ISDA

International Swaps and Derivatives Association, Inc.

IBOR Alternative Reference Rates Disclosure

Disclosure for Rates Transactions

This Disclosure supplements and should be read in conjunction with the Disclosure Annex for Interest Rate Transactions. NOTHING IN THIS DISCLOSURE AMENDS OR SUPERSEDES THE EXPRESS TERMS OF ANY TRANSACTION BETWEEN YOU AND US OR ANY RELATED GOVERNING DOCUMENTATION. Accordingly, the information provided in this Disclosure is subject in all cases to the actual terms of a Rates Transaction executed between you and us and its governing documentation (whether or not such qualification is expressly stated).

Disclosure for IBOR-based Obligations and Investments

This Disclosure is provided for Rates Transactions where an IBOR is an Underlier, but also provides information that may be useful in connection with other IBOR-based Obligations and Investments, including those for which Rates Transactions are entered into or acquired for hedging, risk management or investment purposes.

ISDA makes no representation or warranty, express or implied, regarding this Disclosure, assumes no responsibility for any use of this Disclosure and undertakes no duty to update this Disclosure to reflect future market or other developments relating to the subject matter hereof.

As used herein:

"ARR" refers generally to any alternative reference rate that has been developed and/or recommended as, or is expected to be used as, a replacement for an IBOR.

"ARR-based Obligations and Investments" means transactions, contracts, loans, securities, debt instruments, derivatives or other obligations or investments that include or reference an ARR-based rate, whether or not related to a Rates Transaction or constituting a Rates Transaction.

"IBOR" refers generally to any reference rate or benchmark rate that is an "interbank offered rate" intended to reflect, measure or estimate the average cost to certain banks of borrowing or obtaining unsecured short-term funds in the interbank market in the relevant currency and maturity, based on quotations or other information submitted by such banks to a recognized sponsor or administrator that publishes such reference rate or, as the case may be, as may be provided by one or more reference banks to a calculation agent or determining party pursuant to interest rate setting or fallback provisions or otherwise.

"IBOR-based Obligations and Investments" means transactions, contracts, loans, securities, debt instruments, derivatives or other obligations or investments that include or reference an IBOR-based rate, whether or not related to a Rates Transaction or constituting a Rates Transaction.

"LIBOR" refers generally to any IBOR that is a London interbank offered rate that may be used in the financial markets without necessarily referring to a specific definition used in a financial instrument.

Understanding IBORs

Because IBOR definitions vary, it will be important for you to understand such definitions along with the other interest rate provisions when you enter into or acquire IBOR-based Obligations and Investments. For example, if you enter into or acquire an IBOR-based Obligation or Investment and hedge the IBOR with a derivative, there could be differences in the respective IBOR definitions and/or their interest rate fallback provisions. If the result is a material interest rate mismatch between the two financial products, this could expose you to "basis risk" and otherwise undermine the effectiveness of the derivative as a hedge.

In the case of any IBOR that is produced or published by a compiling body, sponsor or administrator, such as by ICE Benchmark Administration ("IBA"), you should familiarize yourself with the composition and characteristics of the IBOR. You may also wish to consider how the IBOR is determined (including the transparency of the methodology used and the process for making changes to such methodology), the governance of, and accountability for, the IBOR determination process (including contingency measures in the event of insufficient or no inputs, such as reliance on the expert judgment of quoting banks or other contributors), and other factors affecting the operation, credibility and reliability of the IBOR. Information regarding an IBOR, such as that published by IBA, may be publicly available from the IBOR's compiling body, sponsor or administrator on its website.

Whether an IBOR is appropriate to meet your financial needs, objectives and hedging strategies should be part of any suitability analysis that you conduct in entering into or acquiring any IBOR-based Obligation or Investment and, depending upon your circumstances, may be important for you to assess periodically as your financial needs, objectives and hedging strategies change, or as methodological or other changes take place with respect to such IBOR, including any potential discontinuance as discussed below.

