

LIBOR Transition in the Loan Markets

Frequently Asked Questions

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Glossary

Amendment Approach	See paragraph 2.3.
April 2020 SWG Statement	See paragraph 2.1.
ARRC	Alternative Reference Rate Committee. Established by the Federal Reserve Board and the Federal Reserve Bank of New York to help ensure a successful transition away from US dollar LIBOR across the markets that have historically used it.
Bloomberg Spreads	See paragraph 4.6.
BMR	EU Benchmarks Regulation (the EU BMR) or, from 1 January 2021, the equivalent legislation incorporated into UK domestic law as retained EU law (the UK BMR). See paragraph 1.7.
compounded RFR	See paragraph 3.1.
Euro Working Group	The Working Group on Euro Risk-Free Rates. Established by the ECB, ESMA, the European Commission and the Belgian Financial Services and Markets Authority to identify and recommend RFRs that could serve as an alternative to EURIBOR and EONIA.
FCA	The UK Financial Conduct Authority, being the regulator of LIBOR.
FMSB	The Fixed Income, Currencies and Commodities Markets Standards Board.
forward term RFRs	See paragraph 3.11.
Hard-Wired Fallback	See paragraph 2.3.
Hard-Wired Switch	See paragraph 2.3.
IBA	ICE Benchmark Administration Limited, being the administrator of LIBOR.
ISDA	International Swaps and Derivatives Association.
legacy LIBOR loan	An existing LIBOR-based loan with a term continuing beyond LIBOR's anticipated date of discontinuation for the relevant tenor and currency.
LMA	Loan Market Association.
LMA RFR Facility Agreement	See paragraph 1.5.
March 2021 FCA Statement	See paragraph 1.1.
RFR	Overnight, virtually risk-free rate. See paragraph 1.3.
Sterling Working Group	Bank of England Working Group on Sterling Risk-Free Reference Rates. Established to help ensure a successful transition away from sterling LIBOR across the markets that have historically used it.

Introduction

For several decades, a significant proportion of financing transactions denominated in sterling, US dollars, euro, Swiss franc and Japanese yen have used LIBOR as a reference rate to determine amounts payable (in particular interest payable) under the relevant financing transaction. Transitioning away from LIBOR is now a top priority for many financial institutions in Europe (including the UK), the US, the Middle East and beyond. LIBOR's imminent discontinuation is also increasingly concerning the even wider group of stakeholders, including businesses and consumers, who use products referencing LIBOR. This note answers the questions we are most frequently asked by financial institutions and their customers about LIBOR transition in the loan markets. The note's primary focus is on commercial loans under English law documentation. However, some of the answers refer to, or will also be relevant in, other financing contexts.

The original version of this note was published in February 2020. It has now been updated to describe the position up to 22 October 2021. Key developments since we last updated the note in early July 2021 include:

- announcements by the FCA on the continued publication of certain tenors of sterling and Japanese yen LIBOR during 2022 on a synthetic basis (see paragraph 1.1);
- the ARRC's formal recommendation of forward term SOFR (see paragraph 3.11); and
- further legislative developments in the UK, US and EU to address "tough legacy" LIBOR contracts (see paragraphs 4.3 and 4.4).

We have also added new commentary on use of market disruption clauses in RFR-based loans (see paragraph 3.9) and approaches to documenting the amendment of legacy LIBOR loans (see paragraph 4.9).

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1 Background

1.1 When will LIBOR cease to be published?

It depends on the currency and tenor.

Since the start of the LIBOR transition process, the end of 2021 has been seen as a key deadline: on 27 July 2017 Andrew Bailey, then chief executive of the FCA, announced that the FCA would no longer persuade or compel LIBOR panel banks to continue making LIBOR submissions after 2021. For some time after this announcement, regulators emphasised the need for market participants to prepare for discontinuation of LIBOR across all currencies and tenors by the end of 2021.

However, the transition away from LIBOR has occurred more quickly in some LIBOR currencies than others, and the amendment of existing LIBOR-based contracts has been more straightforward in some product areas than others. On 5 March 2021, the FCA published [a statement](#) (the **March 2021 FCA Statement**) announcing the dates of the future cessation or loss of representativeness of all 35 LIBOR settings currently published by IBA. This confirmed that, though LIBOR in the form in which it is currently calculated (**Panel Bank LIBOR**) will cease to be published on 31 December 2021 for all non-US dollar LIBOR currencies and tenors:

- publication of Panel Bank LIBOR for some US dollar tenors will continue until 30 June 2023; and
- the FCA may require IBA to continue publishing some sterling, Japanese yen and US dollar LIBOR settings on a non-representative, synthetic basis (**synthetic LIBOR**), under powers set out in UK BMR (on which see paragraph 4.3, after publication of Panel Bank LIBOR for those settings has been discontinued.

The FCA has subsequently exercised these powers in respect of one, three and six month sterling and Japanese yen LIBOR by delivering notices to IBA on [10 September 2021](#) and [29 September 2021](#)¹. Together, the notices require IBA to publish synthetic LIBOR for those currencies and tenors throughout 2022. The [29 September 2021](#) notice also prescribed the methodology for calculating synthetic LIBOR for this purpose, being in each case a published forward term RFR (on which see paragraph 3.11) plus the relevant Bloomberg Spread (on which see paragraph 4.6). For information on permitted use of these synthetic LIBOR, see paragraph 4.3.

The FCA confirmed in the March 2021 FCA Statement that it will not extend this instruction to the IBA beyond 2022 for one, three or six month Japanese yen LIBOR, but has not ruled out doing so for one, three or six month sterling LIBOR.

Table 1 provides a summary of the discontinuation dates for each LIBOR currency and tenor.

¹ The FCA publicised these notices in [this press release](#) on 29 September 2021.

Table 1

LIBOR currency	Tenors	Discontinuation date of Panel Bank LIBOR	Publication of synthetic LIBOR after discontinuation of Panel Bank LIBOR?
US dollar	1 week and 2 month	31 December 2021	No
	Overnight and 12 month	30 June 2023	No
	1 month, 3 month, 6 month	30 June 2023	FCA to consider publishing for an unspecified period.
Sterling	Overnight, 1 week, 2 month, 12 month	31 December 2021	No
	1 month, 3 month, 6 months	31 December 2021	Yes, until end of 2022. Publication may continue after that date.
Euro	All	31 December 2021	No
Swiss franc	All	31 December 2021	No
Japanese yen	Spot Next, 1 week, 2 month, 12 month	31 December 2021	No
	1 month, 3 month, 6 month	31 December 2021	Yes, until end of 2022. No publication after that date.

1.2 Why are regulators so keen for the financial markets to stop using LIBOR?

The two main reasons are:

- the underlying market that LIBOR has historically sought to measure – the market for unsecured wholesale term lending to banks – has not been an active market since the financial crisis; and
- the financial markets' over-reliance on LIBOR creates systemic risk.

The second of these points is particularly key. LIBOR has evolved significantly in recent years such that it is arguably no longer even an interbank rate. In April 2019, IBA completed the transitioning of LIBOR panel banks onto a new "Waterfall Methodology". It now describes LIBOR as *"a wholesale funding rate anchored in LIBOR panel banks' unsecured wholesale transactions to the greatest extent possible, with a waterfall to enable a rate to be published in all market circumstances"*. If LIBOR, as reformed in this way, were still only being used for its original purpose – to price loans arranged in London – regulators might have been less concerned about its ongoing use. Compare, for example, the regulators' approach to EURIBOR (see paragraph 1.8).

1.3 What are RFRs and how are they relevant to LIBOR transition?

Across the full range of financial products that have historically used LIBOR, regulators want market participants to use rates based on overnight, virtually risk-free rates (**RFRs**) instead². Regulators in the home jurisdictions of each of the five current LIBOR currencies have

² Although this is not necessarily the case where other IBORs have been used to date. See paragraph 1.8.

identified the preferred RFR for their local currency, each of which is now published, as shown in Table 2.

Table 2

Currency	Approved RFR	Administrator	Secured or unsecured?
US dollar	SOFR (Secured Overnight Financing Rate)	Federal Reserve Bank of New York	Secured
Sterling	SONIA (Sterling Overnight Index Average)	Bank of England	Unsecured
Euro	€STR (Euro Short-Term Rate)	European Central Bank	Unsecured
Swiss franc	SARON (Swiss Average Rate Overnight)	SIX Swiss Exchange	Secured
Japanese yen	TONA (Tokyo Overnight Average Rate)	Bank of Japan	Unsecured

Regulators prefer RFRs to IBORs because RFRs are:

- based on deep, highly liquid, overnight borrowing markets; and
- calculated by reference to recorded transactions in those markets, rather than relying on submissions from panel banks.

However, there are disadvantages to using RFRs instead of LIBOR in the loan markets. These include:

- different RFRs measure different types of overnight borrowing (some secured and some unsecured, see Table 2), have different calculation methodologies and are published at different times, in each case in the principal financial centre of the currency for which they have been developed; and
- RFRs have only a single tenor – overnight. "Raw" RFRs are therefore not well suited to fixing a rate of interest in advance over a typical interest period. For more information on how RFRs are being used in the loan markets, see paragraph 3.

