Credit adjustment spread methods for active transition of GBP LIBOR referencing loans

The Working Group on Sterling Risk-Free Reference Rates

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Foreword

The overall objective of the Working Group on Sterling Risk-Free Reference Rates (the "**Working Group**") is to catalyse a broad-based transition to SONIA by end of 2021 across the sterling bond, loan and derivative markets, in order to reduce financial stability risks from the widespread reliance on GBP LIBOR.[1] In the years since the global financial crisis, GBP LIBOR has been based on relatively few underlying transactions which impacts its robustness and sustainability.[2]

The Working Group has previously, following market consultation, recommended an approach to credit adjustment spreads applicable to a SONIA rate in "fallback" or replacement of screen rate provisions applying to cash market products on: (i) the permanent cessation of the publication of GBP LIBOR ("cessation triggers" or "cessation event"); or (ii) an announcement by the Financial Conduct Authority ("**FCA**") that any GBP LIBOR settings are no longer, or at a specific future date will be no longer, representative of the underlying market which they were intended to measure ("pre-cessation triggers" or "pre-cessation event"). That consultation, and the ISDA fallback consultations on which it was based, did not cover credit adjustment spreads applying to active transition in advance of a cessation or loss of representativeness (pre-cessation) event in relation to these benchmarks.

This paper is addressed to lenders, borrowers and investors who are considering how to approach the differences between GBP LIBOR and SONIA when considering active transition mechanisms in, or actively amending, GBP LIBOR referencing loans (including multi-currency loans containing a GBP LIBOR option). As the FCA has noted,[3] the best and smoothest transition from LIBOR will be one in which contracts that reference LIBOR are replaced or amended before fallback provisions are triggered.

As loan market participants are being strongly encouraged to focus on active transition, it is important that these participants decide on their approach to the credit adjustment spread for active transition. This paper is designed to facilitate consideration of the key methodologies emerging in the loan market, and how these compare to the approaches taken in the bond and derivatives markets.

The approach to the credit adjustment spread for active transition is for parties to agree and the Working Group is not making any recommendations in this paper. Market participants are encouraged to review the options available and decide on an appropriate approach. In order to help drive momentum, the Working Group encourages loan market participants going through the process of transition, where practicable and appropriate, to publicly disclose the fact of execution of transactions referencing SONIA (together with any disclosable information around the transition mechanisms, to the extent that it is not considered confidential or competitively sensitive).

This paper was considered by the Working Group on 9 December 2020 which agreed to its publication. The Working Group is particularly grateful to members of the Loan Market Sub-Group, Cash Market Legacy Transition Task Force and Loan Enabler Task Force for having developed this paper.

The Bank of England and FCA are each ex-officio members of the Working Group. The views and outputs set out in this paper do not constitute guidance or legal advice from the Bank of England (including the Prudential Regulation Authority ("PRA")) or the FCA or the Working Group and are not necessarily endorsed by the Bank of England (including the PRA) or the FCA. In addition, this paper is

[1] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr-terms-of-reference.pdf

[2] This was particularly evident during the period of disruption brought on by COVID-19 in March 2020 where the limited market transactions underpinning GBP LIBOR benchmarks fell away leaving them almost entirely reliant on expert judgment. Additionally, during this period, LIBOR rates – and hence costs for borrowers – rose as central bank policy rates fell and underlying market activity was low. This has reinforced the importance of completing the transition to alternative rates by end-2021. For more on this please refer to the Bank of England's May 2020 Financial Stability Report: https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/may-2020.pdf

[3] https://www.fca.org.uk/news/speeches/libor-transition-and-contractual-fallbacks

not intended to impose any legal or regulatory obligations on market participants. This paper has been prepared for the purpose of highlighting to market participants some of the potential considerations. It does not constitute a comprehensive outline of all relevant considerations. Market participants should seek their own advice in relation to their legal, regulatory, tax and other obligations and as to any other considerations or risks that may arise or be relevant.

Introduction

1. The Working Group encourages loan market participants to transition away from GBP LIBOR. Its administrator (ICE Benchmark Administration) is consulting on the potential cessation of these LIBOR panels at the end of 2021.[4]

2. Transition from LIBOR can be achieved through referencing SONIA or an alternative rate directly in new or refinanced loans. To the extent that this is not feasible, the Working Group has recommended[5] that lenders (working with their borrowers) should, from 1 October 2020, include clear contractual arrangements in all new and refinanced GBP LIBOR-referencing loans to facilitate conversion ahead of end-2021 to SONIA or other alternatives. This can be achieved through either pre-agreed conversion terms (taking effect at a pre-agreed switch date) or an agreed process for renegotiation.

3. The Working Group has also set a series of target milestones[6] for active conversion of the outstanding stock of legacy GBP LIBOR referencing loan contracts ahead of the expected cessation of the GBP LIBOR panels at the end of 2021.

4. When amending loan contracts to actively transition from GBP LIBOR to SONIA or other alternative rates – whether directly, by way of pre-agreed conversion terms or through an agreed process for renegotiation – the possibility of value transfer needs to be carefully considered. This is because of the economic differences between GBP LIBOR and SONIA, which result from, amongst other factors, the term credit risk premium that is built into GBP LIBOR, but not into SONIA. The concept of a credit adjustment spread ("**CAS**") has been used in the market as a way to mitigate, as far as possible, any value transfer.

5. The FCA has said that GBP LIBOR transition should not be used to move borrowers with continuing contracts to replacement reference rates that are expected to be higher than what GBP LIBOR would have been. However, when transitioning loan contracts, lenders receiving GBP LIBOR-linked interest are not expected to give up the difference between this and SONIA (resulting from the absence of the term credit risk premium).[7] The transition to SONIA should, as far as possible, be one which mitigates any transfer of value between the parties.

