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Glossary

ARR	Alternative reference rate
CHF	Swiss Franc
EUR	Euro
EURIBOR	Euro Interbank Offered Rate
FCA	Financial Conduct Authority (UK regulator)
GBP	Pound Sterling
IBOR	Interbank Offered Rate
ICE	ICE Benchmark Administration (LIBOR administrator)
JPY	Japanese Yen
LIBOR	London Interbank Offered Rate
RFR	Risk-free rate
SARON	Swiss Average Rate Overnight
SOFR	Secured Overnight Financing Rate
SONIA	Sterling Overnight Index Average
TORF	Tokyo Term Risk Free Rate
USD	US Dollar

The Background to Benchmark Transitioning

1. What is LIBOR?

LIBOR stands for the London Interbank Offered Rate and derives from the rate at which banks can borrow from other banks. LIBOR is used to price or value a wide range of financial products, including loans, mortgages, bonds and derivatives. LIBOR is published in 5 currencies (US Dollar (USD), Pound Sterling (GBP), Euro (EUR), Swiss Franc (CHF) and Japanese Yen (JPY)). It is a forward-looking term rate, which takes into account the credit risk banks would face when lending to one another over a certain period, e.g. 1 month, 3 months, 1 year.

2. Why is LIBOR being discontinued?

LIBOR is determined by quotes submitted to the authorised administrator of LIBOR (ICE Benchmark Administration (ICE)) from panel banks. These submissions are intended to reflect the interest rate at which banks could borrow money on unsecured terms in wholesale markets. However, over time, banks have shifted away from unsecured interbank lending in favour of alternative funding models. As a result, the number of transactions underpinning LIBOR has reduced, making many of the rates heavily reliant on 'expert judgement' by the panel banks. This has led to various regulatory authorities, including the FCA, forming the view that LIBOR needs to be replaced.

3. When will LIBOR be replaced?

Certain markets may transition away from LIBOR and onto alternative reference rates (ARRs), especially risk-free rates (RFRs), before the end of 2021, and different currencies and financial products are likely to move at different speeds. Where applicable, we have sent you a notice to confirm the timing of LIBOR transition as it applies to your LIBOR-linked product(s) held with us before migration takes place. In the meantime, you can obtain further information about LIBOR transition from the Bank of England and FCA websites using the following links:

https://www.bankofengland.co.uk/markets/transition-to-sterling-risk-free-rates-from-libor
https://www.fca.org.uk/markets/libor

We note that ICE has confirmed in the following feedback statement (accompanied by a corresponding FCA announcement) that it will cease the publication of:

- All tenors of EUR, CHF, JPY and GBP LIBOR, to take effect after the publication of LIBOR on 31 December 2021;
- 1 week and 2 month tenors of USD LIBOR, to take effect after the publication of LIBOR on 31 December 2021; and
- Overnight and 1, 3, 6 and 12 month tenors of USD LIBOR, to take effect after the publication of LIBOR on 30 June 2023.

Additionally, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation (together, the US Banking Agencies) in the US released a statement explaining that the 30 June 2023 cessation date would allow time for "legacy contracts" in USD LIBOR executed before 1 January 2022 to mature. The guidance further noted that the US Banking Agencies encourage banks to stop entering into new USD LIBOR based contracts by the end of 2021.

4. What steps is the industry taking to determine alternative rates that could be used in place of LIBOR?

In preparation for the transition away from LIBOR, various authorities, industry bodies and trade associations have identified certain RFRs as possible replacements for LIBOR and/or are considering how existing benchmark rates might be reformed.

The industry is also considering what forms of RFRs should be applied to various products as ARRs to LIBOR. Different forms of RFRs that a firm could choose from might include the following:

- the RFR itself, which is an overnight rate (see FAQ 5);
- a term RFR, which is a published rate representing the market's estimate of the future value of the overnight RFR (see FAQs 8 and 9); and
- compound rates, which are published rates representing RFR values compounded over a period of time (see FAQ 10).

Supervisory authorities and industry groups have been considering the most appropriate use of ARRs per product group. For example, the Bank of England has accepted that Term SONIA is appropriate for use with retail GBP transactions. For more details on the different ARRs we will apply to our existing products, please see FAQ 7.

RFRs and Existing LIBOR-linked Products

5. What are risk-free rates (RFRs)?

RFRs are overnight rates, which are traditionally backward-looking. This means that they are published after the period to which they relate. RFRs are considered to be more robust and representative than LIBOR. This is because they are based on overnight interest rates in wholesale markets, so are close to a risk-free measure of borrowing costs.

Various authorities and industry working groups have identified certain RFRs as possible alternatives to LIBOR and/or have considered how existing benchmark rates might be reformed. The proposals for each LIBOR currency and the potential replacement RFR are at different stages and vary in scope and transition timing. We have closely considered these initiatives, together with guidance published by key regulators and authorities. Please see FAQ 7 for details on certain RFRs that we will apply as ARRs to our existing products.