1.4 What are credit adjustment spreads and how are they relevant to LIBOR transition?

Credit adjustment spreads are particularly relevant in the context of transitioning LIBOR-based agreements to RFR-based alternative rates, whether that transition occurs by amending existing contractual terms, or through "hard-wired" fallback or switch mechanics (see paragraph 2.3).

In either case, the transition from LIBOR to an RFR-based rate should avoid any transfer of economic value between the parties. The total amount of interest the borrower pays after the transition should – to the extent possible – stay the same.

An RFR does not price in bank credit risk or term risk so will inevitably be lower than a term LIBOR (e.g. of one, three or six months) in the same currency. Compounded RFRs (see paragraph 3.1) and forward term RFRs (see paragraph 3.11) are likely to be higher than "raw" daily RFRs, but they will still be lower than LIBOR. Therefore, where LIBOR is replaced in an existing contract with an RFR-based rate, adding a credit adjustment spread to the latter is a useful method of avoiding any transfer of economic value.

For more information about the use of credit adjustment spreads in the loan markets, see paragraphs 3.8 and 4.6.

1.5 What changes has the LMA made to its recommended facility agreements in anticipation of LIBOR's discontinuation?

On 30 March 2021, the LMA published a series of recommended form facility agreements providing for RFR-based pricing (the **LMA RFR Facility Agreements**) for the first time. Minor updates were made to these on 28 May 2021. The current recommended forms include:

- multicurrency term and revolving facilities agreement incorporating rate switch provisions;
- multicurrency term and revolving facilities agreement incorporating backward-looking compounded rates and forward-looking term rates with rate switch provisions; and
- single currency term and revolving facilities agreement incorporating backward-looking compounded rates.

The LMA RFR Facility Agreements have not superseded any of the existing suite of LMA recommended forms of facility agreement providing for IBOR-based pricing (the **LMA IBOR Facility Agreements**), which the LMA continues to publish. However, the LMA IBOR Facility Agreements should not now be used as a base for any sterling facilities. See paragraph 2.1.

Before publishing the LMA RFR Facility Agreements, the LMA had published a series of "exposure draft" facility agreements providing for RFR-based pricing, the first of which were published in September 2019. All of these exposure drafts have now been superseded by the LMA RFR Facility Agreements.

For commentary on the methodologies used in the LMA RFR Facility Agreements, see paragraph 3.

1.6 How relevant to the loan markets is ISDA's work on LIBOR transition?

ISDA has provided a key "thought leadership" role in the LIBOR transition process. It has focused on developing fallbacks based on RFRs to include in legacy IBOR-based derivatives contracts with a view to ensuring contractual continuity. On 9 October 2020, ISDA published its IBOR Fallbacks Supplement. This amends the definitions of IBORs in the 2006 ISDA Definitions by adding a Hard-Wired Fallback to:

- a compounded RFR; plus
- a credit adjustment spread based on the historical difference between the relevant IBOR and that compounded RFR,

with the switch to that fallback occurring automatically on an "Index Cessation Effective Date". For LIBOR, this means either the date on which it ceases to be published, or any earlier date

on which it ceases to be representative of the market it is intended to measure. These amendments apply automatically to trades dated on or after 25 January 2021 that incorporate the 2006 ISDA Definitions.

At the same time, ISDA published a Protocol to enable parties to incorporate this mechanism into legacy trades³. The Protocol also formally launched on 25 January 2021.

The loan markets are, to an extent, adopting some of the methodologies ISDA has developed, such as those relating to credit adjustment spreads (see paragraph 4.6). However, ISDA's use of a Protocol to deal with legacy IBOR-based derivatives:

- is not an approach the loan markets can realistically copy for dealing with legacy LIBOR loans (see paragraph 4.5); and
- is unlikely to be appropriate for amending finance-linked hedging terms (see paragraph 4.13).

In the EMEA loan markets, there has also been limited adoption of Hard-Wired Fallbacks of the type provided for in the ISDA IBOR Fallbacks Supplement (see paragraph 2.3).

1.7 What impact does the BMR have on the ongoing use of LIBOR in loan transactions?

BMR in its original form had a more limited impact on the loan markets (outside consumer credit and regulated mortgages) than in other product areas that use LIBOR, such as derivatives and debt capital markets.

For example, it required supervised entities that continued to "use" LIBOR to produce robust written plans setting out what actions they would take if LIBOR "materially changes or ceases to be provided" and reflect these plans in the relevant contracts⁴. However, loan transactions (other than consumer credit and regulated mortgage contracts) are outside the scope of these rules⁵. As a result, parties to LIBOR-based commercial loans have not generally considered it necessary to include Hard-Wired Fallbacks in their loan agreements (on which see paragraph 2.3) in order to comply with the BMR.

However, amendments have been made to both the UK BMR and EU BMR during 2021 to deal with "hard legacy" LIBOR contracts. These amendments are more likely to have a direct effect on the loan markets. See paragraphs 4.3 and 4.4

1.8 What is happening to EURIBOR and other non-LIBOR interbank rates?

EURIBOR and TIBOR (the rate for Japanese yen in the Tokyo interbank market) will continue to be published for the foreseeable future. There are also currently no plans to discontinue the main local IBORs used in the Middle East markets – EIBOR, SAIBOR, OMIBOR and QIBOR. However, as the underlying currencies to which these local Middle East benchmarks apply are pegged to US dollars, the discontinuation of US dollar LIBOR may still have an impact on their ongoing use.

Historically, EURIBOR has been used much more extensively for euro loans than euro LIBOR, even on transactions arranged in the UK. Our experience is that parties are generally

³ By signing up to a Protocol, an entity agrees that the amended terms to which the Protocol relates will automatically apply in all existing transactions between that entity and each other "adherent" to the Protocol.

⁴ Article 28(2).

⁵ See definition of "use of a benchmark" in Article 3(7).

preferring to continue using EURIBOR for euro loans, rather than €STR (the euro RFR), even on multicurrency transactions where compounded RFRs are being used for other currencies. The LMA RFR Facility Agreements provide for both options (see paragraph 1.5).

As such, to date, euro has been the most straightforward currency in the IBOR transition process. However, on 11 May 2021, the Euro Working Group published its [recommendations](#) on EURIBOR fallback trigger events and €STR-based EURIBOR fallback rates. This included a recommendation to add €STR-based fallbacks to all EURIBOR-based cash products, including corporate loans, trade and export finance products, debt securities and securitisations. The LMA RFR Facility Agreements do not include any recommended drafting for this. Instead, the LMA RFR Facility Agreements that reference EURIBOR include optional language to switch from EURIBOR to €STR at a specified future date. However, this drafting could easily be adapted to create an €STR fallback, which would only apply if EURIBOR were discontinued or otherwise unavailable. We have not yet seen a significant increase in use of €STR fallbacks in EURIBOR loans. However, this may change as the market digests and responds to the Euro Working Group's recommendations.

EONIA, the overnight interbank rate for euro (equivalent to overnight LIBOR) will be discontinued, on 3 January 2022. Until then, EONIA will simply track €STR (the euro RFR), being €STR plus a fixed spread of 8.5 basis points. In the loan markets, the discontinuation of EONIA is most relevant for euro swingline facilities. The LMA published a note in October 2019 with suggested drafting for new facility agreements incorporating euro swingline facilities, to take account of the phasing-out of EONIA. This provided for interest on euro swingline loans to be calculated by reference to €STR or "Enhanced €STR" (the latter being an economic equivalent to EONIA) instead of EONIA.

1.9 Why are regulators taking a different approach to EURIBOR (and some other IBORs) than they are taking with LIBOR?

The lower systemic risk involved in the continued use of other IBORs, when compared to LIBOR, is likely to be a significant factor. See paragraph 1.2.

2 New LIBOR loans

2.1 What deadlines have regulators set for the transition away from LIBOR on new loan transactions?

For each LIBOR currency, regulators in the relevant local jurisdiction have taken the lead on setting milestones for transitioning away from use of LIBOR for that currency. For example:

- **Sterling.** The Sterling Working Group [stated](#) as long ago as April 2020 that, after the end of Q1 2021, lenders should not provide new sterling LIBOR loans with tenors beyond the end of 2021. In January 2021, the Sterling Working Group published an updated [priorities list and roadmap](#) for sterling LIBOR transition, which reinforced this milestone. On 26 March 2021, the PRA and FCA sent UK regulated firms a [Dear CEO letter "Transition from LIBOR to Risk Free Rates"](#), which adopted a more robust tone than previous recommendations by the Sterling Working Group, with the PRA/FCA stating: "[a]ny incident of sterling LIBOR referencing loan, bond or securitisation issuance from Thursday 1 April onwards that expires beyond end 2021 would potentially be viewed as indicative of poor risk management and poor governance of transition" and "[a]ny new sterling LIBOR syndicated lending commitment after the end-Q1 milestone would be viewed as a collective failing of all the banks in the syndicate".