6. In September 2020, following market consultation, the Working Group recommended[8] the use of a five-year historical median for the CAS applicable to a SONIA rate[9] in fallback or replacement of screen rate provisions applying in cash market products (including loans) following a cessation trigger and pre-cessation trigger in relation to GBP LIBOR. This is in line with the ISDA approach for derivatives fallbacks. However, the Working Group and ISDA consultations did not cover active transition, which may involve further considerations relating to timing and other factors as described in this paper.

7. In light of the Working Group recommendation to focus on active transition noted above, loan market participants are strongly encouraged to consider which methodology is appropriate to calculate the

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[4] See https://www.theice.com/publicdocs/ICE_LIBOR_Consultation_on_Potential_Cessation.pdf. In the context of the cessation of GBP LIBOR, readers should also note that the Financial Services Bill introduced to Parliament on 21 October 2020 includes additional powers for the FCA to, amongst other things, require changes to a critical unrepresentative benchmark (such as GBP LIBOR) including its methodology in certain circumstances so it may no longer rely on panel bank submissions. At the date of this paper, the FCA is consulting on its potential policy approach for possible future use of this proposed power. This however does not change the need for parties to take steps to transition away from GBP LIBOR before the end of 2021.
[5] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwg-further-statement-on-the-impact-of-coronavirus-on-timeline-for-firms-libor-transition-plans.pdf
[6] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfr-working-group-roadmap.pdf
[7] https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition
[8] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/recommendation-of-credit-adjustment-spread.pdf
[9] Being either backward-looking compounded SONIA or forward-looking term SONIA.

CAS for active transition. Based on loan transactions executed to date and approaches taken in the bond and derivatives markets, two key methodologies have emerged:

a. the five-year historical median approach; and

b. the forward approach (based on the forward-looking swap market).

8. It should be noted that the forward and historical curves are expected to undergo some degree of convergence as the end of 2021 (and an expected cessation or pre-cessation event) approaches.

9. A number of considerations arise in respect of each methodology, for example: (i) the impact of market prices and expectations, as the spread between GBP LIBOR and SONIA can vary (the FCA has provided some considerations on this point[10]); (ii) whether the CAS is calculated at the date of the transaction[11], or when the switch to SONIA occurs (if later);[12] and (iii) the approach taken in related hedging products.

10. As the end of 2021 draws closer, the risks associated with continuing to rely on agreements that reference GBP LIBOR may increase. It remains the central assumption that firms cannot rely on GBP LIBOR being published after end-2021[13] and there is uncertainty over how the volatility of GBP LIBOR and depth of liquidity in GBP LIBOR instruments may change as the end of 2021 approaches.

11. The approach to active transition, including CAS, is for lenders and their borrowers to determine, factoring in the costs, risks and benefits of any options, and the information available to them at the time. This paper is intended to assist loan market participants in considering the options available for determining the CAS by setting out the two key metholodologies emerging in the market in one place. It describes the options, outlines potential considerations and provides worked examples.

12. This paper does not recommend a particular approach to the CAS in respect of active transition of loans away from GBP LIBOR. The paper focuses on GBP LIBOR and CAS in respect of a SONIA rate.[14] It is noted that loans may be multicurrency and market participants will need to consider their approach to transition in that context. This paper also does not cover:

a. new loans which directly reference SONIA (where market participants will need to consider how best to structure and time their transactions using SONIA given the differences between SONIA and GBP LIBOR); and

b. loans transitioning to Bank Rate. In this respect, market participants should note the conduct expectations outlined in the FCA's Q&A on conduct risk during LIBOR transition ("**FCA Conduct Risk Q&A**")[15].

[10] See the FCA's updated Q&A on conduct risk during LIBOR transition published in November 2020: https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition and discussed further in Appendix 2 of this paper.

[11] This could be entering into a new loan agreement incorporating pre-agreed terms to switch to SONIA at an agreed future date, or an amendment to an existing loan to directly reference SONIA or incorporating pre-agreed terms to switch to SONIA at an agreed future date.

[12] The transition to SONIA could occur at a pre-agreed switch date ahead of end-2021 (in line with the Working Group recommendations for conversion language from 1 October 2020), or it could occur at the point GBP LIBOR permanently ceases or becomes unrepresentative (in line with ISDA fallbacks in the derivatives market). The date the CAS would be fixed depends on the terms of the contract (under ISDA documentation for example, the CAS is fixed in the case of a cessation or pre-cessation event, e.g. the date of the relevant cessation or non-representativeness announcement, but the transition to SONIA would occur at the point that GBP LIBOR ceases or becomes unrepresentative). Note that this paper is focused on active transition, i.e. transition occurring ahead of GBP LIBOR ceasing or becoming unrepresentative.

[13] Please refer to footnote 4.

[14] Being either backward-looking compounded SONIA or forward-looking term SONIA.

[15] See footnote 7 and the question: "Can LIBOR contracts be converted upon LIBOR cessation or loss of representativeness to Bank Rate plus an appropriate spread, rather than SONIA plus and appropriate spread?"

Approaches and considerations relating to active transition CAS

13. The following sections set out descriptions, potential considerations and worked examples for the historical median and forward approaches. The considerations are provided for information only and are not intended to be comprehensive. The Working Group makes no representation as to their accuracy or applicability to the particular circumstances of an individual market participant. Readers are strongly encouraged to formulate their own views regarding the potential considerations applicable to each approach, taking into account their particular circumstances, and to consult with their own advisers in doing so.

14. The worked examples set out simplified illustrations of the approaches outlined. These are for information purposes only. For simplicity, a single interest period is assumed. CAS levels implied by these methodologies are sensitive to the parameters chosen (e.g. the point at which the CAS is determined). Actual implementation of the selected approach may yield different values. However, the examples should provide a helpful sense of how the approaches would function.

Section 1: Five-year historical median approach

Description

15. Under this approach, the CAS is based on the difference between GBP LIBOR for a particular interest period and SONIA compounded in arrears over the same period calculated using a median over a five-year lookback period.[16] This approach therefore looks into the past, i.e. historical differences between GBP LIBOR and the SONIA compounded in arrears rate over a five-year period.

