

**ARRC RECOMMENDATIONS
REGARDING MORE ROBUST FALLBACK LANGUAGE FOR
NEW ISSUANCES OF LIBOR FLOATING RATE NOTES**

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Part I: Background about the ARRC and LIBOR Fallback Language

U.S. dollar LIBOR (“LIBOR”) is widely used in the global financial system in a large volume and broad range of financial products and contracts. In 2014 as a response to concerns about the reliability and robustness of LIBOR and other term wholesale unsecured bank borrowing rates, the Financial Stability Oversight Council and Financial Stability Board (“FSB”) called for the development of alternative interest rate benchmarks. Against this backdrop, the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York convened the [Alternative Reference Rates Committee](#) (“ARRC”) later that year to identify an alternative reference rate for LIBOR, create an implementation plan to support voluntary adoption of the alternative rate, and identify best practices for contract robustness in the interest rate market. After selecting an alternative rate (the Secured Overnight Financing Rate or “SOFR”) and setting out a Paced Transition Plan with respect to the adoption of SOFR in the derivatives market, the ARRC was reconstituted in 2018 with an expanded membership, including regulators, trade associations, exchanges and other intermediaries, and buy side and sell side market participants, to oversee the implementation of the Paced Transition Plan and coordinate with cash and derivatives markets as they address the risk that LIBOR may not exist beyond 2021.¹ This includes both minimizing the potential disruptions associated with a LIBOR cessation on market participants and supporting a voluntary transition away from LIBOR by promoting the development of SOFR-based cash and derivatives products.

The smoothest transition away from LIBOR will be one in which new contracts are written and existing contracts are amended to reference rates other than LIBOR. However, LIBOR-based products continue to be issued and, as the [ARRC’s Second Report](#) noted, most contracts referencing LIBOR do not appear to have envisioned a permanent or indefinite cessation of LIBOR and have fallbacks that would not be economically appropriate if this event occurred.² To address this issue in derivatives and at the request of the FSB’s Official Sector Steering Group, the International Swaps and Derivatives Association, Inc. (“ISDA”) is working on implementing new fallbacks for LIBOR and other key interest rate benchmarks in its standard definitions for derivatives.³ In view of its mandate, the ARRC has endeavored to deliver recommendations for contractual fallback language for new cash (non-derivatives) products with the goal of reducing the risk of serious market disruption following a LIBOR cessation. In furtherance of this objective, the ARRC published [Guiding Principles for More Robust LIBOR Fallback Contract Language in Cash Products](#) in July 2018. Following these overall principles, the ARRC launched consultations seeking market-wide feedback on specific fallback language proposals for four types of cash products: floating rate notes, syndicated business loans, bilateral business loans, and securitizations. Generally, the consultations proposed that following a trigger event the product would pay interest at a SOFR-based rate, with an adjustment so that the successor rate would be more comparable to LIBOR. The ARRC

¹ Additional information about the ARRC and the Paced Transition Plan is available at:

<https://www.newyorkfed.org/arrc>.

² 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.

³ Additional information about ISDA’s work is available at: <https://www.isda.org/category/legal/benchmarks>.

consultations recognized that certain differences are necessary for different cash products and derivatives, but strived for uniformity across products as much as possible.

In accordance with the results of the consultations discussed in **Part IV: Summary of Responses to the ARRC's Consultations**, the ARRC is publishing recommended fallback language for market participants to consider for new issuances of floating rate notes, syndicated business loans, bilateral business loans, and securitizations referencing LIBOR.⁴ To the extent market participants continue to enter into LIBOR-based contracts, the ARRC recommends and endorses the fallback language and related guidance herein and believes the cash markets will benefit by adopting a more consistent, transparent and resilient approach to contractual fallback arrangements for new LIBOR products. It is important to note that regardless of this recommendation, 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.

While the ARRC's final recommendations include a forward-looking term rate as the primary potential successor rate, it is important to note that although such rate may be the optimal fallback for products that were initially referencing LIBOR, the ARRC does not recommend that financial market participants wait until a forward-looking term SOFR exists to begin using SOFR in cash products. Cash products can be designed to use either a simple average or compounded average of daily SOFRs for an interest period in lieu of a term rate. To facilitate use of SOFR in financial products, the Federal Reserve Bank of New York is preparing to publish averages of daily SOFRs beginning in 2020.⁵

The ARRC notes that derivatives and floating rate notes based on SOFR are increasing in volume. SOFR over-the-counter swaps are being quoted by dealers and cleared by central counterparties such as LCH and CME Group. CME and Intercontinental Exchange have listed SOFR-linked futures. Over \$70 billion in SOFR-linked floating rate financing has been issued in all sectors of the debt markets. As it is likely in many market participants' best interest to begin issuing products based on SOFR rather than LIBOR, the ARRC also intends to provide further guidance for market participants on use of SOFR in cash products.

⁴ The ARRC is simultaneously publishing recommended fallback language for syndicated business loans referencing LIBOR. The ARRC plans to subsequently publish recommended fallback language for bilateral business loans, and securitizations referencing LIBOR.

⁵ The technical differences between the "simple average" and "compounded average" as well as other models for using SOFR in cash products are described in *A User's Guide to SOFR* available at <https://www.newyorkfed.org/arrc/publications>. There are plans to produce indicative backward-looking compounded average SOFR rates that could help market participants understand how these rates are likely to behave (before the Federal Reserve Bank of New York publishes such rates for use in contracts, which is expected in 2020).

Part II: Fallback Language for New Issuances of LIBOR Floating Rate Notes

The following language sets forth the ARRC's recommended fallback language for new issuances of LIBOR-referenced U.S. dollar-denominated⁶ floating rate notes ("FRNs") and may be used in a broad range of floating rate securities issued in the capital markets, including municipal bonds, pass-through securities, convertible debt and other debt issuances.⁷ There are certain drafting alternatives for these provisions and related guidance set forth in ***Part III: User's Guide to Fallback Language for Floating Rate Notes***.

Effect of Benchmark Transition Event

(a) ***Benchmark Replacement***. If the issuer or its designee determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any determination of the Benchmark on any date, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the Notes in respect of such determination on such date and all determinations on all subsequent dates.

(b) ***Benchmark Replacement Conforming Changes***. In connection with the implementation of a Benchmark Replacement, the issuer or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time.

(c) ***Decisions and Determinations***. Any determination, decision or election that may be made by the issuer or its designee pursuant to this Section titled "Effect of Benchmark Transition Event," including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the issuer or its designee's sole discretion, and, notwithstanding anything to the contrary in the documentation relating to the Notes, shall become effective without consent from any other party.

(d) ***Certain Defined Terms***. As used in this Section titled "Effect of Benchmark Transition Event":

"Benchmark" means, initially, LIBOR; provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement.