While the PRA and FCA have no mandate to regulate lenders operating entirely outside the UK, our experience is that sterling LIBOR has substantively ceased for new loan transactions, regardless of the location of the parties involved.

- **US dollar.** The FCA launched a [consultation](#) on 29 September 2021 on using its powers in UK BMR⁶ to prohibit UK supervised entities from using US dollar LIBOR in almost all new contracts within the scope of the UK BMR after the end of 2021. Although commercial loan agreements fall outside this scope (see paragraph 1.7), the PRA and FCA made clear in a published ["Dear CEO" letter](#) dated 26 March 2021⁷ that they are expecting all supervised firms to comply with this deadline across all products, citing [earlier guidance issued by US authorities](#) for banks to do the same. Back in May 2020, the ARRC had [set a target](#) of no new US dollar LIBOR business loans after the end of Q2 2021. However, it is now also focusing on encouraging market participants to meet that end of 2021 deadline (for example in this [14 October 2021 press release](#)).
- **Swiss franc.** FINMA (the Swiss financial market supervisory authority) [has stated](#) that new contracts after Q2 2021 should "in general" be based on an alternative to Swiss franc LIBOR.
- **Japanese yen.** The Bank of Japan's Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks [has stated](#) that there should be no new loans referencing Japanese yen LIBOR after Q2 2021.

2.2 To what extent have the loan markets now transitioned away from LIBOR on new transactions?

The transition away from LIBOR has been much slower in the loan markets than in other markets that have traditionally used LIBOR, in particular derivatives and bonds, and progress during 2020 was hindered by COVID-19. However, progress is now undoubtedly being made. We are not aware of any lenders (UK or otherwise) continuing to offer new sterling LIBOR loans. And while lenders' readiness to provide alternatives to LIBOR in other currencies is more mixed, the move away from LIBOR is picking up pace. In Q1 2021, LIBOR remained very much the default option for new single currency US dollar loans. Since then, more UK and European lenders have become comfortable offering SOFR on new transactions. We have also acted on SOFR-based transactions in the Middle East. With a recommended form of term SOFR now available (see paragraph 3.11), and US and UK regulators broadly prohibiting new use of US dollar LIBOR after the end of 2021 (see paragraph 2.1), we expect this transition in the US dollar market to now accelerate significantly.

2.3 How have lenders adjusted the terms of new LIBOR loans to anticipate LIBOR's discontinuation?

Since July 2017, whenever parties have entered into a new LIBOR-based loan with a tenor beyond 2021, they have done so in the knowledge that LIBOR may well disappear during the term of the loan (subject, in the case of some US dollar LIBOR tenors, to the recent extension to June 2023 referred to in paragraph 1.1). Broadly, three approaches to addressing this risk have emerged.

- **The Amendment Approach.** The parties rely on their ability to amend the pricing terms as needed at the relevant time. To facilitate the Amendment Approach, the LMA

⁶ In Article 21A, as added to the UK BMR by the Financial Services Act 2021.

⁷ See paragraph 5b of the Annex.

published a revised "Replacement of Screen Rate" clause in May 2018, which it subsequently added to the LMA's recommended forms of facility agreement. Until August 2020, this simply provided that, on a "Screen Rate Replacement Event" (an event indicating the actual or likely imminent discontinuation of a relevant IBOR), relevant amendments to the facility agreement could be made with "Majority Lender", rather than all lender, approval. Then, on 24 August 2020, the LMA published "Revised Replacement of Screen Rate Clause and documentary recommendations published by the WGSRRF". This suggested supplementing the existing form of LMA Replacement of Screen Rate clause by adding an obligation on the parties to renegotiate in good faith if LIBOR is still being used to calculate interest accruing under the facility agreement at a specified date before the end of 2021. They would aim to complete that negotiation by a second specified date, also before the end of 2021. This was to address a specific recommendation of the Sterling Working Group at the time that any new sterling LIBOR loans include "*clear contractual arrangements...to facilitate conversion ahead of end-2021*". This was commonly included in new sterling LIBOR loans in Q4 2020 and Q1 2021. In our experience, parties have been less keen to include a similar mechanism in non-sterling LIBOR loans.

- **Hard-Wired Switch.** This is a mechanism to switch from LIBOR to an economically equivalent RFR-based rate at a specified future date (which, other than in the case of US dollar LIBOR, would need to be before the end of 2021). Some of the LMA RFR Facility Agreements provide for a Hard-Wired Switch.
- **Hard-Wired Fallback.** This is a mechanism to switch from LIBOR to an economically equivalent RFR-based rate if an event occurs connected to the discontinuation or other unavailability of LIBOR. This is similar to a Hard-Wired Switch, but without an automatic move away from LIBOR on a specified date. Hard-Wired Fallbacks have been common in LIBOR-based derivative and bond transactions, to ensure compliance with the BMR (see paragraph 1.7). Hard-Wired Fallbacks have also gained some traction in the US loan markets; in June 2020, the ARRC published updated [recommended language](#) to include in new US dollar LIBOR transactions. However, in the EMEA loan markets, there has been limited adoption of this approach on LIBOR loans. English law loan agreements have not typically included the ARRC's drafting recommendations, even for US dollar loans.

With the transition away from LIBOR now progressing in all currencies, these mechanisms are becoming less relevant on new transactions. They are perhaps now most commonly used on multicurrency transactions, where lenders are at different stages of readiness to provide alternatives to LIBOR for all relevant currencies (see paragraph 2.4).

2.4 [How are lenders documenting multicurrency transactions where they are not ready to provide alternatives to LIBOR in all relevant currencies?](#)

The LMA RFR Facility Agreements include the "multicurrency term and revolving facilities agreement incorporating backward-looking compounded rates and forward-looking term rates with rate switch provisions" (the **LMA Multicurrency RFR/IBOR Facility Agreement**). This provides for interest to be EURIBOR-based for euro loans (with the option to include a switch to €STR at a specified future date) and RFR-based for all other currencies. However, the LMA Multicurrency RFR/IBOR Facility Agreement can easily be adapted to provide for:

- whatever mixture of IBORs and RFRs the lenders are able to provide at the outset of the transaction (including potentially local IBORs for non-LIBOR currencies); and

- a variety of mechanisms to facilitate transition away from any use of LIBOR at the outset of the transaction, including both the Amendment Approach and a Hard-Wired Switch.

Since the LMA Multicurrency RFR/IBOR Facility Agreement was first published as an exposure draft in January 2021, our experience is that this has been the preferred starting point for documenting new multicurrency facility agreements.

3 New RFR-based loans

3.1 How can RFRs be used to calculate interest on loan transactions?

In EMEA, the most common alternative to LIBOR used to date has been compounded in arrears RFRs (**compounded RFRs**) with a "look-back" period of five business days. This is provided for in all LMA RFR Facility Agreements.

The UK regulators advocate the wide adoption of compounded RFRs in place of LIBOR. In January 2020, the Sterling Working Group published [Use Cases of Benchmark Rates: Compounded in Arrears, Term Rate and Further Alternatives](#). It argued that 90% of loans by volume should be able to transition to use compounded RFRs. Although the remit of the Sterling Working Group is limited to the transition of sterling LIBOR, the analysis of whether compounded RFRs are suitable for a particular product is not currency dependent.

However, this does not mean that there is a single, settled approach for using RFRs on loan transactions. Compounded RFRs are not suitable for some loan products (see paragraph 3.10). More generally, it remains to be seen how popular forward term SOFR will become as an alternative to US dollar LIBOR (see paragraph 3.11). Even among transactions that are using compounded RFRs, there is some variance on the methodologies that parties are using (see paragraphs 3.6 and 3.7).

3.2 What is the significance of the "look-back" when using a compounded RFR?

LIBOR for an interest period is fixed at the beginning of that interest period: all the parties know then how much interest the borrower will have to pay at the end of the interest period. By contrast, the total interest accruing over a period based on a compounded RFR cannot be determined until the end of that period. A "look-back" mechanism provides that the interest payable over an interest period is not determined by the RFR over the interest period itself, but over an "observation period". The observation period is the same number of business days as the interest period but starts and ends a specified number of business days before the relevant interest period. This ensures the parties know the interest that will be payable at the end of that interest period a few days in advance of the payment date.

3.3 What does the "compounding" of an RFR involve?

Broadly, this means that the RFR itself is compounded on each business day over the relevant observation period, using the daily published rates during that period. It does not involve any "capitalisation" or compounding of accrued interest. Consequently, the principal amount of the loan does not increase as interest accrues during the interest period. RFRs are daily rates that anticipate repayment of principal and accrued interest the following day. Where RFRs are being used to calculate interest that will only be payable over a longer term (such as one or three months), it is considered more economically logical to compound the rates daily over that term.

3.4 Are compounded RFRs being published for the tenors most commonly used as interest periods?

"Compounded average" RFRs are now published for all the LIBOR currencies other than sterling⁸, as follows:

- The Federal Reserve Bank of New York [publishes](#) compounded average SOFR over the previous 30, 90 and 180 days.
- The European Central Bank [publishes](#) average compounded €STR over the previous one week, one month, three month, six month and 12 month periods.
- SIX Swiss Exchange [publishes](#) compounded average SARON over the previous one week, one, two, three, six, nine and 12 month periods.
- QUICK Corp [publishes](#) average compounded TONA over the previous 30, 90 and 180 days.

