

Interbank Offered Rate (IBOR) Fallbacks for 2006 ISDA Definitions

Supplemental Consultation on Spread and Term Adjustments for Fallbacks in Derivatives Referencing USD LIBOR, CDOR and HIBOR and Certain Aspects of Fallbacks for Derivatives Referencing SOR

Executive summary

- ISDA intends to amend its standard documentation to implement fallback reference rates (fallbacks) for certain key IBORs.
- The fallbacks will apply if the relevant IBOR is *permanently discontinued*, based on defined triggers.¹
- The fallbacks will be to alternative risk-free rates (RFRs) that have been identified for relevant IBORs as part of recent global benchmark reform work.
- ISDA previously published a consultation (the July 2018 Consultation²) seeking input on the approach for addressing certain technical issues associated with adjustments that will apply to the RFRs if the fallbacks are triggered. This consultation covered GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW and requested preliminary feedback in respect of USD LIBOR amongst other IBORs.
- The compounded setting in arrears rate approach and the historical mean/median approach were identified as the preferred approaches for addressing certain technical issues associated with fallbacks for GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW based on responses to the July 2018 Consultation.³
- **This consultation seeks further input on the approach for addressing the adjustments that will apply to the RFRs if the fallbacks for USD LIBOR, CDOR or HIBOR are triggered. As with the IBORs covered in the July 2018 Consultation, these adjustments are warranted because of the differences between the IBORs and the RFRs.**

¹ Note that ISDA is separately consulting on pre-cessation issues. The consultation is available at <https://www.isda.org/2019/05/16/may-2019-benchmark-fallbacks-consultations>.

² The July 2018 Consultation can be found here: <http://assets.isda.org/media/f253b540-193/42c13663-pdf/>.

³ The preliminary results of the July 2018 Consultation can be found here: <http://assets.isda.org/media/736bd0ed/1f0db5ee-pdf/>. The Brattle Report which summarises the responses to the July 2018 Consultation can be found here: <http://assets.isda.org/media/04d213b6/db0b0fd7-pdf/>.

- **USD LIBOR is used as an input to calculate the Singapore Dollar Swap Offer Rate ('SOR')⁴ and, therefore, a cessation of USD LIBOR would result consequently in a cessation of SOR. This consultation seeks feedback on the use of an adjusted SOFR as an input to a fallback reference rate ('Adjusted SOR') for SOR, if USD LIBOR ceases and fallbacks to an adjusted SOFR take effect in USD LIBOR derivatives.**
- Based on the responses to this consultation, ISDA will determine the style of approach to implement and whether this should be the same approach that is being implemented for GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW.
- ISDA is currently running a request-for-proposal process to select an independent third-party vendor to build out and finalise the compounded setting in arrears rate approach and the historical mean/median approach. If the results of this consultation indicate that the same approaches should be adopted with respect to USD LIBOR, CDOR and HIBOR, the selected vendor will also build out and prepare to publish the approaches for these IBORs. If the results differ, ISDA will work with the selected vendor to build out and prepare to publish the relevant approaches.
- Before implementing any changes to its standard documentation, ISDA will publish a further consultation seeking input from market participants to get feedback on open issues associated with the final parameters of the term and spread adjustments.

Introduction

As explained in the July 2018 Consultation, ISDA plans to amend certain 'floating rate options' in the 2006 ISDA Definitions to include fallbacks that would apply upon the permanent discontinuation of certain key IBORs. These amended floating rate options will apply to transactions incorporating the 2006 ISDA Definitions entered into on or after the day on which the supplement to the 2006 ISDA Definitions that includes the amendment takes effect. ISDA also plans to publish a protocol or protocols to facilitate multilateral amendments to include the amended floating rate options, and therefore the fallbacks, in transactions which incorporate the 2006 ISDA Definitions and which were entered into before the supplement to the 2006 ISDA Definitions, which includes the amendment, takes effect.

⁴ SOR is an FX swap implied interest rate, computed from transactions in the USD/SGD FX swap market and utilizing USD LIBOR as an input for the applicable USD interest rate.

ISDA previously published a consultation to determine the approach for calculating the adjusted RFRs and spread adjustment that would apply if fallbacks are triggered in respect of GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW (i.e. the July 2018 Consultation). That consultation also sought preliminary feedback on the technical issues associated with fallbacks for USD LIBOR, EUR LIBOR and EURIBOR and explained that ISDA was also considering fallbacks for HIBOR. It was noted in the July 2018 Consultation that responses to the preliminary questions on USD LIBOR, EUR LIBOR and EURIBOR may inform the content of subsequent consultations on those benchmarks. **This consultation is a supplemental consultation on USD LIBOR, CDOR and HIBOR to determine the approach for calculating the adjusted RFRs and spread adjustments that would apply if the fallbacks are triggered in respect of those IBORs. It also seeks feedback on the use of Adjusted SOR as a fallback for SOR if USD LIBOR ceases and fallbacks to an adjusted SOFR take effect in USD LIBOR derivatives.** After discussions with its working groups and with its board of directors and outside advisors (and as with the July 2018 Consultation), ISDA has determined that it is most appropriate to consult with all market participants (i.e. not only derivatives market participants) on these aspects of the fallbacks it will implement in the 2006 ISDA Definitions.

As explained in the July 2018 Consultation, upon selection of the approach for calculating the adjusted RFR and spread adjustment as part of the fallbacks for USD LIBOR, CDOR and HIBOR, an independent third-party vendor will obtain the data necessary to perform the relevant calculations, run the calculations and publish the adjusted RFR and spread adjustment on a screen so that users can access the information in the same way that they access the relevant IBOR or RFR.

