

ALTERNATIVE REFERENCE RATES COMMITTEE

Responses to the ARRC Supplemental Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Respondent	Page Number
Anonymous 1	3
Anonymous 2	12
Anonymous 3	21
Anonymous 4	23
Anonymous 5	25
Anonymous 6	27
Anonymous 7	29
Anonymous 8	31
Anonymous 9	33
Anonymous 10	36
Anonymous 11	38
Anonymous 12	43
Anonymous 13	45
Anonymous 14	47
Anonymous 15	49
Anonymous 16	58
Anonymous 17	60
Anonymous 18	62
Anonymous 19	64
Anonymous 20	66
Anonymous 21	69
Anonymous 22	71
Anonymous 23	74
Anonymous 24	76
Bank of Montreal	78
Bank of Nova Scotia	81
Barclays	83
Chatham Financial	85
CoBank	94
CREFC	99
Deutsche Bank	104
Federal Home Loan Bank of Boston	106
Federal Home Loan Bank of Cincinnati	109
Federal Home Loan of Indianapolis	112
Federal Home Loan Bank of New York	115
Fidelity Management and Research	118
ING	121
LMA	130
Morgan Stanley	132
MT Bank	134
NAB and BNZ	136

ALTERNATIVE REFERENCE RATES COMMITTEE

Respondent	Page Number
PNC Bank	138
Prudential Investment Management	140
Riverside Risk Advisors	142
SFA	144
SOFR Academy	149
Standard Chartered	152
Toronto Dominion	154
Wells Fargo	156

ANONYMOUS 1

Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

In January, the Alternative Reference Rates Committee (ARRC) released a [consultation](#) seeking input as it moved to recommend spread adjustments for fallbacks in cash products referencing U.S. dollar (USD) LIBOR, and, at its April meeting, the ARRC agreed on a recommended spread adjustment methodology reflecting the [feedback received](#). This note provides a more detailed summary of the feedback to the ARRC's consultation and seeks further market views on two outstanding technical details.

Section I: Background

As noted in its April [Statement](#), the ARRC is recommending a spread adjustment methodology based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. For consumer products, the ARRC is additionally recommending a 1-year transition period to this five-year median spread adjustment methodology. The five-year median spread adjustment methodology matches the methodology recommended by the International Swaps and Derivatives Association (ISDA) for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fallbacks for derivatives markets. The inclusion of a transition period for consumer products was endorsed by many respondents, including consumer advocacy groups.

The ARRC intends to work with a vendor to publish its recommended spreads and spread-adjusted rates, and will release a more detailed final recommendation of the spread adjustment methodology for cash products as part of this process. In Section III below, the ARRC asks for further views on one technical detail of the spread adjustment calculations.

Since the ARRC's announcement of its initial recommendations, ISDA has announced that it will also move to include a pre-cessation trigger in its definition amendments and protocol for derivatives. The ARRC welcomes the decision, which serves to bring fallbacks for derivatives closer in line to the ARRC's fallback recommendations for cash products, and will closely watch ISDA's decisions as it moves to implement its trigger, seeking to keep alignment on technical implementation details with ISDA where appropriate.

The ARRC's recommended methodology is for market participants' voluntary use, to produce spread adjustments intended for USD LIBOR contracts that have incorporated the ARRC's recommended hardwired fallback language, or for legacy USD LIBOR contracts where a spread-adjusted Secured Overnight Financing Rate (SOFR) can be selected as a fallback.

Section II: Summary of the Spread Adjustment Consultation Responses¹

- The ARRC received 71 responses to its consultation on a spread adjustment methodology. Slightly over half of the responses were provided by banks, with the rest of the responses from a diverse mix of asset managers, insurance and other financial companies, GSEs, consumer groups, and industry associations.²
- For floating rate notes, syndicated and bilateral business loans, and securitizations, respondents almost unanimously preferred to apply ISDA's approach for derivatives (Question 1) and did not wish to see a transition period applied (Question 4), with many respondents citing the importance of consistency across products as the decisive factor in their recommendation. Only one respondent disagreed with this approach.
- ISDA's approach is based on a 5-year median of the spread between LIBOR and SOFR. The consultation noted that it was possible that there may not be a full 5 years of history for the SOFR term rate and asked for preferences as to how any lack of data might be addressed. (Question 3). In the absence of a full five years of data for calculating a median, more respondents favored using an in arrears adjustment, with the remaining respondents roughly equally split between shortening the calculation period or using an OIS adjustment.
- Respondents favored including overnight and 1-week spreads by 3 to 1 (Question 5). Many who favored including short-term spreads acknowledged that those spreads were, and likely would remain, little used but saw no harm in providing them or cited value in completeness.
- Respondents were almost evenly split on whether to include a recommendation for simple, as well as compound, averages. Those for the inclusion generally cited the low cost of providing additional values while those against inclusion noted the potential for confusion and unnecessary systems costs.
- A significant minority of the respondents (about 40 percent) did not answer the questions on consumer loans, citing a lack of relevance for their businesses.
- As with other cash products, almost all respondents with an interest in consumer loans placed a high value on consistency with the ISDA methodology of using a 5-year median spread (Question 8). As to whether a transition period was appropriate for consumer products (Question 9), responses were split equally; however, all of the consumer groups and most (but not all) mortgage lenders preferred the inclusion of a transition period for consumer products, with respondents that preferred not to have a transition period having less clear direct connections to consumer lending in many cases.
- In the absence of data for a 5-year median for consumer cash products, more respondents favored an in arrears adjustment over using a shorter series or OIS rates (Question 11).
- Respondents were evenly divided on the appropriate fallback spread for adjustable rate mortgages if the ARRC-recommended term rates were of shorter maturity than the LIBOR rates referenced in ARMS (1-year and 6-month LIBOR). Some preferred the use of the next longest SOFR-adjusted term while others recommended using a compounded average of in advance SOFRs.

¹ The full set of questions in the ARRC's initial consultation are included in Appendix 2.

² In a few instances multiple groups or firms provided a joint response; in those instances, each group's reply is counted separately in this summary. Responses are available on the ARRC website.

Section III: Further Technical Consultation

As noted in section I.C of the [Consultation](#), the ARRC's hardwired fallback recommendations for floating rate notes, securitizations, and syndicated and bilateral business loans would fall back to a forward-looking term SOFR rate if the ARRC has recommended one, or a compound average of SOFR either in arrears or in advance, depending on the choices made by the parties adopting the language, if a term rate has not been recommended or if the parties prefer to fall back to a compound average SOFR. The ARRC may thus make recommendations for spread adjustments to three types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, and a compound average of SOFR in advance. In addition, the ARRC may also consider recommending spread adjustments for simple averages of SOFR.

Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
- Use the historical difference between LIBOR and compound averages in arrears during the period of time for which historical data on a term SOFR rate is unavailable.
- Base the spread adjustment on the difference between LIBOR and EFR term OIS rates (on the grounds that SOFR term rates should move closely with EFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment *methodology*, another potential option would be to use the same spread adjustment *value* (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears) across the different fallback rates, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

Separately, the ARRC has welcomed the announcement from ISDA that it will include a pre-cessation trigger, which will help to bring fallback language for cash and derivatives products in to closer alignment. In the ARRC's consultation, which was issued before ISDA had announced that it would include a pre-cessation trigger, there was a discussion of the potential timing for when the recommended spread adjustment could be set in the event of a pre-cessation trigger. In the event that LIBOR was found to be no longer representative by the U.K. Financial Conduct Authority (FCA) before any official statement that LIBOR would cease publication, the consultation discussed setting the spread adjustment at the time that LIBOR was found to no longer be representative.³ The ARRC notes that it is possible that ISDA may elect

³ See page 13 of the consultation.

to set its spread adjustment at a different time in this event, for example, at the time of a statement by the FCA that LIBOR would be judged to be non-representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a pre-cessation event is operative should match the timing that ISDA selects.

In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

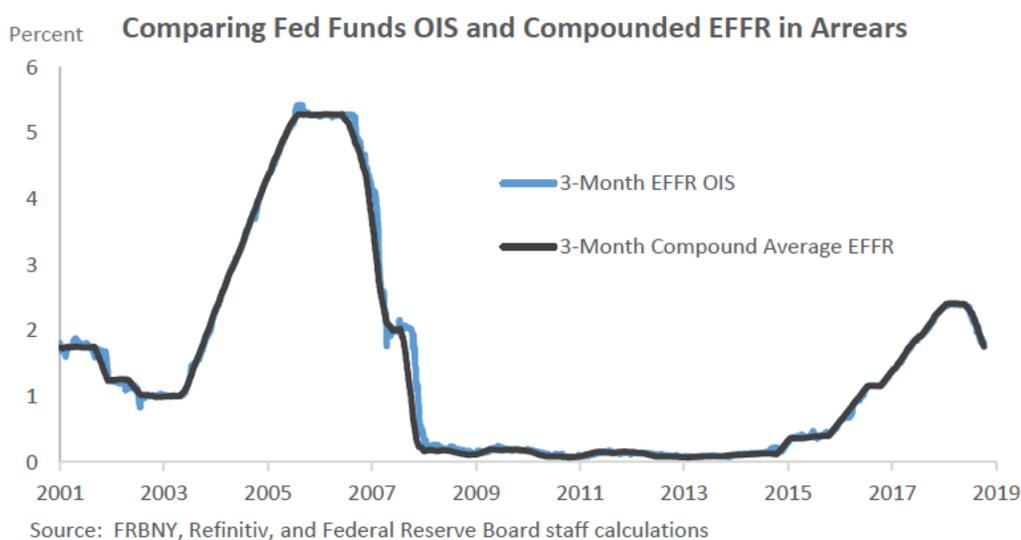
- 5-year median methodology
- 5-year median value

Question 2. *Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Appendix 1. Background Analysis

The Consultation noted that the different versions of SOFR (term, in arrears, and in advance) are all closely linked. An average of SOFR in advance is simply a lagged version of an average in arrears, and the term rate will likely represent the market expectation of compound SOFR in arrears. As shown below, a term rate based on fed funds futures has historically moved very closely with a compound average of EFFR. While there were some differences during the financial crisis, when monetary policy rates were unexpectedly and very sharply cut, the difference between an EFFR term rate and EFFR compound average has averaged less than a basis point both before and since the financial crisis. More recently, with the sharp and unexpected cuts to monetary policy this March in response to the Covid 19 disruptions, there was again a divergence between term rates and in arrears averages of EFFR, although again these differences will presumably be temporary.



Here, we present some analysis to determine whether there would have been significant differences in historical performance in applying the same 5-year median spread value (calculated based on average EFFR in arrears) versus applying the same 5-year methodology to set the spread for an EFFR term rate. We concentrate on spread adjustments to be set for 1-month and 3-month LIBOR, the two most widely used tenors of LIBOR.

For instruments using 1-Month LIBOR and a monthly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears was always within 2 basis points and was within 1 basis point for most (85 percent) of the time over the twenty-year period between 1999 and 2019). Thus, the difference between the option of using the same value or the same methodology would have been negligible.

For instruments using 3-Month LIBOR and a quarterly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears has historically been somewhat more volatile, because over a 3-month period it is possible for unexpected moves in rates to drive a larger gap between the term rate (which reflects expected rate movements) and compound in arrears (which reflects actual rate movements). For the majority of the time, the difference was within 1

basis point between 1999 and 2019, and it was within 5 basis points 90 percent of the time, but the maximum difference, occurring in 2010, briefly reached close to 9 basis points.

Because the median is a relatively nonlinear measure, the impact of the most recent episode of volatility is difficult to predict. The kinds of large, temporary, differences between term and compound arrears rates that occurred recently when the Federal Reserve sharply and unexpectedly cut policy rates in March 2020 would not of themselves affect the 5-year median spread. Because these differences are outsized and therefore very likely to be in the top tail of the distribution, the impact on a 5-year median will depend on what spreads that otherwise would have been close to but above the median are at the time of the spread calculation. If market expectations are an accurate baseline and LIBOR falls back to normal values later this year, then absent further large rate surprises, the recent episode should have negligible impact on a 5-year median, but the final impact will only be known at the time that the spread is set.

Any potential differences between 5-year median spreads based on term rates and compound averages in arrears do not necessarily imply that applying the 5-year median spread for compound SOFR in arrears (ie, using the ISDA spread value) to the SOFR term rate would lead to less basis with ISDA’s fallbacks than applying the 5-year historical median spread for the SOFR term rate (ie, using the ISDA methodology) to the term rate. While applying the same spread value to both the compound average of SOFR in arrears and the SOFR term rate would obviously force the spreads to be the same, it won’t necessarily lead to a closer overall fit because the term rate will differ from ISDA’s fallback to compound in arrears. In the table below, we show that the mean absolute error would have historically the same in either approach, whether measured relative to the ISDA fallback or to 3-month LIBOR.

*Table: Comparing MAEs for Different Spread Methodologies for the 3-Month Term Rate **

Spread Methodology	Relative to 3-Month ISDA Fallback	Relative to 3-Month LIBOR
5-year median spread to Term Rate	0.05	0.14
5-year median spread to Compound Arrears	0.05	0.14

** Data Sources: FRBNY, Refinitiv, and Federal Reserve Board staff calculations. Compound averages and term rates are based on EFR and EFR futures prices. Statistics are reported in percentage points and are based on a hypothetical security with quarterly rate resets and five years of remaining maturity at the time of the move from LIBOR to the spread-adjusted rate over the sample period Jan 1999-May 2019.*

Appendix 2: Questions Included in the January Consultation

Questions 1- 7 refer to Floating Rate Notes, Securitizations, and Business Loans

Question 1. Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer an alternative method?

Floating Rate Notes 5-year median is preferred Other method is preferred

Securitizations 5-year median is preferred Other method is preferred

Syndicated Loans 5-year median is preferred Other method is preferred

Bilateral Business Loans 5-year median is preferred Other method is preferred

Question 2. If “Other Method” was specified for any product, please provide additional feedback on your institution’s preferences, noting whether your alternative is strongly or mildly preferred and why you prefer the alternative method:

- a. 5-year trimmed mean
- b. 5-year average
- c. 10-year median
- d. 10-year trimmed mean
- e. 10-year average
- f. 3.5-year median
- g. 3.5-year trimmed mean
- h. 3.5 year average
- i. Other (please specify)

Question 3. If there are fewer than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:

- a. Use the longest span of indicative term rate data available
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate.
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR

Question 4. Do you believe that a 1-year transition period should be included for any of these cash products? If yes, please specify which products. (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why.)

Question 5. Should the ARRC recommend spread adjustments for 1-week or overnight LIBOR?

Question 6. Should the ARRC recommend spread adjustments based on the differences between LIBOR simple averages of SOFR in addition to compound averages?

Questions 8- 11 refer to Consumer Products

Question 7. *Would it be problematic to use different approaches to calculate the spread adjustment across products and currencies? Please comment specifically on the implications of any differences in the recommended spread adjustment methodologies.*

Question 8. *Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is an acceptable choice for consumer products, or would you prefer an alternative method? (If another method is preferred, please specify which and note whether your alternative is strongly or mildly preferred and why you prefer the alternative method).*

Question 9. *Do you believe that a 1-year transition period should be included for consumer products? (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why).*

Question 10. *If a 1-year or 6-month term rate has not been recommended by the ARRC, would you prefer that a consumer ARM referencing 1-year or 6-month LIBOR fall back to a spread adjusted rate based on:*

- a. the next longest tenor of term rate recommended by the ARRC*
- b. a compound average of SOFR in advance*

(Note that in these instances, the rate would still reset annually or semiannually and spreads would be calculated relative to 1-year or 6-month LIBOR).