However, using published "period averages" of this nature is not without its complications. When calculating compounded RFRs over an interest period, the length of the observation period is typically determined by the number of [business days](#) in the relevant interest period rather than the number of calendar days. So a published three-month compounded average RFR cannot be reliably used to calculate the compounded average RFR over an observation period for a three-month interest period – the observation period may be a slightly different length. We have not seen any of the above published compounded average rates referred to in loan documentation.

In February 2020, the Bank of England began a consultation on whether to publish SONIA period averages, but stated that "*in the absence of a clear market consensus it is likely the Bank would choose not to publish period averages at this time*". In [June 2020](#), it notified the market that no consensus had emerged from the consultation about whether period averages for SONIA would be useful, or on the most appropriate conventions for calculating them. It therefore confirmed that it would not be publishing period averages for SONIA for the time being.

3.5 Can published indexes streamline the calculation of compounded RFRs on loan transactions?

A compounded index of an RFR represents the returns from a rolling investment earning interest at that RFR on a compounded basis. The change in this index between any two dates can be used to calculate the compounded average of the relevant RFR over that period. Inflation indexes (such as the CPI and RPI) work in a similar way.

The Bank of England began publishing a [SONIA compounded index](#) on 3 August 2020⁹, and a compounded RFR index is now published for all LIBOR currencies.

One of the main advantages of this type of index is its flexibility. It enables parties to calculate compounded average interest easily for a period of any maturity using any combination of

⁸ As fallbacks for LIBOR references in ISDA documentation, Bloomberg also now publishes compounded average RFRs plus credit adjustment spreads, covering all LIBOR currencies and tenors. Delayed data is available without a subscription [here](#). However, these fallbacks are not intended to be a resource for using RFRs on new transactions and they [anticipate the use of ISDA's usual fallback methodologies](#) for RFRs (two business day look-back period and with an observation shift), rather than those typically used in the loan markets.

⁹ IBA also now publishes a SONIA index. See paragraph 3.6.

start and end dates. However, it still requires a calculation to be performed, and so does not provide the same operational convenience as published term rates (e.g. of one, three and six months) that parties using LIBOR have been used to.

In any event, the methodologies generally adopted in the loan markets to calculate compounded RFRs make it more difficult (and, in some cases, impossible) to use published indexes. See paragraph 3.6. The LMA RFR Facility Agreements anticipate that all calculations of compounded RFR will be carried out manually using the relevant daily RFRs, rather than by using published compounded averages or published indexes. In our experience, this is consistent with current market practice.

3.6 What is the difference between the "lag" and "observation shift" methods?

"Lag"¹⁰ and "observation shift" are different methods of calculating compounded RFRs. Under both methods:

- the observation period is determined in the same way – if there is a five business day look-back, the observation period begins five business days before the beginning of the relevant interest period and ends on (but excludes) the day five business days before the end of that interest period; and
- the interest rate for the interest period is determined by reference to the daily RFRs during the observation period.

The key difference between the two methods relates to the weighting of the daily RFRs in the compounding formula to address non-business days (on which RFRs are not published). As explained below, under the observation shift method, the relevant non-business days occur in the observation period. But under the lag method, the relevant non-business days occur in the interest period itself.

Under the observation shift method, a multiplier is applied to the RFR for any business day during the observation period if that business day is immediately followed by one or more non-business days. For example, the RFR on any Friday that is a business day will be multiplied by three if the immediately following Monday is not a public holiday. In that way, Friday's rate is treated as applying on Friday and on the immediately succeeding Saturday and Sunday¹¹. If the immediately following Monday is a public holiday, Friday's rate will be multiplied by four instead.

The lag method also weights daily RFRs to address non-business days. But it applies a multiplier to an RFR on any business day during the observation period if the day that is five business days after that business day is immediately followed by one or more non-business days (assuming a five business day look-back between the interest period and its observation period). Whilst the observation shift method "shifts" the weighting of the daily RFRs back to the days in the observation period, with the lag method it remains based on the days in the interest period. See the Appendix for a worked example.

¹⁰ The term "lag" is not used entirely consistently. Sometimes parties use it to describe any look-back mechanism. Where that is the case, the lag method described in this paragraph might be called a "lag without a shift/observation shift", and the observation shift method described in this paragraph called a "lag with a shift/observation shift".

¹¹ For brevity, we assume a working week of Monday to Friday. In some markets the working week will end on Thursday and restart on Sunday.

In July 2020, the [ARRC recommended the lag method for SOFR-based business loans](#) on the basis that the observation shift could result in inappropriate calculations if loans are prepaid or traded mid-interest period. In September 2020, the Sterling Working Group made the same recommendation for SONIA-based loans in [Recommendations for SONIA Loan Market Conventions](#), and our experience is that most lenders have now settled on using the lag method. Nevertheless, the LMA has published two alternative versions of each of the LMA RFR Facility Agreements – one providing for "lag" and the other "observation shift" – reflecting that observation shift is still being used in some loan transactions.

The two methods are unlikely to produce significantly different results, and the technical differences between them may be of limited interest other than to those who need to calculate them. There is, however, a significant practical difference. A compounded RFR over a specified observation period calculated using the observation shift method is not impacted by any variables outside that observation period. As such, it can be calculated from a published index of the relevant compounded average rate (see paragraph 3.5). For most indexes, this is not possible when using the lag method. Since 13 April 2021, IBA has published [ICE SONIA Indexes](#), which are compatible with the lag method, specifically to facilitate the use of indexes in the loan markets. However, we have not yet seen these used on any transactions.

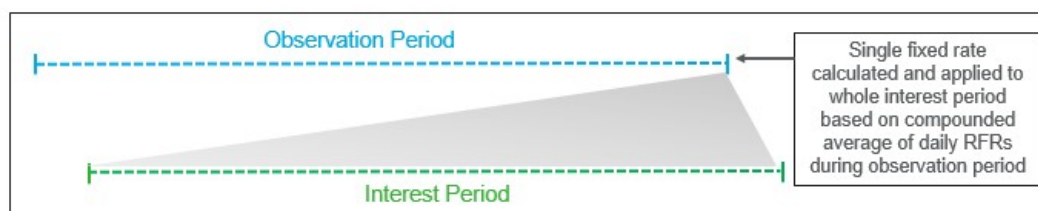
3.7 What is the difference between cumulative and non-cumulative compounding?

There are two basic methods of compounding: cumulative and non-cumulative.

- **Cumulative compounding.** The agent (or lender on a bilateral transaction) determines the total amount of interest accruing over a whole interest period by calculating the compounded average of the risk-free rate over the whole of the related observation period. See Figure 1 below. Therefore, with cumulative compounding:
 - a single interest calculation is required for each interest period, which is performed at the end of the related observation period;
 - although the interest rate is floating, the same interest rate applies on each day throughout an interest period, as in a LIBOR loan.

Figure 1

Cumulative compounding

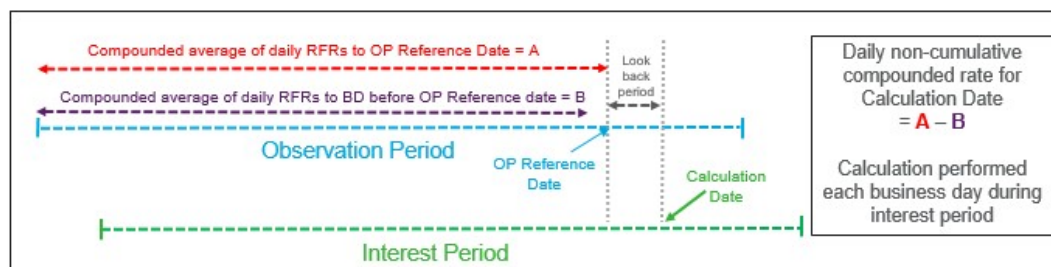


- **Non-cumulative compounding.** Provided the same rounding conventions are used, non-cumulative compounding results in the same amount of interest accruing over a whole interest period as cumulative compounding. However, non-cumulative compounding makes it possible to calculate the interest that has accrued since the start of an interest period on any day during the interest period – there is no need to wait until the end of the observation period.

Figure 2 below illustrates how the interest rate on a business day in an interest period – referred to as the "Calculation Date" – is calculated using non-cumulative compounding.

Figure 2

Non-cumulative compounding



If the Calculation Date is the n th business day in the Interest Period, this rate will be based on the daily RFRs from the beginning of the related observation period to the n th business day in that observation period (referred to as the "OP Reference Date" in Figure 2). It is then necessary to perform two calculations:

- first, calculate the compounded average of the relevant RFR from the beginning of the observation period to the OP Reference Date (referred to as "A" in Figure 2); and
- secondly, calculate the compounded average of the relevant RFR from the beginning of the observation period to the business day before the OP Reference Date (referred to as "B" in Figure 2).

