Private Bank

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Interbank Offered Rate (IBOR) and Benchmark Reform Frequently Asked Questions

01 December 2020

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Contents

Page

THE BACKGROUND TO BENCHMARK TRANSITIONING

1. What is an IBOR rate?

IBOR stands for "interbank offered rate" and "IBOR rates" is a general description for a number of different interest rate benchmarks that historically derive from the rate at which banks could borrow from other banks in particular markets and currencies. LIBOR (the London interbank offered rate), EURIBOR (the Euro interbank offered rate), HIBOR, SIBOR and SOR are examples of commonly used IBORs.

IBORs are used to determine a range of interest rate benchmarks in a number of financial products and are used in a wide variety of markets.

2. Why are IBOR rates being reformed and/or why is a transition to alternative rates being proposed?

IBOR rates are determined by quotes submitted to the applicable benchmark administrator by panel banks. These submissions are intended to be based on actual transactions in the interbank market. However, over time banks have shifted away from unsecured interbank lending in favour of alternative funding models, in particular following the financial crisis. This reduction in the volume of unsecured interbank lending has led to decreased liquidity in the underlying market. As a result, the number of transactions underpinning a variety of IBORs has reduced, making many of the rates heavily reliant on "expert judgement" from the panel banks submitting the quotes that determine the rates.

This has led to various regulatory authorities, including the UK's Financial Conduct Authority ("FCA"), forming the view that a range of IBORs, including LIBOR, need to be replaced or reformed.

3. Why is there uncertainty around the existence of LIBOR post 2021?

The FCA announced in 2017 that it would no longer compel banks to submit the quotes that determine LIBOR following the end of 2021, with LIBOR expected to cease after this date. Other regulators have said that market participants should not rely on LIBOR being available from 1 January 2022.

The uncertainty around LIBOR's sustainability poses a potential threat to the safety and soundness of individual financial institutions and to the financial system. In the US, the Alternative Reference Rates Committee (ARRC) has commented that the sudden cessation of LIBOR would cause considerable disruptions to, and uncertainties around, the large gross flows of LIBOR-related payment and receipts among firms[1].

Andrew Bailey (Chief Executive Officer of the UK Financial Conduct Authority or FCA) publicly stated that LIBOR's end should not be treated as a "black swan" event[2]. Similarly, the president of the New York Federal Reserve, John Williams, warned on 13 July 2020 that "the importance of transitioning from LIBOR is so great that despite the effects of COVID-19, the overall timeline remains the same …The clock is still ticking, and it's critical that regulators and institutions continue to work together to ensure we

[1] See Alternative Reference Rates Committee FAQs (June 2, 2020) at: https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/ARRC-faq.pdf

[2] Andrew Bailey speech (27 July 2017) at: https://www.fca.org.uk/news/speeches/the-future-of-libor

are all ready for January 1, 2022."[3] The Financial Stability Board announced in July 2020 that, despite COVID-19, "financial and non-financial sector firms across all jurisdictions should continue their efforts" to adapt to new benchmarks[4].

4. Is the industry taking any steps to determine alternative rates that could be used in place of IBOR rates? Are there key timelines?

In preparation for the transition away from IBOR term rates, various authorities, industry bodies and trade associations have identified certain nearly risk-free rates ("RFRs") as possible replacements for IBORs and/or are considering how existing benchmark rates might be reformed. RFRs are overnight rates which traditionally are backward-looking, i.e. are published after the period to which they relate. RFRs are considered to be more robust and representative than IBORs because transactions in the underlying market inform the determined rate to a greater extent than is currently the case for many IBORs.

For each existing IBOR benchmark rate and the potential replacement RFR, the proposals are at different stages, vary in scope and timing and will continue to evolve.

In addition, the industry is working to facilitate the transition from an IBOR to a RFR for a range of products. This is a complex and evolving process as RFRs are determined on a different basis to IBORs.

You should consider now, and continue to keep under review, the potential impact of such future changes to the reference rates of financial products relevant to your portfolio and you should consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate.

For further information on timing, please see Citi's IBOR Transition Global Developments Timeline.

RISK FREE RATES

5. What are RFRs and how is each RFR calculated? How do they differ from IBOR rates?

RFRs are calculated on a different basis and are not like-for-like replacements for IBORs. IBORs are set at or prior to the commencement of the period to which they relate, allowing certainty during such a period over amounts which will be due at the end of that period. Taking LIBOR as an example, set out below is a non-exhaustive list of the differences between LIBOR and RFRs.

- LIBOR is a term rate benchmark across multiple tenors (O/N, 1W, 1M, 2M, 3M, 6M, 12M), whereas RFRs are overnight rates with no term element;

[3] Speech by John C. Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York, 537 Days: Time Is Still Ticking (13 July 2020) at https://www.newyorkfed.org/newsevents/speeches/2020/wil200713

[4] FSB statement on the impact of COVID-19 on global benchmark reform (1 July 2020) https://www.fsb.org/2020/07/fsb-statement-on-the-impact-of-covid-19-on-global-benchmark-reform/

- LIBOR is a forward-looking rate, whereas RFRs are backward-looking rates;
- LIBOR contains a premium for bank credit and liquidity risk. In contrast, while the precise nature of each RFR may vary, in general the RFRs contain little or no such additional premiums; because they are overnight and sometimes secured; and
- For each LIBOR currency, the replacement RFR would have both distinct characteristics and a distinct RFR administrator, whereas LIBOR is administered by a single administrator for all currencies, according to a single set of characteristics.

