

# LIBOR Transition

Credit Adjustment Spread

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# One-page Summary

The financial industry is preparing for the cessation of LIBOR.

On 5 March 2021, the [FCA officially announced](#) the dates for LIBOR cessation.<sup>(1)</sup> This was supported by a [statement published by ICE Benchmark Administration](#) (IBA, the administrator of LIBOR).

The alternative reference rates (ARRs) that will replace LIBOR are considered to be more robust. However, they are also calculated or set differently to LIBOR. This means that, historically, LIBOR and ARR's have been at different levels.

To ensure that the transition from LIBOR is fair for everyone, an adjustment needs to be made to account for the differences between LIBOR and ARR's. This adjustment is known as a '**credit adjustment spread**' (CAS).

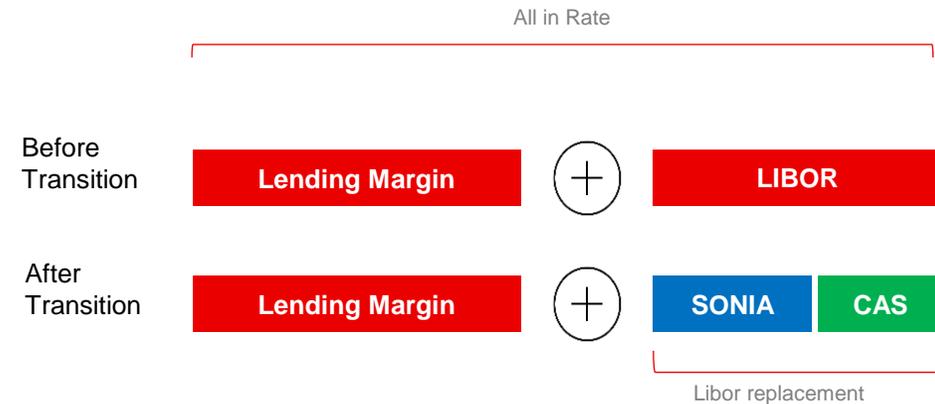
The concept of a CAS has been used in the market as a way to mitigate, as far as possible, any transfer of value between borrower and lender when transitioning from LIBOR to an ARR.

Following industry consultations, the Working Group on Sterling Risk-Free Reference Rates (RFR WG) concluded that one fair way to account for the differences between GBP LIBOR and SONIA<sup>(2)</sup> from LIBOR cessation, is to calculate a CAS based on the median difference between GBP LIBOR and SONIA over the last five years, and to add this to the SONIA rate for the relevant period.



In addition, the FCA has confirmed that a CAS may also be applied to transactions moving to the Bank of England Bank Rate (Base Rate).

To ensure that the historic, 'all-in' rate is maintained during transition, a CAS is added when calculating interest for facilities that have transitioned from LIBOR to an ARR. The all-in interest rate in existing transactions could therefore transition as follows:



This document sets out in more detail how a CAS could be applied to a range of ARR's, including some worked examples.

<sup>(1)</sup> For the purposes of this document, LIBOR cessation is the earlier of the date on which LIBOR for a currency and tenor ceases to be published or is deemed not-representative.

<sup>(2)</sup> SONIA is the Sterling Overnight Index Average. Additional information is available at: [What is SONIA?](#)

# Additional information

## What is happening?

- LIBOR will cease after the end of 2021<sup>(1)</sup> and certain ARRs have been identified as replacements.
- For GBP LIBOR, the RFR WG has nominated SONIA as its preferred alternative interest rate for sterling transactions.
- The RFR WG has also recognised that, for some products or customers, transition to other rates - for example, Bank of England Bank Rate (Base Rate), a fixed rate or, in some cases, Term SONIA Reference Rates (TSRRs) - may be more appropriate.
- Similarly, for USD LIBOR, the US Alternative Reference Rates Committee (ARRC) has nominated the US Secured Overnight Financing Rate (SOFR). And other alternative rates have been identified by national working groups for other LIBOR currencies.