A minus B is the non-cumulative compounded rate that will be applied to determine the interest rate on the Calculation Date. This calculation must be repeated on each business day during the term of the loan.

Until Q3 2020, cumulative compounding had been the preferred method (indeed, arguably the only method) of calculating interest on RFR-based loans in the EMEA region. However, in September 2020, the Sterling Working Group published [Recommendations for SONIA Loan Market Conventions](#) and [accompanying slides](#), commenting in the latter that "*the Non-Cumulative Rate method is preferred for loans as it better supports intra interest period events such as loan trading activity, to distribute interest to the lenders on a pro rata basis*". If a lender transfers some or all of its loan commitments (or a loan is prepaid), in the middle of an interest period, the amount of interest that has accrued since the start of the interest period may determine how much one party must pay to another at that time. Where cumulative compounding is used, that accrued interest cannot be calculated until the end of the related observation period.

To reflect the Sterling Working Group's recommendation, all the LMA RFR Facility Agreements (and before that, the LMA exposure drafts published since September 2020) have provided for non-cumulative compounding (both for calculating compounded SONIA and other RFRs), and this has become the most common approach in the UK market. However, the use of non-cumulative compounding is not a settled market standard. In [SOFR "In Arrears" Conventions for Syndicated Business Loans](#), published in July 2020, the ARRC noted both cumulative and non-cumulative compounding as options for business loans, but without recommending one or the other. Even in the UK sterling market, some lenders currently still prefer to use cumulative compounding, particularly on smaller bilateral

transactions. Non-cumulative compounding undoubtedly makes the interest rate methodology even more complicated, both for agents and lenders to calculate, and for relationship managers to explain to their borrower customers.

3.8 Is it necessary to include a credit adjustment spread in new loans that use compounded RFRs from the outset?

For background information on credit adjustment spreads, see paragraph 1.4. For guidance on credit adjustment spread methodologies, see paragraph 4.6.

For interest based on compounded RFRs, a credit adjustment spread will almost always be included as a separate component of the interest calculation where the loan was originally LIBOR-based. This is the case whether the conversion to compounded RFRs occurred through a Hard-Wired Switch, a Hard-Wired Fallback or a manual amendment.

By contrast, it is not essential to include a credit adjustment spread where interest on a loan is to be calculated by reference to compounded RFRs from the outset. Instead the parties can simply adjust the margin with a view to keeping the overall interest cost the same as it would have been in an equivalent LIBOR-based loan. However, at present, parties are often choosing to include credit adjustment spreads in this context too, for the following reasons:

- Parties are used to considering margin levels in the context of LIBOR-based loans.
- To increase general transparency regarding the components of the interest rate.
- Unlike LIBOR, compounded RFRs are not intended to approximate lenders' cost of funds over an interest period. So if the parties want to include a "cost of funds" fallback (which would apply either on "market disruption" or on the unavailability of both the relevant RFR and fallback central bank rate), it is logical for this to replace the compounded RFR plus a credit adjustment spread.

Although this is a common approach while the loan market transitions away from LIBOR, it would be surprising if credit adjustment spreads remain a feature of compounded RFR loans in the long term.

3.9 How does the use of compounded RFRs instead of LIBOR affect other loan terms?

- **Financial covenants.** In transactions where the borrower has predictable income streams, such as real estate finance and project finance, it is common to test projected income over a future period – typically of 12 months – against projected financing charges during that period. For the purposes of calculating this forward-looking test, it is necessary to make certain assumptions about both sides of this equation. In LIBOR-based transactions, one option for calculating projected financing charges is to assume that the LIBOR element of any unhedged interest over the test period will be 12 month LIBOR as at the beginning of the test period. There is no obvious equivalent to this where interest is based on compounded RFRs. Our experience is that most lenders are effectively now testing projected income against historical interest rates – for example by assuming that (for any unhedged interest) the compounded RFR over the test period will be the same as over the previous 12-month period.
- **Market disruption.** Including a market disruption mechanism in a compounded RFR loan is unlikely to make sense unless a credit adjustment spread is used as part of the interest calculation. See paragraph 3.8. Even where that is the case, some borrowers are

resisting market disruption clauses. LIBOR is a rate intended to represent lenders' cost of funds, but one based on quotations provided by a small number of panel banks. Market disruption has developed as a mechanism to address the risk that those quotations are not truly representative of lenders' costs across the market at the relevant time. Borrowers may argue that RFRs record the average rate of all relevant overnight transactions, rather than relying on quotations. As such, a lender's inability to fund at a rate based on an RFR cannot be an indicator of a "market" disruption. There is currently no market standard approach to this – market disruption clauses are included in some, but not all, compounded RFR transactions.

- **Break costs.** Lenders of LIBOR-based loans usually charge break costs if a prepayment is made mid-interest period. This is on the assumption that for each interest period, the lender funds itself by borrowing a matching loan in the interbank market for the duration of that interest period (although in practice, this is now rarely the case). Loans based on compounded RFRs are not even notionally funded by lenders on the basis of "matched funding" in this way, and so there is less obvious justification for charging break costs on a prepayment during an interest period. However, it is possible that lenders may have put in place other back-to-back arrangements that would need to be "broken" on a mid-interest period prepayment, and the LMA RFR Facility Agreements retain an option for lenders to charge break costs on compounded RFR loans. Most lenders are willing not to do so, but some instead impose a limit on the number of voluntary prepayments permitted during the facility. Another option some lenders have used is to charge a fixed administrative fee for mid-interest period prepayments.

3.10 Are all types of loan products that have used LIBOR to date transitioning to use compounded RFRs instead?

No. In its January 2020 publication [Use Cases of Benchmark Rates: Compounded in Arrears, Term Rate and Further Alternatives](#), the Sterling Working Group acknowledged that using compounded RFRs with a short look-back period could be impractical for some loan types including:

- loans to smaller corporate wealth and retail clients;
- trade finance and working capital products (such as bill or invoice discounting facilities);
- export finance;
- Islamic finance;
- loans to borrowers in emerging market jurisdictions with exchange controls.

These products have been identified as problematic because it is particularly important for parties to these products to be able to ascertain the amount of interest (or equivalent) that will accrue during an interest period at the outset of that interest period, or significantly in advance of the interest becoming payable. The Sterling Working Group has accepted that it might be more appropriate to calculate interest for these products using a term RFR (see paragraph 3.11), or an alternative rate (such as a central bank base rate or fixed rate), rather than compounded RFRs. Another option is to use compounded RFRs, but with a lookback period of a full interest period. See [LIBOR transition – are full interest period lags a viable way to simplify some compounded RFR loans?](#)

Our experience is that these alternatives are in some cases also being used for other types of loan products, particularly on smaller transactions. Using compounded RFRs creates significant documentary and operational complexity, particularly as most RFR-based loan transactions still involve manual calculation of interest (see paragraph 3.6). Relationship managers at lenders are unlikely to relish explaining compounded RFRs to their SME customers.

3.11 Are forward-looking term RFRs an alternative to compounded RFRs?

The position varies for different currencies, loan products and geographical markets. In particular, UK and US regulators are adopting very different positions on their use.

To replace LIBOR, many loan market participants have called for the development of forward-looking term rates derived from RFRs (**forward term RFRs**) for each LIBOR currency and tenor. Like LIBOR, forward term RFRs make it possible to calculate the interest payable over an interest period at the beginning of that interest period.

However, since the start of the LIBOR transition process, regulators have encouraged the loan markets to switch from using LIBOR to using RFRs without waiting for the development of forward term RFRs. One of the perceived advantages of RFRs over IBORs is that RFRs are derived directly from transaction data in very deep markets. By contrast, LIBOR derives from what are now very shallow markets and relies on submissions from a limited number of panel banks participating in those markets. That advantage may not apply to forward term RFRs, as most are based not on overnight borrowing transactions themselves, but on derivative transactions based on the overnight borrowing market. Nevertheless, term RFRs are now being progressed for most LIBOR currencies, as follows:

- **Sterling.** Since January 2021, both [IBA](#) and [Refinitiv](#) have published forward term RFRs for SONIA (known as **TSRRs** – term SONIA reference rates) for one, three, six and 12 month tenors, with similar methodologies. As noted in paragraph 3.10, the Sterling Working Group has made it clear that compounded RFRs are appropriate for the vast majority of the sterling LIBOR loan market, and that a forward term RFR (or alternative rate) is likely to be appropriate for only certain niche products, including those listed at paragraph 3.10.

Nevertheless, the Sterling Working Group has been engaging with the [FMSB](#) on TSRRs. On 24 March 2021, the FMSB published a draft [standard](#) on the use of TSRRs. This summarises the UK regulators' reservations about the widespread use of term SONIA and sets out "core principles" market participants should take into account before using them. For example, it requires market participants to "*assess...whether there is a robust rationale*" for using term SONIA on a lending transaction, and gives some examples where that might be the case (including discounting and Islamic finance facilities). The FCA, the Bank of England and the Sterling Working Group issued a joint [statement](#) welcoming the draft standard.