ISDA is currently running a request-for-proposal process to select an independent third-party vendor to build out and prepare to publish the compounded setting in arrears rate approach and the historical mean/median approach (which were identified as the preferred approaches for GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW based on responses to the July 2018 Consultation). If the results of this consultation are consistent with the July 2018 Consultation, the selected vendor will also build out and finalise the approaches for USD LIBOR, CDOR and HIBOR. If the results differ, ISDA will work with the selected vendor to build out and prepare to publish the relevant approaches. Before implementing any changes to its standard documentation, ISDA will publish a further consultation seeking input from market participants to get feedback on open issues associated with the final parameters of the term and spread adjustments.

Background

Regulatory Context

As explained in the July 2018 Consultation, the Financial Stability Board (FSB) Official Sector Steering Group (OSSG) asked ISDA to participate in work to enhance the robustness of derivative contracts referencing widely used benchmarks. In September 2016, ISDA agreed to convene discussions regarding derivative contract robustness including, specifically, selection of fallbacks for key benchmarks. You can read more about the background to this work, including IOSCO's *Principles for Financial Benchmarks* and *Statement on Matters to Consider in the Use of Financial Benchmarks* in the July 2018 Consultation.

Scope of Consultation and Fallbacks

Please note the following regarding both the scope of this consultation and the scope of the fallbacks ISDA plans to implement:

- Implementation of fallbacks for derivatives is one part of ongoing benchmark reform. Efforts are also underway globally to encourage adoption of alternative rates and transition to those rates. These efforts are outside the scope of the fallbacks that ISDA is implementing in the 2006 ISDA Definitions and therefore beyond the scope of this consultation. ISDA continues to work with its members and relevant regulators to determine what additional documentation solutions may be helpful with respect to the adoption of, and transition to, alternative rates.
- ISDA is amending the 2006 ISDA Definitions to include fallbacks that would apply upon a *permanent discontinuation* of the relevant IBOR. Market participants that reference certain IBORs in derivatives and other financial contracts may decide to include contractual triggers pursuant to which their contracts would move to different rates prior to such time. Please see ISDA's separate consultation on pre-cessation issues for elaboration on these points and an opportunity to provide feedback.⁵
- The 2006 ISDA Definitions are intended for incorporation in derivatives. Therefore, the fallbacks that ISDA plans to implement via amendments to certain floating rate options in the 2006 ISDA Definitions are intended to apply to derivatives. Efforts are also underway globally to implement fallbacks for other products (e.g., loans, bonds, notes) that reference IBORs. ISDA does not make any

⁵ <https://www.isda.org/2019/05/16/may-2019-benchmark-fallbacks-consultations>.

representation regarding whether the fallbacks it implements in the 2006 ISDA Definitions would be appropriate for such products. While it is important to consider whether fallbacks would be appropriate for derivatives that hedge these products, this consultation does not discuss or cover whether the adjusted RFRs and spread adjustments would be appropriate for fallbacks in non-derivative securities or other financial products.

- The fallbacks that ISDA is implementing are to address the systemic disruption that could occur if a key IBOR is permanently discontinued. These fallbacks are not proxies for the relevant IBORs but will provide clarity and certainty to market participants if an IBOR is permanently discontinued.

Current Fallbacks

Under the 2006 ISDA Definitions, if USD LIBOR, CDOR or HIBOR is not available (including if it has been permanently discontinued) current fallbacks require the calculation agent to obtain quotations for what the IBOR should be from major dealers in the relevant interdealer market. If an IBOR has been permanently discontinued, it is likely that major dealers would be unwilling and/or unable to give such quotations. Even if quotations were available in the near-term after the permanent discontinuation, it is unlikely that they would be available for each future reset date over the remaining tenor of long dated contracts. It is also likely that quotations could vary materially across the market. The fallbacks that ISDA plans to implement in the 2006 ISDA Definitions would apply upon any permanent discontinuation (based on the triggers described in the July 2018 Consultation), regardless of its cause.

SOR is an FX swap implied interest rate, computed from actual transactions in the USD/SGD FX swap market, utilizing USD LIBOR as the applicable USD interest rate. Therefore, a cessation of USD LIBOR would result consequently in a cessation of SOR. Under the 2006 ISDA Definitions, if SOR is not available (including if it has been permanently discontinued), current fallbacks require the administrator of SOR to announce a successor rate or, if the administrator does not do so, the calculation agent to determine a replacement for SOR based on a formula that requires quotations from major dealers for the USD/SGD spot rate and forward rate, as well as USD LIBOR.

None of the current fallbacks described above were designed to cover permanent discontinuations.

Description of Fallbacks

Amendments to the floating rate options in Section 7.1 of the 2006 ISDA Definitions for USD LIBOR, CDOR and HIBOR will, as with the IBORs covered in the July 2018 Consultation, take the form of:

- a statement identifying the objective triggers that would activate the selected fallbacks; and
- a description of the fallback that would apply upon the occurrence of that trigger, which will be to the relevant RFR adjusted using methodologies to account for (i) the fact that the RFR is an overnight rate and (ii) the various premia included within the IBOR.