You should consider now, and continue to keep under review, the potential impact of such future changes to the reference rates of the financial products you hold and the services you receive from us.

6. How is each RFR calculated? How do they differ from LIBOR?

RFRs are calculated on a different basis to LIBOR and are therefore not like-for-like replacements. The main differences are as follows:

- LIBOR is set at or prior to the commencement of the period to which it relates, allowing for certainty as to the amount of interest which will be payable at the end of that period. This makes LIBOR a forward-looking term rate. It is published across multiple tenors (for example overnight, 1 week, 1 month, 2 months, 3 months, 6 months and 12 months). By contrast, RFRs are backward-looking overnight rates with no term element.
- LIBOR contains a premium for bank credit and liquidity risk. In general, RFRs contain little or no such additional premium because they are overnight rates and sometimes secured.
- LIBOR is administered by a single benchmark administrator for all currencies but the RFRs will each have their own administrator(s) and distinct characteristics.

This means that replacing LIBOR with RFRs is a complex and evolving process. We will be applying an adjustment spread to the interest rate that we apply to our products in order to account for the expected differences between LIBOR and RFRs described above. This adjustment should help to reduce the risk that a party is financially worse off as a result of the switch from LIBOR to RFRs (see FAQ 12 for further information on adjustment spreads). Where applicable, we have sent you a notice to give you reasonable notice of these changes.

7. Which interest rate benchmark will my LIBOR-linked product migrate to?

Where applicable, we have sent you a notice setting out the ARRs that we have chosen for your product.

As these rates are not like-for-like replacements, we will be applying an adjustment spread, as described in FAQ 12. For further details on the migration process, please see FAQ 13. Additionally, we note that the ARRs will be published a day or two later as compared to LIBOR. This is unlikely to materially affect the operation of the ARRs in practice.

The ARR value that we will apply to your product for each interest payment period will be the rate obtained from Reuters on the relevant calculation day. Please note that Term SONIA is currently available and published by both ICE and Refinitiv, and that Citi has chosen Refinitiv as its vendor for Term SONIA.

8. What is a term rate?

Like LIBOR, term rates are forward-looking rates and published every day by a benchmark administrator. Unlike LIBOR, however, term RFRs represent market expectations as to the future value of RFRs over a specified tenor period – rather than market expectations about the rate at which banks can borrow from other banks. In place of panel bank submissions, benchmark administrators will calculate a forward-looking term rate by taking an average of the quotes for transactions in underlying derivatives markets referencing RFRs in the relevant currency and for the relevant tenor.

For example: if the benchmark administrator were to publish today a rate of 2% for 3-month Term SONIA, this would mean that participants in the overnight indexed swap markets have on average priced their GBP transactions on the expectation that the future interest rate path, i.e. daily compounded SONIA, will be around 2% over three months in the future.

9. Are there any risks associated with term RFRs?

Supervisory authorities and industry groups have indicated that term RFRs are not appropriate for all end-users, other than in a limited number of specified cases. These limited use cases include retail products, where customers need advance knowledge and certainty of their interest rate obligations.

As mentioned in FAQ 8, term rates are derived from quotes in derivative markets for interest rate swaps based on RFRs. Term SONIA, for example, is based on the underlying market for SONIA. The robustness of term rates therefore depends on the liquidity in swap markets referencing RFRs. It is not yet clear whether the volume of swaps data available will be as large as in overnight funding markets, such that Term SONIA may not be as robust as SONIA.

Additionally, the methodology used for constructing Term SONIA relies on transaction data from market participants who may themselves also provide products based on Term SONIA. This potential conflict could impact the willingness of market participants to provide quotes and further undermine the robustness of Term SONIA.

10. What are compound rates?

The Swiss authorities have indicated that a term rate for SARON will not be developed as the underlying markets are not liquid enough. Instead, the retail markets are adopting the SARON Compound Rate published by SIX as an appropriate calculation convention for agreements where the applicable interest rate must be specified at the start of an interest period.

SIX obtains the SARON Compound Rate by compounding SARON values for each day over a specified observation period. For example, in calculating the 3-month SARON Compound Rate, SIX compounds the daily SARON values over the preceding three months, ending on the business day on which the SARON Compound Rate is published. Therefore, when we apply the 3-month SARON Compound Rate at the start of your interest period, this is called 'compounding in advance' as we are applying a rate based on compounded values from the previous three months (as calculated and published by SIX) to the upcoming three months. For more information on how the SARON Compound Rate is calculated, please visit https://www.six-group.com/en/products-services/the-swiss-stock-exchange/market-data/indices/swiss-reference-rates/saron-compound-indices.html.