- **US dollar.** On 29 July 2021, the ARRC [formally recommended](#) use of forward term SOFR, as administered by CME Group, [supporting](#) its use "in addition to other forms of SOFR" for business loans generally. The ARRC also expressed its support for use of forward term SOFR for "end user" derivatives hedging cash products, but not in the derivatives market more generally. It has subsequently provided more detail on these recommended use cases in an [FAQs document](#) published on 27 August 2021.

- **Euro.** The Euro Working Group has [recommended](#) forward term €STR as one potential fallback for EURIBOR in corporate lending transactions. However, forward term €STR is not yet published.
- **Swiss franc.** The National Working Group on Swiss Franc Reference Rates has indicated that a SARON term RFR is unlikely to be feasible and recommends using compounded average in arrear SARON wherever possible. The Swiss National Bank [has confirmed](#) this position.
- **Japanese yen.** QUICK Corp began calculating and publishing daily prototype rates of the Tokyo Term Risk-Free Rate (TORF) in May 2020 and [has been publishing](#) production rates for actual trading since 26 April 2021.

In the sterling market, we have seen only limited use of TSRRs to date, principally in receivables finance transactions. We are already seeing more widespread interest in using term SOFR in US dollar transactions. However, there are likely to be significant variations in its use across different product lines. For example, compounded SOFR has already gained market traction in European investment grade lending, and there may be limited desire to move away from this, particularly in multicurrency transactions. By contrast, the largely US dollar-based aircraft finance market has not yet transitioned significantly away from US dollar LIBOR and is likely to be receptive to the relative documentary and operational simplicity of forward term SOFR.

To date, the LMA has not published any recommended drafting for forward term RFRs, but has advised members that it is working on adding this to its suite of developing markets facility agreements.

4 Legacy LIBOR loans

4.1 What are the options for dealing with legacy LIBOR loans?

For legacy LIBOR loans that do not contain a Hard-Wired Switch or Hard-Wired Fallback (being the vast majority), there are broadly three options.

- Amend the loan terms so the interest is calculated by reference to an RFR-based rate (or other benchmark acceptable to the relevant regulator). Most banks with significant legacy LIBOR books are actively adopting (or planning to adopt) this approach, by undertaking major "bulk" repapering projects¹². In advance of that, where parties are making other amendments to the terms of existing LIBOR loans, they are increasingly using that as an opportunity to also amend the interest rate mechanics, particularly on sterling and multicurrency facilities.
- Amend the loan terms to include a Hard-Wired Switch or Hard-Wired Fallback. In some cases, parties are supplementing LIBOR terms with a Hard-Wired Switch when making other amendments to the terms of existing LIBOR loans. However, in the main, once parties know what alternative to LIBOR they want to use and are able to use it, they are now amending the loan terms to make that the primary source of interest calculation, rather than as a fallback.
- Do nothing, relying on the existing fallbacks in the agreement. Under typical fallbacks, the rate of interest following a permanent discontinuation of LIBOR is likely to be each

¹² The Dentons multi-jurisdictional [LIBOR remediation team](#) is advising on a number of these projects.

lender's own cost of funds plus the margin (instead of LIBOR plus the margin). This is clearly unattractive for a borrower. On a syndicated facility agreement, it is also unattractive for an agent, who will have to calculate different interest rates for different lenders. While superficially more attractive for a lender, this is unlikely to be a viable long-term solution. Failing to take active steps to address LIBOR discontinuation could adversely affect a lender's relationship with both its customers and its regulators.

4.2 What does "tough legacy" mean in the context of LIBOR transition?

In the first two years after Andrew Bailey's July 2017 LIBOR discontinuation announcement (see paragraph 1.1), there was surprisingly little discussion about using legislation to streamline the transition of the financial markets away from LIBOR. Then, in [a speech](#) in New York in July 2019, Mr Bailey (still then chief executive of the FCA) mooted the possibility of legislation helping with the transition of the financial markets away from LIBOR, including "*legislators redefin[ing] LIBOR as RFRs plus fixed spreads for...tough legacy contracts*". "Tough legacy" has no globally consistent meaning, but generally refers to those contracts with inadequate fallbacks that are difficult to amend. Legacy LIBOR bonds are usually seen as the most obvious category of "tough legacy", but regulators have also acknowledged the practical difficulties of amending huge volumes of legacy LIBOR loans¹³.

4.3 What UK legislation has been introduced to deal with tough legacy contracts?

The two key pieces of UK legislation – both amending the UK BMR – are as follows:

- **Financial Services Act 2021.** This received Royal Assent on 29 April 2021. Among other things, the Act gives the FCA additional powers to deal with tough legacy contracts, by amending the UK BMR¹⁴. Under these powers, if the FCA determines that LIBOR is no longer representative of the underlying market it represents, it has the power to:
 1. instruct IBA to continue to publish LIBOR on a synthetic basis;
 2. specify the methodology for that synthetic rate; and
 3. specify which legacy LIBOR contracts are permitted to use the synthetic rate in those contracts, with the expectation that these would be contracts the FCA considers to be "tough legacy" (the legislation prohibits UK supervised entities from any new use of such synthetic rates).

The FCA has already used powers 1 and 2 above for one, three and six month sterling and Japanese yen LIBOR. See paragraph 1.1. On 29 September 2021 it launched a [consultation](#) on how it should use power 3 above in respect of those synthetic rates, expressing its intention to allow synthetic sterling and Japanese yen LIBOR to be used in all existing contracts during 2022 other than cleared derivatives.

- **The Critical Benchmarks (References and Administrators' Liability) Bill.** [This legislation](#) is currently going through Parliament and so is not yet in effect. The main purpose of the Bill is to make clear that references to LIBOR in any "contract or other arrangement" will be construed as including any synthetic LIBOR published pursuant to the FCA's powers under the UK BMR. The Bill provides for these deeming provisions to apply in all UK law contracts, not just those financial contracts and instruments that are

¹³ See, for example the May 2020 [Paper on the identification of Tough Legacy issues](#) by the "Tough Legacy Taskforce" formed by the Sterling Working Group.

¹⁴ In particular, by introducing new [Articles 23A](#) to 23F.

otherwise within the scope of the UK BMR. As such, If the Bill is enacted in its current form, where:

- an existing English law facility agreement uses one, three or six month sterling or Japanese yen LIBOR; and
- provides that interest will be calculated on the basis of a specified fallback if one of those LIBOR settings is unavailable,

that fallback will not be triggered during 2022 – the contractual references to LIBOR will be read as including synthetic LIBOR. However, if that agreement provided for a switch from LIBOR to an alternative rate on a specified date or for a reason other than unavailability (e.g. non-representativeness) the deeming provisions in the Bill would not affect the application of the contractual switch mechanism.

The scope of the UK BMR as amended by this legislation is somewhat uneven. Commercial loans are outside the main scope of the UK BMR (see paragraph 1.7) and as such the restrictions on use of LIBOR (whether panel bank or synthetic) within the legislation do not directly apply to commercial lending. By contrast, the publication of synthetic LIBOR under powers introduced by the legislation and the contractual deeming provisions described above do apply to, and benefit, commercial lending.

As such, the legislative framework has the potential to impose restrictions on ongoing use of LIBOR in core areas of "tough legacy" (such as bonds) without imposing any direct restrictions at all on LIBOR use within the commercial loan market. This is not of immediate practical relevance, as it seems likely that (cleared derivatives aside) the FCA will not impose any restrictions on use of synthetic LIBOR during 2022. This may change if the FCA decides to continue publication of sterling LIBOR beyond then, but with more restricted permitted use cases.

4.4 What legislative solutions have been introduced in other jurisdictions?

- **US.** On 6 April 2021, New York Governor Andrew Cuomo signed into law New York state legislation addressing the cessation of US dollar LIBOR. Broadly, this provides that where a contract referencing US dollar LIBOR has inadequate fallbacks (based on criteria set out in the legislation), contractual references to US dollar LIBOR will be replaced automatically on the discontinuation of US dollar LIBOR with an economically equivalent rate selected or recommended by the Federal Reserve Board, the Federal Reserve Bank of New York or the ARRC. Although the legislation does not specify that it only applies to contracts governed by New York law, it is unlikely to have a practical impact on other contracts. At the federal level, the [Adjustable Interest Rate \(LIBOR\) Act of 2021](#), broadly based on the New York legislation, is now progressing through Congress.
- **EU.** On 13 February 2021, Regulation (EU) 2021/168 entered into force. It amended the EU BMR, among other things, to ensure contractual continuity if a major benchmark used in the EU, such as LIBOR, is discontinued or becomes unrepresentative of its underlying market. In these circumstances, the Commission is empowered to identify a "statutory replacement rate". This would automatically replace the outgoing benchmark by operation of law in in-scope contracts without "suitable fallback provisions". The final legislation differed in some significant respects from the Commission's original proposal. For example, this legislative mechanism was originally only intended to apply to contracts in scope of the EU BMR (which would exclude commercial loans, see paragraph 1.7) to which at least one EU-supervised entity was a party. The final legislation:

- applies to all types of contract referencing a relevant benchmark (not just those within scope of the EU BMR); but
- does not apply to contracts governed by the law of a non-EU country (including English law) unless all the parties are EU-incorporated, and the law of that other country does not provide for an orderly wind-down of the benchmark.