Permanent cessation (or an ‘index cessation event’) for USD LIBOR, CDOR and HIBOR will be defined to include:

- (i) a public statement or publication of information by or on behalf of the administrator of [the relevant IBOR] announcing that it has ceased or will cease to provide [the relevant IBOR] permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide [the relevant IBOR]; or
- (ii) a public statement or publication of information by the regulatory supervisor for the administrator of [the relevant IBOR], the central bank for the currency of [the relevant IBOR], an insolvency official with jurisdiction over the administrator for [the relevant IBOR], a resolution authority with jurisdiction over the administrator for the [the relevant IBOR] or a court or an entity with similar insolvency or resolution authority over the administrator for [the relevant IBOR], which states that the administrator of [the relevant IBOR] has ceased or will cease to provide [the relevant IBOR] permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide [the relevant IBOR].

Note that the fallbacks will not apply until the actual discontinuation of the relevant IBOR (if that is after the announcement date).

As explained in the July 2018 Consultation, ISDA has determined, after consultation with industry participants, regulators and the FSB OSSG, that for a given IBOR below, the fallback rate will be the overnight RFR identified by the relevant public-private sector RFR working group as an alternative to that IBOR or, if no such RFR working group exists, the RFR identified by relevant regulators. For USD LIBOR, CDOR, HIBOR, EUR LIBOR and EURIBOR these include:

Relevant IBOR and corresponding floating rate option in 2006 ISDA Definitions		Fallback rate
USD LIBOR	USD-LIBOR-BBA USD-LIBOR-BBA-Bloomberg ⁶	SOFR
CDOR	CAD-BA-CDOR CAD-BA-CDOR-Bloomberg	CORRA ⁷
HIBOR	HKD-HIBOR-HKAB HKD-HIBOR-HKAB-Bloomberg	HONIA ⁸
<i>EUR LIBOR*</i>	<i>EUR-LIBOR-BBA</i> <i>EUR-LIBOR-BBA-Bloomberg</i>	<i>€STR</i>
<i>EURIBOR*</i>	<i>EUR-EURIBOR-Reuters</i>	<i>€STR</i>

*Not covered by this consultation.

⁶ In the July 2018 Consultation, USD-LIBOR-LIBO was also listed. However, ISDA understands that this rate has been discontinued and so this floating rate option will not be updated to include new fallbacks on the basis that parties will no longer be entering into transactions which reference this floating rate option and that existing transactions that originally referred to USD-LIBOR-LIBO should already have been updated.

⁷ The Canadian Alternative Reference Rate Working Group (CARR) recommended CORRA as the preferred RFR for the Canadian dollar. CARR recently consulted on recommendations to enhance the calculation methodology for CORRA. Please see <https://www.bankofcanada.ca/wp-content/uploads/2019/02/consultation-paper-proposed-enhancements-to-corra.pdf> and <https://www.bankofcanada.ca/markets/canadian-alternative-reference-rate-working-group/> for more details.

⁸ HONIA is the unsecured HKD overnight interbank funding rate. The Treasury Markets Association (TMA) has proposed technical refinements to HONIA to enhance its robustness and representativeness. The proposed refinements under consideration relate to the reporting window, publication time and data source. Please see [https://www.tma.org.hk/NewsPhoto/Benchmark%20Fixings/Consultation%20on%20HONIA%20\(29Mar19\).pdf](https://www.tma.org.hk/NewsPhoto/Benchmark%20Fixings/Consultation%20on%20HONIA%20(29Mar19).pdf) for more details.

Note that a subsequent consultation will cover EURIBOR/€STR and EUR LIBOR/€STR.

SOR is an FX swap implied interest rate, computed from actual transactions in the USD/SGD FX swap market, utilizing USD LIBOR as the applicable USD interest rate. Therefore, a cessation of USD LIBOR would result consequently in a cessation of SOR. To address this risk, ABS Benchmarks Administration Co Pte Ltd ('ABS Co'), as the current administrator for SOR, and the Singapore Foreign Exchange Market Committee ('SFEMC') have recommended that, in the event of a permanent cessation of USD LIBOR (based on the definition of 'index cessation event' described above), an administrator should produce Adjusted SOR as a fallback reference rate based on actual transactions in the USD/SGD FX swap market and a USD interest rate calculated pursuant to the methodology used to calculate fallbacks for USD LIBOR in the updated 2006 ISDA Definitions (i.e. adjusted SOFR plus a spread adjustment). To implement this recommendation, ISDA will update the SGD-SOR-VWAP Rate Option in Section 7.1 of the 2006 ISDA Definitions to provide that upon a permanent discontinuation of USD LIBOR (as triggered by the definition of 'index cessation event' above), derivatives contracts that reference SGD-SOR-VWAP will fall back to this Adjusted SOR. If SOR is unavailable for any reason other than the discontinuation of USD LIBOR, then the current fallbacks for SOR (described above) will continue to apply. If the calculation for adjusted SOFR is based on the compounded setting in arrears rate, then the publication time for Adjusted SOR will differ from the publication time for SOR because Adjusted SOR will not be available until the end of the relevant period.

USD LIBOR is an input to certain benchmarks in markets outside the United States, including the Philippines and Thailand. ISDA continues to engage with regulators in these jurisdictions regarding the implications of a cessation of USD LIBOR.

Adjusted RFRs

The RFRs are overnight rates but the relevant IBORs are published for various tenors. To account for the move from a "term" rate (i.e., the IBOR) to an overnight rate (i.e., the overnight RFR), the fallbacks ISDA implements will apply an adjustment to the relevant overnight RFR so that it is comparable to the relevant IBOR. The adjusted rate is called the "adjusted RFR".