16. The CAS calculated using this methodology for different tenors of GBP LIBOR is currently being calculated and published by Bloomberg Index Services Limited ("**Bloomberg**" or "**BISL**"), following selection by ISDA. BISL is publishing the CAS daily on an indicative basis prior to the setting of the CAS on the effective date of a cessation or pre-cessation event; upon the earlier of such events the CAS will be fixed. However, use of this rate is prohibited while it remains a fluctuating rate.[17]

Box 1: Use of the five-year historical median in the loan market

As the loan market is a private market, it is not possible to be definitive about market practice. However, some market participants have chosen to announce the fact of transactions referencing risk-free rates ("**RFRs**") or containing a switch to RFRs and to disclose associated key conventions used in those transactions (including the approach taken to CAS).[18]

The five-year historical median approach has been used in the loan market in the context of loans containing an in-built switch from LIBOR to RFRs (for example, British American Tobacco and Associated British Ports). In some transactions, the CAS was fixed at the outset, although the switch to RFRs is scheduled to take place on the first anniversary of the signing date (for example, British American Tobacco). In others, the CAS is to be fixed at the point of the switch (for example, Seastar).

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[16] Whilst the same methodology would apply to all tenors of GBP LIBOR, the actual CAS would differ across the different tenors. For example, the CAS applicable for 3-month GBP LIBOR would be different to that applicable for 6-month GBP LIBOR.

[17] ISDA and Bloomberg's IBOR Fallback Rate Adjustments Rule Book (link at end of footnote) states the following: Users should be aware that prior to the Spread Adjustment becoming fixed upon a "Spread Adjustment Fixing Date" (as defined and determined below), neither the Spread Adjustment nor the Fallback Rate should be used as a primary reference rate within a financial instrument or financial contract (or other 'use' as defined in the BMR) other than as a contractual fallback. Use of Bloomberg's calculations to the contrary is expressly prohibited." http://assets.isda.org/media/34b2ba47/c5347611-pdf/

[18] The Loan Market Association ("**LMA**") maintains a list of RFR referencing syndicated and bilateral loans on its website. The list is not comprehensive and it may be that other transactions transitioning to RFRs have been entered into but have not been publicly announced, disclosed by the parties or identified for the list. The latest version of the list can be found on the following website: https://www.lma.eu.com/libor.

The five-year historical median approach has also been used in loans transitioning directly to RFRs (for example, GlaxoSmithKline), with the CAS fixed at the date of the transaction.

Considerations

17. Some potential considerations in respect of the five-year historical median approach are set out below:

    a. Timing of calculation of CAS: It is important to be clear about the date on which the CAS is to be determined, as this determines the five year window and market prices may move. As noted in *Box 1: Use of the five-year historical median in the loan market*, this may be at the date of the transaction, or at the point of switch to SONIA (if later).[19] It is worth noting in this respect that the US Alternative Reference Rates Committee ("**ARRC**") has suggested an approach to the timing of the calculation of an "early opt-in" CAS, although this approach has not been adopted to date in the sterling loan market. For further details of this approach see **Appendix 1** of this paper.

    b. Fair treatment of borrowers: Lenders should consider the ability of their counterparties to assess fair terms. Lenders may be dealing with counterparties with a close understanding of interest rate markets who can agree fair conversion arrangements that take account of the expected future path of interest rates (and, as noted, there are examples of mutually-agreed conversion of GBP LIBOR obligations to SONIA across the loan market). However, lenders may also be dealing with counterparties who may not be able to fully assess fair terms. If this is the case, the FCA Conduct Risk Q&A suggests that parties may wish to consider other conversion mechanisms, including the potential to use GBP LIBOR up and until and including the last reset date before end-2021 and moving to an alternative rate thereafter. For further details of this approach see **Appendix 2** of this paper.

    c. Economic / market factors: 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 a result, the median will sometimes be below or above the actual market prices on any given day prior to GBP LIBOR ceasing. In spring 2020, for example, as financial markets reacted to the impact of Covid-19, the spread between GBP LIBOR and SONIA moved substantially above the then five-year historical median. The spread then moved below the five-year historical median due to various market factors, likely to include among others the significant expansion of liquidity provided by central banks.And current market pricessuggest that it will rise again in future.[20] [21] The timing of transition may therefore have an economic impact and should carefully be considered by both parties in the decision making process. It should be noted that where the five-year historical median approach is used in loan transactions and the rate switch to SONIA becomes effective in advance of GBP LIBOR cessation, the historical median will not fully reflect economic

[19] The transition to SONIA could occur at a pre-agreed switch date ahead of end-2021 (in line with the Working Group recommendations for conversion language from 1 October 2020), or it could occur at the point GBP LIBOR permenantly ceases or becomes unrepresentative (in line with ISDA fallbacks in the derivatives market. The date the CAS would be fixed depends on the terms of the contract (under ISDA documentation for example, the CAS is fixed in the case of a cessation or pre-cessation event, e.g. the date of the relevant cessation or non-representativeness announcement, but the transition to SONIA would occur at the point that GBP LIBOR ceases or becomes unrepresentative). Note that this paper is focused on active transition, i.e. transition occurring ahead of GBP LIBOR ceasing or becoming unrepresentative.

[20] At the beginning of December 2020 forward basis curves were higher than spot basis curves indicating that the market expects them to widen.

