February 2022

IBOR and Benchmark Reform

Frequently Asked Questions

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We encourage you to keep up to date with the latest industry developments in relation to IBOR and benchmark reform and to consider their impact on your business. You should consider, and continue to keep under review, the potential impact of IBOR and benchmark reform on any existing product you have with Citi and/or any new product you enter into with Citi.

The Background to Benchmark Transitioning

1. What is an IBOR rate?

IBOR stands for "interbank offered rate" and "IBOR rates". The IBOR rate 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) and EURIBOR (the Euro interbank offered rate) are both examples of commonly used IBORs, which 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 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 will 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]

The Chief Executive Officer of the 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 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 are all ready for January 1, 2022."[3] The Financial Stability Board ("FSB") 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]

[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/interest-rate-benchmark-reform-transition-world-without-libor
[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) at: https://www.fsb.org/2020/07/fsb-statement-on-the-impact-of-covid-19-on-global-benchmark-reform/

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, or reform, the proposals are at a different stage, vary in scope and timing and continue to evolve. This is a complex and evolving process as RFRs are determined on a different basis to IBORs.

Several industry groups have developed proprietary credit-sensitive benchmark rates as alternatives to RFRs, with ISDA modifying its definitions in early May 2021 to accommodate these rates. However National Working Groups have not endorsed any benchmark alternatives to LIBOR other than the alternative reference rates (i.e. SOFR, SONIA, SARON, €STR and TONA) and their respective term rates (where planned).

We encourage you to keep up to date with IBOR reform, and RFR developments, and to consider their impact on you, using independent professional advisors (financial, legal, tax, accounting or other) as you consider necessary.

For further information on timing please see Citi's IBOR Transition Global Developments Timeline.[5]

[5] Citi's IBOR Transition Global Developments Timeline https://www.citivelocity.com/cv-content-web/storage/akpublic/eppublic/file/IBOR_Transition_Global_Developments_Timeline.pdf

5. Are legislative solutions being considered to help the market transition away from IBORs?

Legislative measures are potentially being developed in a number of jurisdictions, in particular the US, EU and UK. These are all currently at the proposal stage — that is, none have been finalized or adopted into law.

Generally, these legislative proposals are designed to target contracts which do not have suitable LIBOR fallbacks and which cannot move to new rates or be amended by insertion of suitable fallbacks. They likely involve replacing LIBOR with another, as yet undefined, rate.

Even if these legislative proposals are introduced, there are various dependencies, which drive whether or not they will affect any particular contract and their application is therefore expected to have limitations. These dependencies also are still subject to clarification but may include:

(i) Whether these measures only have an impact on certain entities established or supervised in certain jurisdictions or certain LIBOR rates or tenors,

(ii) Contracts governed by certain laws or certain types of contracts; and

(iii) Whether or not the market needs to have achieved certain transition milestones before these measures can be implemented.

In some cases, the legislation merely involves granting powers to a regulatory body to decide at a later date whether or not and how to implement their powers based on market developments.

Citi's policy is to actively transition LIBOR contracts to new rates or suitable fallbacks because these legislative measures are not, and may never be, sufficiently advanced and certain to be relied upon. An attempt to rely on unknown mandatory replacement rates has a potential to result in unforeseen or undesirable commercial impacts. Regulators, including the FCA, have taken the same view. The FCA have specifically recommended[6] that we do not rely on these measures. Citi will monitor the situation as it changes.

[6] https://www.fca.org.uk/news/speeches/libor-are-you-ready-life-without-libor-end-2021

6. What does the FCA's announcement on future cessation and loss of representativeness of the LIBOR benchmarks mean for my LIBOR referencing contracts?

On 5 March 2021, the FCA announced that the future cessation or loss of representativeness of the 35 LIBOR benchmark settings currently published by ICE Benchmark Administration (IBA), an authorised administrator, regulated and supervised by the FCA.