The July 2018 Consultation sets out four approaches for calculating the adjustment. These are:

(i) **The spot overnight rate approach**

The fallback could be to the RFR that sets on the date that is one or two business days (depending on the relevant IBOR) prior to the beginning of the relevant IBOR tenor.

(ii) **The convexity-adjusted overnight rate approach**

This approach is very similar to the spot overnight rate approach, with a first-order modification to adjust for convexity.⁹ The modification attempts to account for the difference between flat overnight interest at the spot overnight rate versus the realized rate of interest that would be delivered by daily compounding of the RFR over the IBOR's term. This is achieved by using an approximation in which "today's" overnight RFR is assumed to hold constant at "today's" value on each day during the relevant IBOR's tenor.

(iii) **The compounded setting in arrears rate approach**

The fallback could be to the relevant RFR observed over the relevant IBOR tenor and compounded daily during that period.

(iv) **The compounded setting in advance rate approach**

This approach is mathematically the same as the compounded setting in arrears rate approach but, while the observation period would be equal in length to the IBOR tenor, it would end immediately prior to the start of the relevant IBOR tenor so that the rate would be available at the beginning of that period.

Potential advantages and disadvantages of these approaches are discussed in the July 2018 Consultation.¹⁰ Those discussions are provided for information only. They are not intended to be comprehensive and ISDA makes no representation regarding their accuracy or applicability to the particular circumstances of an individual market participant. Respondents are strongly encouraged to formulate their own views regarding the

⁹ A lag before an interest rate is observed typically results in greater uncertainty as to that interest rate. As earned returns reflect compounding over time, interest rate uncertainty changes the expected return from that which would be earned at the expected rate. This implies that, even if expectations of interest rate levels were not changing over time, increased uncertainty in interest rates would lead to changes in interest rates over different tenors. This effect is called "convexity" although, more generally, convexity is often used to refer to any curvature in the graph of interest rates versus tenor.

¹⁰ See pages 8-11 of the July 2018 Consultation.

advantages and disadvantages of each approach, taking into account their particular circumstances, and to consult with their own professional advisors in doing so.

As noted in the July 2018 Consultation, these approaches are different from the forward-looking term rates that certain public-private sector working groups are considering, primarily for cash products referencing the RFR.

The approaches were identified based on the following criteria: (1) simplicity and ease of calculating; (2) data requirements; and (3) similarity with the structure of overnight index swaps that reference the RFRs. Note that the different approaches satisfy these criteria to differing degrees. When considering the approaches and answering the questions below, respondents must determine for themselves how to weight each criterion. Respondents may also want to consider their own additional criteria.

See also Annex A of the July 2018 Consultation for a more detailed description of each approach and the set of graphs provided by Bloomberg illustrating the approaches for calculating the adjusted RFR for USD LIBOR, HIBOR and CDOR fallbacks [here](#).

Spread Adjustment Methodologies

The overnight RFRs are risk-free or nearly risk-free whereas the relevant IBORs incorporate a bank credit risk premium and a variety of other factors (e.g., liquidity, fluctuations in supply and demand). While it would not be possible to replicate these factors upon a permanent discontinuation of the relevant IBOR, a spread adjustment could apply to the relevant adjusted RFR as a rough proxy.

As explained in the July 2018 Consultation, the spread adjustment will be calculated as of the business day before the fallback is triggered (i.e., the business day before the public statement is made or the formal publication of information regarding permanent discontinuation) but will not apply until the fallback takes effect (i.e., the first day that the relevant IBOR is not published following a permanent discontinuation).¹¹ Once calculated, the spread adjustment will be set (i.e., it will not be dynamic or reflect any changes in the interbank market once the fallback applies after the permanent discontinuation of the IBOR). Calculating the spread adjustment as of the business day before the fallback is triggered is necessary to avoid distortions due to market disruption during the period between the fallback being triggered and actual discontinuation of the relevant IBOR.

¹¹ There is the potential, in rare circumstances, to lead to negative spread adjustments based on the interest rates and market conditions leading to a trigger event.

The July 2018 Consultation sets out three methodologies for calculating the spread. These are:

(i) **The forward approach**

The spread adjustment could be calculated based on observed market prices for the forward spread between the relevant IBOR and the adjusted RFR in the relevant tenor at the time the fallback is triggered. A forward spread curve up to 30-60 years for the adjusted RFR in each relevant tenor could be published on a daily basis up until the date the fallback is triggered. Upon the permanent discontinuation of the relevant IBOR, the fallback would consist of the adjusted RFR (as published each day going forward), plus a spread based on the relevant curve (which would specify the spread to be applied for every future date and would be frozen at the point of trigger). For future dates beyond the length of the curve, the spread would remain static at the spread for the last date on the curve.

A variation would be to use the average of the spreads based on the curves for a period of days or months (e.g., 5 trading days, 10 trading days, 1 month or 3 months) before the trigger as opposed to one day before the trigger.

The forward approach requires a forward IBOR curve and a forward adjusted RFR discount curve, both of which would ideally extend out to 30-60 years.

The forward approach is not compatible with the spot overnight rate approach or the convexity-adjusted overnight rate approach.

(ii) **The historical mean/median approach**

The spread adjustment could be based on the mean or median spot spread between the IBOR and the adjusted RFR calculated over a significant, static lookback period (e.g., 5 years, 10 years¹²) prior to the relevant announcement or publication triggering the fallback provisions.