6. What RFRs have been proposed as alternatives to replace IBOR rates?

Various authorities and industry working groups have identified certain RFRs as possible alternatives or fallbacks for IBOR rates and/or are considering how existing benchmark rates might be reformed in accordance with applicable regulation. For each existing IBOR and the potential alternative RFR, the proposals are at different stages and continue to evolve.

You should consider now, and continue to keep under review, the potential impact of such future changes to the reference rate of financial products relevant to your portfolio and the services you receive.

Please see the Appendix for links to further information relating to some of the key industry working groups looking at RFRs and a global IBOR transition timeline. The table sets out IBORs for eight currencies and corresponding RFRs, which have been identified as possible fallback rates to International Swaps and Derivatives Association (ISDA) by regulators and industry working groups as of the date of these FAQs.

7. Will there be forward-looking term RFRs rates and, if so, when will these be introduced?

As LIBOR and other IBORs are forward-looking term rates available in a number of tenors, a number of industry working groups have indicated a desire to develop forward-looking RFR-derived term rates. The FSB has emphasized that there are limitations to RFR-derived term rates which may mean they are not a suitable choice in some markets[5]. To the extent they are launched for the different RFRs, it is not yet certain how the market will respond to them more broadly[6]. By way of example:

- The UK authorities have made clear their preference for the market to adopt a broad-based transition to SONIA compounded in arrears, with the use of a forward-looking term SONIA rate being limited. However, more recently, industry-working groups have shared guidance regarding Term SONIA Reference Rates ("TSSRs"). As of November 2020:
    - Three benchmark administrators, FTSE Russell, ICE Benchmark Administration and Refinitiv, have produced beta TSRRs available for use since the summer of 2020.
    - Discussions are planned for the end of 2020 to decide on the removal of the 'beta' tag.

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[5] FSB Interest rate benchmark reform – overnight risk-free rates and term rates (12 July 2018) at: https://www.fsb.org/wp-content/uploads/P120718.pdf

[6] FSB Progress Report on Reforming major interest rate benchmarks (18 December 2019) at: https://www.fsb.org/wp-content/uploads/P181219.pdf

- The US ARRC's Paced Transition Plan envisages the production of a SOFR terms reference rate based on the SOFR derivatives market.
    - The ARRC recommended forward looking SOFR rates to be published in the first half of 2021 if liquidity in SOFR derivatives markets develops sufficiently to produce a robust term rate.
    - The proposed SOFR term rate maturities are expected to include 1-month and 3-month, and may include 6-month or 1-year as considered feasible.
    - The ARRC has issued a request for proposals for an entity to calculate and publish the forward term SOFR rates to the market.
    - For further information, see an indicative terms SOFR rate provided by the US Federal Reserve Bank
- In Japan, prototype term reference rates were published for the first time at the end of May 2020, but a JPY term rate is not expected until mid-2021.
- The National Working Group on Swiss Franc Reference Rates do not recommend the use of a forward-looking term RFR.

Citi Private Bank will continue to evaluate these developments and applicability to the lending products that are offered.

Please see the Appendix for links to further information in relation to what term SOFR may look like.

8. What is happening to the Euro Overnight Index Average ("EONIA")?

EONIA is the current overnight benchmark rate for the Euro. EONIA has been reviewed by the Working Group on Euro Risk Free Rates to ensure its compliance with the EU Benchmarks Regulation ("EU BMR")[7]. Following its review and broad public consultation, the working group recommended that market participants gradually replace EONIA with the new Euro short-term rate ("EuroSTR"), which became available on 2 October 2019.

Until 2 October 2019, EONIA was calculated by the European Central Bank ("ECB") and administered by the European Money Markets Institute ("EMMI") as a weighted average of the interest rates on overnight unsecured lending between banks.

Since 2 October 2019, the date on which the EuroSTR became available, EONIA is determined as EuroSTR plus a fixed spread of 8.5 basis points ("bps"). The spread of 8.5 bps was determined by the ECB as a result of a simple average of the daily spread between EONIA and 'pre-EuroSTR' between 17 April 2018 and 16 April, 2019, with a 15% trimming mechanism, and published to the market on 31 May 2019. This methodology is expected to continue until EONIA is no longer published and EMMI has announced that it plans to discontinue its publication of EONIA from 3 January 2022[8].

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[7] Regulation (EU) 2016/1011 of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014

[8] EMMI, EURIBOR questions and answers (2019)

According to EMMI, the recalibrated EONIA under its new methodology will continue to measure the same underlying interest as the former EONIA calculated under its legacy methodology.

Please see the Appendix for links to further information in relation to the EONIA to EuroSTR transition, including the potential valuation implications of the transition from EONIA to EuroSTR.

9. Are EONIA and EuroSTR comparable rates?

EONIA, prior to its change in methodology, relied on transactions from the euro-denominated overnight unsecured money market sector and this is also the case for EuroSTR.

However, the rates have several characteristics which differ, some of which include the following:

- EONIA is administered by the private sector via EMMI, while EuroSTR is administered by the ECB.
- EONIA relied on voluntary lending data input from 28 panel banks (with one contribution per bank) while EuroSTR is derived from daily data submissions from 50 panel banks reporting borrowing transactions of over €1 million in accordance with the MMSR Regulation.
- EONIA was calculated based on a weighted average of the submissions from its panel banks while EuroSTR relies on data from individual transactions, computed using 25% trimming.
- EONIA was previously published at or shortly after 19.00 CET each trade date, whereas EuroSTR is now published at or shortly after 08:00 CET on each TARGET2 business day on a T+1 basis, based on arm's length transactions conducted and settled on the previous day, with the reformed EONIA published at or shortly after 09:15 CET, also on a T+1 basis.