Using these powers, the Commission has [proposed legislation](#) under which references to Swiss franc LIBOR in the above types of contract will automatically be interpreted as references to an alternative statutory rate from 1 January 2022. The statutory rate is comprised of compounded SARON for the relevant tenor with a full interest period lookback, plus the relevant Bloomberg Spread.

4.5 Are any protocols available or anticipated to streamline the process of amending legacy loans?

An ISDA-style protocol (see paragraph 1.6) has not been developed for amending legacy LIBOR loans. The main reasons for this are:

- loan terms are not as standardised as derivative terms;
- derivatives are always bilateral. If both parties to an existing derivatives transaction sign up to a protocol, this will amend the terms of that transaction. Facility agreements often have multiple parties, making it harder to effect change in this way;
- many derivative contracts are between financial institutions. If a relatively small number of financial institutions sign up to an ISDA Protocol, this can result in the amendment of a significant number of derivative contracts. By contrast, most borrowers are only party to one (or a small number) of facility agreements at any one time.

4.6 How are credit adjustment spreads being calculated in the loan markets?

ISDA has taken the lead in identifying a preferred method of calculating credit adjustment spreads between an IBOR that is being replaced and a compounded RFR that is replacing it. For derivative transactions it has determined that this spread should be the median average difference between the two rates over the previous five years (the **5YHM Approach**).

On 5 March 2021:

- ISDA published a [statement](#) noting that the March 2021 FCA Statement constituted an "Index Cessation Event" under the IBOR Fallbacks Supplement and the ISDA 2020 IBOR Fallbacks Protocol for all 35 LIBOR settings¹⁵; and
- as a result, Bloomberg [published](#) "fixed" credit adjustment spreads for all sterling, US dollar, euro, Swiss franc and Japanese yen LIBOR settings for the purposes of ISDA's LIBOR fallback definitions, using the 5YHM Approach (the **Bloomberg Spreads**). In derivative transactions that incorporate ISDA's latest LIBOR fallback definitions, these will apply automatically when the fallback takes effect (on the relevant "Index Cessation Effective Date", see paragraph 1.6).

¹⁵ This was because in the March 2021 FCA Statement, the FCA confirmed that each LIBOR tenor and currency would, at a specified future date, either be discontinued or become non-representative of the market it is intended to measure.

In September 2020, the Sterling Working Group published a [statement of recommendation](#) on credit adjustment spread methodologies for use with legacy sterling LIBOR cash products (including loans), in which it endorsed ISDA's approach to credit adjustment spreads. The ARRC had [already confirmed](#) the same recommendation for US dollar cash products.

However, the precise scenario anticipated in ISDA's credit adjustment spread methodology (and the endorsement of it by the Sterling Working Group and the ARRC) is only directly relevant where a LIBOR-based contract is transitioning to compounded RFRs on LIBOR's discontinuation or loss of representativeness. This is only likely to be the case if the contract contains a Hard-Wired Fallback, which is rarely the case for commercial LIBOR loans. Most legacy LIBOR loans are being amended before then, through "active transition".

On 18 December 2020, the Sterling Working Group published [a paper](#) highlighting the key methodologies emerging in the loan market to calculate the credit adjustment spread in active transition contexts. It noted that, although using the 5YHM Approach is an option, "*prior to GBP LIBOR permanently ceasing or becoming unrepresentative, a historical median does not necessarily represent the market expectations of the future difference between GBP LIBOR and SONIA*". As an alternative, it suggested using a rate based on the current LIBOR-compounded RFR swap rates for the relevant currency and tenor (the **Forward Approach**).

Before the March 2021 FCA Statement and the consequent publication of the Bloomberg Spreads, both the 5YHM Approach and the Forward Approach were common in the loan markets, with different lenders adopting different policies. Since then, our experience is that it is much more common for parties to use the Bloomberg Spreads, although some lenders do still prefer to use the Forward Approach.

4.7 Have regulators set any deadlines for amending legacy LIBOR loans?

Regulators' primary concern has been that all legacy LIBOR contracts are amended by the end of 2021 (or, in the case of most tenors of US dollar LIBOR, end of June 2023). However, the UK regulators in particular have emphasised the importance of active conversion before the relevant discontinuation date in order to meet that deadline. On 23 April 2021, the Sterling Working Group published a [statement](#) recommending that participants across the loan (and other relevant) markets actively transition legacy sterling LIBOR contracts to SONIA as soon as possible: market participants should aim for "*complete active conversion of all legacy GBP LIBOR contracts expiring after end-2021*" by the end of Q3 2021, although the Sterling Working Group somewhat softened this message by adding "*and, if [this is] not viable, ensure robust fallbacks are adopted where possible*".

4.8 How much progress has there been to date on amending legacy LIBOR loans?

The key milestones necessary for a widespread transition away from LIBOR are:

- banks completing the process of recalibrating or replacing their loan operations systems, and the software supporting them, so that they are compatible with compounded RFRs;
- substantive transition away from LIBOR on new transactions, with a reasonably settled market approach within each relevant product area on how compounded RFRs are to be used in place of LIBOR; and
- a standardised approach to calculating credit adjustment spreads (on which, see paragraph 4.6).

In the UK loan market, these milestones have now largely occurred. Since the beginning of 2021, where parties to existing loan agreements have wished to amend other loan terms (such as re-setting financial covenants or extending the loan term), they have often taken that opportunity to also remove LIBOR references at the same time. By the middle of 2021, most UK bank lenders had begun to roll out their LIBOR remediation projects more generally and many of these are now well advanced. However, there remains a huge amount to be done to amend all non-US dollar legacy loan agreements by the end of 2021. So it is likely that some sterling and Japanese yen legacy LIBOR loans will need to make use of synthetic LIBOR during 2022 (see paragraph 1.1).

4.9 Is there a standardised documentary approach to amending the terms of legacy LIBOR loans?

There are no standardised or recommended form documents for amending legacy LIBOR loans. The main options are:

- **Override agreement.** This amends the facility agreement by describing generally the existing terms that are being replaced and those that are replacing them. Many banks are using override agreements to amend their bilateral legacy LIBOR loans. This limits the need to make bespoke drafting amendments for each transaction. It can however complicate the documentation of future amendments to the facility terms. If these are to be done on a more traditional "amend and restate" basis, the general terms of the override agreement are likely to need "translating" into the amended and restated agreement at the same time.
- **Unrestated amendment.** This avoids a full restatement of the facility terms, but sets out the amendments more precisely than in an override agreement, by reference to specific clauses and defined terms in the existing facility agreement.
- **Amend and restate.** This is the approach usually favoured when amending syndicated facilities.

The LMA has published a recommended form of "Reference Rate Selection Agreement" (the **RRSA**) to help streamline the process of replacing LIBOR with an RFR-based rate in legacy transactions. However, the RRSA is not an amendment agreement. It simply provides a mechanism to enable the agent and borrower to agree amendments (in a separate document) within an agreed framework, without having to obtain further consents from the syndicate. The RRSA therefore would have no application in a bilateral transaction. To date, we have not seen significant take-up of the RRSA when syndicated legacy LIBOR loans are amended.

4.10 Who is instigating the amendment of legacy LIBOR loan agreements?

Lenders are generally instigating this process, on both bilateral and syndicated transactions. On syndicated transactions, a lender wishing to start an amendment process would first need to put forward a proposal to the agent, and ask it to circulate this among the syndicate for discussion and agreement, before any proposal is put to the borrower.

UK regulators [have stated](#) that they expect lead arrangers and agents to "*proactively take steps to initiate the transition of syndicated facilities*". Agents in particular may feel that this goes beyond the remit of their role. However, the entity performing the agency role will usually also be a lender, and so it may still make sense for that entity – through its role as a lender – to initiate the process.

4.11 Who is paying for the amendment of legacy LIBOR loan agreements?

Facility agreements generally provide that if a borrower requests an amendment to the loan terms, it must pay the reasonably incurred costs of the lender (on a bilateral transaction) or agent (on a syndicated transaction) in connection with that amendment. As a result, lenders and agents rarely have to pay for amendment costs – loan terms are usually only ever amended at the request of the borrower. However, repapering lenders' legacy LIBOR loans is likely to be an exception – it is more likely that lenders will instigate this process (see above).

The terms of some recent loans do specifically require the borrower to pay for the lender's costs in connection with LIBOR-related amendments, regardless of who instigated the amendment. However, this is the exception.

Otherwise, if a lender were determined that its borrower should pay for the lender's costs, it potentially has some commercial leverage to engineer this. It could point out that if the loan terms are not amended, the borrower is likely to have to pay the lender's cost of funds plus margin after LIBOR is discontinued (see paragraph 4.1).

There is no "market standard" approach to this. Where parties agree to amend LIBOR-related terms at the same time as amending other loan terms, it is more likely that the borrower will be expected to reimburse the lender's costs in the usual way. By contrast, where LIBOR-related terms are amended through a bank's centralised LIBOR repapering process, the bank is more likely to treat the associated costs in the same way as those arising on other regulatory-driven projects, such as ring-fencing, EMIR and MiFID2, and as such not seek to pass these on to the borrower.