"Benchmark Replacement" means the Interpolated Benchmark; provided that if the issuer or its designee cannot determine the Interpolated Benchmark as of the Benchmark Replacement Date, then "Benchmark Replacement" means the first alternative set forth in the order below that can be determined by the issuer or its designee as of the Benchmark Replacement Date:

- (1) the sum of: (a) Term SOFR and (b) the Benchmark Replacement Adjustment;

⁶ Because this language assumes a U.S. dollar-denominated only issuance, adjustments to these provisions will need to be made for multicurrency notes.

⁷ The following capitalized terms not defined in the fallback language have the meanings ascribed in the relevant governing documentation for the floating rate notes: "Interest Period," "Notes" and "LIBOR." Such terms are included herein for illustrative purposes only and should be coordinated with definitions found elsewhere in the relevant governing documentation for the floating rate notes.

- (2) the sum of: (a) Compounded SOFR and (b) the Benchmark Replacement Adjustment;
- (3) the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment;
- (4) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment;
- (5) the sum of: (a) the alternate rate of interest that has been selected by the issuer or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment.

“Benchmark Replacement Adjustment” means the first alternative set forth in the order below that can be determined by the issuer or its designee as of the Benchmark Replacement Date:

- (1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;
- (2) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;
- (3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated floating rate notes at such time.

“Benchmark Replacement Conforming Changes” means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of “Interest Period,” timing and frequency of determining rates and making payments of interest, [changes to the definition of “Corresponding Tenor” solely when such tenor is longer than the Interest Period]⁸ and other administrative matters) that the issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the issuer or its designee determines that no market practice for use of the Benchmark Replacement exists, in such other manner as the issuer or its designee determines is reasonably necessary).

⁸ If the Benchmark’s tenor is longer than the period of time between payment dates (e.g. interest is paid every quarter based on 6-month LIBOR) and the Benchmark falls back to Compounded SOFR, issuers or their designees may wish to include the language in brackets in the definition of “Benchmark Replacement Conforming Changes” in order to retain the ability to adjust the compounding period to match the period of time between payment dates.

“Benchmark Replacement Date” means the earliest to occur of the following events with respect to the then-current Benchmark:

- (1) in the case of clause (1) or (2) of the definition of “Benchmark Transition Event,” the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or
- (2) in the case of clause (3) of the definition of “Benchmark Transition Event,” the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

“Benchmark Transition Event” means the occurrence of one or more of the following events with respect to the then-current Benchmark:

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

“Compounded SOFR” means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate (which will be compounded in arrears with a lookback and/or suspension period as a mechanism to determine the interest amount payable prior to the end of each Interest Period) being established by the issuer or its designee in accordance with:

- (1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; provided that:
- (2) if, and to the extent that, the issuer or its designee determines that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the issuer or its designee giving due

consideration to any industry-accepted market practice for U.S. dollar denominated floating rate notes at such time.

[Notwithstanding the foregoing, Compounded SOFR will include a [describe lookback and/or suspension period] as a mechanism to determine the interest amount payable prior to the end of each Interest Period.]⁹

“Corresponding Tenor” with respect to a Benchmark Replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark.

“Federal Reserve Bank of New York’s Website” means the website of the Federal Reserve Bank of New York at <http://www.newyorkfed.org>, or any successor source.

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

“ISDA Definitions” means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

“ISDA Fallback Adjustment” means the spread adjustment, (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark for the applicable tenor.

“ISDA Fallback Rate” means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

“Reference Time” with respect to any determination of the Benchmark means (1) if the Benchmark is LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such determination, and (2) if the Benchmark is not LIBOR, the time determined by the issuer or its designee in accordance with the Benchmark Replacement Conforming Changes.

“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.

⁹ Market participants are encouraged to include the bracketed language to adjust the definition of “Compounded SOFR” to the extent that they would use specific conventions for this rate regardless of any ARRC recommendation (e.g. if issuers and investors for a particular issuance are certain they would fall back to a Compounded SOFR with a two-day “lookback” period, that should be explicitly stated).

“SOFR” with respect to any day means the secured overnight financing rate published for such day 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 rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

“Unadjusted Benchmark Replacement” means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

Part III: User's Guide to Fallback Language for Floating Rate Notes

While **Part II** sets forth the ARRC's recommended fallback language, **Part III** contains a detailed description of these fallback provisions and guidance for market participants to consider in the adoption of these fallbacks.

Historically, most FRNs provided for a fallback waterfall that would, upon LIBOR not being available, first revert to the average of quotes in the London interbank market obtained by polling banks and then would ultimately fall back to the last published value of LIBOR if such quotes cannot be obtained.¹⁰ Because most observers now believe that banks would be unable or unwilling to provide the quotes implementing the first stage of this waterfall, it would appear that most FRNs would effectively convert to fixed rate instruments paying the last published value of LIBOR upon a cessation of LIBOR. The ARRC's recommended language is meant to provide a more robust waterfall that would allow for a conversion to SOFR based rates in the initial stages of the waterfall.

The ARRC FRN fallback provisions try to balance several goals of the ARRC. Flexible fallback provisions, particularly where one party is given discretion to make future determinations, could result in divergent outcomes, depending on, among other things, the way in which the provisions are drafted and the circumstances that exist at the time a determination is made. To provide clarity and consistency, the FRN fallback language therefore uses clear and observable triggers and fallback rates with spread adjustments, subject to some flexibility to fall back to a rate and spread adjustment determined by the issuer or its designee if the designated successor rates and adjustments with higher priority in the waterfalls are not available at the time a trigger event becomes effective.

Finally, investors and issuers may enter into interest rate derivatives to offset or hedge their floating rate exposure. In order to reduce a mismatch between FRNs and derivatives instruments, the recommended fallback language for FRNs is consistent in many ways with the approach ISDA presently anticipates implementing for derivatives. In certain key respects, however, the approach for FRN fallbacks differs, including with respect to the primary successor rate, which market participants may choose to adjust for greater consistency across products, as described below.

A. Introduction

Future-proofing

It is important to note that the fallback provisions refer to the "Benchmark" throughout and define the Benchmark as, initially, LIBOR; provided that if LIBOR has been replaced in the contract, then the term "Benchmark" means the applicable "Benchmark Replacement" (which is a defined term that combines the successor rate and the spread adjustment). This drafting is intended to allow the fallback provisions to apply a second time in the highly unlikely event that during the term of a contract, the successor for LIBOR is later discontinued.

¹⁰ See "LIBOR Fallbacks In Focus: A Lesson In Unintended Consequences" at <https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/may/Oliver%20Wyman%20-%20LIBOR%20Fallbacks%20in%20Focus.PDF>.

Operative Provisions

The recommended fallback provisions begin with operative provisions specifying what is to happen if one or more of the trigger events have occurred with respect to the Benchmark.¹¹

- (1) **Benchmark Replacement:** If one or more events that trigger a move to the successor rate have occurred, then the FRN will reference the “Benchmark Replacement” thereafter.
- (2) **Benchmark Replacement Conforming Changes:** At the time of the replacement of a Benchmark, and from time to time thereafter, certain conforming changes will be needed to account for the move to the Benchmark Replacement.
- (3) **Decisions and Determinations:** In addition, standards are set forth for the various decisions that must be made in connection with a Benchmark transition.