10. How will the change to EuroSTR affect legacy EONIA contracts?

As EONIA will be discontinued from 3 January 2022, Citi is participating in relevant industry working groups relating to the transition to EUROSTR and is reviewing its existing population of transactions and credit support documentation referencing EONIA.

Citi's understanding is that ISDA is not actively pursuing a protocol solution to provide market participants with a mechanism to make amendments to legacy transactions and credit support documentation that reference EONIA at this time. As a result, absent any developments in this regard, amendments to legacy bilateral transactions and credit support documentation that reference EONIA will need to be discussed and agreed between the parties.

ISDA is producing documentation to assist participants with the transition. For example, ISDA has produced a template form of amendment which would enable parties to amend one or more existing confirmations, existing credit support documents or existing master agreements to update references to EONIA in light of the anticipated permanent cessation of EONIA on 3 January 2022.

Additionally, ISDA has produced standardized definitions for use in collateral documentation (initially to include definitions of EONIA and EuroSTR) and in October 2019 published supplements to the 2006 definitions to update a number of floating rate options referencing EONIA and to introduce a new EuroSTR floating rate option. We understand that other industry associations are working on producing similar documentation.

Please see the Appendix for links to further information in relation to these legal action plan recommendations.

11. What is happening to the Effective Federal Funds Rate (EFFR)?

Pursuant to the US ARRC's Paced Transition Plan, the ARRC recommended that, from Q2, 2021, CCPs replace the Effective Fed Funds Rate (EFFR) with SOFR for purposes of calculating Price Alignment Interest / Price Alignment Amounts on USD cash collateral / settlement payments and for purposes of discounting USD swaps cleared after such date. LCH and CME transitioned both legacy and new cleared swaps in October 2020. The ARRC has also recommended in its Best Practices for Completing the Transition to LIBOR that dealers, to promote SOFR liquidity, should amend interdealer CSAs to use SOFR 'Interest Amount' instead of EFFR for USD collateral by end 2020.

EFFR will continue to be published. Although EFFR is an IOSCO-compliant rate, the ARRC has publicly acknowledged that it has certain shortcomings (e.g. a relatively small underlying market and limited set of underlying transactions/counterparties) and the ARRC therefore determined not to recommend EFFR or the Overnight Bank Funding Rate (OBFR) as the replacement rate for USD-LIBOR.

Please see the Appendix for link on ARRC FAQs.

12. How has the Euro Interbank Offered Rate ("EURIBOR") been reformed?

On 3 July 2019, EMMI was granted the authorization and administration of EURIBOR by the Belgian Financial Services and Markets Authority (FSMA (being the national competent authority responsible for the authorization and supervision of EMMI as administrator of EURIBOR)) under Art.34 of the EU BMR.

Since May 2017, EMMI has been working on the development of a new determination methodology for EURIBOR with the support of a dedicated task force in which FSMA participated as an observer. As such, EURIBOR is now considered compliant with EU BMR and is expected to continue to be published by EMMI past 2021, using the new hybrid methodology.

EMMI has recently confirmed that the phase-in of panel banks to the hybrid methodology has been completed and EURIBOR will now be based on panel bank data submissions, which follow the new contribution and reporting guidelines of the hybrid methodology.

You are encouraged to consider the impact of this change in methodology on your portfolio and business requirements, together with the fallback language used in EURIBOR-based contracts. You should consider seeking independent professional advice (legal, tax, accounting, or other) as you consider necessary.

Please see the Appendix for website information links in relation to EURIBOR.

13. Why do we need spread adjustments and how will they be calculated in the various markets?

Various components of IBORs are not included in the RFRs.

For derivatives, following consultation with the market, ISDA is developing RFR fallbacks based on:

- an adjustment to the RFR using the "compounded setting in arrears rate" - this addresses the difference between IBORs as forward-looking term rates and RFRs as overnight rates; and
- a spread adjustment using the "historical median approach" - this addresses bank credit risk and liquidity risk and aims at reducing value transfer upon transition to the fallback rate.

The "compounded setting in arrears rate" is the relevant RFR observed over a period of time generally equal to the relevant IBOR tenor being replaced (i.e. three months for three month USD or GBP LIBOR) and compounded daily during that period. The "historical median approach" involves applying a spread adjustment based, amongst other things, on the median spot spread between the relevant IBOR and the adjusted RFR over a static five year lookback period prior to the fallback being triggered. The spread adjustment will be calculated separately for each IBOR tenor.[9]

These adjustments will be combined to produce 'all-in' fallback rates referenced in ISDA's amended 2006 Definitions. Bloomberg was selected to calculate and publish the adjustments and 'all-in' fallback rates and began publishing calculations in May 2020[10].

For cash products, market consultations are ongoing and while progress has been made, challenges remain with determining the most suitable RFR calculation methodology and whether this can be aligned with the derivatives approach (as set out above).[11] Although alignment with the approach agreed for ISDA's fallbacks would facilitate the transition process, this may not be possible because of, amongst other reasons, the differing quantities of available historical data for the relevant currencies and the different features of cash products, e.g. prepayment and discounting.

At present, it is therefore not possible to confirm the equivalent 'all in' rate that will serve as an alternative to IBORs in relation to cash products or, whether there will be a market standard approach for calculating such 'all-in' rates. This may result in basis risk at a broad portfolio level or at a specific transaction level – for example, a derivative hedging IBOR risk on a cash product might transition to a different outcome at a different point in time and may therefore cease to provide as good a hedge as prior to the transition.