¹² See pages 13-14 below regarding the possibility of using a shorter lookback period for rates such as USD LIBOR/SOFR to account for the fact that the New York Federal Reserve Bank only started officially publishing SOFR on April 3, 2018. Indicative data (such as indicative SOFR values dating back to August 1, 2014 and the historical Overnight Treasury GC Repo Primary Dealer Survey Rate (which serves as a proxy for SOFR with a few technical differences), dating back to February 20, 1998) could also be utilised.

Pursuant to the July 2018 Consultation, this spread adjustment could then be used from the end of a one-year transitional period after the fallback takes effect. During the transitional period, the spread to be used would be calculated using linear interpolation between the spot IBOR/adjusted RFR spread at the time the fallback takes effect (i.e., the spot IBOR-adjusted RFR spread on the last date that the relevant IBOR is published) and the spread that would apply after the end of the transitional period. The one-year transitional period would mitigate against a “cliff effect” at the time the fallback takes effect if the spot IBOR/adjusted RFR spread at that time differs from the historical mean/median. The progression from that spot IBOR/adjusted RFR spread to the spread adjustment that will apply going forward will be gradual over the one-year transitional period. Feedback to the July 2018 Consultation raised concerns regarding the complexity that the transitional period would add to the historical mean/median approach to the spread adjustment and some respondents noted that such complexity would outweigh benefits. As a result of this feedback, ISDA is considering omitting the transitional period, subject to approval of market participants, which ISDA will seek during the review and comment period on the final approach for implementation.

The historical mean/median approach requires historical spot IBOR fixings for each relevant tenor and historical spot adjusted RFR fixings, in each case over the relevant lookback period. As mentioned below, the lookback period could be shorter for IBORs with fallbacks to new RFRs (such as SOFR, which was published from April 3, 2018) or indicative data could be used in place of historical spot adjusted RFR fixings.

(iii) **The spot-spread approach**

The spread adjustment could be based on the spot spread between the IBOR and the adjusted RFR on the day preceding the relevant announcement or publication triggering the fallback provisions. A variation would be to use the average of the daily spot spread between the IBOR and the adjusted RFR over a specified number of days (e.g., 5 trading days, 10 trading days or 1 month). This approach is similar to the historic mean/median approach but for a very short time and without the transitional period.

The spot-spread approach requires spot IBOR fixings for each relevant tenor and spot adjusted RFR fixings.

The spot-spread approach is not compatible with the compounded setting in arrears rate.

Potential advantages and disadvantages of these approaches are discussed in the July 2018 Consultation.¹³ These discussions are provided for information only. They are not intended to be comprehensive, and ISDA makes no representation regarding their accuracy or applicability to the particular circumstances of an individual market participant. Respondents are strongly encouraged to formulate their own views regarding the advantages and disadvantages of each methodology, taking into account their particular circumstances, and to consult with their own professional advisors in doing so.

The methodologies were identified based on the following criteria: (1) eliminating or minimizing value transfer at the time the fallback is applied; (2) eliminating or minimizing any potential for manipulation; and (3) eliminating or mitigating against the impact of market disruption at the time the fallback is applied. Note that the different methodologies satisfy these criteria to differing degrees. When considering the methodologies and answering the questions below, respondents must determine for themselves how to weight each criterion. Respondents may also want to consider their own additional criteria.

See also Annex B of the July 2018 Consultation for a more detailed description of each methodology and the set of graphs provided by Bloomberg illustrating the methodologies for calculating the spread for USD LIBOR, HIBOR and CDOR fallbacks [here](#).

Preliminary feedback from the July 2018 Consultation

ISDA engaged the Brattle Group to provide an independent overview, summary and analysis of market participants' responses to the July 2018 Consultation. This anonymised summary of responses (the Brattle Report) is available at: <http://assets.isda.org/media/04d213b6/db0b0fd7-pdf/>.

The overwhelming majority of respondents to the July 2018 Consultation preferred the 'compounded setting in arrears rate' approach for the adjusted RFR, and a significant majority across different types of market participants preferred the 'historical mean/median approach' for the spread adjustment. The majority of respondents also preferred to use the same adjusted RFR and spread adjustment across all benchmarks covered by that consultation. The July 2018 Consultation also asked for preliminary feedback in respect of USD LIBOR/SOFR. Respondents indicated that the compounded setting in arrears rate and the historical mean/median approach to the spread adjustment may also be appropriate for USD LIBOR, and potentially other benchmarks.

¹³ See pages 12-14 of the July 2018 Consultation.

In response to the question in the July 2018 Consultation regarding whether the same approach should be used across all benchmarks, approximately 78 percent found it appropriate to use the same methodology across all benchmarks. Respondents indicated that using a consistent approach across different IBORs would allow market participants to better manage risk exposure (e.g., by mitigating basis risk in cross-currency swaps). Respondents noted that having different methodologies for different IBORs would be difficult to implement, increase complexity and result in operational challenges.¹⁴ In contrast, approximately seven percent of respondents commented that their preferences would not apply universally across different benchmarks, mostly because different market features (such as liquidity) might require different approaches.¹⁵ See pages 59-62 of the Brattle Report for a more in-depth discussion of the feedback received in respect of the use of the same approach across benchmarks.

In relation to the historical mean/median approach, which requires the use of historical data relating to the RFR to calculate the spread, some respondents acknowledged that consideration will need to be given to the limited history of published SOFR data. We note that although the Federal Reserve Bank of New York (NY Fed) started officially publishing SOFR on April 3, 2018, the NY Fed has also made available indicative SOFR values dating back to August 1, 2014 and the historical Overnight Treasury GC Repo Primary Dealer Survey Rate (which serves as a proxy for SOFR with a few technical differences), dating back to February 20, 1998. If USD LIBOR is discontinued before SOFR data is published for the entire lookback period under the historical mean/median approach to the spread adjustment, this additional data could be used.