It is the Benchmark’s replacement that the ARRC’s recommended fallback language is chiefly aimed at addressing. Making this operational involves specifying a set of triggers, a successor rate, a spread adjustment, and some description of the conforming changes that could be made. How each of these is specified in the recommended fallback language is discussed in turn.

B. Triggers

Permanent Cessation Triggers

The triggers specified in the FRN fallback language that precipitate the transition away from the Benchmark are set forth in the defined term “Benchmark Transition Event.” The first two triggers require a public statement or publication of information that the actual cessation of LIBOR has occurred or is expected by the administrator of LIBOR (the ICE Benchmark Administration or “IBA”), the regulatory supervisor of the administrator of LIBOR (the Financial Conduct Authority or “FCA”), the central bank for the currency of LIBOR (the U.S. Federal Reserve System) or a bankruptcy/resolution official or court with jurisdiction over the administrator of LIBOR. The first and second clauses of the definition of “Benchmark Transition Event” read as follows:

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

¹¹ If it is not possible to determine LIBOR but none of the events that would trigger a move to a successor rate have occurred (that is, LIBOR has not been permanently or indefinitely discontinued nor has the regulator of the benchmark found that it is not representative), then the FRN will reference whatever is currently specified in the current sections of contract language for a *temporary* unavailability of LIBOR.

which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

These triggers are intended to align with the triggers included in ISDA's 2018 Consultation¹² and, according to the definition of "Benchmark Replacement Date" do not lead to a move away from LIBOR until the date that LIBOR ceases to be published (if that date is later than the date of the announcement/public information).

Pre-cessation Trigger - Benchmark is "No Longer Representative"

The third trigger recommended by the ARRC for FRNs is a "pre-cessation" trigger found in clause (3) of the definition of "Benchmark Transition Event," which is set forth below:

- (3) *a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.*

This trigger institutes a transition to an alternative rate upon a determination by a regulatory supervisor that the quality of the Benchmark has deteriorated such that it would likely have a significant negative impact on its liquidity and usefulness to market participants. As noted above, the regulator with authority over the administrator of LIBOR is the FCA. The EU Benchmark Regulation requires the FCA to make an assessment of LIBOR's representativeness in certain circumstances, such as the departure of one or more panel banks, or in any event, every two years. If the FCA determines that LIBOR is "no longer representative of the underlying market or economic reality," under the EU Benchmark Regulation LIBOR may in some circumstances continue to be published in order to avoid a disruptive cessation and potential financial instability, however in these circumstances EU-supervised entities could be prohibited from referencing LIBOR in new derivatives and securities. The FCA has publicly stated that market participants may prefer to include a trigger "based on an announcement of non-representativeness rather than triggers based on cessation alone"¹³ and the FSB's Official Sector Steering Group expressed a similar view in a letter to ISDA noting that such a trigger "would offer market participants with LIBOR-referencing derivative contracts the opportunity to move to new benchmarks rather than remain on a non-representative LIBOR rate."¹⁴

Although ISDA intends to consult on pre-cessation issues, including the inclusion of a similar trigger in its definition amendments for derivatives, parties should understand that if ISDA does not include a similar provision and this third trigger results in a "Benchmark Replacement Date" occurring with respect to the FRNs, a party seeking to effectively hedge LIBOR-based FRNs may be obligated (for contractual reasons)

¹² In 2018, ISDA conducted a market-wide consultation on fallbacks for derivatives referencing Sterling LIBOR, Swiss Franc LIBOR, Japanese Yen LIBOR and TIBOR, and the Australian BBSW rate (referred to herein as the "ISDA 2018 Consultation"). See the ISDA 2018 Consultation at <https://www.isda.org/2018/12/20/benchmark-fallbacks-consultation/>.

¹³ See [speech](#) by Edwin Schooling Latter, Director of Markets and Wholesale Policy at FCA, delivered at ISDA Annual Legal Forum on January 28, 2019.

¹⁴ See the FSB [letter to ISDA](#) dated March 12, 2019.

or may choose (for economic reasons) to terminate or amend its LIBOR-linked hedges to reference the benchmark replacement.

C. Benchmark Replacement

In the ARRC-recommended fallback language for FRNs, if a trigger event and its related effective date with respect to a Benchmark occur, all references to the Benchmark will be replaced throughout the documentation with the “Benchmark Replacement.” Note that the defined term “Benchmark Replacement” in the fallback language encompasses the successor rate and any spread adjustment, which is discussed separately below; the defined term for the successor rate prior to adjustment is “Unadjusted Benchmark Replacement.”

Interpolation

The operative defined term “Benchmark Replacement” in the FRN fallback language states that if only some tenors of the Benchmark have been effected by the trigger event but both shorter and longer tenors remain available, then the FRN is to use an interpolated value (defined as the “Interpolated Benchmark”) based on the nearest Benchmark tenors that *can* be determined.¹⁵

Waterfall

If it is not possible to determine the Interpolated Benchmark, however, then the defined term “Benchmark Replacement” sets forth a waterfall to determine the particular successor rate to be used. It is important to note that for consistency across asset classes, each step in the waterfall must be assessed as of the first time a trigger event with respect to the Benchmark becomes effective (this time is called the “Benchmark Replacement Date”). The availability of each step in the waterfall is not re-evaluated at a later point in time. The table below displays the waterfall:

Benchmark Replacement Waterfall
Step 1: Term SOFR + Adjustment
Step 2: Compounded SOFR + Adjustment
Step 3: Relevant Governmental Body Selected Rate + Adjustment
Step 4: ISDA Fallback Rate + Adjustment
Step 5: Issuer or its Designee Selected Rate + Adjustment

Step 1: Term SOFR + Adjustment

The first step in the “Benchmark Replacement” waterfall is specified in the fallback language as follows:

¹⁵ This provision is to address the possibility that a middle tenor (e.g. 3-month LIBOR) is discontinued while shorter and longer tenors remain (e.g. 1-month LIBOR and 6-month LIBOR). In these circumstances, LIBOR would be interpolated rather than replaced.

*the sum of (a) Term SOFR and (b) the Benchmark Replacement Adjustment*¹⁶

“Term SOFR” is defined as a forward-looking term SOFR for the Corresponding Tenor (meaning a period equivalent to the LIBOR tenor, e.g. 1-month SOFR, 3-month SOFR) that is selected or recommended by the Relevant Governmental Body. The “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 (e.g., the ARRC), or any successor thereto.

While the ARRC intends to select a forward-looking term SOFR for use as a fallback rate in cash products that originally referenced LIBOR, if a consensus among its members can be reached that an IOSCO-compliant benchmark¹⁷ exists and meets appropriate criteria set by the ARRC, it is not certain that such a benchmark will be produced prior to the discontinuation of LIBOR.