IBOR Modifications & Discontinuance

A compiling body, sponsor or administrator of an IBOR may make methodological or other changes that could change the value of the IBOR, including changes related to the method by which the IBOR is calculated, eligibility criteria applicable to contributing panel banks or funding sources, or timing related to submissions or the publication of the IBOR. In addition, the compiling body, sponsor or administrator may alter, discontinue or suspend calculation or dissemination of the IBOR (in which case a fallback method of determining the reference rate may apply, if specified in the relevant IBOR-based Obligation or Investment).

Regulatory and industry initiatives concerning IBORs may result in changes or modifications affecting IBOR-based Obligations and Investments or IBORs, such as a change in the compiling body, sponsor or administrator of an IBOR, the suspension, discontinuance or unavailability of an IBOR, the development and/or recommendation of an ARR as a replacement for an IBOR, a need to determine or agree a substitute or successor reference rate or ARR, and/or a need to determine or agree a spread to be added to or subtracted from, or to make other adjustments to, a substitute or successor reference rate or ARR to approximate an IBOR equivalent rate (as further described below), not all of which can be foreseen at the time you enter into, issue or acquire an IBOR-based Obligation or Investment. You should consider how IBOR-based Obligations and Investments and IBORs may be affected by such initiatives, changes and modifications, and the extent to which the definition of an IBOR together with fallbacks in such definition, if any, provide for such eventualities. You should also be aware that regulatory initiatives concerning voluntary amendments to IBOR-based Obligations and Investments to replace references to IBORs with references to ARRs (including, for example, adherence to the Protocol (as defined below)) may vary by region, currency and tenor.

Compiling bodies, sponsors and administrators of IBORs, contributing panel banks on the relevant IBOR panel, reference banks providing IBOR quotations pursuant to interest rate setting or fallback provisions or otherwise, and developers of ARRs (including their participants) have no obligation to consider your interests in calculating, adjusting, converting, revising, discontinuing or developing any IBOR, ARR or fallbacks or in any of their submissions or quotations.

Any of the foregoing initiatives and actions, any delay or uncertainty regarding the same, or any failure of an ARR to be developed or gain market acceptance, could adversely affect IBOR-based Obligations and Investments and their economics, including the price, value or liquidity of IBOR-based Obligations and Investments, their usefulness for your intended purpose, the timing or amount of payments or deliveries and, if applicable, the likelihood that you will be able to exercise any option rights.

Alternative Reference Rates Initiatives

Pursuant to recommendations of the Financial Stability Board ("FSB"), the FSB's Official Sector Steering Group ("OSSG") has been working with benchmark administrators to strengthen benchmarks for IBORs, and with financial institutions and other market participants to promote the development of ARRs. ARRs are in response to concerns over the sustainability of some IBORs and the need to prepare markets for the potential suspension, discontinuance or unavailability of one or more of the IBORs.

The question of IBOR sustainability reflects how interbank markets have changed since the 1980s when IBORs first became popular benchmarks. Short-term interbank unsecured funding has declined over the years, particularly since the financial crisis as capital and liquidity rules have created disincentives for banks to fund themselves in this manner. The FSB and central banks have recognized that, without sufficient volume and liquidity in interbank deposit transactions, the credibility, reliability and sustainability of IBOR-based price discovery will remain at risk despite efforts to strengthen benchmark governance and administration. Without sufficient volume and liquidity, IBORs may be (and in some cases are) based on judgment-based estimates to one degree or another, not actual interbank deposit transactions, and contributing panel banks may be reluctant to continue making IBOR submissions necessary to sustain IBORs.

ARRs are intended to be more robust, transactions-based market interest rates that reduce reliance on the expert judgment of contributing panel banks.

<u>LIBOR Discontinuance and Non-representativeness Risk</u>

In July 2017, the UK Financial Conduct Authority ("FCA") announced that the FCA would no longer use its influence or legal powers to persuade or compel contributing panel banks to make LIBOR submissions after the end of 2021. This approach has been reaffirmed by the FCA as well as by other regulators on several occasions and the FCA has warned market participants that they "need to be ready for life without LIBOR" and that "the discontinuation of LIBOR should not be considered a remote probability 'black swan' event". The stated preference of the FCA and other regulators is that IBOR-based Obligations and Investments that reference LIBOR will have transitioned to ARRs before the end of 2021.