Question 11. *If there is less than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:*

- a. Use the longest span of indicative term rate data available*
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate*
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR*

Question 12 applies to all products

Question 12. *Please provide any additional feedback on any aspect of the proposals.*

ANONYMOUS 2

Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

In January, the Alternative Reference Rates Committee (ARRC) released a [consultation](#) seeking input as it moved to recommend spread adjustments for fallbacks in cash products referencing U.S. dollar (USD) LIBOR, and, at its April meeting, the ARRC agreed on a recommended spread adjustment methodology reflecting the [feedback received](#). This note provides a more detailed summary of the feedback to the ARRC's consultation and seeks further market views on two outstanding technical details.

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As noted in its April [Statement](#), the ARRC is recommending a spread adjustment methodology based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. For consumer products, the ARRC is additionally recommending a 1-year transition period to this five-year median spread adjustment methodology. The five-year median spread adjustment methodology matches the methodology recommended by the International Swaps and Derivatives Association (ISDA) for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fallbacks for derivatives markets. The inclusion of a transition period for consumer products was endorsed by many respondents, including consumer advocacy groups.

The ARRC intends to work with a vendor to publish its recommended spreads and spread-adjusted rates, and will release a more detailed final recommendation of the spread adjustment methodology for cash products as part of this process. In Section III below, the ARRC asks for further views on one technical detail of the spread adjustment calculations.

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Section II: Summary of the Spread Adjustment Consultation Responses¹

- The ARRC received 71 responses to its consultation on a spread adjustment methodology. Slightly over half of the responses were provided by banks, with the rest of the responses from a diverse mix of asset managers, insurance and other financial companies, GSEs, consumer groups, and industry associations.²
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Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
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- Base the spread adjustment on the difference between LIBOR and EFR term OIS rates (on the grounds that SOFR term rates should move closely with EFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment *methodology*, another potential option would be to use the same spread adjustment *value* (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears) across the different fallback rates, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

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In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

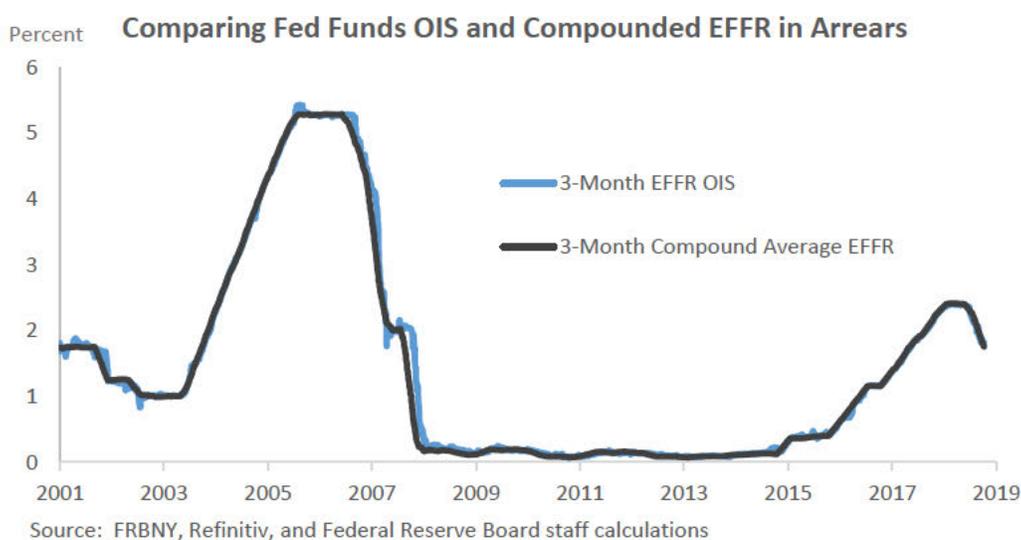
- 5-year median methodology*
- 5-year median value*

Question 2. *Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA*
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing*

Appendix 1. Background Analysis

The Consultation noted that the different versions of SOFR (term, in arrears, and in advance) are all closely linked. An average of SOFR in advance is simply a lagged version of an average in arrears, and the term rate will likely represent the market expectation of compound SOFR in arrears. As shown below, a term rate based on fed funds futures has historically moved very closely with a compound average of EFFR. While there were some differences during the financial crisis, when monetary policy rates were unexpectedly and very sharply cut, the difference between an EFFR term rate and EFFR compound average has averaged less than a basis point both before and since the financial crisis. More recently, with the sharp and unexpected cuts to monetary policy this March in response to the Covid 19 disruptions, there was again a divergence between term rates and in arrears averages of EFFR, although again these differences will presumably be temporary.



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For instruments using 1-Month LIBOR and a monthly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears was always within 2 basis points and was within 1 basis point for most (85 percent) of the time over the twenty-year period between 1999 and 2019). Thus, the difference between the option of using the same value or the same methodology would have been negligible.

For instruments using 3-Month LIBOR and a quarterly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears has historically been somewhat more volatile, because over a 3-month period it is possible for unexpected moves in rates to drive a larger gap between the term rate (which reflects expected rate movements) and compound in arrears (which reflects actual rate movements). For the majority of the time, the difference was within 1

basis point between 1999 and 2019, and it was within 5 basis points 90 percent of the time, but the maximum difference, occurring in 2010, briefly reached close to 9 basis points.

Because the median is a relatively nonlinear measure, the impact of the most recent episode of volatility is difficult to predict. The kinds of large, temporary, differences between term and compound arrears rates that occurred recently when the Federal Reserve sharply and unexpectedly cut policy rates in March 2020 would not of themselves affect the 5-year median spread. Because these differences are outsized and therefore very likely to be in the top tail of the distribution, the impact on a 5-year median will depend on what spreads that otherwise would have been close to but above the median are at the time of the spread calculation. If market expectations are an accurate baseline and LIBOR falls back to normal values later this year, then absent further large rate surprises, the recent episode should have negligible impact on a 5-year median, but the final impact will only be known at the time that the spread is set.

Any potential differences between 5-year median spreads based on term rates and compound averages in arrears do not necessarily imply that applying the 5-year median spread for compound SOFR in arrears (ie, using the ISDA spread value) to the SOFR term rate would lead to less basis with ISDA’s fallbacks than applying the 5-year historical median spread for the SOFR term rate (ie, using the ISDA methodology) to the term rate. While applying the same spread value to both the compound average of SOFR in arrears and the SOFR term rate would obviously force the spreads to be the same, it won’t necessarily lead to a closer overall fit because the term rate will differ from ISDA’s fallback to compound in arrears. In the table below, we show that the mean absolute error would have historically the same in either approach, whether measured relative to the ISDA fallback or to 3-month LIBOR.

*Table: Comparing MAEs for Different Spread Methodologies for the 3-Month Term Rate **

Spread Methodology	Relative to 3-Month ISDA Fallback	Relative to 3-Month LIBOR
5-year median spread to Term Rate	0.05	0.14
5-year median spread to Compound Arrears	0.05	0.14

** Data Sources: FRBNY, Refinitiv, and Federal Reserve Board staff calculations. Compound averages and term rates are based on EFR and EFR futures prices. Statistics are reported in percentage points and are based on a hypothetical security with quarterly rate resets and five years of remaining maturity at the time of the move from LIBOR to the spread-adjusted rate over the sample period Jan 1999-May 2019.*

Appendix 2: Questions Included in the January Consultation

Questions 1- 7 refer to Floating Rate Notes, Securitizations, and Business Loans

Question 1. Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer an alternative method?

Floating Rate Notes 5-year median is preferred Other method is preferred

Securitizations 5-year median is preferred Other method is preferred

Syndicated Loans 5-year median is preferred Other method is preferred

Bilateral Business Loans 5-year median is preferred Other method is preferred

Question 2. If “Other Method” was specified for any product, please provide additional feedback on your institution’s preferences, noting whether your alternative is strongly or mildly preferred and why you prefer the alternative method:

- a. 5-year trimmed mean
- b. 5-year average
- c. 10-year median
- d. 10-year trimmed mean
- e. 10-year average
- f. 3.5-year median
- g. 3.5-year trimmed mean
- h. 3.5 year average
- i. Other (please specify)

Question 3. If there are fewer than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:

- a. Use the longest span of indicative term rate data available
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate.
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR

Question 4. Do you believe that a 1-year transition period should be included for any of these cash products? If yes, please specify which products. (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why.)

Question 5. Should the ARRC recommend spread adjustments for 1-week or overnight LIBOR?

Question 6. Should the ARRC recommend spread adjustments based on the differences between LIBOR simple averages of SOFR in addition to compound averages?

Questions 8- 11 refer to Consumer Products

Question 7. *Would it be problematic to use different approaches to calculate the spread adjustment across products and currencies? Please comment specifically on the implications of any differences in the recommended spread adjustment methodologies.*

Question 8. *Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is an acceptable choice for consumer products, or would you prefer an alternative method? (If another method is preferred, please specify which and note whether your alternative is strongly or mildly preferred and why you prefer the alternative method).*

Question 9. *Do you believe that a 1-year transition period should be included for consumer products? (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why).*

Question 10. *If a 1-year or 6-month term rate has not been recommended by the ARRC, would you prefer that a consumer ARM referencing 1-year or 6-month LIBOR fall back to a spread adjusted rate based on:*

- a. the next longest tenor of term rate recommended by the ARRC*
- b. a compound average of SOFR in advance*

(Note that in these instances, the rate would still reset annually or semiannually and spreads would be calculated relative to 1-year or 6-month LIBOR).

Question 11. *If there is less than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:*

- a. Use the longest span of indicative term rate data available*
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate*
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR*

Question 12 applies to all products

Question 12. *Please provide any additional feedback on any aspect of the proposals.*

ANONYMOUS 3

Response to ARRC consultation on Spread Adjustment Methodology

Questions 1-2

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5 year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

x 5-year median methodology

5-year median value

Response: We believe it is important that the spread adjustment is as valuation neutral as possible. The calculated spread adjustment for different versions of SOFR (term, in arrears, and in advance) will most likely not be identical which if not following the methodology might introduce unnecessary noise in the spread adjustment.

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

x Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Response: We prefer that the ARRC's spread adjustments should be set at the same time as ISDA's in order for the cash market to be consistent with the derivative market.

ANONYMOUS 4

Follow Up Consultation on Technical Details Relating to ARRC Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that the ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no longer representative, regardless of ISDA's timing

ANONYMOUS 5

Consultation Questions	Responses
<p>Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?</p> <ul style="list-style-type: none"> • 5-year median methodology • 5-year median value 	<p>5-year ISDA median value*</p>
<p>Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?</p> <ul style="list-style-type: none"> • Should be set at same time as ISDA • Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing 	<p>Should be set at same time as ISDA*</p>

* Consultation response does not apply to the consumer products.

ANONYMOUS 6

Consultation Questions

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

5-year median value should be applied, as we recommended in our response to the previous consultation papers.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Should be set at the same time as ISDA.

We also recommend that the spread adjustment value set at the same time as ISDA should be used as the spread adjustment for fallback provisions which incorporate the permanent cessation trigger but do not incorporate pre-cessation trigger. This would minimize operational complexities and basis risks between fallback provisions incorporating pre-cessation trigger and those not incorporating pre-cessation trigger.

ANONYMOUS 7

ARRC Supplemental Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

No.	Question	Response
1	<p>Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?</p> <ul style="list-style-type: none"> ✓ 5-year median methodology • 5-year median value 	<p>We favour the option of "5-year median methodology", i.e. using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate, based on the assumption that the 5 years of historical data is available to calculate a forward looking Term SOFR upon the Index Cessation Event being triggered.</p> <p>If 5 years of historical data is <u>not</u> available for a forward looking Term SOFR, we would go with using the same ISDA spread value based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears.</p>
2	<p>Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?</p> <ul style="list-style-type: none"> ✓ Should be set at same time as ISDA • Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing 	<p>The ARRC's recommended spread adjustments should be set at the same time as ISDA.</p>

ANONYMOUS 8

Supplemental Consultation Response (on Spread Adjustment Methodology)

Question 1:

Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median methodology
- 5-year median value Question

Answer: 5-year median methodology.

The same value means that the exact same numerical value would be applied to all fallback rates for a given tenor. In contrast to that, using the methodology implies that a separate spread adjustment would be calculated for all the different fallback rates. While the differences would probably be marginal, it seems to be more accurate to use the methodology rather than one single value.

Question 2:

Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Answer: Should be set at same time as ISDA.

Following the recent ISDA consultation results in favor of pre-cessation triggers, it appears reasonable to set the spread adjustment at the same time to help align cash and derivatives products.

ANONYMOUS 9

Section III: Further Technical Consultation

As noted in section I.C of the Consultation, the ARRC's hardwired fallback recommendations for floating rate notes, securitizations, and syndicated and bilateral business loans would fall back to a forward-looking term SOFR rate if the ARRC has recommended one, or a compound average of SOFR either in arrears or in advance, depending on the choices made by the parties adopting the language, if a term rate has not been recommended or if the parties prefer to fall back to a compound average SOFR. The ARRC may thus make recommendations for spread adjustments to three types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, and a compound average of SOFR in advance. In addition, the ARRC may also consider recommending spread adjustments for simple averages of SOFR.

Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
- Use the historical difference between LIBOR and compound averages in arrears during the period of time for which historical data on a term SOFR rate is unavailable.
- Base the spread adjustment on the difference between LIBOR and EFR term OIS rates (on the grounds that SOFR term rates should move closely with EFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment methodology, another potential option would be to use the same spread adjustment value for a given LIBOR tenor (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears for that tenor of LIBOR) across the different fallback rates of the same tenor, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

Separately, the ARRC has welcomed the announcement from ISDA that it will include a pre-cessation trigger, which will help to bring fallback language for cash and derivatives products in to closer alignment. In the ARRC's consultation, which was issued before ISDA had announced that it would include a precessation trigger, there was a discussion of the potential timing for when the recommended spread adjustment could be set in the event of a pre-cessation trigger. In the event that LIBOR was found to be no longer representative by the U.K. Financial Conduct Authority (FCA) before any official statement that LIBOR would cease publication, the consultation discussed setting the spread adjustment at the time that LIBOR was found to no longer be representative.³ The ARRC notes that it is possible that ISDA may elect to set its spread adjustment at a different time in this event, for example, at the time of a statement by the FCA that LIBOR would be judged to be non-

representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a precessation event is operative should match the timing that ISDA selects.

In light of these discussions, the ARRC seeks further feedback to the following two questions:

- **Question 1.** Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?
 - **Option a:** 5-year median methodology <- the Firm supports option a
 - **Option b:** 5-year median value

The Firm supports the median methodology which captures the various types of fallback rates rather than the median value which will be based solely on compounded average of SOFR in arrears. The Firm is supportive of the development of forward-looking term rates.

- **Question 2.** Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?
 - **Option a:** Should be set at same time as ISDA <- the Firm supports option a
 - **Option b:** Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

The Firm supports consistency between products (Derivatives & Cash), as well as across IBORs, and sees this as very important in making transition easier.

ANONYMOUS 10

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

Answer 1: 5-year median methodology

Answer 2: 5-year median value

Answer 1, i.e. same methodology as ISDA to the best extent possible.

- For compounded SOFR in arrears, the same values as the ones calculated by Bloomberg following the ISDA methodology should be used. Hence, no new calculation.
- For the forward-looking term SOFR, if any, other proxies (e.g. Fed Funds OIS market) might have to be used to make up for the lack of historical data. But the overall methodology should remain similar to the ISDA one.

Question 2. Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a precessation event is operative?

Answer 1: Should be set at same time as ISDA

Answer 2: Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Answer 1, as spread adjustments should be calculated simultaneously for derivatives and cash instruments. In order to avoid unnecessary operational complexities and basis risks (even for a limited period).