Similarly, Term SOFR is not currently widely adopted and industry groups have indicated that it may not be appropriate for use by the Switchover Date. Instead, we have identified the SOFR Average as another replacement rate for USD LIBOR, which can be adopted as an appropriate calculation convention for agreements where the applicable interest rate must be specified at the start of an interest period. The Federal Reserve Bank of New York (also known as the New York Fed) obtains the SOFR Average by compounding SOFR values for each day over a specified observation period. For example, in calculating the 90-day SOFR Average, the New York Fed compounds the daily SOFR values over the preceding three months, ending on the business day before the SOFR Average is published. Therefore, when we apply the 90-day SOFR Average at the start of your interest period, this is called 'compounding in advance' as we are applying a rate based on compounded values from the previous three months (as calculated and published by the New York Fed) to the upcoming three months. For more information on how the SOFR Average is calculated, please visit the New York Fed website.

11. Is EURIBOR not still an IBOR?

EURIBOR will remain an interbank rate, but is not calculated in the same way as EUR LIBOR. The EU authorities have already reformed the calculation methodology for EURIBOR such that it more closely resembles the term rates described above than EUR LIBOR. This is because EURIBOR now relies in part on market data based on transaction pricing and panel bank submissions are no longer critical to its functioning.

12. Will I end up paying more under my contract when LIBOR is transitioned to the new benchmark? What is an adjustment spread?

Depending on how a new RFR compares to LIBOR, this may mean that RFR-linked payments may be more or may be less than they would otherwise have been if linked to LIBOR. As set out above, various components of LIBOR will not be included in the RFRs and so adjustments are needed to address:

- the difference between LIBOR as forward looking rates and RFRs as overnight rates; and
- bank credit risk and liquidity risk included in LIBOR.

The markets have developed a standardised adjustment spread to account for the components that may cause differences in the values of RFRs and LIBOR. These standardised spreads are published by Bloomberg and have now been set. They have been calculated based on the historic performance of LIBOR as compared with the overnight RFRs.

The adjustment spreads are as follows:

Existing LIBOR rate	ARRs	Adjustment spread (3-month tenors)
USD LIBOR	SOFR Average	+0.26161%
USD LIBOR	Term SOFR	+0.26161%
GBP LIBOR	Term SONIA	+0.1193%
EUR LIBOR	EURIBOR	N/A
CHF LIBOR	SARON Compound Rate	+0.0031%
JPY LIBOR	TORF	+0.00835%

Please note that we may round the sum of ARR + adjustment spread to the nearest second decimal for the effective application of interest. Additionally, in order to ensure consistency across our customer base affected by LIBOR transition, we will apply the adjustment spreads in the same manner where your current reference rate (regardless of whether it is based on a fixed rate or a variable LIBOR) is moving to an ARR on and from the Switchover Date.

Example (the figures chosen are for illustration purposes only and not reflective of actual pricing on our contracts): You currently pay a rate specified to be 3-month USD LIBOR + 1%. Our plan is to migrate all USD LIBOR referencing advances to SOFR Average, and before the Switchover Date we communicate to you our decision to apply SOFR Average from the Switchover Date. However, SOFR Average historically has tracked lower than USD LIBOR. This means that 90-day SOFR Average + 1% would not be a direct economic equivalent to your previous rate based on LIBOR. Bloomberg estimates the rough difference between 3-month USD LIBOR and 90-day SOFR Average to be 0.26161%. We would therefore calculate your new rate to be 90-day SOFR Average + 0.26161% + 1%.

Although it would be impossible to achieve absolute economic equivalence between LIBORs and RFRs, adopting the standardised approach to the adjustment spread should help reduce the risk that either party is financially worse off. Additionally, please note that the adjustment spreads will be the same for each RFR regardless of the form of RFR being used (e.g. term RFRs, compound rates).

13. What is the timing for migration for existing LIBOR-linked products?

We are expecting to apply ARRs to most affected existing contracts on 30 September 2021 (the ‘Switchover Date’).

The Switchover Date precedes the expected discontinuation of LIBOR on 31 December 2021 by around 3 months. This is for operational reasons, in order to allow legacy contracts across our portfolio to transition in the manner described below. It also creates a contingency period in the event that LIBOR ceases accurately to represent market conditions before it in fact ceases to be published.

Where applicable, we have sent you a notice which constitutes reasonable notice of the ARRs we will apply to existing contracts from the Switchover Date. Alternatively, you may have entered into a contract with us after 1 April 2021 which references a fixed rate for GBP advances and which automatically switches to a variable rate based on Term SONIA from the Switchover Date. Additionally, due to operational reasons from 1 July 2021 we may have mutually agreed in a Drawdown Form or an Amendment Form that you will pay a fixed rate for CHF and JPY advances, even though your underlying contract references LIBOR (see FAQ 15).