However, it is not certain how the LIBOR "end-game" will play out. It may be that a final cessation date can be announced comfortably in advance, and transition away from each LIBOR currency-tenor pair can be substantially completed before such cessation date. Another possibility is that LIBOR's final cessation is preceded by a period in which it is still provided by IBA (the administrator of LIBOR) but the FCA, as the regulator of IBA, has made a public statement or published information announcing that the FCA has determined that some or all LIBOR currency-tenor pairs are no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such LIBOR currency-tenor pairs are intended to measure and that representativeness will not be restored. This may occur following the departure of some, but not all, of the LIBOR panel banks after the end of 2021, or earlier, if the FCA obtains advance notice of panel banks' intention to withdraw after the end of 2021. As noted below, this means that although a statement or publication by the FCA may constitute a trigger under the Supplement (as defined below), the consequences of such statement or publication may only operate once the relevant LIBOR currency-tenor pairs actually become non-representative. There is a risk that different LIBOR currency-tenor pairs are determined to be non-representative at different times.

Parties to IBOR-based Obligations and Investments that reference LIBOR should understand the consequences of either scenario. In particular, they should understand what fallbacks might apply in place of LIBOR (if any) and what amendment rights (if any) exist under the terms of such IBOR-based Obligations and Investments.

<u>Potential Insufficiency of Existing Fallbacks</u>

When assessing the fallbacks that exist under the terms of IBOR-based Obligations and Investments, parties should first understand when those fallbacks are triggered and consider whether those triggers are sufficient. For example, with respect to IBOR-based Obligations and Investments that reference LIBOR, parties should understand whether triggers in such IBOR-based Obligations and Investments contemplate both the cessation of LIBOR and the FCA declaring that some or all LIBOR currency-tenor pairs are no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such LIBOR currency-tenor pairs are intended to measure and that representativeness will not be restored. As noted below, this means that although a statement or publication by the FCA may constitute a trigger under the Supplement (as defined below), the consequences of such statement or publication may only operate once the relevant LIBOR currency-tenor pairs actually become non-representative.

Parties to IBOR-based Obligations and Investments should then consider whether those existing fallbacks are sufficient. Just as IBORs remain vulnerable to contributing panel bank withdrawals, conventional IBOR fallback provisions in Rates Transactions that call for the polling of reference banks could likewise be vulnerable if reference banks are reluctant to provide IBOR quotations, perhaps for reasons similar to those of withdrawing contributing panel banks. Better suited for a temporary IBOR interruption, such polling of reference banks under primary or secondary fallbacks may also become impractical if carried out on a large scale or for prolonged periods in response to the discontinuance of an IBOR. Other fallbacks currently in use in the financial markets could be commercially suboptimal, such as with respect to an interest rate swap hedging a floating rate note issuance, for example, where the note's IBOR fallback provisions default to the most recently calculated rate for the prior interest period – essentially converting an instrument from a floating to a fixed rate if the relevant IBOR is discontinued. Such a result could undermine a noteholder's hedging strategy, since IBOR fallback provisions used in ISDA definitional booklets for Rates Transactions do not contemplate locking in the last available IBOR for the life of the Rates Transaction.

If parties to IBOR-based Obligations and Investments conclude that existing triggers or fallbacks are insufficient, it may be necessary to amend such IBOR-based Obligations and Investments. Some IBOR-based Obligations and Investments may contain provisions permitting unilateral amendments, although many will not, in which case the parties and other interested persons may need to agree, approve or consent to any amendments. Methods to bilaterally negotiate and/or agree amendments to IBOR-based Obligations and Investments may include use of the Protocol (as defined below). Alternatively, legislation in one or more countries may be introduced that contemplate a number of methods to account for insufficiencies in existing triggers or fallbacks in IBOR-based Obligations and Investments.