Pursuant to the results of the July 2018 Consultation, ISDA is in the process of developing fallbacks based on the compounded setting in arrears rate approach and the historical mean/median approach in respect of the benchmarks covered by that consultation and will publish a further consultation seeking input from market participants to get feedback on open issues associated with the final parameters of the term and spread adjustments before implementing fallbacks in the 2006 ISDA Definitions for those benchmarks.

¹⁴ Respondents did not express concerns about variations in the final parameters for the methodologies. As noted above, ISDA will request feedback on the final parameters for all of the relevant IBORs before implementing any changes.

¹⁵ In most cases these respondents supported the forward approach to the spread adjustment instead of the historical mean/median approach to the spread adjustment.

Questions

The deadline for responses is July 12, 2019. This deadline will not be extended. Please email your response to FallbackConsult@isda.org and clearly indicate that you are submitting a response in the subject line of your email. For your convenience, you can use [this form](#) for your responses (but you are not required to do so).

During the consultation period, ISDA will publish a webinar to introduce the consultation. This will be during the week of May 20, 2019. You can also submit questions to fallbackconsult@isda.org at any time during the consultation period. A set of graphs provided by Bloomberg to illustrate certain of the options for adjustments under consideration in the consultation for USD LIBOR, HIBOR and CDOR fallbacks are available [here](#).

Note to Recipients: By participating in this consultation, you agree not to use this process for any anticompetitive purpose, and further agree and warrant that you will not engage in any conduct that would cause any other party participating in this consultation to be in violation of any competition or antitrust law or regulation. ISDA has taken and will continue to take safeguards and protections to ensure that the use of the results of this consultation comply with applicable laws and regulations.

Relying on the responses to this consultation, ISDA will identify the approaches for calculating the adjusted RFR and spread adjustments for each of USD LIBOR, CDOR and HIBOR pursuant to the process described on page 19 of the July 2018 Consultation. ***In responding to questions 1-5 below, please indicate whether your answers apply to USD LIBOR, CDOR and HIBOR or indicate the IBORs to which your answers apply. You are welcome to provide different answers for different IBORs.***

1. Based on the results of the July 2018 Consultation, the compounded setting in arrears rate approach and the historical mean/median approach will be used to calculate the fallbacks for GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW. Is the compounded setting in arrears rate approach and the historical mean/median approach also appropriate for fallbacks for USD LIBOR, CDOR and HIBOR? Please explain why or why not.
2. If the compounded setting in arrears rate approach and the historical mean/median approach are not suitable for fallbacks for USD LIBOR, CDOR and HIBOR, is another combination of approaches more appropriate?

As explained on page 16 of the July 2018 Consultation, the following pairs of adjusted RFR and spread adjustment are possible:

1. Compounded Setting in Arrears Rate with Forward Approach
2. Compounded Setting in Advance Rate with Forward Approach
3. Spot Overnight Rate with Historical Mean/Median Approach
4. Convexity-adjusted Overnight Rate with Historical Mean/Median Approach
5. Compounded Setting in Arrears Rate with Historical Mean/Median Approach
6. Compounded Setting in Advance Rate with Historical Mean/Median Approach
7. Spot Overnight Rate with Spot-Spread Approach
8. Convexity-adjusted Overnight Rate with Spot-Spread Approach
9. Compounded Setting in Advance Rate with Spot-Spread Approach

Please rank your preferred combinations (with 1 as your top preference) and explain. *If you are completely opposed to an approach to adjusted RFRs, please do not rank it but explain why you are completely opposed to it.*

3. Please indicate whether you would not be able to transact using definitions that incorporate fallbacks based on the compounded setting in arrears rate approach and the historical mean/median approach. If you would not be able to transact please give specific examples of the types of derivatives for which the fallbacks would be problematic and explain why.
4. Please provide separate comments on the general appropriateness and effectiveness of each of the four approaches to the adjusted RFRs and three methodologies for the spread adjustments. Please specifically comment on the operational challenges, economic impacts, implications for hedging, feasibility of implementation and any other complexities. Indicate whether your comments apply to all contracts, new contracts only or legacy contracts only. With respect to any operational challenges, please explain how long it would take to overcome such challenges.
5. Questions about specific methodologies for calculating the spread adjustment.

Unless you are suggesting the use of an approach other than the historical mean/median approach, please only respond to the questions relating to the historical mean/median approach.

(a) Forward Approach

- (i) Should the forward approach be based on data from the day prior to the trigger only or a number of days or months prior to the trigger? If the latter, how many days or months? Please specifically consider 5 trading days, 10 trading days, 1 month and 3 months but also indicate whether a different length is most appropriate and explain why.
- (ii) What is the appropriate length of the forward spread curve? Please specifically consider 30 years, 40 years, 50 years and 60 years but also indicate whether a different length is more appropriate and explain why.
- (iii) Would it be acceptable to use data for cleared transactions only when using the forward approach to calculate the spread adjustment? If so, how should the differential between central counterparties (CCPs) be addressed?

(b) Historical Mean/Median Approach

- (i) What is the appropriate historical static lookback period? Please specifically consider 5 years and 10 years but also indicate whether a different time period is most appropriate and explain why.
- (ii) Should the calculation be based on the mean or the median spot spread between the IBOR and the adjusted RFR? Please explain why.