ANONYMOUS 11

Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

In January, the Alternative Reference Rates Committee (ARRC) released a [consultation](#) seeking input as it moved to recommend spread adjustments for fallbacks in cash products referencing U.S. dollar (USD) LIBOR, and, at its April meeting, the ARRC agreed on a recommended spread adjustment methodology reflecting the [feedback received](#). This note provides a more detailed summary of the feedback to the ARRC's consultation and seeks further market views on two outstanding technical details.

Section I: Background

As noted in its April [Statement](#), the ARRC is recommending a spread adjustment methodology based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. For consumer products, the ARRC is additionally recommending a 1-year transition period to this five-year median spread adjustment methodology. The five-year median spread adjustment methodology matches the methodology recommended by the International Swaps and Derivatives Association (ISDA) for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fallbacks for derivatives markets. The inclusion of a transition period for consumer products was endorsed by many respondents, including consumer advocacy groups.

The ARRC intends to work with a vendor to publish its recommended spreads and spread-adjusted rates, and will release a more detailed final recommendation of the spread adjustment methodology for cash products as part of this process. In Section III below, the ARRC asks for further views on one technical detail of the spread adjustment calculations.

Since the ARRC's announcement of its initial recommendations, ISDA has announced that it will also move to include a pre-cessation trigger in its definition amendments and protocol for derivatives. The ARRC welcomes the decision, which serves to bring fallbacks for derivatives closer in line to the ARRC's fallback recommendations for cash products, and will closely watch ISDA's decisions as it moves to implement its trigger, seeking to keep alignment on technical implementation details with ISDA where appropriate.

The ARRC's recommended methodology is for market participants' voluntary use, to produce spread adjustments intended for USD LIBOR contracts that have incorporated the ARRC's recommended hardwired fallback language, or for legacy USD LIBOR contracts where a spread-adjusted Secured Overnight Financing Rate (SOFR) can be selected as a fallback.

Section II: Summary of the Spread Adjustment Consultation Responses¹

- The ARRC received 71 responses to its consultation on a spread adjustment methodology. Slightly over half of the responses were provided by banks, with the rest of the responses from a diverse mix of asset managers, insurance and other financial companies, GSEs, consumer groups, and industry associations.²
- For floating rate notes, syndicated and bilateral business loans, and securitizations, respondents almost unanimously preferred to apply ISDA's approach for derivatives (Question 1) and did not wish to see a transition period applied (Question 4), with many respondents citing the importance of consistency across products as the decisive factor in their recommendation. Only one respondent disagreed with this approach.
- ISDA's approach is based on a 5-year median of the spread between LIBOR and SOFR. The consultation noted that it was possible that there may not be a full 5 years of history for the SOFR term rate and asked for preferences as to how any lack of data might be addressed. (Question 3). In the absence of a full five years of data for calculating a median, more respondents favored using an in arrears adjustment, with the remaining respondents roughly equally split between shortening the calculation period or using an OIS adjustment.
- Respondents favored including overnight and 1-week spreads by 3 to 1 (Question 5). Many who favored including short-term spreads acknowledged that those spreads were, and likely would remain, little used but saw no harm in providing them or cited value in completeness.
- Respondents were almost evenly split on whether to include a recommendation for simple, as well as compound, averages. Those for the inclusion generally cited the low cost of providing additional values while those against inclusion noted the potential for confusion and unnecessary systems costs.
- A significant minority of the respondents (about 40 percent) did not answer the questions on consumer loans, citing a lack of relevance for their businesses.
- As with other cash products, almost all respondents with an interest in consumer loans placed a high value on consistency with the ISDA methodology of using a 5-year median spread (Question 8). As to whether a transition period was appropriate for consumer products (Question 9), responses were split equally; however, all of the consumer groups and most (but not all) mortgage lenders preferred the inclusion of a transition period for consumer products, with respondents that preferred not to have a transition period having less clear direct connections to consumer lending in many cases.
- In the absence of data for a 5-year median for consumer cash products, more respondents favored an in arrears adjustment over using a shorter series or OIS rates (Question 11).
- Respondents were evenly divided on the appropriate fallback spread for adjustable rate mortgages if the ARRC-recommended term rates were of shorter maturity than the LIBOR rates referenced in ARMS (1-year and 6-month LIBOR). Some preferred the use of the next longest SOFR-adjusted term while others recommended using a compounded average of in advance SOFRs.

¹The full set of questions in the ARRC's initial consultation are included in Appendix 2.

²In a few instances multiple groups or firms provided a joint response; in those instances, each group's reply is counted separately in this summary. Responses are available on the ARRC website.

Section III: Further Technical Consultation

As noted in section I.C of the [Consultation](#), the ARRC's hardwired fallback recommendations for floating rate notes, securitizations, and syndicated and bilateral business loans would fall back to a forward-looking term SOFR rate if the ARRC has recommended one, or a compound average of SOFR either in arrears or in advance, depending on the choices made by the parties adopting the language, if a term rate has not been recommended or if the parties prefer to fall back to a compound average SOFR. The ARRC may thus make recommendations for spread adjustments to three types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, and a compound average of SOFR in advance. In addition, the ARRC may also consider recommending spread adjustments for simple averages of SOFR.

Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
- Use the historical difference between LIBOR and compound averages in arrears during the period of time for which historical data on a term SOFR rate is unavailable.
- Base the spread adjustment on the difference between LIBOR and EFFR term OIS rates (on the grounds that SOFR term rates should move closely with EFFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment *methodology*, another potential option would be to use the same spread adjustment *value* for a given LIBOR tenor (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears for that tenor of LIBOR) across the different fallback rates of the same tenor, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

Separately, the ARRC has welcomed the announcement from ISDA that it will include a pre-cessation trigger, which will help to bring fallback language for cash and derivatives products in to closer alignment. In the ARRC's consultation, which was issued before ISDA had announced that it would include a pre-cessation trigger, there was a discussion of the potential timing for when the recommended spread adjustment could be set in the event of a pre-cessation trigger. In the event that LIBOR was found to be no longer representative by the U.K. Financial Conduct Authority (FCA) before any official statement that LIBOR would cease publication, the consultation discussed setting the spread adjustment at the time that LIBOR was found to no longer be representative.³ The ARRC notes that it is possible that ISDA may elect to set its spread adjustment at a different time in this event, for example, at the time of a statement by

³ See page 13 of the consultation.

the FCA that LIBOR would be judged to be non-representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a pre-cessation event is operative should match the timing that ISDA selects.

In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

5-year median methodology

5-year median value

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

ANONYMOUS 12

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- A. 5-year median methodology
- B. **5-year median value – consistency between ARRC recommendations and ISDA procedures would reduce operational complexity in matching derivative transactions with loans. (Preferred)**

Question 2. Do you believe that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?

- A. **Should be set at same time as ISDA – this would allow for less division between a loan and its associated derivative if the timelines used were concurrent with one another (Preferred)**
- B. Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA’s timing

ANONYMOUS 13

Please treat our responses as anonymized. Let me know if you have any questions or would like to discuss any of our responses.

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology
- 5-year median value

We should use the numerical ISDA value only for the compounding in arrears calculations, matching ISDA approach. For the other rates (compounding in advance, simple average, forward rate), we should use ISDA methodology (5 year historical median) approach, as the numerical results may differ.

Question 2. *Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

ANONYMOUS 14

Alternative Reference Rates Committee

Via email: arrc@ny.frb.org

10 June 2020

RE: Supplemental Consultation

Our firm welcomes the opportunity to respond to the Alternative Reference Rates Committee (ARRC) supplemental consultation. Our firm has set out our responses to the questions contained in the supplemental consultation paper released on 6 May 2020 below.

Our firm requests that its response please be posted anonymously.

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median value

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA

ANONYMOUS 15

Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

In January, the Alternative Reference Rates Committee (ARRC) released a [consultation](#) seeking input as it moved to recommend spread adjustments for fallbacks in cash products referencing U.S. dollar (USD) LIBOR, and, at its April meeting, the ARRC agreed on a recommended spread adjustment methodology reflecting the [feedback received](#). This note provides a more detailed summary of the feedback to the ARRC's consultation and seeks further market views on two outstanding technical details.

Section I: Background

As noted in its April [Statement](#), the ARRC is recommending a spread adjustment methodology based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. For consumer products, the ARRC is additionally recommending a 1-year transition period to this five-year median spread adjustment methodology. The five-year median spread adjustment methodology matches the methodology recommended by the International Swaps and Derivatives Association (ISDA) for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fallbacks for derivatives markets. The inclusion of a transition period for consumer products was endorsed by many respondents, including consumer advocacy groups.

The ARRC intends to work with a vendor to publish its recommended spreads and spread-adjusted rates, and will release a more detailed final recommendation of the spread adjustment methodology for cash products as part of this process. In Section III below, the ARRC asks for further views on one technical detail of the spread adjustment calculations.

Since the ARRC's announcement of its initial recommendations, ISDA has announced that it will also move to include a pre-cessation trigger in its definition amendments and protocol for derivatives. The ARRC welcomes the decision, which serves to bring fallbacks for derivatives closer in line to the ARRC's fallback recommendations for cash products, and will closely watch ISDA's decisions as it moves to implement its trigger, seeking to keep alignment on technical implementation details with ISDA where appropriate.

The ARRC's recommended methodology is for market participants' voluntary use, to produce spread adjustments intended for USD LIBOR contracts that have incorporated the ARRC's recommended hardwired fallback language, or for legacy USD LIBOR contracts where a spread-adjusted Secured Overnight Financing Rate (SOFR) can be selected as a fallback.

Section II: Summary of the Spread Adjustment Consultation Responses¹

- The ARRC received 71 responses to its consultation on a spread adjustment methodology. Slightly over half of the responses were provided by banks, with the rest of the responses from a diverse mix of asset managers, insurance and other financial companies, GSEs, consumer groups, and industry associations.²
- For floating rate notes, syndicated and bilateral business loans, and securitizations, respondents almost unanimously preferred to apply ISDA's approach for derivatives (Question 1) and did not wish to see a transition period applied (Question 4), with many respondents citing the importance of consistency across products as the decisive factor in their recommendation. Only one respondent disagreed with this approach.
- ISDA's approach is based on a 5-year median of the spread between LIBOR and SOFR. The consultation noted that it was possible that there may not be a full 5 years of history for the SOFR term rate and asked for preferences as to how any lack of data might be addressed. (Question 3). In the absence of a full five years of data for calculating a median, more respondents favored using an in arrears adjustment, with the remaining respondents roughly equally split between shortening the calculation period or using an OIS adjustment.
- Respondents favored including overnight and 1-week spreads by 3 to 1 (Question 5). Many who favored including short-term spreads acknowledged that those spreads were, and likely would remain, little used but saw no harm in providing them or cited value in completeness.
- Respondents were almost evenly split on whether to include a recommendation for simple, as well as compound, averages. Those for the inclusion generally cited the low cost of providing additional values while those against inclusion noted the potential for confusion and unnecessary systems costs.
- A significant minority of the respondents (about 40 percent) did not answer the questions on consumer loans, citing a lack of relevance for their businesses.
- As with other cash products, almost all respondents with an interest in consumer loans placed a high value on consistency with the ISDA methodology of using a 5-year median spread (Question 8). As to whether a transition period was appropriate for consumer products (Question 9), responses were split equally; however, all of the consumer groups and most (but not all) mortgage lenders preferred the inclusion of a transition period for consumer products, with respondents that preferred not to have a transition period having less clear direct connections to consumer lending in many cases.
- In the absence of data for a 5-year median for consumer cash products, more respondents favored an in arrears adjustment over using a shorter series or OIS rates (Question 11).
- Respondents were evenly divided on the appropriate fallback spread for adjustable rate mortgages if the ARRC-recommended term rates were of shorter maturity than the LIBOR rates referenced in ARMS (1-year and 6-month LIBOR). Some preferred the use of the next longest SOFR-adjusted term while others recommended using a compounded average of in advance SOFRs.

¹ The full set of questions in the ARRC's initial consultation are included in Appendix 2.

² In a few instances multiple groups or firms provided a joint response; in those instances, each group's reply is counted separately in this summary. Responses are available on the ARRC website.

Section III: Further Technical Consultation

As noted in section I.C of the [Consultation](#), the ARRC's hardwired fallback recommendations for floating rate notes, securitizations, and syndicated and bilateral business loans would fall back to a forward-looking term SOFR rate if the ARRC has recommended one, or a compound average of SOFR either in arrears or in advance, depending on the choices made by the parties adopting the language, if a term rate has not been recommended or if the parties prefer to fall back to a compound average SOFR. The ARRC may thus make recommendations for spread adjustments to three types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, and a compound average of SOFR in advance. In addition, the ARRC may also consider recommending spread adjustments for simple averages of SOFR.

Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
- Use the historical difference between LIBOR and compound averages in arrears during the period of time for which historical data on a term SOFR rate is unavailable.
- Base the spread adjustment on the difference between LIBOR and EFR term OIS rates (on the grounds that SOFR term rates should move closely with EFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment *methodology*, another potential option would be to use the same spread adjustment *value* for a given LIBOR tenor (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears for that tenor of LIBOR) across the different fallback rates of the same tenor, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

Separately, the ARRC has welcomed the announcement from ISDA that it will include a pre-cessation trigger, which will help to bring fallback language for cash and derivatives products in to closer alignment. In the ARRC's consultation, which was issued before ISDA had announced that it would include a pre-cessation trigger, there was a discussion of the potential timing for when the recommended spread adjustment could be set in the event of a pre-cessation trigger. In the event that LIBOR was found to be no longer representative by the U.K. Financial Conduct Authority (FCA) before any official statement that LIBOR would cease publication, the consultation discussed setting the spread adjustment at the time that LIBOR was found to no longer be representative.³ The ARRC notes that it is possible that ISDA may elect to set its spread adjustment at a different time in this event, for example, at the time of a statement by

³ See page 13 of the consultation.

the FCA that LIBOR would be judged to be non-representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a pre-cessation event is operative should match the timing that ISDA selects.

In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

5-year median methodology

5-year median value

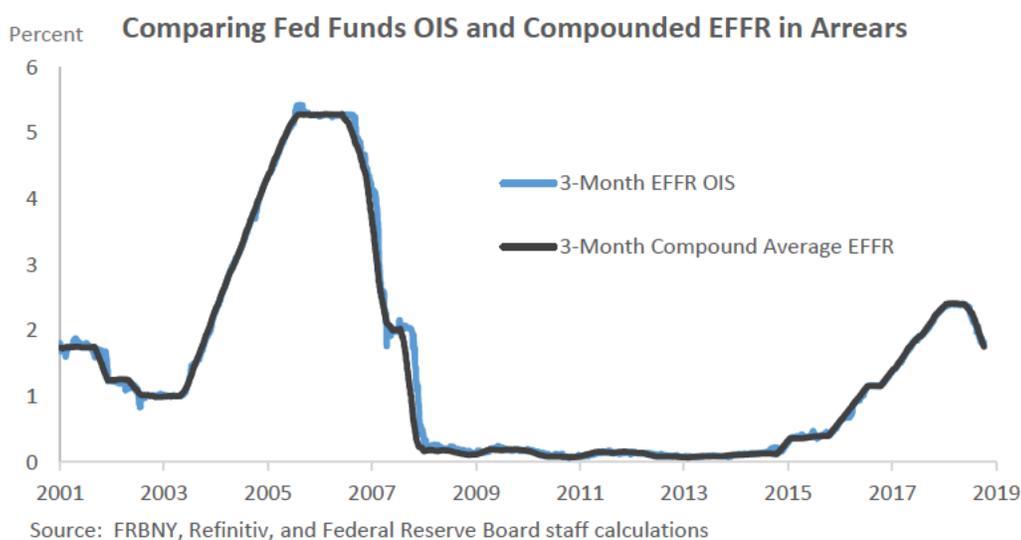
Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Appendix 1. Background Analysis

The Consultation noted that the different versions of SOFR (term, in arrears, and in advance) are all closely linked. An average of SOFR in advance is simply a lagged version of an average in arrears, and the term rate will likely represent the market expectation of compound SOFR in arrears. As shown below, a term rate based on fed funds futures has historically moved very closely with a compound average of EFFR. While there were some differences during the financial crisis, when monetary policy rates were unexpectedly and very sharply cut, the difference between an EFFR term rate and EFFR compound average has averaged less than a basis point both before and since the financial crisis. More recently, with the sharp and unexpected cuts to monetary policy this March in response to the Covid 19 disruptions, there was again a divergence between term rates and in arrears averages of EFFR, although again these differences will presumably be temporary.