The FCA LIBOR announcement states:

(i) All 35 LIBOR settings will either cease to be provided by any administrator or no longer be representative immediately after the dates set out in the table below;

(ii) That such announcement is made by the FCA in the awareness that it will engage certain contractual triggers for the calculation and future application of fallbacks that are activated by pre-cessation or cessation announcements made by the FCA (howsoever described) in contracts; and

(iii) The FCA will:

  (a) Consult on requiring IBA to continue to publish the 1-month, 3-month and 6-month GBP and JPY LIBOR settings for a further period after end-2021 on a changed methodology (also known as "synthetic") basis; and

  (b) Continue to consider the case for requiring continued publication on a synthetic basis of the 1-month, 3-month and 6-month USD LIBOR settings for a further period after end-June 2023, taking into account views and evidence from the US authorities and other stakeholders.

LIBOR Currency	LIBOR Settings	Last Date of Publication/ Representativeness	Potential for Non-Representative, Synthetic Publication
USD	Overnight and 12-month	June 30, 2023	N/A
	1-month, 3-month and 6-month	June 30, 2023	July 1, 2023 onward
	1-week and 2-month	December 31, 2021	N/A
GBP	Overnight, 1-week, 2-month and 12-month	December 31, 2021	N/A
	1-month, 3-month and 6-month	December 31, 2021	January 1, 2022 onward
JPY	Spot next, 1-week, 2-month and 12-month	December 31, 2021	N/A
	1-month, 3-month and 6-month	December 31, 2021	January 1, 2022 through December 31, 2022
EUR & CHF	All settings	December 31, 2021	N/A

The FCA LIBOR announcement may have a contractual impact on your LIBOR-referencing contracts, including with respect to triggering fallbacks relating to the cessation or loss of representativeness of LIBOR.

Citi is currently in an ongoing process of assessing the impact of the FCA LIBOR announcement and LIBOR discontinuation on impacted contracts, and we expect to be in further contact with you in the future to discuss your contract. We would encourage you to undertake a similar scoping and review exercise and to take appropriate independent professional advice (legal, tax, accounting, financial or other) so that you understand the impact on your portfolio with Citi and your business more generally.

Risk Free Rates

7. What are RFRs and how is each RFR calculated? How do they differ from IBORs?

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;
- LIBOR is a forward-looking rate, whereas RFRs are backward-looking rates;
- LIBOR contains a premium for bank credit and term 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.

8. What RFRs have been proposed as alternatives to IBORs?

Various authorities and industry working groups have identified certain RFRs as possible alternatives or fallbacks for IBORs 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 the table that 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.

9. Will there be forward-looking term RFRs 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.[7] To the extent they are launched for the different RFRs, the below updates have been made across the different markets.[8]

By way of example:

- In **Japan**, the Tokyo Term Risk Free Rate (TORF) has been published and available for use since 26 April 2021.
- 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.
- The **National Working Group on Swiss Franc Reference Rates** do not recommend the use of a forward-looking term RFR.
- In May 2021, the **New York Federal Reserve's Alternative Reference Rates Committee** (ARRC) announced it selected CME Group as the administrator that it plans to recommend for a forward-looking Secured Overnight Financing Rate (SOFR) term rate, once market indicators for the term rate are met. The ARRC had consistently stated that the recommendation was dependent on: (i) the development of sufficiently liquid SOFR derivatives markets underlying the rate; and (ii) the identification of appropriate use cases.

[7] 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
[8] FSB Progress Report on Reforming major interest rate benchmarks (18 December 2019) at: https://www.fsb.org/wp-content/uploads/P181219.pdf

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

EONIA is the current overnight benchmark rate for the Euro and the methodology for calculating EONIA has been reviewed by the Working Group on Euro Risk Free Rates to ensure its compliance with the EU Benchmarks Regulation ("EU BMR").[9] Following its review and a 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 8.5bps 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.[10]

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.