In addition, because standard derivatives are not expected to reference a forward-looking term rate,¹⁸ issuers in the cash market who execute hedges may prefer to remove Term SOFR (and adjust all of the corresponding cross references within the fallback language) in order to fall back to Compounded SOFR, the rate expected to be the same rate that becomes operative under ISDA’s standard definitions for derivatives. Note that other conforming changes may also be needed at the time a fallback is activated in order to maintain alignment with hedges.

Step 2: Compounded SOFR + Adjustment

If the ARRC has concluded that a robust, IOSCO-compliant forward-looking term rate is not available and has therefore not selected or recommended such a rate per the first step of the waterfall, then the second step specified in the “Benchmark Replacement” waterfall is as follows:

the sum of: (a) Compounded SOFR and (b) the Benchmark Replacement Adjustment

It is important to note that LIBOR is produced in various tenors (e.g. one-month, three-month, six-month). At each tenor LIBOR acts as a forward-looking rate whereby the interest due at the end of the period is known at the beginning of that interest period. SOFR, however, is currently only an overnight rate, with the SOFR for a given day being published the following day. Because SOFR is only available at this time in an overnight tenor and interest payable by FRNs is typically in terms longer than overnight (i.e. monthly, quarterly), daily SOFRs would need to be aggregated in FRNs in order to determine an interest amount due for each interest period.¹⁹

¹⁶ “Benchmark Replacement Adjustment” is the defined term for the spread adjustment discussed further below.

¹⁷ See the *Principles for Financial Benchmarks*, final report of the Board of the International Organization of Securities Commissions dated July 2013 at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>.

¹⁸ 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?”

¹⁹ Various models for using SOFR in cash products as well as the technical difference between simple average and compounded average calculations are described in *A User’s Guide to SOFR* available at: <https://www.newyorkfed.org/arrc/publications>.

Compounded SOFR as the second step in the waterfall is intended to be a compounded average of daily SOFRs over the relevant period (e.g., one-month, three-months) depending on the tenor of the LIBOR being replaced.²⁰ For the avoidance of doubt, compounding does not apply to the Benchmark Replacement Adjustment or any margin specified in the underlying terms. The definition explicitly states that the rate will be implemented “in arrears,” meaning that Compounded SOFR would reflect daily rates during the relevant interest period (not over a prior interest period), which rate would not be known at the beginning of the relevant interest period. Importantly, provided that interest is compounded and accrued in systems, the accrued interest would be known at any day in the interest period. As noted above, this rate may be the fallback rate for LIBOR derivatives referencing the ISDA standard definitions for derivatives.²¹

Although, as discussed in *Part IV: Summary of Responses to the ARRC’s Consultations*, there was strong consultation feedback in favor of compounded SOFR in arrears as the second step in the successor rate waterfall, some market participants have expressed concerns regarding issues that may arise in connection with implementation of this waterfall step. While a compounding calculation formula (the “methodology”) could be specified in the contractual documents, most FRNs referencing SOFR issued to date have used a “simple average” of daily SOFRs rather than a “compounded average” and there is no standard methodology for referencing a compounded rate in FRNs at this time. Furthermore, at this time there is no standard set of “conventions” for use of this rate in the FRN market.

To illustrate a few of the possible conventions, most FRNs referencing SOFR to date provide for a “lookback” (also called a “lag”), meaning that in order to achieve certainty regarding cash flows before an interest payment is due, SOFR-referencing FRNs shift backwards the period of time that the rates are observed. Therefore, SOFR is determined for each day during the relevant period of time between payment dates based on a prior day’s rate. However, the number of days’ lookback has varied by issuance. As a different mechanism to determine the interest amount before an interest payment becomes due, most FRNs referencing SOFR to date have also provided for a “lockout” period (also called a “suspension” period) of varying lengths (or none at all), meaning that a SOFR rate is repeated for the final few days in each observation period.²²

Market conventions can develop and change over time according to market-based evolution and/or changes in practice. In order to facilitate a smooth transition within a relatively short timeframe, the ARRC has agreed to raise awareness about the different conventions for referencing SOFR in cash products and provide further clarity in relation to these emerging conventions. Accordingly, the definition of “Compounded SOFR” in the fallback language leaves room for direction from the ARRC and/or market-accepted conventions once they emerge. The relevant definition is set forth below:

²⁰ If the Benchmark’s tenor is longer than the period between payment dates (e.g. interest is paid every quarter based on 6-month LIBOR) and the Benchmark falls back to Compounded SOFR, issuers or their designees may want to include language that is in brackets in the definition of “Benchmark Replacement Conforming Changes” in order to retain the ability to adjust the compounding period to match the period of time between payment dates.

²¹ However, this is not certain as ISDA has not yet completed its consultation specifically focused on U.S. dollar LIBOR.

²² This discussion does not capture all potential conventions for using SOFR in the cash markets.

“Compounded SOFR” means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate (which will be compounded in arrears with a lookback and/or suspension period as a mechanism to determine the interest amount payable prior to the end of each Interest Period) being established by the issuer or its designee in accordance with:

- (1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; provided that:
- (2) if, and to the extent that, the issuer or its designee determines that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the issuer or its designee giving due consideration to any industry-accepted market practice for U.S. dollar denominated floating rate notes at such time.

[Notwithstanding the foregoing, Compounded SOFR will include a [describe lookback and/or suspension period] as a mechanism to determine the interest amount payable prior to the end of each Interest Period.]

Because of the uncertainty around the conventions that the market will adopt, this definition is drafted flexibly with the intention that parties will be able to observe prevailing conventions at the time of transition and, when implementing Compounded SOFR, will adopt conventions that have been accepted in the market, recognizing that market conditions may thereafter continue to evolve.

The definition of “Compounded SOFR” establishes a two-step analysis. If the ARRC were to make a recommendation for or select a rate/methodology and/or a set of conventions, then the issuer or its designee would first look to such choices and apply such rate/methodology and/or conventions. In the absence of an ARRC recommendation or selection, or to the extent that the ARRC recommendation or selection did not cover all of the methodology and/or conventions needed, the issuer or its designee would select them giving due consideration to any methodology and/or conventions that have been accepted in the U.S. dollar FRN market.

Market participants are encouraged to adjust the definition of “Compounded SOFR” to the extent that they would use specific conventions for this rate regardless of any ARRC recommendation (e.g. if issuers and investors for a particular issuance are certain they would fall back to a Compounded SOFR with a two-day “lookback” period, that should be explicitly stated using the language in brackets at the end of the definition of Compounded SOFR).

Alternative Step 2: Simple Average SOFR + Adjustment

Market participants may prefer to reference a simple average of SOFRs (rather than a compounded average) in the second step of the successor rate waterfall in order to utilize an uncompounded interest rate that is easier to calculate, regardless of the standard derivatives convention to reference compounded SOFR. This can be accomplished by changing the “Compounded SOFR” definition in the recommended fallback language to the “Simple Average SOFR” definition set forth below and changing

all of the corresponding references within the fallback language from “Compounded SOFR” to “Simple Average SOFR.” For the avoidance of doubt, this modification to the fallback language would be aligned with the ARRC’s principles.