We encourage you to keep up to date with the latest industry developments and to consider their impact on your own business and the potential impact of such future changes on your portfolio.

14. What about those rates which directly or indirectly reference IBOR rates, such as USD LIBOR?

The impending discontinuation of USD LIBOR will affect various rates that either directly or indirectly reference USD LIBOR. In order to prepare for this discontinuation, you should consider which contracts are affected and the potential application of RFRs as proposed by relevant industry groups and trade associations. You should consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate.

For derivative contracts, there are instances where "LIBOR" is referenced in the 2006 ISDA Definitions or utilized in the methodology for a rate but that rate does not reference the full LIBOR Rate Option. In these instances, the new fallbacks for LIBOR Rate Options in the ISDA IBOR Protocol will not automatically apply to these other rates. ISDA's IBOR Protocol and the IBOR Supplement includes fallbacks for SOR and THBFIX in the event of a permanent cessation in respect to USD LIBOR (which is used to calculate these rates).

Please see the Appendix for links to further information in relation to SOR and industry guidance.

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[9] ISDA Research Note, Adoption of Risk Free Rate. Major Developments in 2020

[10] Further information on the Bloomberg calculations can be found HERE

[11] The ARRC Supplemental Consultation on Spread Adjustment Methodology for cash products was issued on May 6, 2020, and the deadline for responses to this consultation was June 8, 2020. See https://www.newyorkfed.org/arrc/publications; https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Spread_Adjustment_Consultation_Follow_Up.pdf.

CUSTOMER ENGAGEMENT WITH BENCHMARK TRANSITIONING

15. How do I know if I have an exposure to an IBOR?

You should review your documentation carefully to determine what elements of your portfolio reference and services an IBOR, what fallbacks would apply and consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate.

16. How will my Citi portfolio be impacted by the discontinuation of any IBOR?

Citi is currently scoping IBOR-impacted contracts and assessing whether amendments may be needed to cater for the discontinuation of any relevant IBOR and how best to make these amendments. At the same time, various initiatives are under way to establish industry standards for alternative RFRs (for example, the ISDA IBOR Protocol). However it is not possible to say at this stage whether industry standards for alternative RFRs will be available in all markets. We would encourage you to undertake a similar scoping and review exercise and to take appropriate independent professional advice (legal, tax, accounting, or other) so that you understand the impact of the discontinuation of any IBOR on your portfolio with Citi and your business more generally.

17. How will my IBOR-linked contract be changed to one which incorporates one of these new RFRs?

This will be determined on a per contract basis and will depend on the financial product and the existing fallback language used. You should review your documentation carefully and seek independent professional advice (legal, tax, accounting, or other) as appropriate. The amendment process may be different for each product type pursuant to the terms of each contract.

18. What happens if I do not amend my IBOR impacted contract?

This will depend on many things, including the contractual provisions for the financial product or service and the alternative RFR solutions available. You should review your portfolio carefully and consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate.

19. What can I do to prepare for the transition away from IBORs?

We encourage you to keep up to date with the latest industry developments in relation to benchmark transitioning (e.g. monitoring the announcements of industry working groups, trade associations and international bodies, such as IOSCO and the relevant product groups) and to consider their impact on your own business, using independent professional advisors (legal, tax, accounting, or other) as appropriate.

For example, the ARRC in its Best Practices for Completing the Transition to LIBOR have suggested that impacted firms may prepare for such a transition by establishing a clear IBOR transition plan which includes, inter alia:

- a robust governance framework;
- an enterprise-wide programme and strategy to assess impacts and appropriate engagement with internal and external stakeholders;

- the quantification of IBOR-linked exposures and the development of capabilities to value new RFR-products;
- a transition strategy for any existing portfolio of IBOR products;
- the identification of financial and non-financial risks of transition, with appropriate oversight and management;
- an assessment of potential legal, tax, accounting, regulatory and related reporting implications; and
- the development of an operating model to address operational and market infrastructure implications.

This is not an exhaustive list and you should consider seeking independent professional advice (legal, tax, accounting, financial or other) as appropriate.

Please see the Appendix for further detail and guidance on how to prepare for transitioning to certain RFRs.

20. What has Citi done so far in relation to IBOR transitioning?

We are actively involved in industry efforts to manage the transition from IBORs. In addition, we are working through internal steps and processes to balance benchmark transitioning with our obligations. Furthermore, Citi has set up an IBOR governance and implementation program and remains focused on identifying and addressing the transition impact to our operational capabilities and financial contracts, among others.

FALLBACK LANGUAGE, LEGACY BUSINESS AND INTERACTION WITH THE BENCHMARKS SUPPLEMENT

For any further questions on fallback language you may have that is not covered in this section, you should review your portfolio carefully and consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate. Your advisor can best help answer any questions on fallback language and trigger events you have specific to your portfolio and / or contract.

21. What is meant by ‘fallback language’ and ‘trigger events’?

In this context, ‘fallback language’ refers to the legal provisions in a contract that apply if the underlying reference rate in the product is permanently discontinued, ceases to be available or there has been a pre-cessation announcement that the rate is no longer, or will at some point in the future no longer be, representative. A fallback will generally consist of two components:

- the trigger event: which is an event that brings about the need to use the fallback (such as the IBOR rate not being available or, in the case of LIBOR, such rate no longer being representative); and
- the fallback rate: the rate(including any spread adjustment), or approach to determining the rate(including any spread adjustment), which will replace the relevant IBOR rate following the trigger event

You should review your portfolio carefully and consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate if you have any questions on fallback language and trigger events.