Here, we present some analysis to determine whether there would have been significant differences in historical performance in applying the same 5-year median spread value (calculated based on average EFFR in arrears) versus applying the same 5-year methodology to set the spread for an EFFR term rate. We concentrate on spread adjustments to be set for 1-month and 3-month LIBOR, the two most widely used tenors of LIBOR.

For instruments using 1-Month LIBOR and a monthly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears was always within 2 basis points and was within 1 basis point for most (85 percent) of the time over the twenty-year period between 1999 and 2019). Thus, the difference between the option of using the same value or the same methodology would have been negligible.

For instruments using 3-Month LIBOR and a quarterly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears has historically been somewhat more volatile, because over a 3-month period it is possible for unexpected moves in rates to drive a larger gap between the term rate (which reflects expected rate movements) and compound in arrears (which reflects actual rate movements). For the majority of the time, the difference was within 1 basis point between 1999 and 2019, and it was within 5 basis points 90 percent of the time, but the maximum difference, occurring in 2010, briefly reached close to 9 basis points.

Because the median is a relatively nonlinear measure, the impact of the most recent episode of volatility is difficult to predict. The kinds of large, temporary, differences between term and compound arrears rates that occurred recently when the Federal Reserve sharply and unexpectedly cut policy rates in March 2020 would not of themselves affect the 5-year median spread. Because these differences are outsized and therefore very likely to be in the top tail of the distribution, the impact on a 5-year median will depend on what spreads that otherwise would have been close to but above the median are at the time of the spread calculation. If market expectations are an accurate baseline and LIBOR falls back to normal values later this year, then absent further large rate surprises, the recent episode should have negligible impact on a 5-year median, but the final impact will only be known at the time that the spread is set.

Any potential differences between 5-year median spreads based on term rates and compound averages in arrears do not necessarily imply that applying the 5-year median spread for compound SOFR in arrears (ie, using the ISDA spread value) to the SOFR term rate would lead to less basis with ISDA’s fallbacks than applying the 5-year historical median spread for the SOFR term rate (ie, using the ISDA methodology) to the term rate. While applying the same spread value to both the compound average of SOFR in arrears and the SOFR term rate would obviously force the spreads to be the same, it won’t necessarily lead to a closer overall fit because the term rate will differ from ISDA’s fallback to compound in arrears. In the table below, we show that the mean absolute error would have historically the same in either approach, whether measured relative to the ISDA fallback or to 3-month LIBOR.

*Table: Comparing MAEs for Different Spread Methodologies for the 3-Month Term Rate **

Spread Methodology	Relative to 3-Month ISDA Fallback	Relative to 3-Month LIBOR
5-year median spread to Term Rate	0.05	0.14
5-year median spread to Compound Arrears	0.05	0.14

** Data Sources: FRBNY, Refinitiv, and Federal Reserve Board staff calculations. Compound averages and term rates are based on EFR and EFR futures prices. Statistics are reported in percentage points and are based on a hypothetical security with quarterly rate resets and five years of remaining maturity at the time of the move from LIBOR to the spread-adjusted rate over the sample period Jan 1999-May 2019.*

Appendix 2: Questions Included in the January Consultation

Questions 1- 7 refer to Floating Rate Notes, Securitizations, and Business Loans

Question 1. Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer an alternative method?

Floating Rate Notes 5-year median is preferred Other method is preferred

Securitizations 5-year median is preferred Other method is preferred

Syndicated Loans 5-year median is preferred Other method is preferred

Bilateral Business Loans 5-year median is preferred Other method is preferred

Question 2. If “Other Method” was specified for any product, please provide additional feedback on your institution’s preferences, noting whether your alternative is strongly or mildly preferred and why you prefer the alternative method:

- a. 5-year trimmed mean
- b. 5-year average
- c. 10-year median
- d. 10-year trimmed mean
- e. 10-year average
- f. 3.5-year median
- g. 3.5-year trimmed mean
- h. 3.5 year average
- i. Other (please specify)

Question 3. If there are fewer than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:

- a. Use the longest span of indicative term rate data available
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate.
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR

Question 4. Do you believe that a 1-year transition period should be included for any of these cash products? If yes, please specify which products. (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why.)

Question 5. Should the ARRC recommend spread adjustments for 1-week or overnight LIBOR?

Question 6. Should the ARRC recommend spread adjustments based on the differences between LIBOR simple averages of SOFR in addition to compound averages?

Questions 8- 11 refer to Consumer Products

Question 7. *Would it be problematic to use different approaches to calculate the spread adjustment across products and currencies? Please comment specifically on the implications of any differences in the recommended spread adjustment methodologies.*

Question 8. *Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is an acceptable choice for consumer products, or would you prefer an alternative method? (If another method is preferred, please specify which and note whether your alternative is strongly or mildly preferred and why you prefer the alternative method).*

Question 9. *Do you believe that a 1-year transition period should be included for consumer products? (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why).*

Question 10. *If a 1-year or 6-month term rate has not been recommended by the ARRC, would you prefer that a consumer ARM referencing 1-year or 6-month LIBOR fall back to a spread adjusted rate based on:*

- a. the next longest tenor of term rate recommended by the ARRC*
- b. a compound average of SOFR in advance*

(Note that in these instances, the rate would still reset annually or semiannually and spreads would be calculated relative to 1-year or 6-month LIBOR).

Question 11. *If there is less than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:*

- a. Use the longest span of indicative term rate data available*
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate*
- c. Use the spread between LIBOR and EFFR OIS rates, adjusted for the mean difference between compound averages of EFFR and SOFR*

Question 12 applies to all products

Question 12. *Please provide any additional feedback on any aspect of the proposals.*

ANONYMOUS 16

June 14, 2020

Anonymous Response to ARRC Supplemental Consultation on Spread Adjustment Methodologies

Question 1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

Answer:

5 year median value

Question 2: Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Answer:

Should be set at same time as ISDA

ANONYMOUS 17

June 14, 2020

Anonymous Response to ARRC Supplemental Consultation on Spread Adjustment Methodologies

Question 1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

Answer:

5 year median value

Question 2: Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Answer:

Should be set at same time as ISDA

ANONYMOUS 18

Response to the ARRC's Supplemental Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Question 1: *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology
- 5-year median value

We are in support of leveraging the 5-year median value to mitigate having multiple permutations of spread adjustments across products.

We find that consistency across products (cash and derivatives) is critically important to ensure market stability and reduce operational difficulties, economic impacts and basis risks that would arise due to methodological differences.

It is important to note the operational burden and communication complexities involved if multiple spread adjustments are published by ISDA and the ARRC, especially if they are not expected to differ materially from each other. In addition to the backward-looking quantitative analysis, we would recommend highlighting that on an ex-ante basis, one should be indifferent between term SOFR and SOFR compounded in arrears since the former is the market-implied expectation for the latter.

Our view is that there is also value in generating a single spread adjustment for different ARRC methodologies (i.e., for term SOFR, SOFR reset in advance and SOFR reset in arrears).

Question 2: *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

We would support consistency with ISDA's approach, which we understand will use the pre-cessation or cessation announcement date (whichever occurs first) to set the recommended spread adjustment (which could take place in advance of the effective date) if a pre-cessation event is operative. Calculating the spread on the same day will also allow the ARRC to leverage the detailed work that has already been done by Bloomberg with respect to the adjustment calculations.

ANONYMOUS 19

ARRC Spread-Adjustment Follow-Up Consultation on Technical Detail

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- ~~5-year median methodology~~
- 5-year median value

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- ~~Should be set at the time that LIBOR is found to be no longer representative, regardless of ISDA's timing~~

ANONYMOUS 20

June 15, 2020

Via email to the ARRC Secretariat at: arrc@ny.frb.org

Alternative Reference Rates Committee, convened by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York

Re: ARRC Issues Supplemental Consultation on Spread Adjustment Methodology

Anonymous responses to the request for consultation.

Question 1: *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology
- 5-year median value

Response to Question 1:

We prefer using the 5-year median value as computed by ISDA. Utilizing the ISDA median spread adjustment value for each tenor of SOFR average across all interest variants of SOFR increases simplicity for both operational purposes and for communications with borrowers. Additionally, relying on the ISDA spread adjustment value reduces one source of potential basis between legacy hedges and legacy cash products, even when the hedged item may use an interest variant other than compound average *in arrears*.

Question 2: *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Response to Question 2:

Given our preference for using the ISDA spread adjustment median value for cash products, we believe that the cash products spread adjustment should be set at the same time as ISDA's spread adjustment, including at date of the announcement of non-representativeness, for consistency across all asset classes.

Thank you for your time and attention to this feedback.

ANONYMOUS 21

Supplemental consultation on spread adjustment methodology

Consultation response Bank

Date - 15-6-2020

Question 1

Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

Answer: **5-year median methodology**
~~5-year median value~~

Question 2

Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Answer: **Should be set at same time as ISDA**
~~Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing~~

ANONYMOUS 22

ARRC Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products
Referencing USD LIBOR. Supplemental Consultation

Anonymous submission.

Consultation paper:

https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Spread_Adjustment_Consultation_Follow_Up.pdf

Question 1:

Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median methodology
- 5-year median value

Response 1:

5-year median methodology.

Comment:

The ISDA methodology of a 5-year median of the historical difference between LIBOR and SOFR compounded in arrears is the correct choice for cash products. Alternative methodologies considered were SOFR compounded in advance, simple averaging, and (with only a one-year time history) CME forward SOFR rates. Tenors studied were 1M/30D, 3M/90D, and 6M/180D respectively for LIBOR and SOFR. SOFR indicative data were used for 2014 until official SOFR was produced, so that roughly a six-year SOFR time history was available. Five-year medians were computed for every day in a one-year lookback.

Analysis of the medians across all 3 tenors studied showed virtually no statistical differences amongst the 4 methodologies. That is, the fallbacks at a given tenor are the same, independent of the methodology. Because SOFR compounded in arrears is the current mechanism used by the Fed, and contemplated by ISDA, it should be adopted as the basis of cash fallbacks by the ARRC.

Question 2:

Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Response 2:

The ARRC should use the same time as does ISDA.

Comment:

It is currently the case that ISDA has sought input from the community but does not appear to have created a detailed response to a pre-cessation event. For example, as is implicit in the question, ISDA's determination that one or more tenors of LIBOR are non-representative (zombies) may be separate from that of the FCA. Also, ISDA has contemplated different fallbacks for pre-cessation than for permanent cessation.

ANONYMOUS 23

Response to ARRC Supplemental Consultation on Spread Adjustment

#	Question	Answer
1	Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?	5-year median methodology
2	Do you believe that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?	Should be set at same time as ISDA

ANONYMOUS 24

ARRC - Supplemental Consultation on Spread Adjustment Methodology

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- a. 5-year median methodology
- b. 5-year median value

Lloyds Banking Group response : “b. 5-year median value”

Question 2. Do you believe that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?

- a. Should be set at same time as ISDA
- b. Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA’s timing

Lloyds Banking Group response : “a. Should be set at same time as ISDA”

Please note: In our response to Question 1 we have assessed the 5-year median value approach as having more upside in comparison to the 5-year median methodology approach. We are concerned that the latter could result in multiple spread adjustments and potentially lead to a mis-alignment across international jurisdictions.

BANK OF MONTREAL

June 8, 2020

ARRC Secretariat

Via email submission to: arrc@ny.frb.org

Re: Supplemental Consultation Response on Spread Adjustment Methodology

Bank of Montreal ("BMO") welcomes the opportunity to respond to the ARRC's request for public comment on the Supplemental Consultation on Spread Adjustment Methodology . BMO recognizes the need to finalize the details for spread adjustment calculation in order to support a successful transition away from USD LIBOR. Our responses are as follows:

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

Response:

Selection: 5-year median value.

BMO would give priority to actions that move toward more similarities where feasible between Cash Products and ISDA. This will serve to reduce confusion and the number of unique spread adjustments for each legacy LIBOR term. As noted in Appendix 1 of the follow up consultation document, compounding SOFR in arrears to match the length of the IBOR term has shown to be equally representative to using a Term LIBOR vs daily SOFR rate calculation. For legacy lending products that have a derivative hedge, this will increase consistency of the transition.

Question 2. Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Response:

Selection: Should be set at the same time as ISDA.

BMO's selection reflects the belief that should a pre-cessation event be realized, that the representativeness of LIBOR will be questionable from that point onward. The timing of the calculation should therefore be the same as ISDA. As noted in the first question of this consultation, reducing the number of spread adjustment values per term has market and client benefits, reducing confusion.

BANK OF NOVA SCOTIA

ARRC Follow-up Consultation on Technical Details pertaining to the Calculation of the Spread Adjustment for Cash Products referencing USD LIBOR

Bank of Nova Scotia Response

June 15, 2020

Question 1

Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median methodology
- 5-year median value

Answer

Our view is that using the methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products.

As noted in the ARRC's Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR of January 21, 2020, however, there may not be 5 years of historical data available for a SOFR term rate. In that case only, we believe that using the 5-year median value is appropriate.

Question 2

Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Answer

Our view is that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set.

BARCLAYS

Barclays response to ARRC Follow-Up Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Our overall view is to adopt an approach that is consistent with ISDA approach. We believe that the difference between the different SOFR fallbacks is minimum which is evident from 'Guide to SOFR' published by the ARRC (although we are not sure of the gap with regards to Term SOFR at this point in time). For simplicity and to align with ISDA approach, we prefer the '5 years median value' approach

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median methodology
- 5-year median value

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

CHATHAM FINANCIAL

Feedback to Further Technical Consultation on ARRC Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

10 June 2020

10 June 2020

Chatham Financial appreciates the efforts of the Alternative Reference Rates Committee (ARRC) to provide fallback methodologies and recommendations for USD LIBOR upon its permanent discontinuation. Chatham is committed to guiding our clients through a transition to market-transaction-based rates. In the interim, we recognize the need to adopt refined fallback definitions prudently to manage the period during which continued use of legacy rates will remain unavoidable for many of our clients. Chatham thanks the ARRC for the opportunity to comment on further technical consultation on “Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR.”

Chatham Financial is the largest independent financial risk management advisory and technology firm. A leader in debt and derivative solutions, Chatham provides clients with access to in-depth knowledge, innovative tools, and an incomparable team of nearly 700 employees to help mitigate risks associated with interest rate, foreign currency, and commodity exposures. Founded in 1991, Chatham serves more than 3,000 companies across a wide range of industries — handling over \$750 billion in transaction volume annually and helping businesses maximize their value in the capital markets, every day.

For more than two decades, Chatham has invested in creating proprietary models and independently gathering data to value debt and derivatives. Our best-in-class valuation models have been tested and reviewed by auditors from leading accounting firms, providing a thorough calculation of nonperformance risk for clients needing ASC 820 or IFRS 13 fair values. Chatham incorporates industry-leading modern CVA-DVA-FVA and OIS discounting techniques into valuation methodologies.

Chatham offers the following comments in response to the questions in the consultation. Our comments reflect our inherent orientation toward the interests and concerns of derivatives end users, the core constituency of our client base.

