousands of loans simultaneously. Additionally, because terms are agreed upfront, there should be limited ability for participants to game the outcome. However, the hardwired approach relies on components – such as Term SOFR and Replacement Floating Rate Spread – which do not currently exist. In the event that certain components do not exist, the hardwired approach falls back to an amendment process.

Definitions Pertaining to Reference Rates and Spreads

"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. It is the combination of three overnight repo rates that use U.S. Treasuries as collateral. SOFR differs from LIBOR in that LIBOR contains an element of bank credit risk, whereas SOFR is presumed to be relatively risk-free.

"Term SOFR" means the forward-looking term SOFR rate, for a term equal to the applicable Interest Period, that is selected, endorsed or recommended as the replacement for such LIBO Rate by the Relevant Governmental Body. Term SOFR does not currently exist, but is scheduled to be implemented no later than 2021 and there is the potential that it will exist much earlier.

"Interpolated SOFR" means, at any time, for any Interest Period, the rate per annum determined by the Lender to be equal to the rate that results from interpolating on a linear basis between: (a) Term SOFR for the longest period (for which Term SOFR is available) that is shorter than the Impacted SOFR Interest

Period; and (b) Term SOFR for the shortest period (for which Term SOFR is available) that exceeds the Impacted SOFR Interest Period.

"Compounded SOFR" means, for the applicable Interest Period, a compounded average of daily SOFR as published by the Federal Reserve Bank of New York or any entity that assumes responsibility for publishing such rate. Compounded SOFR may be either: (i) calculated at the start of the interest period using the historical Compounded SOFR rate for the period that ends immediately prior to that date (this payment structure is often termed "in advance" since the payment obligation is determined in advance) or (ii) calculated over the relevant interest period 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 (this structure is often termed "in arrears").

"LIBOR" means the London Interbank Offered Rate, a proxy for the rate at which banks theoretically could lend unsecured to each other. LIBOR differs from SOFR in that LIBOR contains an element of bank credit risk, whereas SOFR is considered to be relatively credit risk free.

"Replacement Benchmark Spread" means a spread adjustment meant to approximately compensate for the difference between LIBOR and a replacement benchmark rate. This spread is ***not*** intended to be an ongoing, dynamic spread adjustment.

"Basis Risk" means the financial risk that offsetting hedges or arbitraged investments will not move in lockstep with each other. This imperfect correlation between the two positions creates the potential for excess gains or losses in a hedging strategy, thus adding risk to the position.

Definitions Pertaining to Transition

"Trigger" means an event that signals the transition from LIBOR to a new reference rate. Examples of proposed triggers include LIBOR cessation (or statement of LIBOR cessation), LIBOR not being published for a period of time, or the announcement that LIBOR is no longer representative. In addition to cessation- or discontinuance-related triggers, the consultation considers "pre-cessation" triggers and "opt-in" triggers, whereby parties can initiate a transition to a new reference rate, even if LIBOR continues to exist and be representative.

"Benchmark Discontinuance Event" indicates the current or upcoming discontinuance of a benchmark. This can include an announcement that the benchmark has or will cease, the insolvency of the administrator, the cessation of publishing of the benchmark, the statement that such benchmark has or will invoke an insufficient submissions policy or a statement by a relevant regulator that a benchmark is no longer representative.

Appendix VI

EXAMPLE FALLBACK LANGUAGE FOR NEW ORIGINATIONS OF HEDGED LIBOR BILATERAL BUSINESS LOANS[26]

SWAP AGREEMENT PROVISIONS:

(a) Notwithstanding anything to the contrary set forth herein, at any time when an interest rate swap transaction between Borrower and Lender (a ***"Swap"***) is in effect in connection with a loan made pursuant to this Agreement, the following revisions to this Agreement shall apply [only with respect to an amount of principal outstanding hereunder equal to the lesser of (i) the principal balance outstanding of such loan and (ii) the notional amount of the Swap (the ***"Hedge Portion"***)][with respect to such loan]:

EFFECT OF OCCURRENCE OF A BENCHMARK REPLACEMENT DATE:[27]

(a) Notwithstanding anything to the contrary in this Agreement[28] or any other Loan Document, following a Benchmark Replacement Date, the base rate for determining interest for any Borrowing in accordance with [Section relating to Interest] shall be the Replacement Benchmark and all subsequent determinations of the Benchmark will be made using the Replacement Benchmark.