For example, if the FCA has declared that some or all LIBOR currency-tenor pairs are no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such LIBOR currency-tenor pairs are intended to measure and that representativeness will not be restored, legislation may (i) enable the FCA to direct a methodology change for LIBOR and (ii) permit the continued use of LIBOR in some legacy IBOR-based Obligations and Investments. Alternatively, legislation may target IBOR-based Obligations and Investments and (a) override existing fallbacks and instead require the use of a recommended alternative reference rate, (b) provide for a fallback to a recommended alternative reference rate in the absence of any existing fallback or (c) provide litigation safe harbors to parties exercising discretion or judgment. The development of such legislation remains uncertain and should not be relied upon absent its actual entry into law in the relevant jurisdictions. To the extent such legislation does develop, parties will need to assess how it impacts their IBOR-based Obligations and Investments. In particular, if there is an overlap between legislation introduced in different jurisdictions, parties may need to conduct a conflict of laws assessment to determine which, if any, legislation would take priority.

Transition to ARRs

A scenario where parties to IBOR-based Obligations and Investments conclude that existing fallbacks are insufficient could be avoided by voluntarily amending such IBOR-based Obligations and Investments through replacing references to IBORs with references to ARRs.

In respect of IBORs in various currencies, one or more ARRs have been identified as the most suitable replacements. For example, in the case of US Dollar LIBOR, the recommended ARR is the Secured Overnight Financing Rate (or "SOFR"). While some ARRs have existed for a number of years (e.g. the Sterling Overnight Index Average (or "SONIA") with respect to pound sterling LIBOR), several ARRs have been developed recently. Existing ARRs have historically only been used in a limited number of types of ARR-based Obligations and Investments. Consequently, the liquidity in ARR-based Obligations and Investments is developing and can be more limited than IBOR-based Obligations and Investments denominated in the same currency, and the future performance of ARRs may not be capable of being accurately predicted.

It is difficult to say when liquidity will develop in ARR-based Rates Transactions and other ARR-based Obligations and Investments such that it is comparable with IBOR-based Obligations and Investments denominated in the same currency.

Unilateral Amendments to IBOR-based Obligations and Investments

If provisions permit unilateral amendments in response to IBOR discontinuance, or authorize a calculation agent or other determining party to use its discretion in administering fallbacks, selecting a substitute or successor rate or ARR, or making IBOR-equivalency determinations, you may need to evaluate the pros and cons of utilizing such provisions. For example, interest rate swaps that are part of a financing may have indentures that could specify that the issuer and the trustee may enter into a supplemental indenture to replace a discontinued IBOR without requiring the consent of floating rate note holders.

You should review the scope of the duties of the calculation agent under your contracts and the applicable standards of care. If you will be acting as a calculation agent or determining party, you may wish to consider your exposure to litigation risk if parties dispute your calculations and determinations under fallback provisions, especially if you are called upon to use your discretion.

IBOR-Equivalency and Risks

It is important to understand that the composition or characteristics of an ARR may differ in a material respect from those of the relevant IBOR which the ARR is intended to replace. For example, in the case of an ARR that represents overnight secured funding transactions involving bank and non-bank market participants, it may be necessary to apply term and spread adjustments to the ARR before it is considered a suitable fallback for the relevant IBOR.

With respect to Rates Transactions that reference certain key IBORs, ISDA has consulted on what those adjustments in fallbacks for derivatives should be. The term adjustment will be the "compounded setting in arrears rate", where the relevant ARR is observed over the relevant IBOR tenor and compounded daily during a two-day shifted period. The spread adjustment will be the "historical median approach", based on the median spot spread between the IBOR and the adjusted ARR calculated over a five-year static lookback period prior to the relevant announcement or publication triggering the fallback provisions. The fallback rate will equal the term-adjusted ARR plus the spread adjustment.

To the extent any adjusted ARR will be included as a fallback in any IBOR-based Obligations and Investments, you should ensure you understand the basis on which that adjustment has been made.