(c) Spot-Spread Approach

- (i) Should the spot-spread approach be based on data from the day prior to the trigger only or, alternatively, some number of days prior to the trigger? If the latter, how many days prior to the trigger should this be? Please specifically consider 5 trading days, 10 trading days and 1 month, but also indicate whether a different time period is most appropriate and explain why.

6. The Federal Reserve Bank of New York started officially publishing SOFR on April 3, 2018. It has also made available indicative SOFR values dating back to August 1, 2014 and the historical Overnight Treasury GC Repo Primary Dealer Survey Rate (which serves as a proxy for SOFR with a few technical differences), dating back to February 20, 1998. Would it be acceptable to use this indicative and

proxy data when calculating the spread adjustment in respect of adjusted SOFR (i.e. as part of a lookback period)? Please explain why or why not.

7. SOR is an FX swap implied interest rate, computed from actual transactions in the USD/SGD FX swap market, utilizing USD LIBOR as the applicable USD interest rate. Therefore, a cessation of USD LIBOR would result consequently in a cessation of SOR. To address this risk, ABS Co and the SFEMC have recommended that, in the event of a permanent cessation of USD LIBOR (based on the definition of ‘index cessation event’ described above), an administrator should produce Adjusted SOR as a fallback reference rate based on actual transactions in the USD/SGD FX swap market and a USD interest rate calculated pursuant to the methodology used to calculate fallbacks for USD LIBOR in the updated 2006 ISDA Definitions (i.e. adjusted SOFR plus a spread adjustment). To implement this recommendation, ISDA will update the SGD-SOR-VWAP Rate Option in Section 7.1 of the 2006 ISDA Definitions to provide that upon a permanent discontinuation of USD LIBOR (as triggered by the definition of ‘index cessation event’ above), derivatives contracts that reference SGD-SOR-VWAP will fall back to this Adjusted SOR. Please comment on whether you have any concerns regarding this approach.

If you responded to the July 2018 Consultation and you wish to affirm that the responses you provided for that consultation apply equally to the questions above in relation to USD LIBOR/SOFR, CDOR/CORRA and HIBOR/HONIA, you may use the template wording in Annex I to this consultation when submitting your response to this consultation to ISDA.

Glossary

2006 ISDA Definitions: A definitional booklet published by ISDA to provide a basic framework for the documentation of privately negotiated interest rate and currency derivative transactions. The 2006 ISDA Definitions are intended for use in confirmations of individual transactions governed by ISDA Master Agreements and are also referenced by CCPs that clear interest rate and currency derivative transactions. From time to time, ISDA publishes ‘Supplements’ to amend the 2006 ISDA Definitions on its website. The amendments made by these Supplements apply to transactions referencing the 2006 ISDA Definitions that are entered into on or after the date the relevant Supplement is effective.

Bank Bill Swap Rate (BBSW): The Bank Bill Swap Rate administered by the Australian Securities Exchange.

Brattle Report: The Anonymized Narrative Summary of Responses to the ISDA Consultation on Term Fixings and Spread Adjustment Methodologies prepared for ISDA by the Brattle Group dated December 20, 2018 and available [here](#).

CDOR: The Canadian Dollar Offered Rate administered by Refinitiv Benchmark Services (UK) Limited.

Central Counterparty (CCP): A financial entity that stands between counterparties of a trade in order to mitigate counterparty credit risk, acting as the buyer to every seller and the seller to every buyer. A CCP nets transactions between counterparties on a multilateral basis, resulting in lower gross exposures. Counterparties are required to contribute margin and other resources on a regular basis to cover losses. Once the resources contributed by a defaulting entity are depleted, any further losses are mutualized.

CORRA: The Canadian Overnight Repo Rate Average administered by Refinitiv Benchmark Services (UK) Limited.

Euro Interbank Offered Rate (EURIBOR): The Euro Interbank Offered Rate administered by the European Money Markets Institute.

Euro Short Term Rate (€STR): The Euro Short Term Rate to be administered by the European Central Bank.

Financial Stability Board (FSB): An international body that monitors and makes recommendations about the global financial system. The FSB was established in April 2009, as the successor to the Financial Stability Forum, with a broadened mandate to promote financial stability.

Floating Rate Option (FRO): The price source or ‘interest rate benchmark’ for the floating rate leg of a swap transaction. The FROs are set forth in Section 7.1 of the 2006 ISDA Definitions. Counterparties to swap transactions that reference the 2006 ISDA Definitions may specify one of the FROs in their confirmations. By doing so, the counterparties agree that the terms of that FRO will govern the amount that is payable

by the floating rate payer on the applicable payment date. The fallbacks that ISDA is implementing for certain IBORs will be amendments to the FROs for the relevant IBORs.

HKD Overnight Index Average (HONIA): The Hong Kong Dollar Overnight Index Average administered by the Treasury Markets Association.

Hong Kong Interbank Offered Rate (HIBOR): The Hong Kong Interbank Offered Rate administered by the Treasury Markets Association.

Interbank Offered Rates (IBORs): Average rates at which certain banks could borrow in the interbank market, which range in tenors from overnight to 12 months. The rates include a spread reflecting the credit risk involved in lending money to banks. In this document, LIBOR, EURIBOR, TIBOR, BBSW, CDOR and HIBOR are collectively known as the ‘IBORs’.