22. Is there standardized fallback language?

There are a variety of market standard fallbacks, which existed prior to IBOR discontinuation, intended to cater for a temporary pause in availability of the relevant IBOR rate (for example due to market disruption). These fallbacks may already be included in your contracts and may operate differently for different rates as applied to various financial products. You should review your documentation closely to determine the position for each contract in your portfolio, in relation to existing or legacy products, as well as for any new products you are considering entering into.

Various industry groups have started to develop template fallback language for new products specifically to cater for IBOR discontinuation and are working closely with market participants to develop an amendment process for legacy products so that fallback language can be applied retrospectively.

23. What is ISDA's work on IBOR fallback language for derivatives and why is this relevant?

Current fallback provisions in the unamended 2006 ISDA Definitions (which are standard terms often incorporated into interest rate derivatives) were drafted primarily for a temporary cessation of an IBOR (e.g. many ISDA definitions require quotes to be obtained from certain reference banks if the applicable reference rate is not available).

In this context, and at the request of the Financial Stability Board's Official Sector Steering Group ("OSSG"), ISDA has produced more robust fallback language (the "ISDA IBOR Fallbacks") for certain key IBORs which will replace the relevant IBOR with an adjusted RFR upon the occurrence of certain trigger events.

As part of this initiative, ISDA has updated the 2006 ISDA Definitions through a supplement (the "IBOR Supplement") to include the ISDA IBOR Fallbacks.

ISDA recently announced the launch of the IBOR Supplement on 23 October 2020 and will take effect 3 month thereafter on 25 January 2021. Once effective, all derivative transactions that are traded on or following the effective date that incorporate the 2006 ISDA Definitions will include this fallback language.

ISDA will also launch a protocol (the "IBOR Protocol") at the same time as the IBOR Supplement which would allow adhering parties to include the ISDA IBOR Fallbacks in certain existing covered contracts with other adhering parties.

24. How will the fallback rates under the ISDA IBOR Fallbacks be calculated and published?

As set out above, an adjustment spread will need to be applied to RFRs in order to reduce value transfer when transitioning from an IBOR to an RFR.

For each relevant RFR, Bloomberg has agreed to produce and publish three particular RFR calculations, namely:

- the adjusted RFR;
- the relevant spread adjustment (median of historical differences between the IBOR for each tenor and the compounded RFR for that tenor over a five-year period prior to an announcement triggering the fallback); and

- the ‘all-in’ fallback rate.

Please see the Appendix for further information on Bloomberg methodology.

25. If parties adhere to the IBOR Protocol, which existing contracts would be amended?

Following adherence, the IBOR Protocol would apply the ISDA IBOR fallbacks to a broad range of existing ISDA and non-ISDA documents – including master agreements, credit support documents and related confirmations (together, “Protocol Covered Documents”) – that:

- incorporate a covered ISDA definitional booklet (each a “Covered Booklet”[12]);
- reference an IBOR included in the scope of the IBOR Protocol (a “Relevant IBOR”) as defined in a Covered Booklet; or
- reference a Relevant IBOR howsoever defined (for instance “LIBOR”).

We encourage you to review the terms of the Protocol for any derivative transactions you may have. We will be contacting you in early 2021 to bilaterally amend your respective contracts, unless you chose to adhere. You should consider seeking independent professional advice (legal, tax, accounting, financial or other) as appropriate.

26. When will RFR fallbacks under the IBOR Supplement and the IBOR Protocol take effect?

As set out in the IBOR Supplement and the IBOR Protocol, the ISDA IBOR Fallbacks would be triggered following a permanent cessation or a non-representative determination, of the relevant IBOR (either an “Index Cessation Event”)

A permanent cessation of a Relevant IBOR would occur following either:

- A statement or publication of information by the administrator of the relevant IBOR that it has ceased or will cease to provide the relevant IBOR permanently or indefinitely; or
- A statement or publication of information by the relevant administrator’s regulator, currency central bank or other competent authority that the administrator of the relevant IBOR has ceased or will cease to provide the relevant IBOR permanently or indefinitely.

A non-representative determination in respect of a Relevant IBOR would occur if there were a public statement or publication of information by the regulatory supervisor for the administrator of such Relevant IBOR announcing

- that such Relevant IBOR is no longer, or as of a specified future date will no longer be, capable of being representative, or is non-representative, of the underlying market and economic reality that such Relevant IBOR is intended to measure as required by applicable law or regulation and as determined by the regulatory supervisor in accordance with applicable law or regulation and

[12] These include the 2006 ISDA Definitions, 2000 ISDA Definitions, 1998 ISDA Euro Definitions, the 1998 Supplement to the 1991 ISDA Definitions and the 1991 ISDA Definitions.

- that the intention of that statement or publication is to engage contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts,

At present the pre-cessation trigger is only relevant for Sterling LIBOR, Swiss Franc LIBOR, USD LIBOR, Euro LIBOR and Japanese Yen LIBOR.

27. How do the IBOR Supplement and IBOR Protocol account for a temporary cessation of an IBOR? What fallbacks would apply in this instance?

The IBOR Supplement and IBOR Protocol also envisage additional fallback provisions if there is a temporary cessation of a Relevant IBOR, i.e. in summary where the Relevant IBOR has not been published on the relevant screen by the relevant time on the relevant day, but an Index Cessation Event has not occurred.