Further Technical Consultation

Question 1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- 5-year median methodology
- 5-year median value

Chatham supports the use of a 5-year median value.

Given that there is little economic difference between these two options as shown in Appendix 1 of the Consultation, Chatham supports the use of the 5-year median value. We believe that by using the same 5-year median value, we also avoid the complexities that come from trying to define the forward-looking term SOFR spread, thus simplifying one component of the transition process.

Question 2: Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative regardless of ISDA's timing

Chatham believes that the ARRC's recommended spread adjustment should be set at the same time as ISDA sets its spread adjustment.

When entering into derivatives transactions to hedge cash instruments, best practices are predicated on having close alignment between the cash instruments and hedges. In the case of LIBOR cessation, we believe that the triggers, replacement indexes, and spread adjustments should all closely align to maintain hedges and therefore believe that the ARRC's and ISDA's spread adjustments should be calculated as of the same time.

Appendix: Responses to Questions from January Consultation

Questions 1- 7 refer to Floating Rate Notes, Securitizations, and Business Loans

Question 1: Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer an alternative method?

If the ARRC does provide recommended spread adjustments, Chatham agrees that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best method.

The historic mean/median approach aims to capture the cyclical nature of markets and, over time, revert to the mean. Therefore, it is important to understand the relevant time scales for the market to complete a cycle. After the recent financial crisis, it took more than 5 years for markets to stabilize. Even today, many markets remain in an unusual position of low interest rates. While a 10-year lookback would be attractive due to its inclusivity of different market regimes, Chatham believes that it is difficult to properly test a 10-year lookback due to the presence of the Financial Crisis and lack of longer-term data. Testing with the data currently available would give too much weight to the crisis relative to the rest of the 10-year lookback period. If more historical data were available, it is likely the lookback would result in a more stable and accurate credit spread. Given the limitations of the historic data, however, Chatham recommends the use of the 5-year lookback period to better capture the weight of events and exclude the 2008 Financial Crisis in the historic lookback period.

Chatham recommends using the historic median. In our historic scenario analysis, which is detailed in [Section 2.2.2 of our response to ISDA's July 2018 Consultation](#), the median historic credit spread resulted in fallback rates that were more similar to the replaced IBORs across currencies and different historic averaging lengths.

Question 2: If “Other Method” was specified for any product, please provide additional feedback on your institution’s preferences, noting whether your alternative is strongly or mildly preferred and why you prefer the alternative method:

- | | |
|-------------------------|---------------------------|
| a. 5-year trimmed mean | f. 3.5-year median |
| b. 5-year average | g. 3.5-year trimmed mean |
| c. 10-year median | h. 3.5-year average |
| d. 10-year trimmed mean | i. Other (please specify) |
| e. 10-year average | |

Chatham did not select another method other than the 5-year median approach in Question 1.

Question 3: If there are fewer than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:

- a. Use the longest span of indicative term rate data available**
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate.**
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR**

If there are fewer than 5 years of available data in calculating a spread adjustment for a forward-looking term rate, then Chatham's preference is to (a) use the longest span of indicative term rate data available. Our second preference is for method (c). We do not believe method (b) is viable given the ARRC's waterfall for a fallback rate.

Method (a) directly calculates the LIBOR to SOFR forward term rate spread given the available data. There is currently almost 2 years' worth of indicative daily forward-looking term data, and we expect to have about 3.5 years of daily forward-looking term data to calculate the spread.

ISDA chose to use 5 years of data in calculating the historic spread, because it performed best in minimizing the error between LIBOR and the fallback rate. Although 3.5 years of data performed slightly worse, it did not perform significantly worse. Due to limited data available, no direct calculation is possible to find the optimal spread adjustment associated with a forward-looking SOFR term rate. Given that there is no direct way to measure if 5 years of data is the best length of time, and 3.5 years worked reasonably well for the historic spread, we believe that 3.5 years will be a reasonable amount of data to use in this case.

The forward term rate and the forward spread data is also calculated from a relatively robust futures market. The SOFR futures market is much smaller than the Eurodollar futures market. However, the \$100B of SOFR futures notional traded on average every day appears robust enough for use in USD cash product fallbacks.

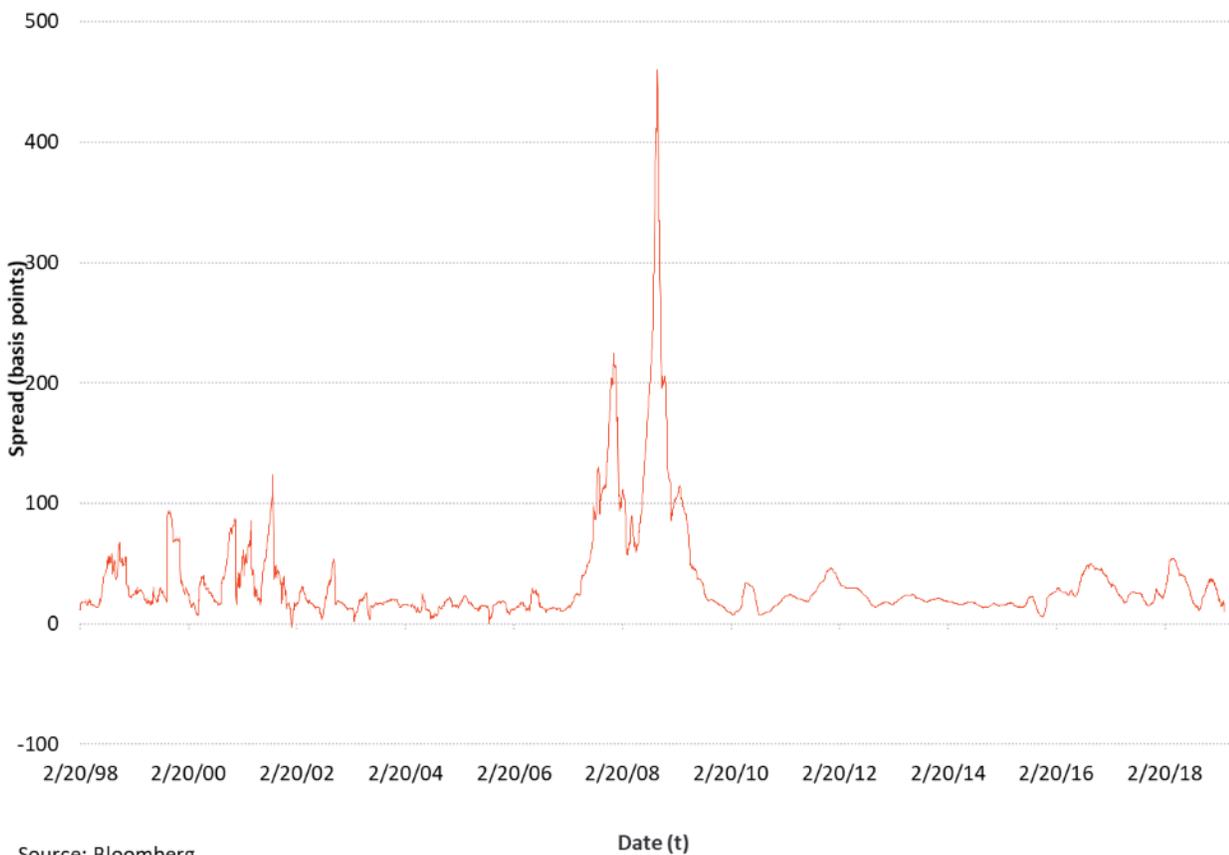
Although not our primary choice, method (c) is also a reasonable alternative. It is well known that the EFRR is a fair proxy for SOFR, so an adjusted mean accounting for the average difference between EFRR and SOFR would be an even better proxy. Since it is a proxy and not actually measuring SOFR, however, we rank method (c) below method (a) which actually uses forward SOFR. Additionally, given its additional complexity, method (c) would likely be a more challenging method for the market to adopt. The benefit of method (c) is that we have more data available than in method (a), albeit proxy data. As stated above, however, we do not see this as a significant reason to use method (c) over method (a).

Finally, it is our view that method (b) should be eliminated from consideration as a method in calculating the spread adjustment associated with a forward-looking term rate. Method (b) does involve a reasonable proxy of the SOFR forward rate, however, when viewed in the context of the ARRC's waterfall for fallbacks, method (b) fails to keep the steps in the waterfall for fallback rates distinct. Method (b) would effectively set the forward rate step in the waterfall equal to the historic rate step in the waterfall. In our view method (b) should not be considered as a possible method in calculating the forward rate spread unless the ARRC is considering removing the forward rate method as a distinct option.

Question 4: Do you believe that a 1-year transition period should be included for any of these cash products? If yes, please specify which products. (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why.)

A transitional period should not be included. A transitional period is a mechanism that allows the LIBOR fallback rate to transition from the LIBOR rate on the date of the discontinuation to a historic average after one year. Chatham believes this transitional period is too long, does not reflect actual LIBOR movements and that there are other potential transition mechanisms. Looking at the history of LIBOR spreads, the spread returns to its average over a period of a few months. As an example, see the historic spread between 3M USD LIBOR and term adjusted SOFR.

Historical basis-point spread between 3 months USD LIBOR and adjusted RFR



Movements in the spread typically take a few months to return to a more long-term value. The spike that occurred during the 2008 Financial Crisis would not be accounted for by a transitional period because it took more than two years to return to its long-term value.

Chatham also believes that the transitional period allows for market speculation around the proposed discontinuation date. Given the discontinuation date is approximately known, speculators may try to manipulate the spot spread around the discontinuation date. In this case, a speculative spread would be locked in and effect payments for the following year.

Not including a transitional period means that, on the discontinuation date, there may be a jump from the LIBOR rate to the LIBOR fallback rate. Because LIBOR is already a model-driven rate, it is also possible that the LIBOR submissions will drift to the LIBOR fallback rates in the period before the discontinuation. By not including a transitional period, the LIBOR submission process may naturally provide a smooth transition on the transition date.

Question 5: Should the ARRC recommend spread adjustments for 1-week or overnight LIBOR?

Although these tenors may not be as widely used as the longer-dated tenors, they are used in the market and will require fallback terms. Therefore, if the ARRC provides recommended spread adjustments for other tenors, it should also recommend them for 1-week and overnight LIBOR. Chatham recognizes that the spread adjustments for these tenors will likely be small, but it is important to be consistent across all tenors.

Question 6: Should the ARRC recommend spread adjustments based on the differences between LIBOR simple averages of SOFR in addition to compound averages?

Chatham believes the ARRC should not recommend spread adjustments based on simple averages in addition to compound averages. Compounding reflects the time value of money, and this notion should be the standard. While the differences between simple and compound rates have not been large, and simple interest rate averages have been used in the past, it would be better to use rates that accurately reflect how prices work.

Question 7: Would it be problematic to use different approaches to calculate the spread adjustment across products and currencies? Please comment specifically on the implications of any differences in the recommended spread adjustment methodologies.

There are potential problems with using different fallback methods across different products and currencies, specifically the operational challenge of tracking multiple different spread adjustment methodologies. All things considered, however, minimizing value transfer in order to preserve the economics of the original agreement is a higher priority than the operational challenge of managing inconsistencies across fallback methods.

Chatham does not advise our clients on consumer products; therefore, questions 8-11 have intentionally been omitted.

Question 12: Please provide any additional feedback on any aspect of the proposals.

First, the decision to follow the ARRC's recommended spread adjustment or to negotiate a spread adjustment should be mutually agreed upon between the issuer and borrower given the uncertainties about how spread adjustments will work for all products and in all market conditions.

Secondly, Chatham believes that the ARRC should provide further clarification and recommendation on where the spread adjustment should be applied within loan documentation. As an example, to demonstrate how this could impact value, consider a loan that pays interest based on USD-LIBOR with an embedded 1% floor plus a borrowing spread. Consider the two potential alternatives for how the fallback language could incorporate the recommended spread adjustment to apply to the new index: (1) include the spread adjustment as part of replacement index or (2) apply the spread adjustment to the loan spread directly.

If at the date of the fallback, USD-LIBOR was 1.00% and SOFR was 0.90%, with an ARRC recommended spread adjustment of 8 basis points, the borrower could pay the following depending on which is the selected method:

- (1) 1.00% plus the original borrowing spread
- (2) 1.00% plus 8 basis points plus the original borrowing spread

As demonstrated, there are situations in which this makes an economic difference in the value of the cash product. Chatham favors the use of method (1) where the spread adjustment is included as part of the replacement index. For end users hedging their cash instruments, it is necessary for the fallbacks for cash instruments to align with fallbacks for derivatives. It is essential for both the ARRC and ISDA to be clear in the recommended method of inclusion for the spread adjustment, and it is important for those recommendations to be aligned.

COBANK

June 15, 2020

Federal Reserve Board
Alternative Reference Rate Committee
Submitted via Email

Dear ARRC Secretariat:

CoBank, ACB, on behalf of the Farm Credit Banks (FC Banks), appreciates the opportunity to comment on the Alternative Reference Rate Committee's (ARRC) Supplemental Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR.

The FC Banks are part of the Farm Credit System (FCS), which is a government-sponsored enterprise of the United States that provides loans, leases, and financial services to rural American farmers, ranchers, and agricultural, aquatic and infrastructure cooperatives and providers, across all fifty states and the Commonwealth of Puerto Rico.¹ The FC Banks are: (1) AgFirst Farm Credit Bank; (2) AgriBank, FCB; (3) CoBank, ACB and (4) Farm Credit Bank of Texas. Together, the FC Banks are among the leading lenders to rural America; they provide credit for rural housing, agricultural processing and marketing activities, utilities providers, and certain farm-related businesses.

Congress created the FCS, to provide a permanent, stable source of credit and related services to support rural America and improve the lives of its residents. Specifically, the FCS institutions were created "to accomplish the objective of improving the income and well-being of American farmers and ranchers by furnishing sound, adequate, and constructive credit and closely related services to them, their cooperatives, and to selected farm-related businesses necessary for efficient farm operations"². Since its creation, CoBank was granted authorities to provide credit to rural infrastructure providers, who are vital to creating successful businesses and healthy rural communities. The FC Banks and their associations hold gross loans of \$293 billion, as of March 31, 2020, and provide approximately 41% of all U.S. agricultural financing according to the U.S. Department of Agriculture.

¹ See generally 2019 Annual Report on the Farm Credit System by the Farm Credit Administration.

² 12 U.S.C. § 2001(a)

Page 2

Before addressing the questions in the ARRC's USD LIBOR Spread Adjustment Methodologies Supplemental Consultation, the FC Banks would like to provide several general comments related to the transition from USD LIBOR to an alternative reference rate.

The FC Banks compliment the ARRC on its fallback language recommendations from the Business Loans, Floating Rate Notes and Securitization Work Groups in developing a reasonably coordinated approach to the fallbacks language across cash products. The Banks have also asked the International Swap and Derivative Association (ISDA) in our response to the ISDA consultations to work to align key aspects of the fallback language for USD LIBOR bilateral derivatives with the ARRC cash product's recommendations. In the view of the Banks, a lack of coordination among the fallback language could create substantial basis risks to all financial institutions if, for example, triggers for different types of instruments are invoked at varying times or alternative reference rates (including spread adjustments) are inconsistent. The FC Banks would encourage the ARRC to take a leadership role in encouraging greater coordination with other working groups on these issues, such as the ISDA and central counterparty clearing exchanges.

The FC Banks also encourage all regulators to increase engagement with regulated financial institutions to fully appreciate the complexity, expense and legal ramifications related to the transition to alternative reference rate indexes. It would be regrettable if global and domestic financial markets encounter a major systemic event related to a quick implementation of the alternative reference rate indexes based on regulatory pressure.