<sup>(1)</sup> On the 5th March 2021 the FCA announced that Libor would cease to be representative, or no longer available immediately after 31 December 2021, in the case of all Sterling, Euro, Swiss Franc and Japanese Yen settings. This will also be the case for 1 week and 2 month US Dollar settings. The announcement further stated that immediately after 30 June 2023, the remaining US Dollar settings would cease to be representative or available.

## Why is a CAS necessary?

The ARR that will replace LIBOR is calculated or set differently to LIBOR. For example, the main differences in the characteristics of LIBOR and SONIA are set out in the table below.

	LIBOR	SONIA
<b>Inputs to calculation</b>	LIBOR is based on panel bank submissions of the rate at which they are able to borrow for the relevant period in the unsecured wholesale funding market. However, the underlying market that LIBOR measures is no longer used in any significant volume. Therefore, the submissions made by banks to sustain LIBOR rates are often based (at least in part) on expert judgement rather than actual transactions.	In contrast, SONIA is the effective overnight interest rate paid by banks for unsecured transactions in the British sterling market and is based on actual transactions. According to the RFR WG, being anchored in active, liquid underlying markets makes SONIA a more robust interest rate benchmark, relative to LIBOR.
<b>Term</b>	LIBOR is a set of mostly forward-looking term rates (commonly used are 1 month, 3 month and 6 month LIBOR). This means that the LIBOR rate for an interest or calculation period is set at the start of that period.	In contrast, SONIA is an overnight rate. This means that the rate for an interest or calculation period is typically determined by looking back at the SONIA rates over that period.
<b>Term premium and credit premium</b>	LIBOR term rates contain an element of 'term premium'. This is because setting an interest rate now for a point in the future involves taking a view on how interest rates might change over the intervening period, which is uncertain. In addition, LIBOR term rates contain an element of 'credit premium' (it implies bank credit risk).	In contrast, SONIA is an overnight rate and borrowing overnight in wholesale markets is very nearly risk-free, so SONIA is not designed to contain a term or credit premium. That said, the same considerations (e.g. term risk) would continue to apply to setting the margin over SONIA, as for any other reference rate (e.g. in a loan).
<b>Publication times</b>	LIBOR rates for a given day are published on the same day.	The SONIA rate for a given London business day is published on the next London business day (T+1).

LIBOR rates include term and credit premiums within their published rates, resulting in LIBOR typically being higher than either SONIA or Base Rate. The difference between LIBOR and ARR drives the requirement for a CAS for existing agreements.

# Does a CAS need to be applied?

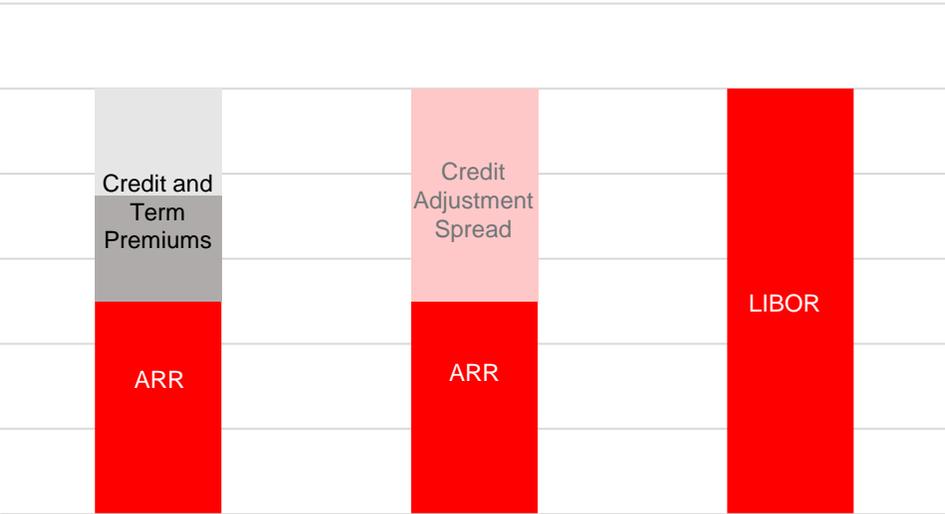
The FCA has made it clear that *“The discontinuation of LIBOR should not be used to move customers with continuing contracts to higher rates”*<sup>(1)</sup>.