For further information, please see "ECB – Spread between EuroSTR and EONIA"[11] and Report by the Working Group on Euro Risk-Free Rates on the transition from EONIA to EuroSTR.[12]

[9] 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

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

[11] ECB – Spread between EuroSTR and EONIA https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.pr190531~a3788de8f8.en.html

[12] Report by the Working Group on Euro Risk-Free Rates on the transition from EONIA to EuroSTR https://www.ecb.europa.eu/paym/pdf/cons/euro_risk-free_rates/ecb.eoniatransitionreport201812.en.pdf

11. 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, they 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 Money Market Statistical Reporting (MMSR) Regulation.
- EONIA was calculated on the basis of 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 will now be 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.

12. How has 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 authorisation 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 the EU BMR and is expected to continue to be published by EMMI past 2021, using the new hybrid methodology.

EMMI confirmed the successful completion of the phase-in of all EURIBOR panel banks to the hybrid methodology in November 2019. EURIBOR is now based solely 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, financial or other) as you consider necessary.

In relation to changes to EURIBOR, various helpful FAQs have been published by the EMMI[13], ISDA[14] and the ECB's Working Group on Euro Risk-Free Rates.[15] The ECB also has an update on EURIBOR fallbacks.[16]

[13]FAQs published by the EMMI https://www.emmi-benchmarks.eu/assets/files/D0062A-2019%20-%20EURIBOR%20Questions%20and%20Answers.pdf
[14]FAQs published by the ISDA https://www.isda.org/a/tVtTE/ISDA-EURIBOR-reform-FAQs-10-Sept.pdf
[15]FAQs published by the ECB's working group on Euro risk-free rates https://www.ecb.europa.eu/paym/interest_rate_benchmarks/WG_euro_risk-free_rates/shared/pdf/Frequently_Asked_Questions_WG_on_risk_free_rates.pdf
[16]ECB's update on EURIBOR fallbacks https://www.ecb.europa.eu/pub/pdf/other/ecb.wgeurofr_highlevelrecommendatioseuriborfallbacks~abc6ca6268.en.pdf

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

As set out above, various components of IBORs are not included in the RFRs.

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, which is developing RFR fallbacks based on:

(i) 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

(ii) a spread adjustment using the "historical median approach" — this is an adjustment to the client spread/margin made at the point of transition which addresses bank credit risk and liquidity risk not included in RFR's and aims at reducing value transfer upon transition to the alternative reference 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.[17]
- These adjustments will be combined to produce an 'all-in' rate. Bloomberg was selected to calculate and publish the adjustments and 'all-in' fallback rates and began publishing indicative calculations in May 2020.[18]

Although alignment with the approach agreed for ISDA's proposed 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.

You should consider, to the extent applicable, engaging with relevant working groups and continue to keep under review, the potential impact of such future changes on your portfolio.

[17] ISDA Research Note, Adoption of Risk Free Rate. Major Developments in 2020
[18] Further information on the Bloomberg calculations can be found HERE and on the ISDA Benchmarks Hub.

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

The impending discontinuation of USD LIBOR will impact 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, financial or other) as appropriate.

For particular USD LIBOR issues with 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"[19] published by the Association of Banks in Singapore and the Singapore Foreign Exchange Market Committee ("ABS-SFEMC").

Benchmark Transitioning and Points for Customers to Consider

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 an IBOR, what fallbacks would apply and consider seeking independent professional advice (legal, tax, accounting, financial or other) as appropriate.

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

Citi has completed scoping IBOR-impacted client contracts and assessing amendment provisions contained within these documents. We would encourage you to undertake a similar scoping and review exercise and to take appropriate independent professional advice (legal, tax, accounting, financial 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 do I change my IBOR-impacted contract to one which incorporates one of these new RFRs? Whose consents will be required?

This will be determined on a per contract basis and 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, financial or other) as appropriate when considering whether a transition to RFRs is best achieved by amending the contract, either bilaterally or by participating in a market initiative, or replacing the product with a financial product that references the preferred RFR. The amendment process is likely to be different for each product type, and in the case of IBOR-impacted contracts for Cash products may require some amount of group consent.