In this scenario, broadly speaking, the Relevant IBOR (other than SOR and THBFIX) would be deemed to be replaced by, in order of priority:

- a reference to the rate as provided by the relevant IBOR administrator;
- a rate determined by the calculation agent to be a commercially reasonable alternative by applying
  - a rate formally recommended by the relevant IBOR administrator; or
  - a rate formally recommended for use by certain specified bodies for that rate which may include the relevant central bank or any supervisor or administrator of the Relevant IBOR; or
- a commercially reasonable alternative rate determined by the calculation agent taking into account any rate implemented by central counterparties and/or future exchanges.

28. What is the adherence process to the IBOR Protocol? How does adherence to the IBOR Protocol interact with the launch of the IBOR Supplement?

Following the launch of the IBOR Supplement and the IBOR Protocol on 23 October 2020, market participants can start to apply ISDA's new fallback provisions to (i) existing derivatives transactions, subject to adherence to the IBOR Protocol and (ii) new transactions by incorporating the Supplement.

In order to adhere to the IBOR Protocol, the 'Protocols' section of the ISDA website will allow for market participants to generate their form of Adherence Letter. Once all relevant parties have completed their respective Adherence Letters and ISDA accepts the Adherence Letter from the later of the two parties, the agreement to make the changes contemplated by the IBOR Protocol will become effective (the "Implementation Date").

The IBOR Supplement will become effective 3 months after its launch (the "Fallback Effective Date") and the changes contemplated by the IBOR Protocol will become effective on the later of the Fallback Effective Date and the Implementation Date.

ISDA has released FAQs with respect to the IBOR Fallbacks Protocol.[13]

If you prefer to not adhere to the Protocol, we will reach out to bilaterally amend your contract, which will have similar terms to the Protocol.

29. What is Citi doing in respect to ISDA's work on IBOR fallback language and what should you do in relation to this?

Messaging from regulators across the globe is to urge market participants to transition their LIBOR portfolios. The ARRC in its Best Practices for Completing the Transition from LIBOR has recommended that market participants should adhere to the IBOR Protocol within the 3-month period after its publication and before the amendments take effect. Similarly, the FCA have stated that market participants should continue to focus on active transition, including continuing work on adopting robust fallbacks via market standard documents such as those produced by ISDA.[14]

Adherence to the IBOR Protocol is expected to reduce the complexity of contract repapering, improve contractual robustness and promote global consistency, and as such, Citi has taken the decision to:

- incorporate the new ISDA IBOR Supplement into new derivative contracts and
- adhere to the IBOR Protocol and apply IBOR fallback language to existing derivative contracts or otherwise amend existing derivative contracts based on the IBOR Supplement

We encourage you to review the terms of the IBOR Protocol and consider whether to adhere. If you prefer to not adhere to the Protocol, we will reach out to bilaterally amend your contract, which will have similar terms to the Protocol. You should consider seeking independent professional advice (legal, tax, accounting, or other) as appropriate.

30. How is Citi positioning itself in respect of derivatives which reference RFRs?

Citi recognises the benefits to customers and the market with regard to a transition from IBORs to RFRs, and can facilitate proactive portfolio transitions as well as new RFR trades, where appropriate. In particular, Citi recognises that there will need to be as much liquidity in the RFR market as possible in order to facilitate the transitioning process. As such, Citi is a liquidity provider in certain new and existing RFRs for derivatives transactions and intends to consider its use of IBORs and RFRs in derivatives and, where appropriate:

- follow market initiatives as proposed by ISDA to apply compounded RFR and adjustment spreads to its existing derivatives contracts;
- consider how it can best apply RFRs to new derivatives trades;

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[13] FAQ for the IBOR Fallbacks Protocol are available at: http://assets.isda.org/media/3062e7b4/3cfa460a-pdf/

[14] FCA statement on planned amendments to the Benchmarks Regulation (23/06/2020) at: https://www.fca.org.uk/news/statements/fca-statement-planned-amendments-benchmarks-regulation

- consider any potential compensation payments that could be made following a transition between different interest rates paid on collateral in a CSA (such as from EONIA to EuroSTR); and
- consider the potential impact of rate fallback inconsistency across products, currencies and jurisdictions for derivatives

THE BENCHMARKS SUPPLEMENT

31. What is the Benchmarks Supplement?

The ISDA Benchmarks Supplement (the "Benchmarks Supplement") was published by ISDA in September 2018 primarily to address certain benchmark requirements under EU BMR. It allows parties to include, in respect of certain derivative contracts, the actions they would take if a referenced benchmark materially changes or ceases to be provided, including nomination of alternative benchmarks where feasible and appropriate. These actions to be taken, or fallbacks, are provided in the Benchmarks Supplement and can be applied to derivative transactions which reference benchmarks and incorporate one or more of the following definitional booklets (the "covered definitional booklets"):

- 2006 ISDA Definitions;
- 2002 ISDA Equity Derivatives Definitions;
- 1998 FX and Currency Option Definitions; and
- 2005 ISDA Commodity Definitions.

32. What is the EU BMR and what are the benchmark user requirements?

The EU BMR is a piece of European legislation passed to ensure the accuracy and integrity of benchmarks produced and used in the EU. It came into force on 30 June 2016, with most provisions applying from 1 January 2018.