Equally, the FCA says that firms are *“not expected to give up the difference between LIBOR and SONIA (or other alternative rates), which results from the term credit risk premium built into the LIBOR rate but not built into other rates such as SONIA”*<sup>(2)</sup>.

The aim is to apply a CAS that is fair to both customers and their banks.

Following industry consultations, the RFR WG concluded that one fair way to account for the differences between LIBOR and SONIA on LIBOR cessation, is to calculate a CAS based on the median difference between LIBOR and SONIA over the last five years, and to add this to the SONIA rate for the relevant period.

The FCA has confirmed that a CAS may also be applied to transactions moving to Base Rate. The CAS applied to transactions moving to Base Rate will be different to the CAS applied to transactions moving to SONIA, to reflect the market spread between SONIA and Base Rate.



(1) <https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/what-is-credit-adjustment-spread-supporting-slides.pdf?la=en&hash=902E3D63832AE0692DBCA6F1129F38968EBD7F43>, (page 5 of this document)

(2) <https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition>

## When is a CAS applied?

### Existing agreements

A CAS will need to be included in all contracts transitioning from a LIBOR linked rate to a non-LIBOR linked rate.

A CAS is added as a third component to the ARR and margin when transitioning an existing LIBOR linked facility to an ARR (for example SONIA, Base Rate or SOFR).

For derivative transactions<sup>(1)</sup> the CAS will be added to the floating leg of the swap which will transition from LIBOR to SONIA for GBP derivatives, or to SOFR for USD derivatives.

Where you wish to change other transaction terms at the same time, such as for example the amount you borrow and/or the term of your transaction, this is likely to need to be treated as a new transaction.

### New agreements

Any new agreements, including term extensions and refinance requests, will be arranged using a non-LIBOR linked rate with no separate CAS. The non-LIBOR options available to customers will be dependent on their individual circumstances.

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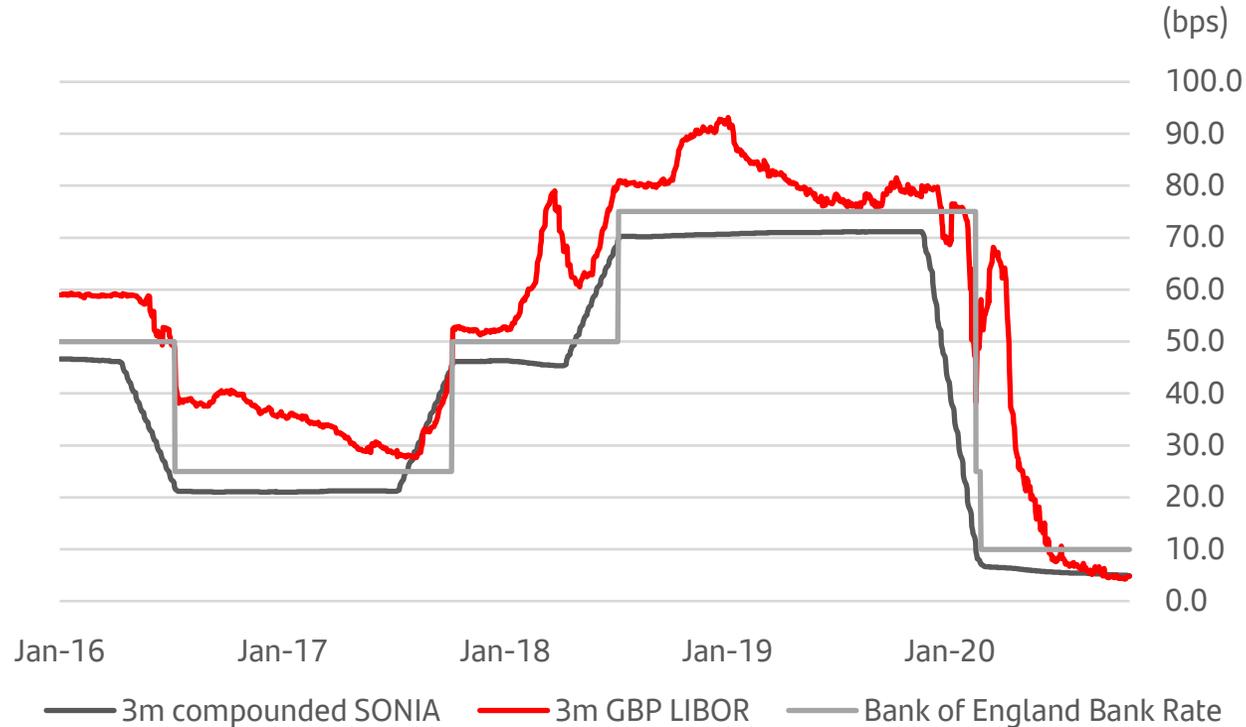
*(1) If you have a derivative linked to your loan – for example, to hedge the interest rate – you may want to move it off LIBOR at the same time and in the same way as your loan, as far as possible. If this is not the case then, upon the cessation of LIBOR, there would be a risk that the terms of your loan and derivative are no longer aligned.*