Finally, the FC Banks would like to express their concern related to the ARRC's white paper on "Using an Average of SOFR to Build an Adjustable-Rate Mortgage Product for Consumers" and the Federal Reserve Bank of New York's (FRBNY) publishing of SOFR Averages and SOFR Indexes. The paper discussed the possibility of utilizing SOFR averages "in advance" as a possible fallback index. The FC Banks are concerned that applying this possible alternative reference rate on one class of loans could create significant volatility in earnings during periods of monetary policy activity. Additionally, the effect of the lagging index could also lead to ineffectiveness of hedges and create issues with hedge accounting. The FC Banks think that the FRBNY and the ARRC's efforts would be better served in working to accelerate the implementation of forward looking term SOFR indexes, as a much more appropriate alternative reference rate solution. As stated

Page 3

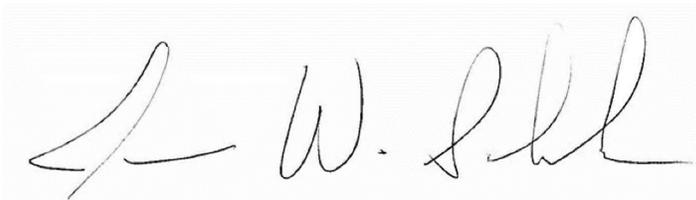
previously, the FC Banks strongly advocate for coordinated fallback language across derivative and all cash market products.

Attached are the FC Banks' current responses to the specific questions put forth in the ARRC's USD LIBOR Spread Adjustment Methodology Supplemental Consultation. The responses have been developed jointly by the FC Banks. This feedback represents our current thoughts and might be subject to changes as we see developments in the markets and regulatory environment.

The FC Banks welcome the opportunity to discuss our comments with you. Please contact the following staff with any comments or questions:

<u>Bank</u>	<u>Contact</u>	<u>Email</u>
AgFirst, FCB	Josh Goethe	JGoethe@AgFirst.com
AgriBank, FCB	Luis Sahmkow	Luis.Sahmkow@agribank.com
CoBank, ACB	James Shanahan	jshanahan@cobank.com
Farm Credit Bank of Texas	Matthew Windsor	matthew.windsor@farmcreditbank.com

Sincerely,

A handwritten signature in black ink, appearing to read "J. W. Shanahan". The signature is written in a cursive style with a large initial "J" and "S".

James W. Shanahan, CFA
Vice President – Financial Regulatory Compliance
CoBank, ACB

**ARRC Supplemental Consultation on Spread Adjustment Methodologies for
Fallbacks in Cash Products Referencing USD LIBOR**

The ARRC Supplemental Consultation on Spread Adjustment Methodologies requests the following feedback from market participants:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

Option #1 - 5-year median methodology

Option #2 - 5-year median value

FC Banks Response: *The FC Banks would prefer to utilize Option #2 and have the value exactly match the ISDA's calculation. We have noted that both the ISDA and ARRC recommendations should produce the same value, but for simplicity we would like to ensure that they are the same.*

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

Option #1 - Should be set at same time as ISDA

Option #2 - Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

FC Banks Response: *The FC Banks would prefer to utilize Option #1 and the timing of the calculation match ISDA's calculation. We have noted that ISDA triggers now include the "Pre-cessation" trigger, both should have the same timing.*

CREFC

June 15, 2020

Alternative Reference Rates Committee

Via email: arrc@ny.frb.org

Re: ARRC Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Dear Sir or Madam:

The CRE Finance Council (CREFC) – in its role as co-chair of the ARRC’s Securitizations Working Group (SWG) – is pleased to respond to the Alternative Reference Rates Committee’s (ARRC) *Supplemental Consultation* seeking further views on certain technical issues related to spread adjustment methodologies for cash products referencing USD LIBOR. This Consultation follows the ARRC’s January 2020 consultation, which sought input as it moved to recommend spread adjustments for fallbacks in cash products referencing USD LIBOR.

CREFC members represent U.S. commercial and multifamily real estate investors, lenders, and service providers – a market with an estimated \$4.6 trillion of commercial real estate (CRE) debt outstanding.¹ A significant portion² of this debt is structured as floating-rate that is indexed to U.S. dollar (USD) LIBOR. Floating-rate CRE loans and commercial mortgage-backed securities (CMBS) typically have maturities of two to five years, meaning that CRE sector debt instruments are medium- to long-dated making the outcome of this Consultation important for our industry as loans and securities issued from 2018 on are likely to still be outstanding after December 31, 2021.

As highlighted in CREFC’s response to ARRC’s January 2020 consultation, a key objective of CREFC and its members is a high degree of consistency with ISDA’s recommendations related to the spread adjustment for the derivatives market. Derivatives, which represent 95% of all LIBOR exposures, are widely used across the CRE finance industry by lenders, borrowers, and investors. A lack of consistency increases the possibility of value transfer in a transition from LIBOR to SOFR. Another objective for our members is that the transition be conducted in an orderly manner that minimizes volatility and provides the market with sufficient information that is both objective and readily available.

¹ Federal Reserve, as of December 31, 2019.

² Based on data from J.P. Morgan and the Federal Reserve, the current outstanding balance of CRE loans indexed to LIBOR is approximately \$1.3 trillion.

Accordingly, our responses to the two questions posed in the Consultation attempt to balance these considerations and objectives. We would note, however, that CREFC's preferences in terms of both the calculation of the spread and timing of implementation upon the occurrence of a pre-cessation trigger will be informed by the actions taken by Freddie Mac and Fannie Mae (GSEs). In addition to aiming for consistency with ISDA, CREFC's members believe it is important to consider the direction taken by the GSEs, given their significant presence in the multifamily mortgage market, in response to the LIBOR transition.

We appreciate this opportunity to comment, and we look forward to working constructively with the ARRC on this important matter.

Sincerely,

A handwritten signature in cursive script that reads "Lisa A. Pendergast". The signature is written in dark ink and includes a long horizontal flourish extending to the right.

Lisa Pendergast
Executive Director
CRE Finance Council

Consultation Questions

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- ***5-year median methodology***
- ***5-year median value***

Given the overall breadth and complexity of the LIBOR transition, we advocate for simplicity where possible. As such, rather than using the same **spread adjustment methodology**, we would prefer to use the same **spread adjustment value** for a given LIBOR tenor (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears for that tenor of LIBOR) across the different fallback rates of the same tenor. As Appendix 1 in the Consultation demonstrates, favoring simplicity does not mean sacrificing accuracy. According to the analysis in Appendix 1, historically-speaking, there would have been little difference between the option of using the same value or the same methodology in the context of both 1-Month and 3-Month LIBOR.

The analysis in Appendix 1 examined the differences in historical performance in applying the same 5-year median spread value (calculated based on average EFFR in arrears) versus applying the same 5-year methodology to set the spread for an EFFR term rate. For instruments using 1-Month LIBOR and a monthly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compounded EFFR in arrears was always within 2 basis points and was within 1 basis point for 85% of the time between 1999 and 2019. In the case of 3-Month LIBOR, for a majority of the time, the difference was within 1 basis point between 1999 and 2019, and it was within five basis points 90 percent of the time. The maximum difference, occurring in 2010, briefly reached close to nine basis points. However, as noted in Appendix 1, large, temporary differences between term and compound arrears rates would typically not impact a median spread calculation.

Given the relatively small difference between using a spread value (calculated based on average EFFR in arrears) versus using the same methodology to set the spread for an EFFR term rate, as demonstrated by the Appendix's 1-Month and 3-Month LIBOR data, we would support, in the name of simplicity, the use of the same spread value across all fallback rates.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- ***Should be set at same time as ISDA***
- ***Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing***

As discussed in this letter's introduction, derivatives, which represent 95% of all LIBOR exposures, are widely used across the CRE finance industry by lenders, borrowers, and investors. In order to avoid basis risk where possible, we prefer that cash products implement transition plans that are consistent with ISDA's strategies. Therefore, we believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative.

DEUTSCHE BANK

June 15, 2020

Deutsche Bank Response to **ARRC Supplemental Spread Adjustment Consultation**

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

- Based on a review of the analysis contained in appendix 1 of the ARRC's supplemental consultation, Deutsche Bank's preference would be that the ARRC use the 5-year median value (ISDA's value calculated on SOFR Compounded in Arrears). Deutsche Bank is of the opinion that the use of one spread value applied to all SOFR rates would reduce complexity, which would result in more overall stability in the market during cessation.

Question 2. Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

- In a scenario where a "pre-cessation" event is triggered, Deutsche Bank's preference is that the ARRC's recommended spread adjustments be set at the same time as ISDA's spread adjustments are set. This will insure synchronization across cash and derivative products which will result in less complexity in the market place.

FEDERAL HOME LOAN BANK OF BOSTON

To: ARRC Secretariat
From: Federal Home Loan Bank of Boston
Date: June 8, 2020
Subject: Response to ARRC Follow-up Consultation on Technical Details

The Federal Home Loan Bank of Boston submits the attached response to the ARRC Follow-up Consultation on Technical Details.

Consultation Questions and Responses

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology*
- 5-year median value*

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA*
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing*

FEDERAL HOME LOAN BANK OF CINCINNATI

For any inquiries please contact:

Tami L. Hendrickson, SVP, Treasurer

FHLB Cincinnati

513-852-7581, hendricksontl@fhlbcin.com

the FCA that LIBOR would be judged to be non-representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a pre-cessation event is operative should match the timing that ISDA selects. In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate? 5-year median methodology 5-year median value.

Answer Question 1: 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears - the same spread value to be used by ISDA.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative? Should be set at same time as ISDA Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Answer Question 2: ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative.

FEDERAL HOME LOAN BANK OF INDIANAPOLIS



To: ARRC
From: Federal Home Loan Bank of Indianapolis
Date: June 8, 2020
Subject: FHLB Indianapolis response to Supplement consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR

Dear ARRC Secretariat,

The Federal Home Loan Bank of Indianapolis (FHLBI) is a US government-sponsored entity and one of 11 district banks in the Federal Home Loan Bank System.

Please find FHLBI's response to the ARRC Supplement Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR below. FHLBI believes that there should be a strong alignment to the extent possible with the spread adjustment methodology being implemented by ISDA.

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-yr median methodology
- 5-yr median value

FHLB Indianapolis prefers using a 5 – year median methodology. Our primary focus is on the consistency of rules between ISDA and ARRC. We prefer to avoid any areas that may lead to a difference in fall back spreads between cash products and derivatives hedging them.

Question 2. *Do you believe that that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA’s timing

FHLB Indianapolis prefers the ARRC’s recommended spread adjustments be set at the same time that ISDA’s spread adjustments if a pre-cessation event is operative. Mismatch in timing may result in market manipulation leading to a difference in fallback spreads applied to the cash products vs the derivatives hedging them.

FEDERAL HOME LOAN BANK OF NEW YORK

June 8, 2020

Via Electronic Mail

ARRC Secretariat
Alternative Reference Rates Committee
arrc@ny.frb.org

Dear ARRC Secretariat,

The Federal Home Loan Bank of New York's response to the *ARRC Follow-Up Consultation on Technical Details* for Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR is attached.

Sincerely,

Benchmark Index Transition Office
Federal Home Loan Bank of New York
101 Park Ave
New York, NY 10178

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

Response: We advocate using the **uniform spread adjustment value** whether the replacement rate is a compound average of daily SOFR in arrears, simple average of daily SOFR in arrears or a potential forward-looking SOFR term rate. Multiple spread adjustments for different SOFR applications may create unnecessary market confusion. The average difference between a) forward-looking term rate (OIS swap) and b) compounded average in arrears is negligible.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Response: We recommend **setting ARRC recommended spread adjustments at the same time as ISDA's spread adjustments are set.** Our preferred outcome is fallback consistency across all cash and derivative products where possible.

FIDELITY MANAGEMENT AND RESEARCH



June 8, 2020

ARRC Secretariat – Alternative Reference Rate Committee (“ARRC”)

Submitted by electronic mail to: arrc@ny.frb.org

Re: Supplemental Consultation Response -- ARRC Supplemental Consultation on Spread Adjustment Methodology for Fallbacks in Cash Products referencing USD LIBOR – May 6, 2020 (the “Spread Adjustment Methodology Supplemental Consultation”)

Fidelity Investments (“Fidelity”)¹ appreciates the opportunity to provide some feedback on the questions posed by the ARRC in the Spread Adjustment Methodology Supplemental Consultation.

Responses to Supplemental Consultation Questions:

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

Fidelity Response:

We would prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, be applied to each potential fallback rate. We think it is important to have consistent adjustment values across the derivatives and cash market.

¹ Fidelity is one of the world’s largest providers of financial services, including investment management, retirement planning, portfolio guidance, brokerage, benefits outsourcing and many other financial products and services to more than 30 million individuals and institutions, as well as through 13,500 financial intermediary firms. Fidelity submits this letter on behalf of its investment advisers that manage LIBOR-indexed investments.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Fidelity Response:

We believe that it is important that ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative, the pre-cessation trigger and related timing should be consistent between the derivatives and cash market, especially if we are going to use the same spread adjustment value used by ISDA.

As a general matter, many market participants use both derivatives and cash instruments together in order to hedge various exposure. Consistency between the treatment of the two markets upon an event such as pre-cessation will help to minimize market disruption from both a valuation and operational perspective and allow participants to continue their focus on other aspects of the conversion from LIBOR

* * *

Fidelity wishes to thank the ARRC for the opportunity to provide feedback on the Spread Adjustment Methodology Supplemental Consultation. We would be pleased to provide further information or respond to questions the ARRC may have about our comments. Please contact Helen Lloyd-Davies at helen.lloyd-davies@fmr.com.

Thank you,

Fidelity Investments

(on behalf of its investment advisers that manage LIBOR-indexed investments)

ING

Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

In January, the Alternative Reference Rates Committee (ARRC) released a [consultation](#) seeking input as it moved to recommend spread adjustments for fallbacks in cash products referencing U.S. dollar (USD) LIBOR, and, at its April meeting, the ARRC agreed on a recommended spread adjustment methodology reflecting the [feedback received](#). This note provides a more detailed summary of the feedback to the ARRC's consultation and seeks further market views on two outstanding technical details.

Section I: Background

As noted in its April [Statement](#), the ARRC is recommending a spread adjustment methodology based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. For consumer products, the ARRC is additionally recommending a 1-year transition period to this five-year median spread adjustment methodology. The five-year median spread adjustment methodology matches the methodology recommended by the International Swaps and Derivatives Association (ISDA) for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fallbacks for derivatives markets. The inclusion of a transition period for consumer products was endorsed by many respondents, including consumer advocacy groups.

The ARRC intends to work with a vendor to publish its recommended spreads and spread-adjusted rates, and will release a more detailed final recommendation of the spread adjustment methodology for cash products as part of this process. In Section III below, the ARRC asks for further views on one technical detail of the spread adjustment calculations.

Since the ARRC's announcement of its initial recommendations, ISDA has announced that it will also move to include a pre-cessation trigger in its definition amendments and protocol for derivatives. The ARRC welcomes the decision, which serves to bring fallbacks for derivatives closer in line to the ARRC's fallback recommendations for cash products, and will closely watch ISDA's decisions as it moves to implement its trigger, seeking to keep alignment on technical implementation details with ISDA where appropriate.

The ARRC's recommended methodology is for market participants' voluntary use, to produce spread adjustments intended for USD LIBOR contracts that have incorporated the ARRC's recommended hardwired fallback language, or for legacy USD LIBOR contracts where a spread-adjusted Secured Overnight Financing Rate (SOFR) can be selected as a fallback.