“Simple Average SOFR” means the simple average of SOFRs for the applicable Corresponding Tenor, with the conventions for this rate (which will be in arrears with a lookback and/or suspension period as a mechanism to determine the interest amount payable prior to the end of each Interest Period) being established by the issuer or its designee in accordance with:

- (1) the conventions for this rate selected or recommended by the Relevant Governmental Body for determining simple average SOFR; provided that:*
- (2) if, and to the extent that, the issuer or its designee determines that Simple Average SOFR cannot be determined in accordance with clause (1) above, then the conventions for this rate that have been selected by the issuer or its designee giving due consideration to any industry-accepted market practice for U.S. dollar denominated floating rate notes at such time.*

[Notwithstanding the foregoing, Simple Average SOFR will include a [describe lookback and/or suspension period] as a mechanism to determine the interest amount payable prior to the end of each Interest Period.]

Step 3: Relevant Governmental Body Selected Rate + Adjustment

The third step in the waterfall is a rate selected by the Relevant Governmental Body (e.g. the ARRC or a similar body). As noted above, because FRNs may have longer maturities, the fallback language also addresses a scenario where SOFR has been discontinued and the Benchmark Replacement cannot be determined on the basis of a SOFR-linked replacement rate as provided in the first two steps of the waterfall. The third priority set forth in the “Benchmark Replacement” waterfall is:

the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment

This language is intended to mirror the first fallback for SOFR embedded in the ISDA definitions. The rationale is that if a SOFR-based rate is discontinued, it is possible that a committee similar to the ARRC would be formed to recommend a replacement for such SOFR-based rate.

Step 4: ISDA Fallback Rate + Adjustment

If, however, the Benchmark Replacement cannot be determined pursuant to any of the waterfall steps above, presumably because SOFR has been discontinued and the ARRC (or other then-existing Relevant Governmental Body) has not recommended a replacement for the SOFR-based rate, at this stage of the waterfall, the “Benchmark Replacement” is as follows:

the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment

The “ISDA Fallback Rate” is the applicable fallback rate (without any spread adjustment) that is embedded in the ISDA standard definitions as written at the time of the then-current Benchmark’s cessation, allowing for future modifications to the ISDA fallback provisions.

The ISDA Fallback Rate currently embedded in the ISDA definition of “USD-SOFR-COMPOUND” is a waterfall that looks first to the Relevant Governmental Body recommended replacement rate for SOFR, then to the Overnight Bank Funding Rate (“OBFR”) published on the Federal Reserve Bank of New York’s website and then to the FOMC Target Rate,²³ published on the Federal Reserve’s website. ARRC members and market participants recognize that ISDA’s fallbacks may change in the future and consultation feedback indicated a preference to reference the ISDA definitions in place at the time the relevant Benchmark is discontinued rather than name specific fallback rates below the third step in the waterfall.

Step 5: Issuer or its Designee Selected Rate

If, however, the Benchmark Replacement cannot be determined in accordance with any of the steps above, then the fifth and final step of the waterfall is set forth in the definition of “Benchmark Replacement” as follows:

the sum of: (a) the alternate rate of interest that has been selected by the issuer or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor that gives due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment

This final step of the waterfall allows an easier transition from LIBOR in the event that the first four steps of the Benchmark Replacement waterfall do not produce a replacement rate. The issuer or its designee will select an alternate rate of interest giving due consideration to any industry-accepted rate in the U.S. dollar floating rate note market. Like the steps above, such “Benchmark Replacement” will include the applicable Benchmark Replacement Adjustment described below.

Some ARRC members continue to feel strongly that if the issuer or its designee determines that the ISDA Fallback Rate is not an industry-accepted successor rate for floating rate notes at such time, then the issuer or its designee may override the fourth step and move directly to this final fifth step. Note, however, that neither the issuer nor its designee would be obliged to make any such determination and if they do not do so, the ISDA Fallback Rate for the applicable Benchmark at such time will be the replacement rate. For the avoidance of doubt, this modified fifth step (set forth below) would not be inconsistent with the ARRC’s principles.

²³ “FOMC Target Rate” is the short-term interest rate target set by the Federal Open Market Committee and published on the Federal Reserve’s website or, if the Federal Open Market Committee does not target a single rate, the mid-point of the short-term interest rate target range set by the Federal Open Market Committee and published on the Federal Reserve’s website (calculated as the arithmetic average of the upper bound of the target range and the lower bound of the target range, rounded, if necessary, to the nearest two decimal places (with .005 being rounded upwards (e.g., .674 being rounded down to .67 and .675 being rounded up to .68))).

provided that if (i) the Benchmark Replacement cannot be determined in accordance with clause (1), (2), (3) or (4) above as of the Benchmark Replacement Date or (ii) the issuer or its designee shall have determined that the Unadjusted Benchmark Replacement determined in accordance with clause (4) above is not an industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar denominated floating rate notes at such time, then the Benchmark Replacement shall be the sum of: (a) an alternate rate of interest that has been selected by the issuer or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor that gives due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment

D. Benchmark Replacement Adjustment

LIBOR and SOFR are different rates and thus the transition from LIBOR to SOFR will require a spread adjustment to make the rate levels more comparable. As noted above, LIBOR is produced in various tenors and SOFR is currently only an overnight rate. Another critical difference between LIBOR and SOFR is that LIBOR is based on unsecured transactions and is intended to include the price of bank credit risk. SOFR, on the other hand, is a near risk-free rate that does not include any bank credit component, as the transactions underpinning SOFR are fully secured by U.S. Treasuries.

Therefore, the ARRC-endorsed fallback language provides for an adjustment (which may be a positive or negative value or zero) to be included in the determination of any Benchmark Replacement. The particular spread adjustment to be used is selected at the time that the Benchmark Replacement is selected according to a waterfall in the definition of “Benchmark Replacement Adjustment.” Note that the fallback adjustment would differ for each LIBOR tenor and would be implemented as part of the Benchmark Replacement in order to encompass all credit, term and other adjustments that may be appropriate for a given tenor of the benchmark rate. The table below displays the FRN spread adjustment waterfall:

Benchmark Replacement Adjustment Waterfall
Step 1: ARRC Selected Adjustment
Step 2: ISDA Fallback Adjustment ²⁴
Step 3: Issuer or its Designee Selected Adjustment

Step 1: ARRC Selected Adjustment

The first step of the adjustment waterfall set forth in clause (1) of the definition of “Benchmark Replacement Adjustment” provides that the adjustment will be:

²⁴ This step 2 is applicable only where the Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, as described below.

the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;

This means that if the ARRC selects or recommends a spread (or its methodology), it is this adjustment that would be incorporated and applied to the successor rate. Market participants that remove the first step of the Benchmark Replacement waterfall and wish to fall back first to Compounded SOFR may consider removing this first step of the Benchmark Replacement Adjustment waterfall.