*The International Swaps and Derivatives Association (ISDA) has published an IBOR Fallbacks Protocol as a means of moving derivative transactions from LIBOR (and other inter-bank offered rates) to alternative reference rates. Santander UK plc and Banco Santander S.A. have both adhered to the ISDA IBOR Fallbacks Protocol. However, as the Protocol is specific to derivatives and not loans, relying on the Protocol to amend a loan-linked derivative may result in a mismatch between the derivative and loan in the timing of the transition, the resulting replacement rates and how they are calculated (including any CAS). Where the derivative is used to hedge a loan, this could reduce the efficiency of your hedge.*

*Where you have a loan and a linked derivative both with us, amending the relevant interest rate provisions of the loan and the derivative at the same time should ensure that these can continue to be aligned.*

*[ISDA has confirmed](#) that the FCA's announcement of 5 March 2021 constitutes an index cessation event, and [Bloomberg has published](#) spread adjustments for all LIBOR tenors and currencies.*

## How big is the historical difference between LIBOR and ARRAs?



As the chart on this slide shows, other than in specific instances, LIBOR has typically been above SONIA and Base Rate over the last five years. This is because LIBOR contains term and credit premiums.

SONIA is closely aligned to Base Rate and is less volatile than LIBOR, especially in times of market turbulence.

- The median<sup>(1)</sup> difference between 3 month GBP LIBOR and 3 month SONIA compounded in arrears has been 0.1193% over the last five years.
- The median difference between overnight SONIA and Base Rate has been 0.0398% over the last five years.

Source: Bloomberg

<sup>(1)</sup> If you take the daily differences between LIBOR and SONIA compounded in arrears (or another ARR) over a given period and arrange these differences from largest to smallest, the median difference will be the number in the middle of this list (i.e. with an equal number of observations above it and below it).

## How is the CAS calculated?

- There are several ways a CAS can be calculated. Two examples are:
  1. Market prices (forward approach)
  2. Historical five year median – adopted by ISDA and recommended by the RFR WG for cessation/pre-cessation fallbacks in cash products.
- Worked examples of how the CAS is applied to transitioning loans and a hedge are provided below.
- Each approach has its benefits and drawbacks. Summaries of some of the main considerations are included on the next page. **This is not an exhaustive summary however and you should seek independent financial, legal and tax advice on the implications of LIBOR transition on your transactions.**
- The rate on a transaction referencing SONIA will be calculated at the end of the interest period by compounding SONIA rates over the period with a 'look back'. For more information, please see [What is SONIA?](#). The 'look back' convention for a loan (e.g. five day) and a derivative may be different (e.g. two day).

## Examples of how a CAS can be calculated

### Description

#### Market prices (forward approach)

- Using market prices to calculate what the expected difference is between LIBOR and SONIA for the remainder of your transaction(s).
- Involves comparing pricing in the LIBOR swaps and SONIA swaps markets.