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

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

[19] ABS-SFEMC Roadmap for Transition of Interest Rate Benchmarks https://abs.org.sg/docs/library/consultation-report-on-roadmap-for-transition-of-interest-rate-benchmarks-from-sor-to-sora.pdf

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, and the relevant product groups) and to consider their impact on your own business, using independent professional advisors (legal, tax, accounting, financial or other) as appropriate.

For example, the ARRC in its Best Practices for Completing the Transition to LIBOR[20] 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.

For further detail and guidance on how to prepare for transitioning to certain RFRs, please refer to the ARRC's Internal Systems & Processes: Transition Aid for SOFR Adoption,[21] the ARRC's Practical Implementation Checklist for SOFR Adoption in relation to SOFR[22] and the 2020 Top Level Priorities and Roadmap provided by the UK RFR Working Group in relation to SONIA.[23]

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 and are also working through internal steps and processes to balance benchmark transitioning with our obligations. Citi has also 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.

[20] ARRC's Best Practices for Completing the Transition to LIBOR https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Best-Practices.pdf
[21] ARRC's Internal Systems & Processes: Transition Aid for SOFR Adoption https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Internal-Systems-Processes-Transition-Aid.pdf
[22] ARRC's Practical Implementation Checklist for SOFR Adoption in relation to SOFR https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/ARRC-SOFR-Checklist-Press-Release-20190919.pdf
[23] Top Level Priorities and Roadmap provided by the UK RFR Working Group in relation to SONIA https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwgs-2020-priorities-and-milestones.pdf?la=en&hash=653C6892CC68DAC968228AC677114FC37B7535EE

Fallback Language, Legacy Business and Interaction with the Benchmarks Supplement

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 a fallback rate (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.

22. Is there standardized fallback language?

There are a range of market standard fallbacks which existed prior to IBOR discontinuation in order 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 this fallback language can be applied retrospectively.

In relation to USD LIBOR, please refer to the ARRC Fallback Contract Language webpage for a library of fallback clauses across a range of asset classes, including: Adjustable Rate Mortgages, Bilateral Business Loans, Floating Rate Notes, Securitizations, Syndicated Loans and Variable Rate Private Student Loans.[24]

23. Will Citi be amending the reference rates and/or fallback language in legacy business? If so, to what extent and when?

Citi is reviewing the industry approach in respect of a range of benchmark rates and financial products and is developing its strategy as the market reacts in respect of this issue. Liquidity Management Services ("LMS") is not implementing fallbacks and will actively transition all accounts prior to the end of 2021.

[24] ARRC Fallback Contract Language https://www.newyorkfed.org/arrc/fallbacks-contract-language

Considerations for Trade Finance and Liquidity Management Services Products

24. How will trade finance RFR products be priced? For example, how will the spread adjustment be calculated (and will there be a market standard)? Will this affect the margin for the product?

Trade products will apply applicable RFR base rates from the applicable jurisdictional and market conventions. There is expected to be an additional spread adjustment for loans transitioning from IBORs to RFRs which will be applied to the RFR base rates based on market conventions and applicable jurisdictions as they develop. The respective markets and working groups are still determining the best approach to calculate any appropriate spread adjustment (in addition to, the applicable margin for new transactions) for any such transition. The determination of the methodology for any spread adjustment is a complex process and the same approach will not necessarily be adopted for each alternative rate and jurisdiction because of, amongst other reasons, the differing quantities of available historical data and the different uses of IBORs within particular financial products.

Citi is monitoring and, to the extent applicable, engaging with these working groups but you should consider, and continue to keep under review, the potential impact of such future changes to the applicable reference rate(s).

25. What will happen to all my existing Trade finance related contracts linked to LIBOR that are set to expire after 1 Jan 2022?