One of the aspects of the EU BMR is that it imposes obligations on 'supervised entities' that use a benchmark within the EU, including banks, insurers, central counterparties (CCPs), certain pension funds and others. It requires those entities to produce and maintain robust written plans using 'fallback' language to set out the actions they would take if a referenced benchmark materially changes or ceases to be provided, including nomination of alternative benchmarks where feasible and appropriate. This fallback language must be reflected in the contractual relationship between 'supervised entities' and their clients.

The EU BMR also prohibits 'supervised entities' from using a benchmark in the EU unless the administrator of the benchmark (or the benchmark itself) is included on a specific register maintained by the European Securities and Markets Authority (ESMA) and provides that fallback language must also apply in certain circumstances where authorization or approval of a benchmark administrator is withdrawn.

33. Will the provisions of the EU BMR still apply in the UK following the UK's withdrawal from the EU?

Although the UK officially left the EU on 31 January 2020, the EU BMR will continue to apply in the UK until the end of the implementation period on 31 December 2020 (the "EU Exit Date"). The UK Government has agreed to 'onshore' the substantive EU BMR provisions on to the UK statute book (the UK BMR) to ensure that these continue to operate effectively in the UK following the EU Exit Date.

THE BENCHMARKS SUPPLEMENT FALLBACK LANGUAGE

34. When is fallback language applied in the Benchmarks Supplement?

When used in combination with the covered definitional booklets, the Benchmarks Supplement incorporates and applies the fallback language if:

- a benchmark ceases to be provided; or
- a benchmark or its administrator is not authorised (or similarly approved) or included in an official register (including where such authorization or inclusion is suspended or withdrawn) in accordance with applicable law.

These events are also referred to as 'trigger events' within the fallback language. The Benchmarks Supplement also contains acknowledgements regarding the consequences of a change to a benchmark. These acknowledgements provide that, following a change to a benchmark, references to that benchmark will be to that benchmark as changed.

Given that some of the covered definitional booklets already contain fallback language which applies upon the occurrence of some of these trigger events, the amendments which would be made by incorporating the Benchmarks Supplement into the terms of a transaction vary from booklet to booklet.

35. What is Citi doing in respect of the Benchmarks Supplement?

The below Citi entities have adhered to the BMS Protocol and will be exchanging questionnaires with counterparties on ISDA Amend, where possible, in order for new transactions with clients under existing master agreements to have robust fallback language.

- Citibank Europe Plc., LEIN1FBEDJ5J41VKZLO2475
- Citibank, National Association, LEIE57ODZWZ7FF32TWEFA76
- Citigroup Global Markets Europe AG. LEI 6TJCK1B7E7UTXP528Y04
- Citigroup Global Markets Ltd., LEIXKZZ2JZF41MRHTR1V493

Citi has currently elected only to incorporate the Benchmarks Supplement into new transactions under existing master agreements. This means that, regardless of a counterparty's election in the questionnaire, currently only new transactions with Citi will be amended to incorporate the Benchmarks Supplement. However, in the future, Citi may decide to change its election to also include legacy transactions. In the event that our counterparty has also elected to amend legacy transactions, such transactions would have to be bilaterally amended to incorporate the Benchmarks Supplement.

As a result of the additional bilateral delivery requirements associated with adhering to the BMS Protocol, ISDA together with IHS Markit, have developed a technology-based solution on the ISDA

Amend platform which allows adhering parties to share submitted data to permissioned counterparties. Alternatively, Citi will agree with clients bilaterally how to apply the Benchmarks Supplement to those transactions.

36. How does ISDA's work on the Benchmarks Supplement interact with IBOR Supplement and protocol?

According to ISDA, the Benchmarks Supplement covers a much broader range of benchmarks than ISDA's work to implement robust fallbacks to specific rates for certain IBORs. While two separate initiatives, the ISDA Benchmarks Supplement complements the IBOR fallback work, as it enables firms to agree interim fallback arrangements should an IBOR cease to exist before the IBOR fallbacks are implemented. The IBOR fallbacks will take precedence for relevant IBORs once implemented following an index cessation event.

The ISDA Benchmarks Supplement also sets out triggers and fallbacks if a benchmark does not qualify for use in a relevant jurisdiction or qualification is subsequently suspended or withdrawn.

DEFINITIONS

"**ABS-SFEMC**" means the Association of Banks in Singapore and the Singapore Foreign Exchange Market Committee.

"**AONIA**" means the AUD Overnight Index Average.

"**ARRC**" means the Alternative Reference Rates Committee, the working group established by the Federal Reserve that has identified SOFR as the preferred replacement RFR in respect of USD LIBOR.

"**ASX**" means the Australian Securities Exchange.

"**Australian Financial Markets Association**" means one of the three committees working on benchmark reform which has identified AONIA as the preferred replacement RFR in respect of BBSW.

"**Australian Securitization Forum**" means one of the three committees working on benchmark reform which has identified AONIA as the preferred replacement RFR in respect of BBSW.

"**BBSW**" means the bank bill swap interest rate, a term rate commonly used for Australian Dollar transactions and which is administered by the ASX.

"**Belgian Financial Services and Markets Authority**" means the national competent authority responsible for the authorization and supervision of EMMI as administrator of EURIBOR.

"**Bloomberg**" means Bloomberg Index Services Limited.

"**Canadian Alternative Reference Rate Working Group**" means the working group including the Bank of Canada which has established two working subgroups, the Transition Subgroup and the Term Rate Subgroup.

"**Canadian Dollar Offered Rate**" is a term rate commonly used in transactions denominated in Canadian dollars.