#### ISDA five year historical median

- The FCA announced on 5 March 2021 that GBP LIBOR will cease from 31 December 2021.
- For LIBOR derivatives, ISDA has announced that it will apply the five year median difference between LIBOR and SONIA from LIBOR cessation. This can be applied to other types of transactions as well – the RFR WG has also recommended this method for use in the loan market.
- CAS values are now fixed.

### Considerations

- Economic equivalence where a loan and a derivative are being transitioned together.
- Reflects current market pricing. In some market conditions, CAS could be higher or lower than the 5 year historical median CAS.
- Can be calculated based on loan profile.
- Transaction may move to a higher or lower rate in the period to LIBOR cessation than if it had stayed on LIBOR.
- Multi-banked clients may have a mismatch to transactions with other banks.

- Clear path to transition - use LIBOR until cessation, then apply SONIA plus the fixed ISDA 5 year historical median CAS.
- Method used in the ISDA fallback for derivatives.
- Additional time to adapt systems and processes to new index(es).
- Continued exposure to movements in LIBOR until switch on LIBOR cessation occurs.
- Multi-banked clients may have a mismatch to transactions with other banks.

# Example 1: Transitioning a loan off LIBOR to SONIA compounded in arrears at the cessation of LIBOR

## Current loan characteristics:

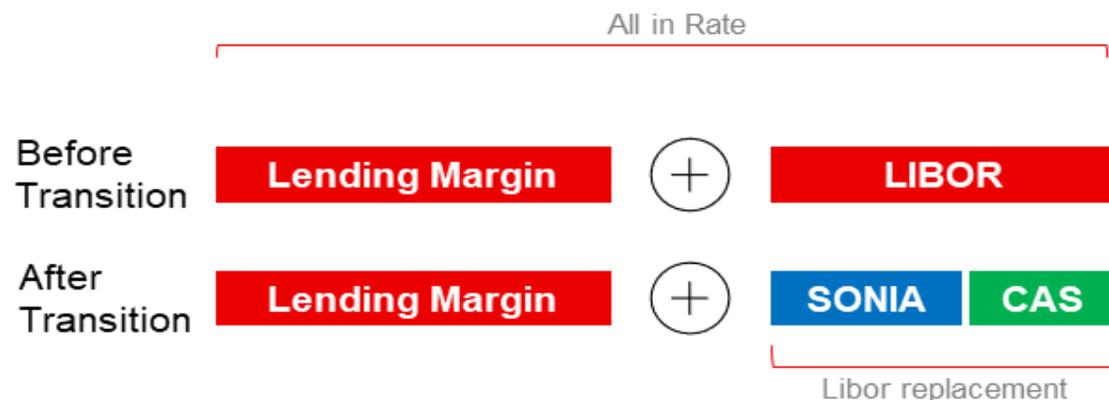
Current Reference Rate	3 month GBP LIBOR
Current Lending Margin	3% (example only)
Maturity	31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

## Proposal: Switch to SONIA compounded in arrears at cessation

Proposed Reference Rate	SONIA (compounded in arrears)
Current Lending Margin	Unchanged at 3% (example only)
Maturity	Unchanged at 31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

## How would switch to SONIA compounded in arrears at cessation work?

You will keep paying interest based on LIBOR up to 10-Mar-22. For interest periods starting on or after 10-Mar-22, your rate will be calculated with reference to SONIA compounded in arrears plus a CAS.