Even with spreads or other adjustments, ARRs used as fallbacks may be only an estimate or approximation of the relevant IBOR, may not be subject to continued verification against the relevant IBOR if it is suspended, discontinued, unavailable or non-representative, and may not result in a rate that is the economic equivalent of the specific IBORs used in your IBOR-based Obligations and Investments. In addition, any spread adjustment that will become permanent in response to the permanent discontinuance of the relevant IBOR or, in the case of LIBOR, non-representativeness, may reflect a historical correlation or relationship between the relevant rates without taking into account future changes in the unsecured short-term funding costs of banks in the interbank market and without otherwise including a measure that reflects bank credit risk.

Supplement to 2006 ISDA Definitions (as published by ISDA) and the ISDA 2020 IBOR Fallbacks Protocol

ISDA has finalized a supplement to the 2006 ISDA Definitions, which contains new triggers and fallbacks in respect of LIBOR (in each of the five published currencies), the Euro Interbank Offered Rate, the Tokyo Interbank Offered Rate, the Bank Bill Swap Rate, the Canadian Dollar Offered Rate, the Hong Kong Interbank Offered Rate, the Singapore Dollar Swap Offer Rate and the Thai Baht Interest Rate Fixing (the "Supplement"). These new provisions are intended to enhance the robustness of contracts to address the risk that some or all currency-tenor pairs of a covered IBOR are permanently discontinued or, in the case of LIBOR, cease to be representative. The new triggers and fallbacks will apply in Rates Transactions or other IBOR-based Obligations and Investments that apply the 2006 ISDA Definitions and are entered into on or after the date on which the Supplement is effective.

Subject to the provisions of the Supplement (including provisions that contemplate the determination of a rate through interpolation), the fallbacks will apply from the earlier of (i) the date on which the relevant currency-tenor pair is no longer provided and (ii) if the relevant rate is LIBOR, the date on which the relevant LIBOR currency-tenor pair is non-representative (by reference to the date indicated in the most recent FCA statement or publication described in "LIBOR Discontinuance and Non-representativeness Risk" above). If a particular currency-tenor pair is no longer provided or is non-representative and a shorter tenor and longer tenor for the relevant currency continue to be provided (and, in the case of LIBOR, are not non-representative), the rate can be determined using, for example, linear interpolation. Otherwise, the fallbacks will be to the term-adjusted ARR plus the spread adjustment, as described in "IBOR-Equivalency and Risks" above.

The Supplement introduces updated triggers and fallbacks for transactions that are entered into after the date on which the Supplement is effective (being January 25, 2021).

With respect to Rates Transactions and certain other IBOR-based Obligations and Investments that were entered into or acquired before the date on which the Supplement is effective, ISDA will also publish the ISDA 2020 IBOR Fallbacks Protocol (the "Protocol"), pursuant to which parties can agree to amend those Rates Transactions and IBOR-based Obligations and Investments by incorporating the terms of the Supplement or otherwise applying comparable terms. You should consider whether adhering to the Protocol is appropriate to meet your financial needs, objectives and hedging strategies and seek advice from professional advisors as required. For example, the amendment of some Rates Transactions pursuant to the Protocol may require the consent of third parties, or the amendment of some transaction types (such as non-linear derivatives) may be affected in different ways. ISDA will make available a list of frequently asked questions to assist in the consideration of the Protocol.

Approach to IBOR Discontinuance

You should expect that our interest, involvement or role in IBOR-based Obligations and Investments will vary, and we may make decisions and act independently with respect to each such IBOR-based Obligation or Investment, without any obligation to treat all IBOR-based Obligations and Investments alike, including, without limitation, agreeing or applying the same spreads or adjustments to ARRs for purposes of converting them into approximations of IBOR-equivalent rates.

Other Risks and Considerations

This Disclosure is not a complete statement of risks and other considerations concerning its subject matter, nor is it intended to address tax, accounting, or legal issues or risks unless otherwise noted. You should not construe the content of this Disclosure as legal, financial, tax, accounting or other advice, and you should consult your own attorneys, financial advisors, tax advisors and accountants as to legal, financial, tax, accounting and related matters concerning any IBOR-based Obligations and Investments, including the impact on your business and the risks, requirements and results of IBOR-based Obligations and Investments.