Citi is currently scoping IBOR-impacted Trade contracts and assessing where amendments may be needed to cater for IBOR discontinuation and how best to make these amendments. We would encourage you to undertake a similar scoping and review exercise and to take appropriate independent professional advice (legal, tax, accounting, financial or other) so that you understand the impact of the discontinuation of any IBOR on your portfolio with Citi and your business more generally. Various authorities and industry working groups (such as ARRC and Sterling Working Group on Risk-Free Rate) are under way to establish industry standards for alternative RFRs for which the proposals are at different stages and vary in scope and transition timing. Citi will look to adhere to the regulatory timeframes that have been set-out and have commenced reaching out to clients in the first quarter of 2021. As the industry is establishing standards in different products at different paces, we will look to engage with proposed changes for the specific products and solutions as consensus is reached. Whilst we will look to align timing to the extent possible, we would want to ensure we do not limit the required time for transition.

26. Is there a specific date as to when new LIBOR-linked Trade finance loans will cease?

ARRC has issued guidelines[25] that stipulates new loans linked to LIBOR that will mature after December 31, 2021, will not be issued after June 30, 2021.

[25]https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Best-Practices.pdf

27. Will Citi inform my suppliers on the Supply Chain Finance program of changes related to LIBOR transition?

Citi's standard supplier agreements contain a form of pricing schedule which sets out (among other things) the information used to calculate the discount charge and other fees and charges in respect of receivables which are offered for sale to us. Our supplier agreements allow us to update the form of pricing schedule from time to time. If you have supply chain finance arrangements in place with us, we have provided each supplier in the second half of 2021, with an updated pricing schedule in accordance with the terms of the underlying agreement and effect the transition away from LIBOR onto Replacement Rates to take effect 30 days following the date of issuance of the revised pricing schedule.

28. How will bank accounts be impacted by LIBOR transition?

Bank accounts linked to LIBOR will be transitioned in an orderly fashion to alternative RFRs. We started reaching out to clients for the change arrangement from Jan 2021 onwards with a phased approach. To ensure we have a smooth client experience, details of your transition date and how the transition will take place will be contained within the notice of variation that we will send you.

29. Will I have a choice as to which alternative RFR to be transitioned to?

Trade intends to transition your pricing to the following RFRs by default (corresponding spread adjustments will be communicated):

- For USD LIBOR, we will transition your pricing to SOFR;
- For GBP LIBOR, we will transition your pricing to SONIA;
- For EUR LIBOR, we will transition your pricing to €STR / EURIBOR;
- For CHF LIBOR, we will transition your pricing to SARON;
- For JPY LIBOR, we will transition your pricing to TONA.

Liquidity Management Services intends to transition your accounts to the following O/N rates (with a corresponding spread adjustment) by default:

- For USD LIBOR, we will transition your relevant accounts to EFFR;
- For GBP LIBOR, we will transition your relevant accounts to SONIA;
- For EUR LIBOR and EONIA, we will transition your relevant accounts to €STR;
- For CHF LIBOR, we will transition your relevant accounts to SARON;
- For JPY LIBOR, we will transition your relevant accounts to TONA.

If you would like to discuss this or request an alternative, please contact your relationship manager.

30. How is spread adjustment calculated for my LMS facility, and why is this different from Bloomberg spread adjustments?

(i) The "historical median approach" involves applying a spread adjustment based 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 was calculated separately for each IBOR tenor. This approach is consistent with the ISDA recommended approach for calculating the spread adjustment.

The chosen five year lookback period within LMS was January 1st 2016 to December 31st 2020. This period was chosen to coincide with the beginning of industry timelines to help give better clarity to clients ahead the planned transition from IBORs at the start of 2021. As this is a static period, the Spread Adjustment applied to your facility will be fixed.

(ii) Bloomberg spread adjustments are calculated to account for the difference between like-for-like tenors of term IBORs and compounding in arrears term RFRs — for example the difference between 3m GBP LIBOR and 3m compounding in arrears SONIA. LMS migrated clients to overnight RFR instead of term RFR, and therefore will not offer different spread adjustments for each tenor. LMS is also using a different 5 year median period when compared to Bloomberg (LMS' 5 year median period ends on 31st Dec-2020 but Bloomberg's in March 2021) due to the timing of LMS outreach, which makes the calculation of the 5 year spread adjustment slightly different comparing term IBOR to RFR overnight rate, but nonetheless follows the same methodology. This means the chosen LMS Spread Adjustments are not published externally, however these have been advised to clients as part of the migration process via their unilateral variation notice.