Section II: Summary of the Spread Adjustment Consultation Responses¹

- The ARRC received 71 responses to its consultation on a spread adjustment methodology. Slightly over half of the responses were provided by banks, with the rest of the responses from a diverse mix of asset managers, insurance and other financial companies, GSEs, consumer groups, and industry associations.²
- For floating rate notes, syndicated and bilateral business loans, and securitizations, respondents almost unanimously preferred to apply ISDA's approach for derivatives (Question 1) and did not wish to see a transition period applied (Question 4), with many respondents citing the importance of consistency across products as the decisive factor in their recommendation. Only one respondent disagreed with this approach.
- ISDA's approach is based on a 5-year median of the spread between LIBOR and SOFR. The consultation noted that it was possible that there may not be a full 5 years of history for the SOFR term rate and asked for preferences as to how any lack of data might be addressed. (Question 3). In the absence of a full five years of data for calculating a median, more respondents favored using an in arrears adjustment, with the remaining respondents roughly equally split between shortening the calculation period or using an OIS adjustment.
- Respondents favored including overnight and 1-week spreads by 3 to 1 (Question 5). Many who favored including short-term spreads acknowledged that those spreads were, and likely would remain, little used but saw no harm in providing them or cited value in completeness.
- Respondents were almost evenly split on whether to include a recommendation for simple, as well as compound, averages. Those for the inclusion generally cited the low cost of providing additional values while those against inclusion noted the potential for confusion and unnecessary systems costs.
- A significant minority of the respondents (about 40 percent) did not answer the questions on consumer loans, citing a lack of relevance for their businesses.
- As with other cash products, almost all respondents with an interest in consumer loans placed a high value on consistency with the ISDA methodology of using a 5-year median spread (Question 8). As to whether a transition period was appropriate for consumer products (Question 9), responses were split equally; however, all of the consumer groups and most (but not all) mortgage lenders preferred the inclusion of a transition period for consumer products, with respondents that preferred not to have a transition period having less clear direct connections to consumer lending in many cases.
- In the absence of data for a 5-year median for consumer cash products, more respondents favored an in arrears adjustment over using a shorter series or OIS rates (Question 11).
- Respondents were evenly divided on the appropriate fallback spread for adjustable rate mortgages if the ARRC-recommended term rates were of shorter maturity than the LIBOR rates referenced in ARMS (1-year and 6-month LIBOR). Some preferred the use of the next longest SOFR-adjusted term while others recommended using a compounded average of in advance SOFRs.

¹ The full set of questions in the ARRC's initial consultation are included in Appendix 2.

² In a few instances multiple groups or firms provided a joint response; in those instances, each group's reply is counted separately in this summary. Responses are available on the ARRC website.

Section III: Further Technical Consultation

As noted in section I.C of the [Consultation](#), the ARRC's hardwired fallback recommendations for floating rate notes, securitizations, and syndicated and bilateral business loans would fall back to a forward-looking term SOFR rate if the ARRC has recommended one, or a compound average of SOFR either in arrears or in advance, depending on the choices made by the parties adopting the language, if a term rate has not been recommended or if the parties prefer to fall back to a compound average SOFR. The ARRC may thus make recommendations for spread adjustments to three types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, and a compound average of SOFR in advance. In addition, the ARRC may also consider recommending spread adjustments for simple averages of SOFR.

Respondents to the consultation strongly preferred to use the same 5-year historical median spread methodology that will be used by ISDA for each of these potential forms of the SOFR fallback rate. However, although as noted in the Consultation each of the types of SOFR fallback rates are each closely linked to each other, because they are each somewhat different, the same methodology is likely to produce somewhat different spread calculations.

The Consultation additionally noted that there may not be 5 years of historical data available for a SOFR term rate, and asked for feedback as to how the term-rate spread adjustment should be calculated if this occurred (Question 3). The consultation proposed and sought views on potential ways to address this:

- Use a shorter sample to estimate a recommended spread for the forward-looking term SOFR rate.
- Use the historical difference between LIBOR and compound averages in arrears during the period of time for which historical data on a term SOFR rate is unavailable.
- Base the spread adjustment on the difference between LIBOR and EFR term OIS rates (on the grounds that SOFR term rates should move closely with EFR OIS rates)

In discussing feedback to the Consultation, the ARRC has determined that there is another potential option that could have been considered - rather than using the same spread adjustment *methodology*, another potential option would be to use the same spread adjustment *value* for a given LIBOR tenor (calculated to be equal to ISDA's spread adjustment for compound SOFR in arrears for that tenor of LIBOR) across the different fallback rates of the same tenor, regardless of whether there was sufficient rate history for any particular fallback rate. The ARRC has noted that there is a possibility that some respondents took Question 1 to be asking whether preferred to use the same value rather than the same methodology. Additional background on the differences between these two options is provided below in Appendix 1.

Separately, the ARRC has welcomed the announcement from ISDA that it will include a pre-cessation trigger, which will help to bring fallback language for cash and derivatives products in to closer alignment. In the ARRC's consultation, which was issued before ISDA had announced that it would include a pre-cessation trigger, there was a discussion of the potential timing for when the recommended spread adjustment could be set in the event of a pre-cessation trigger. In the event that LIBOR was found to be no longer representative by the U.K. Financial Conduct Authority (FCA) before any official statement that LIBOR would cease publication, the consultation discussed setting the spread adjustment at the time that LIBOR was found to no longer be representative.³ The ARRC notes that it is possible that ISDA may elect to set its spread adjustment at a different time in this event, for example, at the time of a statement by

³ See page 13 of the consultation.

the FCA that LIBOR would be judged to be non-representative at a future date. The ARRC has previously indicated that the timing of the fixing of its spread adjustments would match ISDA's in the event that a cessation event was operative. The ARRC therefore seeks views from a diverse array of market participants as to whether the timing of the fixing of its spread adjustment in the event that a pre-cessation event is operative should match the timing that ISDA selects.

In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

5-year median methodology

5-year median value

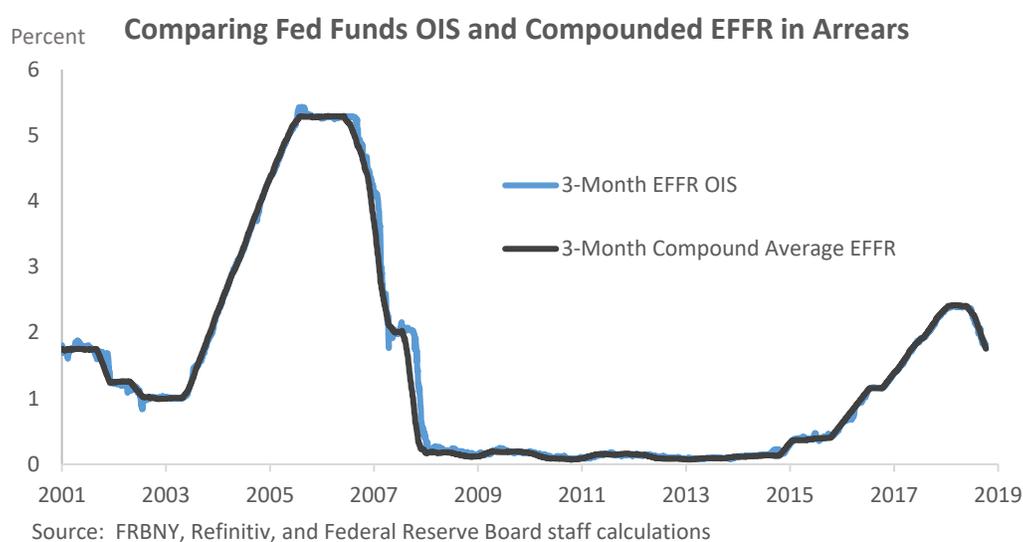
Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Appendix 1. Background Analysis

The Consultation noted that the different versions of SOFR (term, in arrears, and in advance) are all closely linked. An average of SOFR in advance is simply a lagged version of an average in arrears, and the term rate will likely represent the market expectation of compound SOFR in arrears. As shown below, a term rate based on fed funds futures has historically moved very closely with a compound average of EFFR. While there were some differences during the financial crisis, when monetary policy rates were unexpectedly and very sharply cut, the difference between an EFFR term rate and EFFR compound average has averaged less than a basis point both before and since the financial crisis. More recently, with the sharp and unexpected cuts to monetary policy this March in response to the Covid 19 disruptions, there was again a divergence between term rates and in arrears averages of EFFR, although again these differences will presumably be temporary.



Here, we present some analysis to determine whether there would have been significant differences in historical performance in applying the same 5-year median spread value (calculated based on average EFFR in arrears) versus applying the same 5-year methodology to set the spread for an EFFR term rate. We concentrate on spread adjustments to be set for 1-month and 3-month LIBOR, the two most widely used tenors of LIBOR.

For instruments using 1-Month LIBOR and a monthly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears was always within 2 basis points and was within 1 basis point for most (85 percent) of the time over the twenty-year period between 1999 and 2019). Thus, the difference between the option of using the same value or the same methodology would have been negligible.

For instruments using 3-Month LIBOR and a quarterly reset, the difference between the 5-year median spread to term EFFR and the 5-year median spread to compound EFFR in arrears has historically been somewhat more volatile, because over a 3-month period it is possible for unexpected moves in rates to drive a larger gap between the term rate (which reflects expected rate movements) and compound in arrears (which reflects actual rate movements). For the majority of the time, the difference was within 1 basis point between 1999 and 2019, and it was within 5 basis points 90 percent of the time, but the maximum difference, occurring in 2010, briefly reached close to 9 basis points.

Because the median is a relatively nonlinear measure, the impact of the most recent episode of volatility is difficult to predict. The kinds of large, temporary, differences between term and compound arrears rates that occurred recently when the Federal Reserve sharply and unexpectedly cut policy rates in March 2020 would not of themselves affect the 5-year median spread. Because these differences are outsized and therefore very likely to be in the top tail of the distribution, the impact on a 5-year median will depend on what spreads that otherwise would have been close to but above the median are at the time of the spread calculation. If market expectations are an accurate baseline and LIBOR falls back to normal values later this year, then absent further large rate surprises, the recent episode should have negligible impact on a 5-year median, but the final impact will only be known at the time that the spread is set.

Any potential differences between 5-year median spreads based on term rates and compound averages in arrears do not necessarily imply that applying the 5-year median spread for compound SOFR in arrears (ie, using the ISDA spread value) to the SOFR term rate would lead to less basis with ISDA’s fallbacks than applying the 5-year historical median spread for the SOFR term rate (ie, using the ISDA methodology) to the term rate. While applying the same spread value to both the compound average of SOFR in arrears and the SOFR term rate would obviously force the spreads to be the same, it won’t necessarily lead to a closer overall fit because the term rate will differ from ISDA’s fallback to compound in arrears. In the table below, we show that the mean absolute error would have historically the same in either approach, whether measured relative to the ISDA fallback or to 3-month LIBOR.

*Table: Comparing MAEs for Different Spread Methodologies for the 3-Month Term Rate **

Spread Methodology	Relative to 3-Month ISDA Fallback	Relative to 3-Month LIBOR
5-year median spread to Term Rate	0.05	0.14
5-year median spread to Compound Arrears	0.05	0.14

** Data Sources: FRBNY, Refinitiv, and Federal Reserve Board staff calculations. Compound averages and term rates are based on EFR and EFR futures prices. Statistics are reported in percentage points and are based on a hypothetical security with quarterly rate resets and five years of remaining maturity at the time of the move from LIBOR to the spread-adjusted rate over the sample period Jan 1999-May 2019.*

Appendix 2: Questions Included in the January Consultation

Questions 1- 7 refer to Floating Rate Notes, Securitizations, and Business Loans

Question 1. Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer an alternative method?

Floating Rate Notes 5-year median is preferred Other method is preferred

Securitizations 5-year median is preferred Other method is preferred

Syndicated Loans 5-year median is preferred Other method is preferred

Bilateral Business Loans 5-year median is preferred Other method is preferred

Question 2. If “Other Method” was specified for any product, please provide additional feedback on your institution’s preferences, noting whether your alternative is strongly or mildly preferred and why you prefer the alternative method:

- a. 5-year trimmed mean
- b. 5-year average
- c. 10-year median
- d. 10-year trimmed mean
- e. 10-year average
- f. 3.5-year median
- g. 3.5-year trimmed mean
- h. 3.5 year average
- i. Other (please specify)

Question 3. If there are fewer than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:

- a. Use the longest span of indicative term rate data available
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate.
- c. Use the spread between LIBOR and EFRR OIS rates, adjusted for the mean difference between compound averages of EFRR and SOFR

Question 4. Do you believe that a 1-year transition period should be included for any of these cash products? If yes, please specify which products. (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why.)

Question 5. Should the ARRC recommend spread adjustments for 1-week or overnight LIBOR?

Question 6. Should the ARRC recommend spread adjustments based on the differences between LIBOR simple averages of SOFR in addition to compound averages?

Questions 8- 11 refer to Consumer Products

Question 7. *Would it be problematic to use different approaches to calculate the spread adjustment across products and currencies? Please comment specifically on the implications of any differences in the recommended spread adjustment methodologies.*

Question 8. *Do you agree that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is an acceptable choice for consumer products, or would you prefer an alternative method? (If another method is preferred, please specify which and note whether your alternative is strongly or mildly preferred and why you prefer the alternative method).*

Question 9. *Do you believe that a 1-year transition period should be included for consumer products? (If you believe that a transition period should be included, but that it should be longer or shorter than 1 year, please note this and explain why).*

Question 10. *If a 1-year or 6-month term rate has not been recommended by the ARRC, would you prefer that a consumer ARM referencing 1-year or 6-month LIBOR fall back to a spread adjusted rate based on:*

- a. the next longest tenor of term rate recommended by the ARRC*
- b. a compound average of SOFR in advance*

(Note that in these instances, the rate would still reset annually or semiannually and spreads would be calculated relative to 1-year or 6-month LIBOR).

Question 11. *If there is less than 5 years of available data to use in calculating a spread adjustment for a forward-looking term rate, which method would you prefer to calculate the associated spread adjustment:*

- a. Use the longest span of indicative term rate data available*
- b. Use the spread adjustment associated with the difference between LIBOR and a compound average of SOFR in arrears as an appropriate spread adjustment for the forward-looking term rate*
- c. Use the spread between LIBOR and EFFR OIS rates, adjusted for the mean difference between compound averages of EFFR and SOFR*

Question 12 applies to all products

Question 12. *Please provide any additional feedback on any aspect of the proposals.*

LMA

ARRC Supplemental Consultation on Spread Adjustment Methodology

Supplemental Consultation Response

Thank you for the opportunity to comment on the ARRC Follow-Up Consultation on Technical Details following the ARRC Spread Adjustment Consultation.

The LMA is the trade body for the EMEA syndicated loan market and was founded in December 1996 by banks operating in that market. Its aim is to encourage liquidity in both the primary and secondary loan markets by promoting efficiency and transparency, as well as by developing standards of documentation and codes of market practice, which are widely used and adopted. Membership of the LMA currency stands at over 750 organisations across over 65 jurisdictions and consists of banks, non-bank investors, law firms, rating agencies and service providers. The LMA is recognised across the market and has expanded its activities to include all aspects of the primary and secondary syndicated loan markets. Its overall mission is to act as the authoritative voice of the EMEA loan market vis à vis lenders, borrowers, regulators and other interested parties.

Our comments are specifically in the context of the loan market and, in particular, we would like to raise a general point which applies to both questions asked in the Follow-Up Consultation. We believe there is strong merit in seeking consistency of methodology and application of spread adjustments across products and across currencies, wherever feasible. In particular, in respect of Question 1, it should be noted that in the sterling market, the equivalent consultation provided for the same spread adjustment value for a given GBP LIBOR tenor to be used across forward-looking term SONIA and the compound average of SONIA in arrears. A divergence in approach in respect of the application of the credit spread adjustment methodologies across currencies and products is of particular significance in the context of multicurrency and hedged loans.

We look forward to the outcome of the Follow-Up Consultation.