"**Canadian Overnight Repo Rate Average**" means the reference rate in Canadian dollar financial products currently proposed by the Canadian Alternative Reference Rate Working Group as the replacement RFR in respect of the Canadian Dollar Offered Rate.

"**Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks**" is the working group established by the Bank of Japan that is consulting on alternative rates for JPY LIBOR.

"**EU 27**" means the remaining 27 member states of the European Union following the UK's withdrawal from the European Union.

"**EU BMR**" means the Benchmarks Regulation (EU) 2016/1011 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds

"**EuroSTR**" means the Euro short-term rate.

"**FSMA**" means the Belgian Financial Services and Markets Authority.

"**HIBOR**" means the Hong Kong Interbank Offered Rate.

"**Hong Kong Treasury Markets Association**" means the working group which has identified the Hong Kong Dollar Overnight Index Average as the preferred replacement RFR in respect of HIBOR.

"**ISDA**" means the International Swaps and Derivatives Association.

"**International Organization of Securities Commissions" or "IOSCO**" means the international body formed of securities regulators from around the world which develops, implements and promotes adherence to internationally recognized standards for securities regulation.

"**LIBOR**" means the London Interbank Offered Rate.

"**National Working Group on Swiss Franc Reference Rates**" means the working group established by the Swiss National Bank which has identified SARON as the preferred replacement RFR in respect of CHF LIBOR.

"**MMSR Regulation**" means the Money Markets Statistical Reporting Regulation (EU) No 1333/2014 which entered into force on 1 January 2015 and which regulates the reporting of money market data in the EU.

"**SARON**" means the Swiss Average Rate Overnight, the RFR identified as the preferred replacement for CHF LIBOR by the National Working Group on Swiss Franc Reference Rates.

"**SOFR**" means the Secured Overnight Funding Rate.

"**SONIA**" means the Sterling Overnight Index Average.

“**SOR**” means the Singapore Dollar Swap Offer Rate, an implied interest rate determined by examining the spot and forward foreign exchange rate between the USD and SGD and the appropriate US dollar interest rate for the term of the forward.

"**TONA**" means the Tokyo Overnight Average Rate, the RFR being consulted on by the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks as a potential alternative to JPY LIBOR.

"**Working Group on Euro Risk Free Rates**" is the working group established by the ECB, ESMA, FSMA and the European Commission that was established to identify and recommend risk-free rates that could serve as a basis for an alternative to current benchmarks used in a variety of financial instruments and contracts in the euro area, such as EONIA and EURIBOR.

"**Working Group on Sterling Risk Free reference rates**" means the working group established by the Bank of England which has identified SONIA as the preferred replacement RFR in respect of GBP LIBOR.

APPENDIX

FAQ 6:

COUNTRY	IBOR RATE	STATUS	EXPECTED RFR	TRANSITION COMMITTEE WEBSITE
United Kingdom	GBP LIBOR	Expected to cease	SONIA	Sterling Working Group on Risk-Free Rates
United States	USD LIBOR	Expected to cease	SOFR	Alternative Reference Rates Committee (ARRC)
Japan	TIBOR	Being reformed but expected to continue	TONA	Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks
	JPY LIBOR	Expected to cease	TONA	
	Euroyen TIBOR	Being reformed but at risk of ceasing	TONA	
Europe	EUR LIBOR	Expected to cease	€STR / EuroSTR	ECB Working Group on Euro Risk-Free Rates European Money Markets Institute (EMMI) and Euro RFR Working Group
	EURIBOR	Being reformed but expected to continue	€STR / EuroSTR	
Canada	CDOR	Expected to continue	CORRA (we understand this rate will exist alongside CDOR)	Canadian Alternative Reference Rate Working Group (CARR)
Switzerland	CHF LIBOR	Expected to cease	SARON	The National Working Group on Swiss Franc Reference Rates
Australia	BBSW	Reform (continue)	RBA Cash Rate (AONIA) (we understand this rate will exist alongside BBSW)	Australian Financial Markets Association
Hong Kong	HIBOR	Reform (continue)	HONIA (we understand this rate will exist alongside HIBOR)	Treasury Markets Association's Market Practices Committee

FAQ 7:

For an indicative terms SOFR rate provided by the US Federal Reserve Bank.

FAQ 8:

ECB - Spread between EuroSTR and EONIA and Report by the working group on euro risk-free rates on the transition from EONIA to EuroSTR.

FAQ 10:

Refer to Working Group on Euro Risk-Free Rates' "Recommendations of the working group on euro risk-free rates on the EONIA to €STR legal action plan**".**

FAQ 11:

Refer to ARRC FAQs for further information on EFFR.

FAQ 12:

In relation to changes to EURIBOR, various helpful FAQs: EMMI (here), ISDA (here) and the ECB's working group on euro risk-free rates (here). The ECB also has an update on EURIBOR fallbacks.

FAQ 14:

For particular USD LIBOR issues arising with derivatives contracts using the Singapore Swap Offer Rate (SOR) which refers to the rate for deposits in U.S. Dollars (i.e. USD LIBOR), see "Roadmap for Transition of Interest Rate Benchmarks" published by the Association of Banks in Singapore and the Singapore Foreign Exchange Market Committee ("ABS-SFEMC").

FAQ 19:

For further detail and guidance on how to prepare for transitioning to certain RFRs, see here for the ARRC's Practical Implementation Checklist for SOFR Adoption in relation to SOFR and here for the 2020 Top Level Priorities and Roadmap provided by the UK RFR Working Group in relation to SONIA.

FAQ 24:

For further information on Bloomberg methodology, refer to ISDA Benchmarks hub.