Step 2: ISDA Fallback Adjustment

The second step in the waterfall is the ISDA Fallback Adjustment, which is defined as the spread adjustment applicable to fallbacks for derivatives that ISDA anticipates implementing in its definitions. The ISDA Fallback Adjustment will be intended for use with the particular version of the fallback rate selected by ISDA based upon the outcome of its consultations. Therefore, the ISDA Fallback Adjustment will only be automatically applicable under the second step of the waterfall if the Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate. The relevant language in the second clause of the definition of “Benchmark Replacement Adjustment” is set forth below:

if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;

It is important to note that ISDA has not analyzed, and will not analyze, whether the fallbacks it anticipates implementing, including spread adjustments in the fallbacks, would be appropriate for non-derivatives.²⁵

Step 3: Issuer or its Designee Selected Adjustment

If the first two steps in the Benchmark Replacement Adjustment waterfall are not applicable, then the third and final step of the spread adjustment waterfall requires that the issuer or its designee select a Benchmark Replacement Adjustment giving due consideration to any market-accepted conventions for such spread adjustment. This step is set forth in clause (3) of the definition of “Benchmark Replacement Adjustment” as follows:

²⁵ As discussed in **Part IV: Summary of Responses to the ARRC’s Consultations**, it may be the case that ISDA’s standard definitions for derivatives do not include a “pre-cessation” trigger for LIBOR’s representativeness of the kind that the ARRC is recommending for FRNs and that any spread adjustment for derivative fallbacks in the ISDA’s standard definitions for derivatives would only become effective upon a permanent discontinuance of LIBOR. However, the methodology used in ISDA’s chosen spread adjustment could be utilized in connection with the FRN “pre-cessation” trigger prior to transition of the derivatives market because ISDA anticipates that a third party vendor will publish the spread adjustment on a daily basis up until the time an ISDA trigger event has occurred. Note that spread adjustments for FRNs determined based upon the spread methodology for derivatives in the ISDA definitions could result in different spreads if such calculations are performed at a time prior to the activation of fallbacks for standard derivatives.

the spread adjustment (which may be a positive or negative value or zero) that has been selected by the issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated floating rate notes at such time.

E. Conforming Changes

As noted above, the fallback language provides the issuer or its designee the ability to execute certain conforming changes to the FRNs in order to appropriately implement and apply the successor 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 length of interest accrual periods or frequency of determining rates. The definition of “Benchmark Replacement Conforming Changes” is set forth below:

“Benchmark Replacement Conforming Changes” means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of “Interest Period,” timing and frequency of determining rates [changes to the definition of “Corresponding Tenor” solely when such tenor is longer than the Interest Period²⁶] and making payments of interest and other administrative matters) that the issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the issuer or its designee determines that no market practice for use of the Benchmark Replacement exists, in such other manner as the issuer or its designee determines is reasonably necessary).

Because conventions may evolve over time, the ability of the issuer or its designee to implement conforming changes is not only available at the time of transition, but also from time to time thereafter. With respect to implementation of a fallback, it is expected that “Benchmark Replacement Conforming Changes” will be particularly important in connection with implementation of Compounded SOFR.

F. Decisions and Determinations

In general, the recommended FRN fallback language provides detail about the triggers, successor rates and spread adjustments in order to minimize the exercise of discretion by any party in the event of a LIBOR cessation.

Nonetheless, the fallback provisions specify that the issuer or its designee (which may be an affiliate of the issuer, or some other agent) must make certain decisions and determinations (*e.g.*, whether a trigger has occurred and what is the applicable successor rate and spread adjustment). The fallback

²⁶ If the Benchmark’s tenor is longer than the period of time between payment dates (*e.g.* interest is paid every quarter based on 6-month LIBOR) and the Benchmark falls back to Compounded SOFR, issuers or their designees may want to include the language in brackets in the definition of “Benchmark Replacement Conforming Changes” in order to retain the ability to adjust the compounding period to match the period of time between payment dates.

language specifies in the operative provisions that such decisions regarding whether to take action or refrain from taking action may be made “in the sole discretion” of the issuer or its designee. The standard set forth for any determinations by the issuer or its designee, including determinations of the occurrence or non-occurrence of any event, circumstance, date, rate or adjustment, are to be “conclusive and binding absent manifest error.”

Parties to a transaction may discuss and seek to assign responsibility for making such decisions and determinations in a manner that is consistent with other provisions of their transaction (e.g. to a third party trustee). In particular, as noted above, the fallback language provides flexibility at the end of the successor rate and spread adjustment waterfalls for the issuer or its designee to exercise discretion to make a determination with respect to such rate and spread adjustment and parties may wish to carefully consider which party would bear this responsibility in advance of an issuance.

G. General Considerations

This ARRC recommendation for FRNs provides a complete fallback solution. However, it was not possible to address every aspect of the documentation that would be impacted when LIBOR is replaced and such other changes to operative provisions fall outside the scope of this project. For example, with respect to Compounded SOFR implemented “in arrears,” parties will need to consider what changes may be necessary to accommodate not knowing the interest rate at the beginning of the interest period. It is the intention that future changes such as these would be able to be implemented through an issuer or its designee’s ability to make “Benchmark Replacement Conforming Changes.”

Finally, there are certain decisions and determinations that must be made by issuers or their designees in connection with a transition to a Benchmark Replacement. Issuers or their designees may deem it prudent to include general disclaimer language with respect to LIBOR or any successor rate. While such provisions are individual to each issuance, the ARRC understands the needs of issuers and thus, inclusion of such language will not be inconsistent with the ARRC’s principles.

Part IV: Summary of Responses to the ARRC's Consultations

In this section, we discuss the feedback the ARRC received to its consultations published in 2018 for floating rate notes, syndicated business loans, bilateral business loans, and securitizations and how these responses affected the crafting of the ARRC's final fallback language recommendations. The consultations generally set forth proposed fallback provisions that defined:

- ***A set of trigger events.*** Trigger events are the occurrences that precipitate the conversion from LIBOR to a new reference rate.
- ***The selection of a successor rate.*** The successor rate is the reference rate that would replace LIBOR in contracts.
- ***The selection of a spread adjustment.*** The adjustment is added to the successor rate to account for differences between LIBOR and the successor rate.

The proposed provisions also sought to address timing and operational mechanics so that the fallbacks would function effectively. Market participants were invited to comment on these details of the ARRC's proposed fallback provisions. Comment was also sought on the general appropriateness of the proposals, potential operational challenges, and any barriers to implementation. Below is an overview of the feedback with respect to each of the key components of the proposed fallback language in the consultations.

Triggers

The ARRC consultations included five baseline trigger events²⁷: The first and second triggers in the ARRC's proposed fallback provisions matched the fallback triggers in the ISDA 2018 Consultation²⁸. These two triggers would cause a move to the successor rate in the event that LIBOR was permanently or indefinitely discontinued, as announced either by the benchmark administrator or an official body. The ARRC consultations also included additional "pre-cessation triggers" that were not included in the ISDA 2018 Consultation but were intended to describe events that signaled either an unannounced stop to LIBOR, a material downgrade in the quality of LIBOR as signaled by a permanent or indefinite decline in the number of submitting banks to below the number required by its administrator's internal policies, or a determination by a regulatory supervisor that LIBOR was not representative of the underlying market.