[21] https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition

differences between GBP LIBOR and SONIA from the selected CAS calculation date until the eventual LIBOR cessation date and so would not necessarily align with market values.

d. Consistency with market precedent: As noted in *Box 1: Use of the five-year historical median in the loan market*, this approach has been used in some loan market transactions, so there is some precedent for its use. Factors for this methodology's use in syndicated transactions have included the simplicity of explaining this approach consistently to all counterparties and to align multiple parties to a commonly understood methodology. However, this approach has not been used in the bond or derivatives markets for active transition.

e. Consistency with hedging (where relevant): Consistency with the derivatives market for hedging purposes needs to be considered (should hedging be a relevant consideration) and the potential consequences of any mismatches which might impact hedge accounting treatment and/or the effectiveness of a hedge. Within the derivatives market the five-year historical median for fallbacks is being used on cessation and pre-cessation triggers only, not for active transition (where the basis swap market is generally used).

f. Transparency: The BISL CAS is available through various distribution channels (with a licence required from Bloomberg for the re-distribution or usage of the BISL CAS) and also publicly available on the Bloomberg website on a delayed basis. However, the BISL CAS is being published in the context of ISDA fallbacks and parties should note that use of the indicative CAS is prohibited prior to it becoming fixed following a cessation of pre-cessation event in relation to GBP LIBOR as noted in the BISL Rulebook.[22] The terms of use and access to the BISL CAS for the sterling loan market are in the process of being confirmed and market participants are encouraged to monitor this.

g. Tenor(s) of existing GBP LIBOR: Where there are multiple choices of tenor under the loan, the borrower and lender(s) should agree which GBP LIBOR tenor(s) (e.g. 1, 3, 6 months) should be assumed for calculating the CAS. The CAS will be different depending on the tenor(s) used. BISL CAS is published for all tenors, noting there are restrictions on use as set out above.

h. Stability of a long-term median: The use of a long lookback period rather than a single observation makes the five-year historical median less susceptible to market distortions over short periods.

i. Operational considerations: Lenders should assess the operational considerations of managing and maintaining the CAS on an ongoing basis across a wide portfolio of deals. For example, it could be considered that standardising the calculation of CAS using a five-year historical median approach and common trigger dates (to the extent achievable) could simplify the operational process.

[22] See footnote 17

Worked example 1: Five-year historical median approach with the same amendment date, switch to SONIA date and CAS determination date

18. In this simplified example, for illustration purposes only, the borrower entered into an amendment to a loan agreement on 30th July 2020 with a rate switch to SONIA effective on 30th July 2020. On 30th July 2020, by reference to the five-year historical median approach, the CAS is determined at 0.1227%.

Maturity of existing loan:	30th October 2025
Repayment profile:	Bullet (100% at maturity)
Current loan margin over GBP LIBOR:	200bps
Agreed assumed GBP LIBOR tenor on existing loan:	3 months
Date of loan amendment:	30th July 2020
CAS calculation date:	30thJuly 2020
SONIA switch date:	30th July 2020
Interest Period Selected at/after SONIA switch date:	3 months 30th July 2020 to 30th October 2020
Calculated 3 Month CAS:	0.1227%
Margin following switch:	2.0000%
At the end of the selected interest period, this advance attracted the following Compounded 3 Month SONIA and All in Rates. Please note that these are not known until the end of the interest period.	
Compounded 3 Month SONIA:	0.0553%
Loan all in Rate:	2.178%

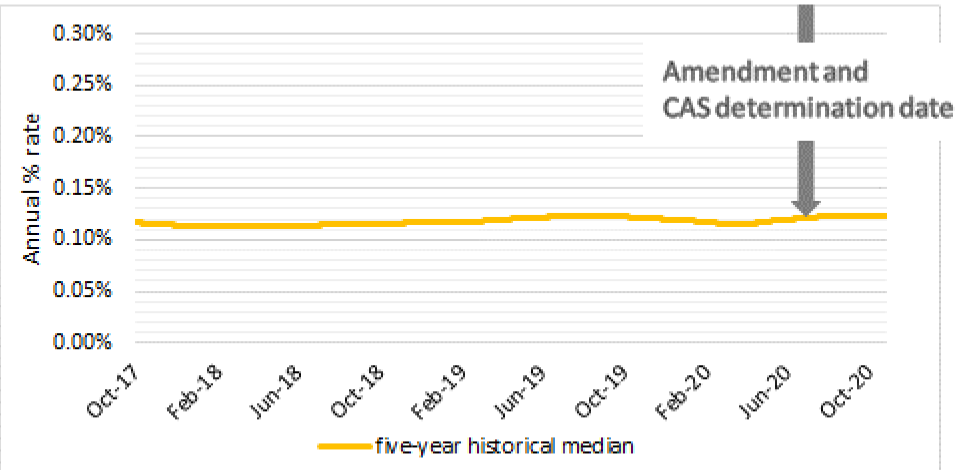

Figure 1: Graph of worked example where CAS is determined using 5YHM for loan agreement with same amendment date, switch to SONIA date and CAS determination date

Worked example 2: Five-year historical median approach with the amendment date differing from the switch to SONIA date and CAS determination date

19. In this simplified example, for illustration purposes only, the borrower entered into an amendment to a loan agreement on 30th July 2020 which included pre-agreed terms to transition to SONIA on 30th October 2020. On 30th October 2020, by reference to the five-year historical median approach, the CAS is determined at 0.12340%.

Maturity of existing loan:	30th October 2025
Repayment profile:	Bullet (100% at maturity)
Current loan margin over GBP LIBOR:	200bps
Agreed assumed GBP LIBOR tenor on existing loan:	3 months
Date of loan amendment:	30th July 2020
CAS calculation date:	30th October 2020
SONIA switch date:	30th October 2020
Interest Period Selected at/after SONIA Switch date:	3 months 30th October 2020 to 30th January 2021
Calculated 3 Month CAS:	0.12340%
Margin following switch:	2.00000%
At the end of the selected interest period, this advance attracted the following Compounded 3 Month SONIA and All in Rates. Please note that these are not known until the end of the interest period.	
Compounded 3 Month SONIA	0.05000% (assumed rate for illustration purposes)
Loan all in Rate:	2.17340%