Note: Where RFR's were not available for the full five year lookback period, proxy benchmarks were used for the unavailable time period as chosen by the administrators of the benchmark as their preferred alternative.

31. How will this impact my Interest Re-allocation setup in my liquidity structure?

If your existing Interest Re-allocation setup is based on LIBOR, EONIA or rates that either directly or indirectly reference to IBOR, it will be transitioned to a suitable RFR. It is advisable that you review your existing Interest Re-allocation arrangements carefully and seek independent professional advice (legal, tax, accounting, financial or other), as appropriate.

In order to properly reflect the mechanics of the RFRs, we will be changing the manner on how interest is calculated under the Interest Re-allocation arrangement, to which we will provide further updates in due course.

32. I have liquidity setup and cash operating accounts in many countries, will they be treated differently?

As part of the LIBOR transition, we will be informing you of the proposed alternative rate and any spread adjustment. It will be applied to your existing liquidity structure or accounts uniformly at the target effective date. To ensure a smooth client experience, details of your transition date and how the transition will take place will be contained within the notice of variation that we will send you. This will be done in accordance with the requirements of the country in which the header account is held, and this may involve communication with the entity of the header and source accounts.

33. What will happen to my liquidity structure or operating accounts linked to Non Overnight LIBOR? I.e. 1 month LIBOR

Your liquidity structure or account will be transitioned to an alternative benchmark RFR that we have deemed suitable. With the exception of SONIA there are no forward looking term rates available for the chosen risk-free-rates RFRs, so we will transition your accounts including those linked to non-overnight rates to overnight rates. We will amend your spread accordingly and apply a spread adjustment to your existing margin to take into account the difference between term and overnight rates.

34. Can I ask the bank not to transition my accounts to the new RFR or can I request to transition to a different rate?

IBOR rates are anticipated to cease publication by as early as the end of 2021, and in line with targets set by regulators and industry working groups, we will need to transition your accounts to alternative rates before then. However, if you want to further explore other pricing structures or transition to differing rates, please contact your Citi relationship manager as indicated within your notice of variation before the transition date.

35. I have an overdraft that is not managed by Liquidity Management Services. What will happen to this?

If you have an overdraft or revolving loan that is not entered under the Liquidity Management Services account opening and account maintenance terms, for example a credit facility letter or credit agreement, we will write to you separately in regards to this.

This may affect overdrafts offered in: India, Sri Lanka, Korea, Bangladesh, Malaysia, Taiwan, Hungary, Slovakia, Czech Republic, Bulgaria, Romania, Russia, Ukraine, Kazakhstan, Lebanon, Bahrain, Qatar, Pakistan, Egypt, Kuwait, Israel, Turkey, Jordan, Algeria, Morocco, Tunisia, UAE, Hong Kong, Singapore, China, Thailand, Indonesia and Vietnam.

36. What if the benchmark applied to my LMS account is not an externally published IBOR rate however tracks to an IBOR rate, e.g. London Interbank Bid Rate (LIBID)?

In this scenario, we will transition the arrangements to the applicable replacement reference rate as set out in the LMS unilateral variation notice. Any fixed spreads currently included as part of the applicable benchmark rate will continue to be applied, together with the applicable adjustment spread, and added to the margin that we currently apply on our LMS products.

37. Why have LMS opted to use Fed Funds Effective (EFFR) v SOFR?

Liquidity Management Services opted to use EFFR as their default replacement rate to USD Libor.

EFFR was selected as the default option for Liquidity Management Services because:

- It has historically been commonly used as an index from pricing deposits on both the credit and debit interest sides of the account.
- It has a longer track record (SOFR has been published since 2018 only).
- EFFR is seen as a more consistent and less volatile alternative to overnight SOFR.
- Pre-migration client outreach suggested that EFFR was the preferred benchmark for non-contractual overnight deposit pricing.