Although many respondents to the ARRC consultations noted that consistency with ISDA was desirable where possible, a clear majority of consultation respondents (84 percent) supported the inclusion of one or more of the pre-cessation triggers, with 77 percent supporting the inclusion of a trigger for a regulatory finding that LIBOR was no longer representative. Many respondents to the FRN and securitization consultations (72 percent of respondents) believed they would have no other options available to manage the potential risks that could be involved if triggers of this type were not included in fallback language.

²⁷ The securitizations consultation included two additional triggers that are not discussed herein.

²⁸ See the ISDA 2018 Consultation at <https://www.isda.org/2018/12/20/benchmark-fallbacks-consultation/>.

Since the ARRC's consultations were released, other information has also been received that was relevant for the ARRC's considerations of trigger events. The regulatory supervisor for the administrator of LIBOR, the FCA, has indicated that it may be likely to determine that LIBOR was no longer representative of underlying markets at, if not before, the time that [the benchmark's insufficient submissions policy](#) was ever invoked.²⁹ And ISDA has indicated that it is also moving to solicit market-wide feedback on pre-cessation issues, including those related to a statement by the FCA that LIBOR was no longer representative.³⁰

Based on the feedback to its consultations and the ARRC's belief that some form of trigger that attempts to address a further decline in the quality of LIBOR is desirable, the ARRC has determined that the inclusion of at least one pre-cessation trigger is appropriate, but that it is also appropriate to seek consistency with ISDA's standard definitions for derivatives where it is feasible. Although the results of ISDA's work cannot be known at this time, and it is not certain that ISDA will ultimately include a pre-cessation trigger in its standard definitions, the ARRC has also concluded that it is appropriate to seek potential consistency with ISDA by recommending a pre-cessation trigger in cash product contracts for the event that the FCA finds LIBOR to no longer be representative. In this way, as has been supported by the FCA, FSB, and other regulatory organizations, the ARRC's recommendations can hope to effectively address a deterioration in LIBOR's quality while also seeking as much consistency with ISDA as may be possible.³¹

Successor Rate

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 was selected because it [meets international standards](#) for benchmark quality in light of the depth and liquidity of the markets that underlie it and the manner in which it is produced and administered.

SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities and reflects an economic cost of lending and borrowing relevant to the wide array of market participants active in the financial markets. SOFR is determined based on transaction data composed of:

²⁹ See [speech](#) by Edwin Schooling Latter, Director of Markets and Wholesale Policy at FCA, delivered at ISDA Annual Legal Forum on January 28, 2019.

³⁰ See the FSB Official Sector Steering Group's [letter](#) to ISDA dated March 12, 2019, indicating support for ISDA's decision to consult market participants regarding the addition of other trigger events.

³¹ The final fallback language for securitizations may include additional pre-cessation triggers.

(i) tri-party repo, (ii) General Collateral Finance (GCF) repo, and (iii) bilateral Treasury repo transactions cleared through Fixed Income Clearing Corporation (FICC). 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.³² Further, SOFR has a combined set of other advantages that are difficult to match: it is fully IOSCO compliant and produced by the public sector with the public interest in mind, it is now included in FASB's list of hedge accounting markets³³, and it should be expected to become a highly liquid benchmark in derivatives markets.

However, SOFR is fundamentally different from LIBOR. SOFR is an overnight, secured nearly risk-free rate, while LIBOR is an unsecured rate published at several different maturities (overnight/spot, one week, one month, two months, three months, six months and one year). Although many market participants should be able to use SOFR as an overnight rate, as evidenced by recent issuances of SOFR-based FRNs, some may find this difficult, and in particular market participants that executed securities and loans linked to LIBOR may find it difficult to transition such legacy contracts from a term LIBOR to an overnight SOFR. For these reasons, 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.³⁴

Recognizing that it may be more difficult for parties to legacy cash products to move from a term LIBOR rate to an overnight rate, this forward-looking term rate was proposed as the primary potential successor rate for new cash products in the ARRC's consultations. A clear majority (80 percent) of respondents to the consultations agreed with this proposal, although other respondents believed that a compound average of SOFR was more appropriate as the primary fallback. Consistent with the feedback received from a majority of respondents to the consultations, the final fallback provisions reference a forward-looking term SOFR "selected or recommended by the Relevant Governmental Body" as the primary fallback rate. As noted above, the ARRC has set a goal of seeing a forward-looking term SOFR rate produced by the end of 2021; however, it is also important to understand that the ARRC will only select or recommend any reference rate as a fallback for LIBOR based cash products if a consensus can be reached among its members that such rate is a robust, transaction-based IOSCO-compliant benchmark.

³² 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 Federal Reserve Bank of New York began publishing SOFR on April 3, 2018. SOFR is published on a daily basis on the Federal Reserve Bank of New York's website at approximately 8:00 a.m. eastern time. To view the rate, visit: <https://apps.newyorkfed.org/markets/autorates/sofr>.

³³ The Financial Accounting Standards Board ("FASB") issued [ASU 2018-16](#) to permit the use of the overnight index swap rate based on SOFR as a U.S. benchmark interest rate for purposes of hedge accounting under Topic 815, *Derivatives and Hedging*.

³⁴ The ARRC also 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). The Federal Reserve Board released a paper on Inferring Term Rates from SOFR Futures Prices: Finance and Economics Discussion Series (FEDS), Divisions of Research & Statistics and Monetary Affairs, dated February 5, 2019 at <https://www.federalreserve.gov/econres/feds/files/2019014pap.pdf>.

If the ARRC has concluded that a robust, IOSCO-compliant forward-looking term rate is not available and has therefore not selected or recommended such a rate, then the next successor rate proposed in the consultations was a compound average of SOFR. Respondents to the consultations approved of this choice, and all respondents to the FRNs consultation (and the majority of respondents to other consultations) believed that the compound average should be calculated “in arrears,” *i.e.* not known at the beginning of the interest period. The third proposed fallback rate, spot SOFR, received little support – only 22 percent of consultation respondents believed it would be appropriate to include one single day’s observation of SOFR held for the duration of the interest period as a successor rate, and the ARRC has not included spot SOFR in its final recommendations.

The remaining steps included in the FRN and securitization consultations’ waterfall of successor rates are primarily aimed at addressing the risk that SOFR might someday cease to be published. While this seems an unlikely event in the current environment, FRNs and securitizations can have very long maturities and the ARRC believed it was important to include a robust set of fallback provisions that would protect issuers and investors beyond the potential end to LIBOR itself. Respondents generally supported the ARRC’s proposals at this stage of the successor rate waterfall and the ARRC has kept them in its final recommendations. On the other hand, the ARRC has removed from the penultimate step of the FRN fallback language the right of the issuer or its designee to override the ISDA fallback rate. The provision was opposed by the majority of respondents to the FRN consultation, although it is not inconsistent with the ARRC’s principles.