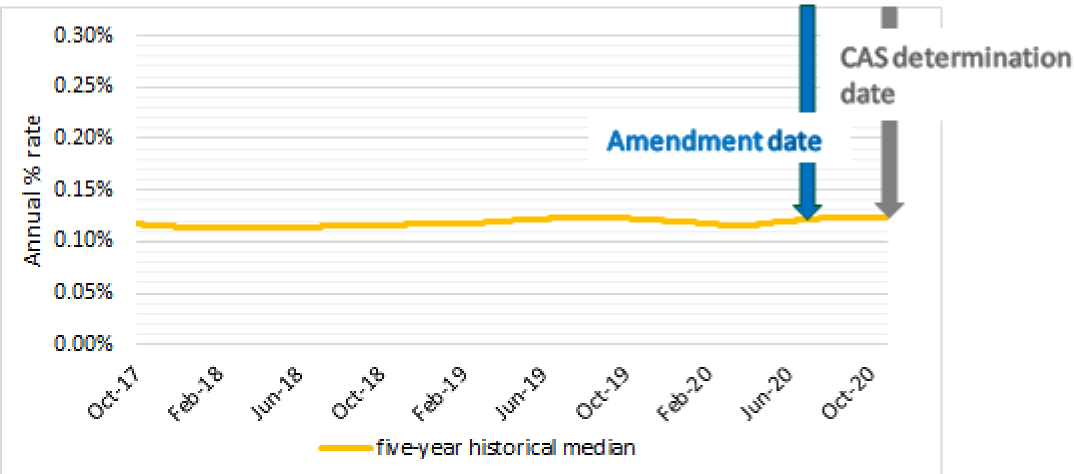

Figure 2: Graph of worked example showing CAS determined using 5YHM approach for loan agreement with amendment date differing from the switch to SONIA date and CAS determination date

Section 2: Forward approach

Description

20. This approach involves calculating the CAS based on the forward-looking basis swap market. It is calculated as the linear interpolation between differing tenors of GBP LIBOR vs SONIA swaps, which is then added to the original margin. The tenor of basis used should match the weighted average life of the existing loan (e.g. the tenor of the loan if it has a bullet repayment, or shorter if it has an amortising repayment profile).

Box 2: Use of the forward approach in the loan market

The forward approach has been used in loans transitioning directly to RFRs (for example, South West Water), and also loans containing an in-built switch from LIBOR to RFRs (for example, Associated British Ports). In some cases, the CAS is fixed at the date of the transaction, and in others at the point of the switch (if later).

It is also useful in this context to consider the experience in the SONIA-referencing floating rate note ("**FRN**") market[23], where numerous active transitions via consent solicitations have been concluded using the forward approach for the CAS.

An example of a corporate borrower consent solicitation is that by Associated British Ports in May 2019 which involved notes which had between 3 and 4 years to run. The CAS was the interpolation between the 3 year and 4 year 3 month GBP LIBOR vs SONIA basis for sterling basis swap transactions.

In the Associated British Ports loan with an in-built switch, the CAS was set at the date of the transaction (although the switch to SONIA would take place on the first anniversary of signing) and was based on the 12 month forward starting basis spread between SONIA compounded 6 monthly and 6 month GBP LIBOR. In the South West Water loan amendment, the agreed margin includes the 3 month GBP LIBOR / SONIA basis calculated using the linear interpolation to the final maturity date of the loan.

Considerations

21. Some potential considerations in respect of the forward approach are set out below:

    a. Timing of calculation of CAS: It is important to be clear about the date on which the CAS is to be determined, as market prices may move. The basis swap market assumes the switch is effective at the pricing date and so FRN consent solicitations have been structured to keep the difference between pricing and effective dates to a minimum (a large difference would mean the basis screen is less accurate).[24]

    b. Fair treatment of borrowers: Lenders may be dealing with counterparties who may not be able to fully assess fair terms. If this is the case, the FCA Conduct Risk Q&A suggests that parties may wish to consider other conversion mechanisms. This is considered further in **Appendix 2** of this paper.

    c. Economic / market factors: A CAS based on the forward approach would reflect the expected difference between GBP LIBOR and SONIA for the remaining life of the loan, subject to sufficient liquidity in the market being observed. This would incorporate market views on the

[23] The SONIA-referencing floating rate note market includes securitisations.
[24] A forward adjustment may also be included to reflect any time difference between the pricing and effective dates. Typically on SONIA-referencing FRNs this is a number calculated by the 'Solicitation Agent' in accordance with market practice.

path of GBP LIBOR cessation and / or pre-cessation events. By comparison, the five-year historical median approach will sometimes be below or above these prices on any given day prior to GBP LIBOR ceasing.

d. Consistency with market precedent: As noted in *Box 2: Use of the forward approach in the loan market* this approach has been used in some loan market transactions. In some of the syndicated loans that have been made public, the five-year historical median has been used for simplicity, particularly where the loan is being used for backstop liquidity purposes and is not expected to be drawn. However, the forward approach does have some precedent for its use and given the loan market is a private market there may have been further use which is not public. Factors for use of the forward approach have included, but are not limited to, alignment with market values at the time of the transaction (particularly where the loan is drawn, and to guard against parties entering swaps to lock in an arbitrage on the difference), and the involvement of longer-term non-bank lenders. This approach has also been used in a number of consent solicitations in the SONIA-referencing FRN market and is generally used for active transition of derivatives.

e. Consistency with hedging (where relevant): The derivatives market generally uses the basis market for active transition, so use of the forward approach could be in line with hedging associated with the loan (assuming the same timing is used to calculate the CAS). Note that the hedging would usually be amended based on the precise term structure of the basis market (rather than linear interpolation) and so there could be some small differences between the two CAS's. This may also be the case where a repayment profile is not bullet (e.g. amortising). Linear interpolation has been used in debt transitions to provide transparency but where there is hedging it may be that lenders and borrowers agree to match the precise swap amendment terms for consistency. This will particularly be a consideration for long-term project finance deals where hedging will be in place for the life of the loan so it will be important for both instruments to transition at the same time and on the same basis to alternative rates.