12 June 2020

MORGAN STANLEY

Morgan Stanley

ARRC Cash Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

Morgan Stanley is pleased to respond to the Alternative Reference Rates Committee’s Follow-up Consultation on Technical Details regarding Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR (the “**Consultation**”). Please find below our answers to each of the questions posed by the Consultation.

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- A. *5-year median methodology*
- B. *5-year median value*

Morgan Stanley supports the selection of 1(A), the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate. The methodology should tie to the rate published on Bloomberg or other administrator screens; it is particularly important that the rate be published in a clear and transparent manner to facilitate ease of use in the consumer markets.

Question 2. *Do you believe that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?*

- A. *Should be set at same time as ISDA*
- B. *Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA’s timing*

Morgan Stanley supports the selection of 2(A) for all cash products; the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative.

MT BANK

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

M&T Response - 5-year median value

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

M&T Response - Should be set at same time as ISDA

NAB AND BNZ



National Australia Bank Limited
ACN 0004044937
HR-59966SM

11th June 2020

Alternative Reference Rates Committee
Federal Reserve Bank of New York
New York

Please find below the National Australia Bank and Bank of New Zealand response to the ARRC Supplemental Consultation due June 15th

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology
- 5-year median value

Answer 1. 5-year median value

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

Answer 2. Should be set at same time as ISDA

PNC BANK

In light of these discussions, the ARRC seeks further feedback to the following two questions:

Question 1. *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

5-year median methodology

5-year median value

Question 2. *Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?*

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

PRUDENTIAL INVESTMENT MANAGEMENT

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5- year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

We prefer the same spread value that will be used by ISDA

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

The spread adjustment should be set at the same time as ISDA

RIVERSIDE RISK ADVISORS

The ARRC is expected to make recommendations for spread adjustments to four types of SOFR: a forward-looking term SOFR, a compound average of SOFR in arrears, a compound average of SOFR in advance, and simple averages of SOFR.

For borrowers without hedging requirements, the choice of applying the ISDA methodology value has the advantage of simplicity, given the small difference in the values for different types of SOFR. For borrowers with hedging requirements, the key issues are: 1) minimizing the basis risk between the loan and the hedge, and 2) keeping the amendment requirements to a minimum. For this reason, using the value from the ISDA calculation for SOFR compounded in arrears is likely to be better.

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median methodology

5-year median value

Question 2. Do you believe that that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a precession event is operative?

Should be set at same time as ISDA

Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA's timing

SFA



June 15, 2020

Via email to the ARRC Secretariat at: arrc@ny.frb.org

Alternative Reference Rates Committee, convened by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York

Re: ARRC Summary of Feedback Received in the ARRC Spread-Adjustment Consultation and Follow-Up Consultation on Technical Details

The Structured Finance Association (“SFA”) appreciates the opportunity to respond to the Follow-Up Consultation (“**Follow-Up Consultation**”) of the Alternative Reference Rates Committee (“**ARRC**”) regarding technical details related to the ARRC’s previous Spread-Adjustment Consultation.

SFA is a member-based trade industry advocacy group focused on improving and strengthening the broader structured finance and securitization market. SFA’s core charge is to support a robust and liquid securitization market, recognizing that securitization is an essential source of funding for the real economy. While the comments expressed in this letter represent the consensus views of our broad membership, this letter does not necessarily represent the perspectives of all SFA members. None of the recommendations expressed herein are binding on, or should be attributed to, any individual SFA member, each of which will decide for itself whether and to what extent to submit individual comments in response to the Follow-Up Consultation.

SFA views the Follow-Up Consultation as an important step in the overall process of transitioning globally from LIBOR to new benchmarks representing market-based risk-free rates. The Follow-Up Consultation seeks commentary on the certain technical details relating to the spread adjustment methodology the ARRC should include as part of its fallback provision recommendations for cash products referencing LIBOR and asks two specific questions relating to such methodologies (“**Questions**”). The Follow-Up Consultation seeks commentary from all market participants.

As you know, SFA is a member of ARRC and we also serve as co-chair of the ARRC Securitization Working Group. In an independent effort, we began convening our LIBOR Task Force in early 2018 to identify potential best practices that SFA members in particular believed would help ensure an as-seamless-as-possible transition away from LIBOR to successor benchmarks. The SFA LIBOR Task Force includes a broad cross-section of SFA members from all our constituency groups, including, among others, banks, issuers, investors, trustees, rating agencies, and servicers.

Submitted below, are SFA’s responses (“**Responses**”) to both Questions. For your convenience, the Responses have been placed in the order in which the Questions were presented, and the text of each Question is presented in italics before the associated Response. Capitalized terms that are used in this letter, unless otherwise defined, have the meanings set forth in the Follow-Up Consultation.

Question 1: *Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?*

- 5-year median methodology
- 5-year median value

Response to Question 1:

As discussed in SFA’s March 25th response to the ARRC’s Consultation on Spread Adjustment Methodologies for Fallbacks in Cash Products Referencing USD LIBOR (the “**March 25 SFA Response**”)¹, SFA believes that there is significant value in the securitization industry aligning with the spread adjustment methodologies used by other key market participants, including ISDA. Additionally, the March 25 SFA Response noted that SFA supports consistency in how various products and asset classes handle the transition from LIBOR to successor reference rates. As such, the vast majority of SFA members have indicated that they support securitization transactions using a spread adjustment equal to the 5-year median value between LIBOR and a compounded average of SOFR in arrears as calculated by ISDA for the relevant tenor. Such members believe that having securitization transactions incorporate the same methodology (rather than the value itself) as used by ISDA would add complexity without adding significant value.

Additionally, such SFA members have noted that using a single published number to act as a spread adjustment between each respective tenor USD LIBOR and any SOFR-based reference rate (e.g., overnight SOFR compounded in advance or in arrears, simple average overnight SOFR in advance or in arrears, or term SOFR) may be beneficial to the market. First, there is simplicity in having a single number represent the spread adjustment between LIBOR and any SOFR-derived reference rate for the relevant tenor. Second, if the median historical differences between LIBOR and multiple SOFR-derived reference rates for the relevant tenor were each calculated based on such methodology, it seems likely that such differences in the spread adjustment values calculated across different SOFR-derived reference rates would be small in relation to the size of the spread

¹ Available at <https://structuredfinance.org/wp-content/uploads/2020/03/SFA-Response-to-ARRC-Spread-Adjustment-Consultation-March-2020.pdf>.

adjustments. Furthermore, to the extent term SOFR is eventually published, there may not be sufficient historical data at that time to calculate a median difference for such term rate. For these reasons, the vast majority of SFA members support the use of the 5-year median value of the difference between each respective tenor LIBOR and SOFR as calculated by ISDA as the spread adjustment.

Question 2: *Do you believe that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set in the event that a pre-cessation event is operative?*

- Should be set at same time as ISDA*
- Should be set at the time that LIBOR is found to be no-longer representative, regardless of ISDA’s timing*

Response to Question 2:

ISDA has recently indicated that they plan to incorporate a pre-cessation trigger into the 2006 ISDA Definitions this July.² Although the supplement to amend the 2006 ISDA Definitions which is not expected to be published before early July, ISDA has indicated that the pre-cessation trigger would occur on the date of a statement by the UK Financial Conduct Authority that LIBOR “is no longer, or as of a specified future date will no longer be, capable of being representative.” To the extent a pre-cessation event occurs under the amended ISDA protocols, SFA believes that the ARRC’s recommended spread adjustments should be set at the same time that ISDA’s spread adjustments are set. We believe that this would be necessary in order to use the ISDA value as discussed in Question 1 and to support consistency between securitizations and any related derivatives.

However, we also believe that the ARRC must be prepared to provide guidance or publish a recommended spread adjustment on various dates until ISDA has published its spread adjustment value. Under the ARRC’s recommended fallback provisions, pre-cessation events may occur prior to the occurrence of a pre-cessation trigger pursuant to the amended 2006 ISDA Definitions. For example, the ARRC’s recommended fallback provisions for securitizations contain the Asset Replacement Percentage trigger while a similar trigger will not be included in the amended ISDA protocols. Whether the Asset Replacement Percentage will be triggered in any individual transaction will depend on characteristics unique to such transaction’s underlying pool of assets. Similarly, the ARRC’s recommended fallback provisions for syndicated loans and bilateral loans contain an Early Opt-in Election which can cause the benchmark to be replaced prior to the ISDA

² <https://www.isda.org/2020/05/14/isda-publishes-report-summarizing-final-results-of-consultation-on-pre-cessation-fallbacks-for-libor/>

pre-cessation trigger, and a similar provision will not be included in the amended ISDA protocols. Therefore, SFA believes it will be necessary for the ARRC to publish either recommended spread adjustments or a recommended methodology containing prescriptive calculations for determining such spread adjustment in advance of ISDA publishing the value of the spread adjustment to be used in the 2006 ISDA Definitions. To the extent securitizations will transition from LIBOR based upon the activation of the Asset Replacement Percentage trigger, having the ARRC publish a spread adjustment or guidance on how such spread adjustment should be calculated that can be applied on the replacement date will be necessary in order to determine the Benchmark Replacement Adjustment under the first alternative in the recommended fallback provisions. Lastly, to the extent the ARRC were to publish a recommended methodology for determining the spread adjustment values, we believe it would be beneficial to the securitization market for such methodology to align with the proposed methodology endorsed by ISDA. This would help ensure consistency between transactions that transition based on the non-representative trigger and the Asset Replacement Percentage trigger.

* * *

SFA appreciates your consideration of these comments and welcomes the opportunity to discuss further. If you have any questions about this matter, please contact Kristi Leo, President, at (917) 415-8999 or Kristi.Leo@structuredfinance.org.

Very truly yours,



Kristi Leo
President
Structured Finance Association

SOFR ACADEMY



June 15, 2020

SOFR Academy LLC
525 Broome Street, Level 2
New York, NY 10013
United States of America
[SOFR.org](https://www.sofr.org)

Via electronic email

Mr. Thomas G. Wipf
Chair – Alternative Reference Rates Committee
Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045
arrrc@ny.frb.org

Dear Chairman Wipf,

SOFR Academy is an American education technology firm backed by a team of financial services professionals and academics. We have partnered with Amazon Web Services to provide high-quality low-cost online training courses aimed at empowering people with the knowledge and skills to transition away from the USD London Interbank Offered Rate (LIBOR). We believe that education is critical in order to achieve an orderly and broad-based transition to Alternative Reference Rates (ARR). We also believe that the Secured Overnight Financing Rate (SOFR) can and should be the primary ARR for the vast majority of financial products that currently reference USD LIBOR in the United States of America and abroad.

SOFR Academy is pleased to provide feedback in response to the Alternative Reference Rate Committee's (ARRC) Supplemental Consultation on Spread Adjustment Methodology. Please find feedback in response to questions in the consultation below.

Question 1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA , based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

SOFR Academy was unable to form a strong view on this question. We agree with the ARRC's analysis that the various versions of SOFR (term, in arrears and in advance) are all closely linked, particular in low interest rate environments. We note that larger and more sophisticated market participants may be better

equipped than smaller participants to risk manage any potential basis risk that could arise through the use of SOFR variants in cash products that exist in hedging relationships with derivatives.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

SOFR Academy is supportive of technical implementation alignment between the ARRC and ISDA where possible. To that end, we do believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative. Consistency between cash and derivative products during the transition may help in minimizing potential interest rate basis risk resulting from the transition.

Thank you for your consideration of these comments.

Yours sincerely,

Members of the Management Board.



SOFR Academy LLC
Phone +1 855 236 6106
info@SOFRacademy.com
www.SOFRacademy.com

STANDARD CHARTERED

15 June 2020

Dear Sir/Madam,

Standard Chartered Bank's Response to the Supplemental Spread Adjustment Consultation by the Alternative Reference Rate Committee

Standard Chartered Bank ("SC") welcomes the supplemental consultation by the Alternative Reference Rate Committee (ARRC) on Spread Adjustment for Cash Products Referencing USD LIBOR. We support the ARRC's work in helping to facilitate the market's transition from LIBOR to RFRs and appreciate the challenges in doing so.

We have the following feedback to the questions raised in the consultation:

Q1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for the following cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

SC Response: We are of the view that using the ISDA methodology of a 5-year median of the historical difference between USD LIBOR and SOFR fallback rate, rather than the spread value, is the best choice.

The ARRC's recommended hardwire fallbacks for cash products (such as FRNs, securitisations, syndicated and bilateral business loans) have different options, such as forward-looking term rate (if the ARRC has recommended one), compounded average of SOFR in arrears, compounded average of SOFR in advance. Firms may choose to incorporate different fallbacks, depending on their specific products and needs. Having the same methodology for spread values provides consistency across the different fallbacks, as compared to having the same spread value.

Q2: Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

SC Response: We are of the view that the ARRC's recommended spread adjustments should be set at the same time as ISDA. Difference in timing may cause more confusion and potential unintended consequences with further basis risk created.

We will be happy to discuss the points above.

Yours sincerely,

Standard Chartered Bank

Standard Chartered Bank
1 Basinghall Avenue
London EC2V 5DD
www.standardchartered.com

Tel +44 (0)20 7885 8888

TORONTO DOMINION

12 June 2020

ATTN: ARRC Secretariat via email submission to:
arrc@ny.frb.org

RE: Follow-Up Consultation on Technical Details

TD welcomes the opportunity to respond and invites the U.S. Alternative Reference Rates Committee to consider the following submission:

Question 1: Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5-year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

TD prefers the application of the 5-year median value. We believe that this approach offers both transparency and ease of use. Provided that the difference between the nominal ISDA spread and similar spreads that are calculated using a separate permutation of SOFR may be marginal, then it would be prudent to conserve uniformity across product fallback approaches.

Question 2: Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

TD believes that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set. This would mitigate potential dislocation between types of products and between varying sophistication of end users.

WELLS FARGO



June 15, 2020

To: Alternative Reference Rates Committee via email submission to: arrc@ny.frb.org

Re: Supplemental Consultation on Spread Adjustment Methodology

The following sets forth Wells Fargo & Co.'s response to the Supplemental Consultation on Spread Adjustment Methodology published by the Alternative Reference Rates Committee on May 6, 2020.¹

Question 1. Do you believe that using the ISDA methodology of a 5-year median of the historical difference between LIBOR and the SOFR fallback rate is the best choice for cash products, or would you prefer that the same spread value to be used by ISDA, based on the 5 year median of the historical difference between LIBOR and a compound average of SOFR in arrears, should be applied to each potential fallback rate?

5-year median value

We would prefer that the ARRC use the same spread value to be used by ISDA as the spread adjustment for cash products. Alignment between the spread value to be used by ISDA for derivatives and cash products is preferable and using the same value is efficient, would create consistency and mitigates complexities for market participants that would be introduced through utilizing the same spread adjustment methodology in another manner.

Question 2. Do you believe that the ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative?

Should be set at same time as ISDA

The ARRC's recommended spread adjustments should be set at the same time that ISDA's spread adjustments are set in the event that a pre-cessation event is operative. As stated above, we value consistency and simplicity as beneficial for the implementation of SOFR fallback rates. However, due to differences in fallback language mechanics, the ARRC should consider and address the need for setting spread adjustments at a time prior to the time that ISDA's spread adjustments are set.

Wells Fargo wishes to thank the ARRC for the opportunity to provide responses to this consultation. We are happy to discuss our responses further or provide any additional information that may be helpful.

Thank you,

Wells Fargo

¹ These responses reflect Wells Fargo's current views of the approaches identified in the consultation and not any determinations by Wells Fargo with respect to its own business operations. In that regard, the responses are provided for informational purposes only, are not intended to be comprehensive, and Wells Fargo makes no representation regarding their accuracy or applicability to any particular circumstance or categories of or individual transactions.