International Organization of Securities Commissions (IOSCO): An international body that brings together securities regulators and is recognized as the global standard setter for the securities sector. IOSCO was established in 1983. Its membership regulates more than 95% of the world's securities markets in more than 115 jurisdictions and includes all the major emerging markets. IOSCO develops, implements and promotes adherence to internationally recognized standards for securities regulation. It works closely with the G-20 and the FSB on the global regulatory reform agenda. IOSCO published its *Principles for Financial Benchmarks* in July 2013 and *Statement on Matters to Consider in the Use of Financial Benchmarks* in January 2018.

July 2018 Consultation: The Consultation on Certain Aspects of Fallbacks for Derivatives Referencing GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW published by ISDA on July 12, 2018 and available [here](#).

London Interbank Offered Rate (LIBOR): The London Interbank Offered Rate administered by the ICE Benchmark Administration.

Official Sector Steering Group (OSSG): In February 2013, the G-20 nations commissioned the FSB to review and reform major interest rate benchmarks. In June 2013, the Financial Stability Board established the OSSG comprised of senior officials from central banks and regulatory agencies to focus on interest rate benchmarks. The OSSG recommended enhancing LIBOR and other IBOR benchmarks, selecting alternative risk-free benchmarks and developing plans to transition to them, and implementing contractual fallbacks that would apply in the event of permanent discontinuation of an IBOR. The OSSG published its Reforming Major Interest Rate Benchmarks report in July 2014 and has since published updates in 2015, 2016, 2017 and 2018.

Protocol: A multilateral contractual amendment mechanism that has been used to effectuate standard amendments to ISDA documentation among adhering counterparties. The first protocol that ISDA launched was the ISDA EMU Protocol in 1998, which addressed contractual and legal certainty issues arising from the implementation of the European Monetary Union. This protocol and many others since 1998 have provided an efficient way of implementing industry standard contractual changes over a broad number of counterparties. Legally, the effect of protocols is the same as bilateral amendments among adhering parties but protocols have the benefit of eliminating the need for costly and time-consuming bilateral negotiations.

Reserve Bank of Australia (RBA) Cash Rate: The interbank overnight cash rate administered by the Reserve Bank of Australia. The 2006 ISDA Definitions refer to this rate as the AUD Overnight Index Average (AONIA).

Risk-free Rates (RFRs): Average rates of investments that are risk free or nearly risk free. Unlike the IBORs, RFRs do not account for credit risk involved in lending money to banks. In this document, SONIA, TONA, SARON, SOFR, the RBA cash rate, €STR, CORRA and HONIA are collectively known as the ‘RFRs’.

Secured Overnight Financing Rate (SOFR): The Secured Overnight Financing Rate administered by the Federal Reserve Bank of New York.

Singapore Dollar Swap Offer Rate (SOR): The Singapore Dollar Swap Offer Rate administered by the ABS Benchmarks Administration Co Pte Ltd.

Sterling Overnight Index Average (SONIA): The Sterling Overnight Index Average administered by the Bank of England.

Swiss Average Rate Overnight (SARON): The Swiss Average Rate Overnight administered by SIX Swiss Exchange.

Tokyo Interbank Offered Rate (TIBOR): The Tokyo Interbank Offered Rate administered by the JBA TIBOR Administration (JBATA).

Tokyo Overnight Average Rate (TONA): The Tokyo Overnight Average Rate administered by the Bank of Japan.

Annex I

Template wording for affirmation of response to July 2018 Consultation

If you provided feedback to the July 2018 Consultation and you wish to affirm that your responses to the questions in that consultation apply equally to the questions in this consultation in relation to USD LIBOR/SOFR, CDOR/CORRA and HIBOR/HONIA, you may use the following template wording to do so. The template wording is available in Word format [here](#).

“*[Insert name of institution]* affirms that the responses it provided to the *Consultation on Certain Aspects of Fallbacks for Derivatives Referencing GBP LIBOR, CHF LIBOR, JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW* published by ISDA on July 12, 2018 apply equally to the questions raised as part of this consultation in respect of fallbacks for derivatives referencing USD LIBOR, CDOR and HIBOR [provided that *[describe any exceptions]*].”

Please also answer the following questions, which were not included in the July 2018 Consultation:

1. The Federal Reserve Bank of New York started officially publishing SOFR on April 3, 2018. It has also made available indicative SOFR values dating back to August 1, 2014 and the historical Overnight Treasury GC Repo Primary Dealer Survey Rate (which serves as a proxy for SOFR with a few technical differences), dating back to February 20, 1998. Would it be acceptable to use this indicative and proxy data when calculating the spread adjustment in respect of adjusted SOFR (i.e. as part of a lookback period)? Please explain why or why not.
2. SOR is an FX swap implied interest rate, computed from actual transactions in the USD/SGD FX swap market, utilizing USD LIBOR as the applicable USD interest rate. Therefore, a cessation of USD LIBOR would result consequently in a cessation of SOR. To address this risk, ABS Co and the SFEMC have recommended that, in the event of a permanent cessation of USD LIBOR (based on the definition of ‘index cessation event’ described above), an administrator should produce Adjusted SOR as a fallback reference rate based on actual transactions in the USD/SGD FX swap market and a USD interest rate calculated pursuant to the methodology used to calculate fallbacks for USD LIBOR in the updated 2006 ISDA Definitions (i.e. adjusted SOFR plus a spread adjustment). To implement this recommendation, ISDA will update the SGD-SOR-VWAP Rate Option in Section 7.1 of the 2006 ISDA Definitions to provide that upon a permanent discontinuation of USD LIBOR (as triggered by the definition of ‘index cessation event’ above),

derivatives contracts that reference SGD-SOR-VWAP will fall back to this Adjusted SOR. Please comment on whether you have any concerns regarding this approach.