f. Difference between bid and offer rates: In the basis market, there is a difference between the bid and the offer rates. Some market participants have used the mid-market rate to transition in order to provide a neutral approach to mitigate value transfer.

g. Transparency: The GBP LIBOR-SONIA basis screens can be found through a number of vendors and if borrowers do not have access, lenders should be able to provide evidence of levels at an agreed time. There are a number of screens which are available for use now that have been used in FRN consent solicitations where a screen shot can be provided by the lender to the borrower with a timestamp (if the borrower does not have access to those screens and subject to licensing considerations). Linear interpolation is a simple and transparent method of using the data on the basis screens and a worked example is provided below.

h. Tenor(s) of existing GBP LIBOR: Where there are multiple choices of tenors under the loan, the borrower and lender(s) should agree which GBP LIBOR tenor(s) (e.g. 1, 3, 6 months) should be assumed. The CAS will be different depending on the tenor(s) used. Basis screens are available for all tenors.

i. Operational considerations: The forward approach requires a bespoke solution per contract as it is based on inputs subject to the profile of the loan. Parties should consider whether there is any complexity to operationalising this approach on a broader basis given that the CAS is based on the maturity of the loan and the time of execution.

Worked example 3: Forward approach with the same amendment date, switch to SONIA date and CAS determination date

22. In this simplified example, for illustration purposes only, the borrower entered into an amendment to a loan agreement on 30th July 2020 with a rate switch to SONIA effective on 30th July 2020. On 30 July 2020, by reference to the forward approach, the CAS is determined at 0.17400%.

Maturity of existing loan:	30th October 2025
Repayment profile:	Bullet (100% at maturity)
Current loan margin over GBP LIBOR:	200bps
Agreed assumed GBP LIBOR tenor on existing loan:	3 months
Date of loan amendment:	30th July 2020
CAS calculation date:	30th July 2020
SONIA switch date:	30th July 2020
Interest Period Selected at/after SONIA switch date:	3 months 30th July 2020 to 30th October 2020
Years from CAS calculation date to loan maturity:	5.25 years
3 month GBP LIBOR vs SONIA Basis Swap Screen at time of CAS calculation:	Bloomberg ICAB9
5 year 3 month GBP LIBOR vs SONIA Basis:	0.106%
6 year 3 month GBP LIBOR vs SONIA Basis:	0.108%
Calculated 3 month CAS:	0.106 + [(0.108 – 0.106) * (5.25y – 5y) / (6y – 5y)] = 0.1065%
Margin following switch:	2.00000%
At the end of the selected interest period, this advance attracted the following Compounded 3 Month SONIA and All in Rates. Please note that these are not known until the end of the interest period	
Compounded 3 Month SONIA:	0.0553%
Loan All in Rate	2.1618%

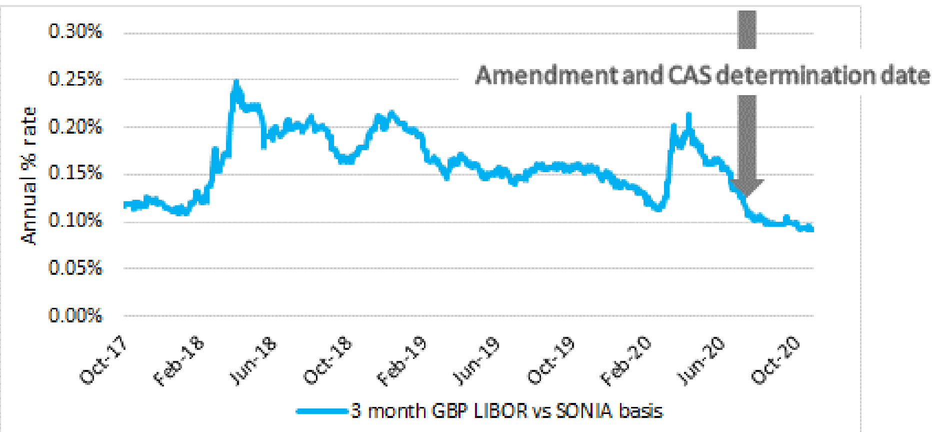

Figure 3: Graph of worked example showing CAS determined using forward approach for loan agreement with same amendment date, switch to SONIA date and CAS determination date

Worked example 4: Forward approach with the amendment date differing from the switch to SONIA date and the CAS determination date

23. In this simplified example, for illustration purposes only, the borrower entered into a loan agreement on 30th July 2020 which included pre-agreed terms to transition to SONIA on 30th October 2020. On 30th October 2020, by reference to the forward approach, the CAS is determined at 0.09600%.

Maturity of existing loan:	30th October 2025
Repayment profile:	Bullet (100% at maturity)
Current loan margin over GBP LIBOR:	200bps
Agreed assumed GBP LIBOR tenor on existing loan:	3 months
Date of loan amendment:	30th July 2020
CAS calculation date:	30th October 2020
SONIA switch date:	30th October 2020
Interest Period Selected at/after SONIA switch date:	3 months 30th October 2020 to 30th January 2021
Years from CAS calculation date to loan maturity:	5y
3 month GBP LIBOR vs SONIA Basis Swap Screen at time of CAS calculation:	Bloomberg ICAB9
5 year 3 month GBP LIBOR vs SONIA Basis:	0.09600%
Calculated 3 month CAS:	0.09600%
Margin following switch:	2.0000%
At the end of the selected interest period, this advance attracted the following Compounded 3 Month SONIA and All in Rates. Please note that these are not known until the end of the interest rate period	
Compounded 3 Month SONIA:	0.05000% (assumed for illustration purposes)
Loan All in Rate	2.14600%