Agreeing responsibility for costs is slowing down the amendment of some syndicated facilities. If the borrower is unwilling to pay the agent's legal fees, these will need to be paid by the lenders, usually pro rata to their commitments.

4.12 If a legacy LIBOR loan is subject to interest rate hedging, will that hedging need to be amended at the same time as the loan terms?

Yes, in order to ensure that the borrower (and lender(s)) benefit from a true hedge of interest rate risk, the terms of the hedging will need to be amended so that the floating rate element in it is consistent with the amended floating rate in the loan.

4.13 Can finance-linked hedging terms be amended by using the ISDA Protocol and Hard-Wired Fallbacks?

For background information on ISDA's work on fallbacks and related Protocol, see paragraph 1.6. Our view is that these mechanisms are not suitable for amending finance-linked hedging terms for two main reasons:

- the Hard-Wired Fallbacks in the updated 2006 ISDA Definitions will only take effect following an "Index Cessation Effective Date" (which for most LIBOR tenors and currencies will occur at the end of 2021). Huge numbers of hedged legacy LIBOR loan terms will be amended at various times between now and the end of 2021. The parties will need to effect the amendment of the hedging terms at the same time; and
- for each LIBOR currency and tenor the fallback provided for in the updated 2006 ISDA Definitions will comprise a standard RFR-based rate plus a standard credit adjustment

spread. This will not always correspond to the rate replacing LIBOR when a legacy LIBOR loan is amended¹⁶.

We therefore anticipate that parties to legacy finance-linked hedging transactions will need to amend their terms manually, at the same time as amending the legacy LIBOR loan terms to which the hedging relates.

4.14 What conduct and litigation risk issues should lenders consider when amending legacy LIBOR loans?

The specific conduct obligations of a lender will depend on the jurisdiction(s) in which it is incorporated or operating. Regulated entities in the UK should, in particular, note the FCA's [Questions and answers for firms about conduct risk during LIBOR transition](#), published in November 2019. In relation to a lender's engagement with its corporate borrowers, we consider the following to be the key litigation risks:

- *Exercising contractual discretions.* It is anticipated that most commercial legacy LIBOR loans with a tenor beyond 2021 will transition to an RFR-based rate by amendment agreement. However, in some legacy LIBOR loans that transition process may involve the lender, agent or other finance party exercising a discretion. For example, if a loan has a Hard-Wired Fallback or gives the lender a unilateral right to amend the terms following certain trigger events, the lender may be responsible for adjusting the margin or incorporating a credit adjustment spread to account for the difference between LIBOR and the replacement rate. Where a party to an English law contract exercises a discretion of this nature, it is generally under an obligation not to exercise that discretion irrationally, capriciously or arbitrarily (sometimes referred to as a "Braganza duty"). Similar implied duties may apply under other laws. One would not expect a lender to fail to meet this obligation, but lenders should keep clear records of their decision-making processes before exercising contractual discretions of this nature.
- *Avoiding assumption of an advisory role.* Across all lending products, lenders need to engage with their customers to explain how they propose to amend existing loan terms to address the risk of LIBOR discontinuation. However, it is important that lenders avoid creating an advisory relationship with their borrowers. For example, in product areas where compounded RFRs are impractical (see paragraph 3.10) there may be different approaches to replacing LIBOR across the market for that product. Where that is the case, if a lender "recommends" a specific option to a customer, it may incur a duty to the client in respect of that option's suitability to the client. Lenders should make clear that borrowers are responsible for taking their own decisions, particularly where those customers do not have their own legal counsel.

¹⁶ For example, standard ISDA definitions provide for the calculation of compounded RFRs on the basis of a two (rather than a five) business day look-back period and with an observation shift. However, in May 2021, ISDA published [Supplement 75](#) to the 2006 Definitions to make it easier to align look-back methodologies on an interest rate hedging transaction with those on the compounded RFR cash product being hedged, and thereby eliminate or minimise basis risk. For example, if "Compounding with Lookback" is chosen as the calculation methodology for the compounded RFR under the relevant hedging transaction, it will be calculated with a look-back period of five business days and without an observation shift.

Appendix – "Lag" method v. "observation shift" method – a worked example

For background information about the lag and observation shift methods, see paragraph 3.6 above. Please note that in the worked example below, compounded interest is calculated on a "cumulative" basis (see paragraph 3.7 above).

Scenario

- Sterling loan
- Interest rate = compounded average in arrear SONIA
- Two week interest period from 10 to 24 April
- Five business day "look-back" between interest period and observation period

SONIA rates during and immediately before interest period

Day/Date	SONIA	Interest Period ¹⁷	Observation Period ¹⁸
Monday, 1 April	a%		
Tuesday, 2 April	b%		
Wednesday, 3 April	c%		
Thursday, 4 April	d%		
Friday, 5 April	e%		
Saturday, 6 April	No rate – weekend		
Sunday, 7 April	No rate – weekend		
Monday, 8 April	f%		
Tuesday, 9 April	g%		
Wednesday, 10 April	h%		
Thursday, 11 April	i%		
Friday, 12 April	j%		
Saturday, 13 April	No rate – weekend		
Sunday, 14 April	No rate – weekend		
Monday, 15 April	k%		
Tuesday, 16 April	l%		Look-back business day 5
Wednesday, 17 April	m%		Look-back business day 4
Thursday, 18 April	n%		Look-back business day 3
Friday, 19 April	o%		Look-back business day 2
Saturday, 20 April	No rate – weekend		Non-business day
Sunday, 21 April	No rate – weekend		Non-business day
Monday, 22 April	No rate – bank holiday		Non-business day
Tuesday, 23 April	p%		Look-back business day 1
Wednesday, 24 April	q%		
Thursday 25 April	r%		
Friday 26 April	s%		

¹⁷ The days in an interest period are counted by the number of "overnights". So a 14-day interest period such as this straddles 15 days.

¹⁸ An observation period always has the same number of business days as the interest period to which it relates (in this case, nine). It may have a different number of calendar days (as here). Where there is a five business day "look-back", the observation period ends on "but excludes" the date five business days before the end of the interest period. Five business days before the end of this interest period is Tuesday 16 April, so the observation period ends on Monday 15 April.

Calculation of interest (i) using the lag method

Formula for calculation of interest

$$\left[\prod_{i=1}^{d_b} \left(1 + \frac{SONIA_{i-5LBD} \times n_i}{365} \right) - 1 \right] \times \frac{365}{d_c}$$

Extract from definitions

i = a series of whole numbers from one to d_b , each representing the relevant London Banking Day in chronological order from, and including, the first London Banking Day in the relevant Interest Period. [5 BD lag addressed through the formula]

Calculation of interest (using SONIA rates shown on previous page)

$$\left[\left(1 + \frac{0.0c}{365} \right) \left(1 + \frac{0.0d}{365} \right) \left(1 + \frac{0.0e \times 3}{365} \right) \left(1 + \frac{0.0f}{365} \right) \left(1 + \frac{0.0g}{365} \right) \left(1 + \frac{0.0h}{365} \right) \left(1 + \frac{0.0i}{365} \right) \left(1 + \frac{0.0j \times 4}{365} \right) \left(1 + \frac{0.0k}{365} \right) - 1 \right] \times \frac{365}{14}$$

Number of calendar days in **Interest Period** (see footnote 18 on previous page)

Calculation of interest (ii) using the observation shift method

Formula for calculation of interest

$$\left[\prod_{i=1}^{d_b} \left(1 + \frac{SONIA_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{d_c}$$

Extract from definitions

i = a series of whole numbers from one to d_b , each representing the relevant London Banking Day in chronological order from, and including, the first London Banking Day in the relevant Observation Period. [5 BD shift addressed through the definitions.]

Observation Period = the period from and including the date falling five London Banking Days prior to the first day of the relevant Interest Period...and ending on, but excluding, the date falling five London Banking Days prior to the Interest Payment Date for such Interest Period.

With the lag method, SONIA on 12 April (j%) gets weighting of x4, based on the number of days between 19 April (5BDs ahead) and the next day SONIA is published (19th, 20th, 21st, 22nd).

With the observation shift method, SONIA on 12 April gets weighting of x3, based on the number of days between 12 April and the next day SONIA is published (12th, 13th, 14th).

Calculation of interest (using SONIA rates shown on previous page)

$$\left[\left(1 + \frac{0.0c}{365} \right) \left(1 + \frac{0.0d}{365} \right) \left(1 + \frac{0.0e \times 3}{365} \right) \left(1 + \frac{0.0f}{365} \right) \left(1 + \frac{0.0g}{365} \right) \left(1 + \frac{0.0h}{365} \right) \left(1 + \frac{0.0i}{365} \right) \left(1 + \frac{0.0j \times 3}{365} \right) \left(1 + \frac{0.0k}{365} \right) - 1 \right] \times \frac{365}{13}$$

Number of calendar days in **Observation Period** (see footnote 18 on previous page)