The Switchover Date represents the date on which the rate change becomes contractually effective, but you might not be required to make payments based on ARRs immediately from that date if you have an outstanding advance. If we made you an advance under a LIBOR-linked product before the Switchover Date, and the Switchover Date falls in the middle of an interest period, you will pay interest based on your current reference rate (LIBOR or a fixed rate) for the remainder of that interest period. In other words, you would only start making interest payments based on ARRs from the first interest reset date on or after the Switchover Date.

Example 1: You have an existing lending product with us and pay interest every three months. You have an outstanding EUR advance on which you pay a rate based on EUR LIBOR. We set your EUR LIBOR rate on 1 August 2021 at the beginning of your three-month interest payment period. However, the Switchover Date is due to occur on 30 September 2021, two thirds of the way through your interest period. Despite the switch, you will continue to pay the EUR LIBOR rate for the remainder of the interest period until 31 October 2021. From 1 November 2021, the start of the next interest payment period when we refresh your rate, you will pay a rate based on EURIBOR.

Example 2: You have an existing lending product with us and pay interest every three months. You have an outstanding CHF advance on which we have mutually agreed in a Drawdown Form that you will pay a fixed rate of interest, even though your underlying contract references LIBOR (see FAQ 15). We set your fixed rate on 1 August 2021 at the beginning of your three-month interest payment period. However, the Switchover Date is due to occur on 30 September 2021, two thirds of the way through your interest period. Despite the switch, you will continue to pay the fixed rate for the remainder of the interest period until 31 October 2021. From 1 November 2021, the start of the next interest payment period when we refresh your rate, you will pay a variable rate based on SARON Compound Rate.

In the meantime, we would encourage you to undertake a review of your LIBOR-linked products and to take appropriate independent professional advice (legal, tax, accounting, financial or other) so that you understand the impact of the discontinuation of any LIBOR on your products with Citi and more generally.

14. What is meant by "fallback language" and "trigger events"?

"Fallback language" refers to the legal provisions in a contract that apply if the underlying reference rate in the product (e.g. LIBOR) is permanently discontinued, ceases to be available or there has been an announcement or determination 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:

- details of the trigger events, which is an event that brings about the need to rely on the fallback language (such as LIBOR not being available); and
- the fallback rate: the rate, or the approach to determining that rate (including any adjustment) which is to be used in place of the relevant LIBOR that is unavailable.

Your contract may include fallback language. If it does, that language will detail the trigger events relevant to that product together with details of the fallback rate or how that rate will be determined. Where we are not able to provide the exact fallback rate in your existing contract, we will have explained our approach to determining that rate.

15. Can I continue to request LIBOR-linked advances under an existing facility agreement during this year?

Until the Switchover Date, you can continue to draw down under existing facility agreements in USD and EUR and pay an interest rate based on LIBOR in the appropriate currency and tenor (to the extent that your existing facility agreement allows you to do so).

However, since 1 April 2021 Citi has been unable to extend new GBP LIBOR-linked loans in order to comply with the expectations of the UK regulators. The restriction on using GBP LIBOR as a reference rate also extends to new GBP advances under existing facility agreements, as well as currency switches and automatic renewals of an outstanding GBP balance. Instead of GBP LIBOR, Citi is now offering a different rate for GBP loans, which is based on a fixed rate. Additionally, due to operational reasons from 1 July 2021 we have stopped using CHF LIBOR and JPY LIBOR as a reference rate for CHF and JPY advances and are instead offering CHF and JPY advances based on a fixed rate instead.

If your loan is up for renewal in the near future, and you plan to request an advance in GBP, CHF or JPY under an existing facility, or change the currency of an outstanding advance to GBP, CHF or JPY, we recommend that you get in touch with your Relationship Manager. Your Relationship Manager can tell you whether you will be affected by these changes and, if so, can discuss alternative pricing not based on LIBOR until the Switchover Date.

General Matters

16. What can I do to prepare for the transition away from LIBOR?

We encourage you to keep up-to-date with the latest industry developments in relation to benchmark transitioning (for example, by monitoring the announcements of industry working groups, trade associations and regulators) and to consider the impact of those developments on your products, using independent professional advisors (legal, tax, accounting, financial or other) as appropriate.

17. What has Citi done so far in relation to LIBOR transitioning?

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

Please see FAQ 7 for further information on the ARRs Citi may apply to its existing products and the challenges associated with these.

We will communicate with you in good time if there are any changes to information previously communicated to you.

18. What should I do if I would like to discuss this topic with Citi?

You should contact your Relationship Manager.

Please note that “Citi” refers to Citi’s Global Consumer Bank in Asia-Pacific, Europe, Middle East and Africa.