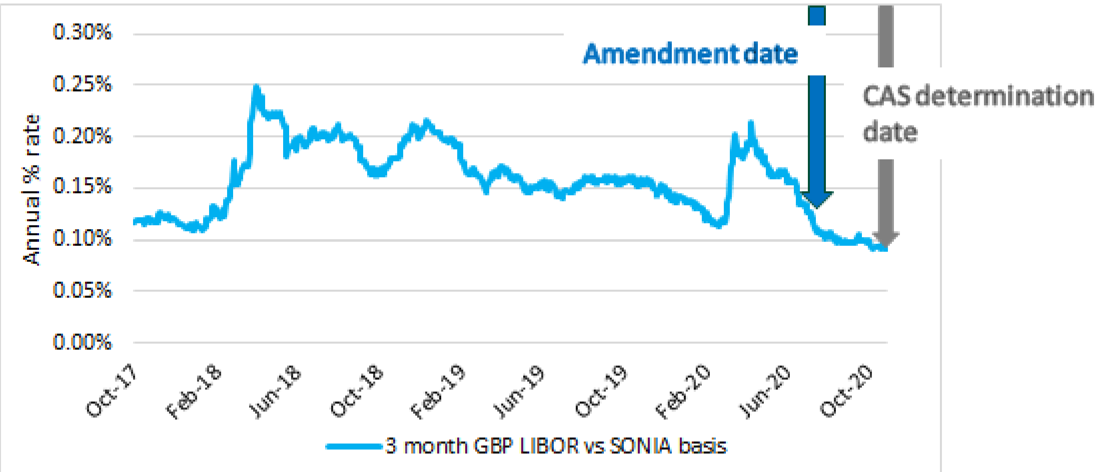

Figure 4: Graph of worked example showing CAS determined using forward approach for loan agreement with amendment date differing from the switch to SONIA date and CAS determination date

Summary of options

24. The table below sets out a summary of the different options within the five-year historical median and forward approaches based on the time for determination of the CAS. It also notes whether this approach has been used in the market or recommended by any currency working group, or trade association, or is otherwise reflected in communications by a regulator.

	Five-year historical median	**Forward approach**
CAS fixed at date of transaction where switch also occurs at the date of transaction	• Has been used in the sterling loan market	• Has been used in sterling loan market • Has been used in sterling FRN market for consent solicitations where transition date and CAS calculation date are broadly aligned • Has been used for active transition of derivatives
CAS fixed at date of transaction with switch occurring on a later date	• Has been used in the sterling loan market	• Has been used in the sterling loan market • Has been commonly seen in GBP FRN consent solicitations
CAS reset at each interest period (and then fixed on cessation/pre-cessation trigger)	• Not known to be used in sterling loan market • Used in ARRC Hardwired Language (as defined in **Appendix 1**)	*Not used*
CAS fixed at switch trigger date which is later than date of transaction (active switch before cessation/pre-cessation trigger)	• Has been used in sterling loan market	• Has been used in sterling loan market • Could be used where there is associated hedging being switched simultaneously • Has been used for active transition of derivatives
CAS fixed at cessation/pre-cessation with switch occurring at the first interest reset after the end of 2021	• Alternative approach for certain users aligned with example in FCA Conduct Risk Q&A • This is likely to align more closely with fallbacks operating when LIBOR permanently ceases or becomes unrepresentative (see below)	*Not used*
CAS fixed at cessation/pre-cessation trigger (with switch occurring at permanent cessation/at the point at which the rate is no longer representative)	• Recommended by Working Group for fallbacks for cash products (*but not for active transition*) • ISDA approach for derivatives fallbacks (*but not for active transition*) • Has been used in sterling bond market for consent solicitations where transition date contingent on or expected after LIBOR permanently ceases, for example resets on certain callable securities	*Not used*

25. Ultimately, the approach to active transition and the CAS is for lenders and their borrowers to determine. This paper has highlighted some of the available approaches and considerations to help loan market participants understand and discuss some of the options available.

Appendix 1: ARRC early opt-in approach

Description

In June 2020, the ARRC published recommendations regarding more robust fallback language for new originations of USD LIBOR syndicated loans (the "**ARRC Hardwired Language**").[25] The ARRC Hardwired Language provides that parties may elect to exercise an "early opt-in" with respect to their transition from USD LIBOR. If the early opt-in is triggered, the ARRC Hardwired Language looks to the indicative CAS (published by ARRC or ISDA) with respect to SOFR during the period until the CAS becomes static on a cessation or pre-cessation event.

The CAS will be determined at the time the early opt-in election becomes effective, but the applicable CAS (for the applicable tenor or payment period) will be set at the beginning of every interest period, subject to any lookback period, and will apply for the duration of that interest period. At the time that the ARRC or ISDA CAS becomes static, the same CAS will apply, via the same process, over the life of the contract.

Considerations

Whilst this approach has not been used to date in sterling loan markets it presents similar considerations to those applicable to the five-year historical median approach. In addition:

1. Eventual alignment with CAS for cessation/pre-cessation fallbacks: The early opt-in approach means that, whether a loan facility transitions through an "early opt-in" or upon the occurrence of LIBOR permanently ceasing or becoming unrepresentative, the same CAS will apply across different loan facilities after the ARRC or ISDA CAS become static, even if the "early opt-in" was triggered when the CAS was not static. Market participants who choose to transition through an "early opt-in" will be, at that time, in the same position as if they had waited until LIBOR permanently ceases or becomes unrepresentative.
2. Consistency with market precedent: Based on publicly available information, where the ARRC Hardwired Language has been included in USD LIBOR syndicated loans, no parties to date have exercised the "early opt-in". The "early opt-in" can be triggered if at least five (or such other number as agreed in the documentation) currently outstanding and publicly available USD denominated syndicated credit facilities at such time contain a SOFR-based rate as a benchmark. As of the date of this paper, this condition has not been met and so there is no precedent for its use. This approach has also not been used in the bond or derivatives markets for active transition.
3. Availability of indicative CAS: The ARRC Hardwired Language suggests the use of an indicative ARRC or ISDA CAS for the "early opt-in" prior to the ARRC or ISDA CAS becoming static. However, there is currently no ARRC CAS in publication (this is subject to an ongoing request for proposal process, of which the timing is uncertain). Whilst BISL is publishing the ISDA CAS on an indicative basis, as noted in paragraphs 15 and 16 of this paper, there are restrictions on use of this indicative CAS as set out in the BISL Rulebook.
4. Operational considerations: There may be complexity to operationalising this approach given that it involves managing and maintaining a CAS which is reset at the start of every interest period (and that interest period start date will be bespoke per borrower and loan).