That having been said, we do have the capability to offer SOFR and can accommodate client requests to do so. You should consider seeking professional independent advice (legal, tax, accounting, regulatory, financial, or otherwise) in respect of these alternative rates as appropriate.

38. Will Synthetic IBORs be used for calculation interest on my LMS accounts?

Synthetic IBOR was not part of the LMS transition strategy for the legacy portfolio. Should it be considered for new business, information will be communicated as appropriate.

39. Are LMS adopting Term RFRs as part of transition strategy?

LMS products in general are overnight in nature and non contractual, therefore term RFRs were not part of the strategy for the migration of the legacy portfolio and any existing account linked to term IBOR was migrated to the overnight RFR or Fed Effective with the commensurate adjustment spread. As of the time of this publication, term RFRs are not part of the LMS rate strategy, but should that change in the future, it will be communicated as appropriate.

Definitions

"**AONIA**" means the RBA Interbank Overnight Cash Rate.

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

"**ARRC**" means the Alternative Reference Rates Committee, the working group established by the Federal Reserve.

"**BBSW**" means the Bank Bill Swap Rate.

"**CDOR**" means the Canadian Dollar Offered Rate.

"**CORRA**" means the Canadian Overnight Repo Rate Average.

"**ECB**" means the European Central Bank.

"**EFFR**" means the Effective Fed Funds Rate.

"**EMMI**" means the European Money Markets Institute.

"**EU BMR**" means the EU Benchmarks Regulation.

"**EURIBOR**" means Euro interbank offered rate.

"**EONIA**" means the Euro Overnight Index Average.

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

"**FCA**" means the UK Financial Conduct Authority.

"**FSB**" means the Financial Stability Board.

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

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

"**HONIA**" means the HKD Overnight Index Average.

"**IBOR**" means an interbank offered rate.

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

"**LIBOR**" means the London interbank offered rate.

"**O/N**" means Overnight.

"**RBA**" means the Reserve Bank of Australia.

"**RFR**" means risk-free rate.

"**SARON**" means the Swiss Average Rate Overnight.

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

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

"**SOR**" means the Singapore Swap Offer Rate.

"**TIBOR**" means the Tokyo interbank offered rate.

"**TONA**" means the Tokyo Overnight Average Rate.

Appendix

For FAQ 6:

Country	IBOR Rate	Status	Alternative RFR	RFR Administrator	Transition Committee	Link to Published Rate
United Kingdom	GBP LIBOR	Expected to cease	SONIA	Bank of England	Sterling Working Group on Risk-Free Rates	SONIA
United States	USD LIBOR	Expected to cease	SOFR/EFFR	Federal Reserve Bank of New York	Alternative Reference Rates Committee (ARRC)	SOFR EFFR
Europe	EUR LIBOR	Expected to cease	€STR/ EuroSTR	European Central Bank	ECB Working Group on Euro Risk-Free Rates European Money Markets Institute (EMMI) and Euro RFR Working Group	€STR
	EURIBOR	Being reformed but expected to continue				
Japan	JPY LIBOR	Expected to cease	TONA	Bank of Japan	Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks	TONA
	TIBOR	Being reformed but expected to continue publication in near term				
	Euroyen TIBOR					
Switzerland	CHF LIBOR	Expected to cease	SARON	Swiss National Bank	The National Working Group on Swiss Franc Reference Rates	SARON
Canada	CDOR	Expected to continue	CORRA (will exist alongside CDOR)	Bank of Canada	Canadian Alternative Reference Rate Working Group (CARR)	CORRA
Australia	BBSW	Reform (continue)	RBA Cash Rate (AONIA) (will exist alongside BBSW)	Reserve Bank of Australia	Australian Financial Markets Association	AONIA
Hong Kong	HIBOR	Reform (continue)	HONIA (will exist alongside HIBOR)	The Treasury Markets Association	Treasury Markets Association's Market Practices Committee	HONIA

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