(b) The Lender will promptly notify the Borrower of the occurrence of any Benchmark Unavailability Period. The Borrower may revoke any request for a Eurodollar Borrowing of, conversion to or continuation of [Eurodollar Loans] to be made, converted or continued during any Benchmark Unavailability Period and, if no such revocation is timely sent by the Borrower, the Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to [ABR Loans] (subject to the next sentence). During any Benchmark Unavailability Period, the LIBOR component shall not be used in any determination of ABR.

(c) The Lender shall have the right [from time to time] to make any Replacement Benchmark Conforming Changes and, notwithstanding any other provision of this Agreement to the contrary, any amendment[s] implementing such Replacement Benchmark Conforming Changes shall become effective without any further action or consent of the Borrower.

(d) If the Benchmark is determined in accordance with clause (2) of the definition of "Replacement Benchmark," the Lender shall deliver to the Borrower an amendment to this Agreement to reflect such alternate rate of interest. Such amendment shall become effective without any further action or consent by the Borrower [five][ten] Business Days following receipt of such amendment by the Borrower[, unless

[26] This language assumes a U.S. Dollar only facility. Adjustments to these provisions will need to be made for multicurrency facilities.

[27] The following provisions are designed to work with a Swap that incorporates standard ISDA Definitions. Non-standard or bespoke swaps may require different provisions.

[28] Capitalized terms not defined herein shall have the meanings ascribed in the relevant promissory note or credit agreement. Such terms are included herein for illustrative purposes only and should be coordinated with definitions in the relevant promissory note or credit agreement.

the Borrower delivers to the Lender, within [five][ten] Business Days of receipt of such amendment, a written notice to the Lender rejecting such amendment].[29]

(e) As used in this Section titled "Effect of Occurrence of a Benchmark Replacement Date":

"Benchmark" means, initially, 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 Replacement Date" means the date an "index cessation event" (as described in the ISDA Definitions) has occurred with respect to the Benchmark.

"Benchmark Unavailability Period" means the period (x) beginning at the time that either (A) a Benchmark Replacement Date has occurred or (B) a Benchmark rate is not published by the administrator of such Benchmark, if, at such time, no Replacement Benchmark has been determined in accordance with the Section titled "Effect of Occurrence of a Benchmark Replacement Date" for which, in the determination of the Lender, adequate and reasonable means exist for determination thereof and (y) ending at the time that (A) a Replacement Benchmark has been determined in accordance with the Section titled "Effect of Occurrence of a Benchmark Replacement Date" for which, in the determination of the Lender, adequate and reasonable means exist for determination thereof or (B) solely with respect to a period beginning pursuant to clause (x)(B) of this definition, a Benchmark rate is published by the administrator of such Benchmark.

"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 applicable Interest Period, but without giving effect to any additional spread adjustment to be applied according to such ISDA Definitions.

"ISDA Spread Adjustment" means the spread adjustment (which may be a positive or negative value or zero) that shall have been selected by ISDA as the spread adjustment that would apply to the applicable ISDA Fallback Rate, as displayed on a screen or other information service that publishes such spread from time to time as selected by the Lender in its reasonable discretion.

"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:

[29] Include bracketed language if the Borrower will have negative consent right for Replacement Benchmark selection.

(1) the ISDA Fallback Rate plus the applicable ISDA Spread Adjustment; provided that:

(2) if the Lender determines on such Benchmark Replacement Date (which determination shall be conclusive and binding absent manifest error) that the Replacement Benchmark cannot be determined in accordance with clause (1) above, then an alternate rate of interest, together with an applicable spread adjustment (which may be a positive or negative value or zero), to replace the Benchmark, both of which shall be selected by the Lender in its sole discretion[, giving due consideration to any rate and spread adjustment reflecting any evolving or then existing convention for similar U.S. dollar denominated swaps, which may include any spread adjustment that is selected, endorsed or recommended as the replacement for such Benchmark by the Relevant Governmental Body].

If the Replacement Benchmark determined as provided pursuant to clause (1) or (2) above would be less than zero percent (0.0%), then the Replacement Benchmark shall be deemed to be zero percent (0.0%) for purposes of this Agreement.

"Replacement Benchmark Conforming Changes" means, with respect to any proposed Replacement Benchmark, any technical or operational changes (including, for the avoidance of doubt, changes to the definition of "[Interest Period]"), in the discretion of the Lender, to reflect the adoption of such Replacement Benchmark and to permit the administration thereof by the Lender in a manner substantially consistent with market practice (or, if the Lender determines that adoption of any portion of such market practice is not administratively feasible or that no market practice for the administration of the Replacement Benchmark exists, in such other manner of administration as the Lender determines is reasonably necessary in connection with the administration of this Agreement)[(but for the avoidance of doubt, such changes shall not include a reduction of the [Interest Rate][Margin]).