[25] https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/Updated-Final-Recommended-Language-June-30-2020.pdf

Appendix 2: Last reset conversion

Description

In November 2020, the FCA published a new Q&A as part of its FCA Conduct Risk Q&A.[26] The FCA considered the following question: "*Given that the spread between LIBOR and SONIA will vary, how can firms address this fairly when actively transitioning existing customers from LIBOR to alternative rates?*"

In its response, the FCA states that where firms are dealing with counterparties who may not be fully able to assess fair terms, they may wish to consider other conversion mechanisms. For example, they may consider whether it is appropriate to use contractual arrangements which see the last reset before end-2021 being based on GBP LIBOR, before moving to an alternative rate thereafter.

Considerations

A worked example for this approach has been included for illustration purposes below. This approach has similar considerations to those applicable to the five-year historical median approach. In addition:

1. Consistency with market precedent: As this approach involves converting after the last GBP LIBOR reset before end-2021, this is likely to align more closely with fallbacks operating when GBP LIBOR permanently ceases or becomes unrepresentative. As a result, the use of a five-year historical median would align with the established consensus that a five-year historical median is a fair way to approximate the expected future difference between GBP LIBOR and SONIA from the point GBP LIBOR permanently ceases or becomes unrepresentative.
2. Consistency with hedging (where relevant): Consistency with the derivatives market for hedging purposes needs to be considered (should hedging be a relevant consideration) and the potential consequences of any mismatches which might impact hedge accounting treatment. The derivatives market is using the five-year historical median for fallbacks upon LIBOR permanently ceasing or becoming unrepresentative, which is expected to align with the last reset approach.
3. Fair treatment of borrowers: This approach may be appropriate when dealing with counterparties who may not be able to fully assess fair terms. However, where counterparties have a close understanding of interest rate markets, they are likely to be capable of agreeing to fair conversion arrangements in advance of end 2021. An assessment therefore may need to be made by lenders depending on the counterparty being dealt with and the appropriate approach to be taken.

[26] See the FCA's updated Q&A on conduct risk during LIBOR transition as updated in November 2020: https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition

Worked example 5 : Last reset conversion approach with each of the amendment date, switch to SONIA date and CAS determination date differing

In this simplified example, for illustration purposes only, the borrower entered into an amendment of a loan agreement on 30th July 2020 which included pre-agreed terms to transition to SONIA after the last GBP LIBOR reset before end-2021. It is assumed that ISDA fallback trigger date occurred on 30th October 2020 which enables determination of the CAS by reference to the five year historical median approach at 0.12340%.

Maturity of existing loan:	30th October 2025
Repayment profile:	Bullet (100% at maturity)
Current loan margin over GBP LIBOR:	200bps
Agreed assumed GBP LIBOR tenor on existing loan:	3 months
Date of loan amendment:	30th July 2020
CAS calculation date:	30th October 2020 (assumed ISDA fallback trigger date for illustration only)
SONIA Switch date:	After the last GBP LIBOR reset before end-2021
Interest Period Selected at/after SONIA Switch date:	3 months 30th January 2022 to 30 April 2022
Calculated 3 Month CAS:	0.12340%
Margin following switch:	2.00000%
At the end of the selected interest period, this advance attracted the following Compounded 3 Month SONIA and All in Rates. Please note that these are not known until the end of the interest rate period	
Compounded 3 Month SONIA:	0.05000% (assumed rate for illustration purpooses)
Loan all in Rate:	2.17340%

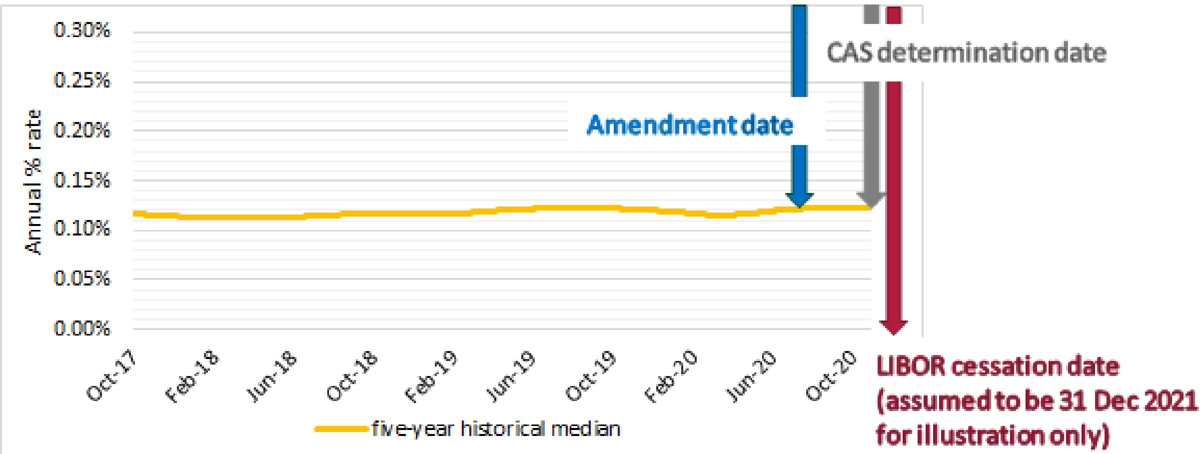

Figure 5: Graph of worked example showing CAS determined using five year historical median approach for loan agreement with each of the amendment date, switch to SONIA date and CAS determination date differing