The final step in each of the successor rate waterfalls in all of the consultations allowed agents and borrowers, lenders, and issuers or their designees discretion to select a successor rate, sometimes with negative consent of other parties. This flexibility is intended to ensure the successor rate waterfalls do not fail and has remained in the final ARRC-recommended fallback language.

Spread Adjustment

As described above, LIBOR and SOFR are different rates and thus the ARRC consultation fallback proposals included a spread adjustment, intended to make the successor rate level more comparable to LIBOR. The ARRC proposed that the primary spread adjustment at the top of a waterfall would be an adjustment selected or recommended by the “Relevant Governmental Body.” The majority of consultation respondents (91 percent) indicated that it would be helpful for the ARRC to make recommendations for spread adjustments for cash products. Although an ARRC-recommended spread adjustment does not exist today, the ARRC has agreed to make such a spread adjustment recommendation one of its goals.

Respondents believed that the spread adjustment for derivatives that ISDA intends to include in its standard documentation should be used as the second step in the waterfall.³⁵ While ISDA expects to

³⁵ FRN consultation respondents were split between views as to whether the ISDA spread adjustment should be used only if the fallback rate corresponded to ISDA’s chosen fallback rate. In the final recommendations for FRN fallbacks, the ISDA adjustment will not automatically apply unless the cash product fallback rate is equivalent to the ISDA fallback rate.

include SOFR as the successor rate for USD LIBOR, it has not yet finalized the term and spread adjustments that will apply in the ISDA standard definitions for derivatives.

Consistent with the successor rate waterfall, the final step of the spread adjustment waterfall also provides one or more parties the discretion to select a spread adjustment to ensure the waterfall does not fail.

“Amendment Approach” for Loans

The description of consultation proposals and feedback above generally applies to the FRNs, securitizations and the “hardwired approach” in the syndicated and bilateral loan consultations. These hardwired approaches for cash products provide more clarity upfront. Market participants that adopt these fallback provisions can know that they will pay or receive a version of SOFR plus a spread adjustment upon a trigger event and parties will not be able to take advantage of the then-current market environment to capture economic value. The hardwired approach will likely be more executable on a large number of transactions at LIBOR transition.

However, another approach was included in the consultations for syndicated and bilateral loans called the “amendment approach.” The “amendment approach” uses loans’ flexibility to create a simpler, streamlined amendment process. It maximizes flexibility and does not reference rates or spread adjustment methodologies that do not yet exist. 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. Additionally, as described in the loan consultations, the “amendment approach” is likely to create winners and losers in different market cycles. In a borrower-friendly market, a borrower may be able to extract value from the lenders by refusing to include a compensatory spread adjustment when transitioning to SOFR. Non-consenting lenders still would be subject to the lower rate. In a lender-friendly market, lenders might block a new proposed rate, forcing the borrower to pay a higher interest rate, such as the alternate base rate³⁶ for a period of time. A number of respondents to the consultations also noted the operational risk associated with amending a large number of loans in a short period of time.

For these reasons, most consultation respondents that indicated they would prefer to implement the “amendment approach” acknowledged they would likely later find the “hardwired approach” more appropriate. Market participants who choose to adopt the “amendment approach” should therefore expect that future amendments to those provisions, if possible, may be desirable prior to any LIBOR cessation. Furthermore, the potential risks related to the “amendment approach” support a general recommendation that whenever the “amendment approach” is used, negotiation of a fallback benchmark replacement between the lenders and the borrower should be targeted well in advance of an expected LIBOR demise, *i.e.* through use of the “Early Opt-in Election.”

³⁶ The “Alternate Base Rate” or “ABR” is typically defined in syndicated business loan 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).

Part V: Differences Among Fallback Provisions Across Products

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.

Despite the benefits of consistency across markets, ISDA has not analyzed the appropriateness of its proposed fallbacks for non-derivatives and many market participants provided feedback to the ARRC consultations that cash product fallbacks should differ in some respects from derivative fallback provisions. Further, the ARRC recognizes that there are differences among floating rate notes, syndicated business loans, bilateral business loans, and securitizations that may warrant differences in their fallback provisions.

One area of potential divergence is the "triggers" that precipitate the conversion away from LIBOR. As noted above, while ISDA is moving to consult on pre-cessation issues, including those related to a statement by the FCA that LIBOR is no longer representative, there can be no presumption that ISDA will include such a trigger in its standard definitions for derivatives, and this could cause some divergence between the ARRC's recommended fallback language for inclusion in cash products and the fallbacks in ISDA's standard definitions for derivatives. Nonetheless, based on feedback to its consultations, the ARRC is recommending this type of trigger for cash products.

A second area of divergence between the ARRC-recommended fallback language for cash products and those for derivatives is the primary fallback rate. The ARRC-recommended fallback language references a forward-looking term SOFR as the primary fallback rate in response to feedback from the vast majority of respondents to the consultations that a rate with a similar term structure would be the most workable fallback rate for LIBOR. Although ISDA's amendments to its standard definitions are not final, it is a certainty that forward-looking term SOFR will not be the primary fallback rate for derivatives in ISDA's standard definitions for derivatives.³⁷ The ISDA 2018 Consultation proposals attracted broad derivatives market consensus that the primary fallback for LIBOR should be an average of the applicable overnight risk-free rates compounded in arrears for a comparable period plus a spread adjustment based on the historical differences with LIBOR.

As noted above, while a clear majority of respondents to the ARRC consultations believed that it was appropriate to fall back first to a forward-looking term SOFR (if the ARRC had recommended or selected such a rate), a minority of respondents believed it was more appropriate to fall back to a compound average of SOFR (to achieve greater alignment with derivatives). In light of this issue, the ARRC wishes to make it clear that choosing to fall back to a compound average of SOFR in cash products would in no way be in conflict with its recommendations. Any choice to remove references to term SOFR and the

³⁷ 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?"

related ARRC-recommended spread adjustment should be viewed as fully aligned with the ARRC's principles and recommendations. However, market participants should consult their counsel and other advisors regarding whether to modify the ARRC-recommended fallback language in cash products in consideration of their own hedging objectives and basis risk tolerance levels.

In addition to potential difference between fallbacks for derivatives and cash products, there are some differences in the ARRC's recommendations across cash products. Although the ARRC has sought to minimize these differences, it also recognizes that different cash products can have idiosyncratic features that in some cases warrant different treatment. One key difference is that many floating rate notes and securitizations have quite long maturities and are difficult to modify. For this reason the ARRC's recommendations for these asset classes have several lower levels of the successor rate waterfall to ensure that a rate can be determined under *any* contingency, even ones that at the moment are remote. These lower levels of the waterfall are unlikely to be operative at the time of a LIBOR cessation, and thus are not anticipated to lead to different outcomes in that event. Other differences relate to the relative ease of amending loans. For this reason, the "amendment approach" described above as well as "early opt-in" provisions that allow the parties to switch the reference rate any time that certain conditions are met (even prior to a trigger) are both specific to loans and are not recommended for other cash products.