Start date	End date	Days in period	Loan amount (£m)	3m GBP LIBOR (%)	Compounded SONIA	Lending Margin (%)	3m£L to SONIA CAS (%)	All-in rate (%)	Interest due (£)
10-Mar-21	10-Jun-21	92	5.00	0.07725		3.00		3.0773	38,781.78
10-Jun-21	10-Sep-21	92	5.00	0.08125		3.00		3.0813	38,832.19
10-Sep-21	10-Dec-21	91	5.00	0.08427		3.00		3.0843	38,447.75
10-Dec-21	10-Mar-22	90	5.00	0.09843		3.00		3.0984	38,199.82
10-Mar-22	10-Jun-22	92	5.00		0.0489	3.00	0.1193	3.1682	39,928.00
10-Jun-22	12-Sep-22	94	5.00		0.0491	3.00	0.1193	3.1684	40,798.58
12-Sep-22	12-Dec-22	91	5.00		0.0490	3.00	0.1193	3.1683	39,495.25

Note: All numbers used above are for illustrative purposes only, with the exception of the 3mth GBP LIBOR fixing on 10-Mar-21 and the official 3m GBP LIBOR to SONIA CAS as announced on 5-Mar-21.

## Notes / Assumptions

- The 5 year historical median CAS was fixed on 5-Mar-21 when the FCA announced LIBOR will be non-representative from 31-Dec-21. For 3 month GBP LIBOR contracts the CAS was fixed at 0.1193%.
- This calculation will be based upon the existing LIBOR tenor (or interest periods) in your agreement(s) with us, in this example 3 months.
- Interest payment dates have been adjusted in accordance with the 'modified following' business day convention.

- The loan in the example is non-amortising and we and you have agreed to include a clause that switches LIBOR to SONIA compounded in arrears plus the 5 year historical median CAS after LIBOR cessation.
- LIBOR provides certainty of funding costs at the beginning of the interest period. In contrast, the average of SONIA rates over an interest or calculation period can only be fully determined at the end of that period. The SONIA based interest rate for an interest period is in effect calculated by compounding the SONIA rate for each day in an observation period related to the interest period.

## Example 2: Transitioning a loan off LIBOR to Bank of England Base Rate at the cessation of LIBOR

### Current loan characteristics:

Current Reference Rate	3 month GBP LIBOR
Current Lending Margin	3% (example only)
Maturity	31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

### Proposal: Switch to Bank Rate at cessation

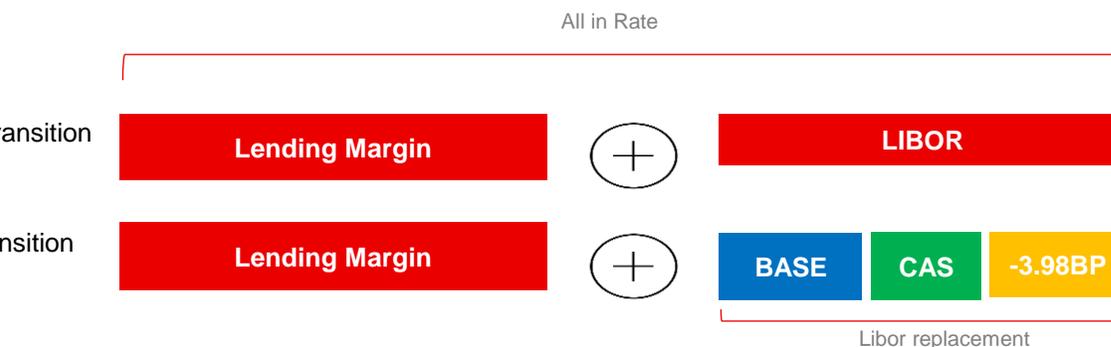
Proposed Reference Rate	Bank Rate (BASE)
Current Lending Margin	Unchanged at 3% (example only)
Maturity	Unchanged at 31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

### How would switch to Bank Rate at cessation work?

You will keep paying interest based on LIBOR up to 10-Mar-22. For interest periods starting on or after 10-Mar-22, your rate will be calculated with reference to Base Rate plus a CAS reflecting a further spread adjustment for the Base Rate to SONIA spread.

### Notes / Assumptions

- The 5 year historical median LIBOR-SONIA CAS was fixed on 5-Mar-21 when the FCA announced LIBOR will be non-representative from 31-Dec-21. For 3 month GBP LIBOR, the LIBOR-SONIA CAS was fixed at 0.1193%.
- For loans moving to Base Rate, there needs to be a further adjustment to account for the SONIA to Base Rate spread. The median difference between overnight SONIA and Base Rate has been 0.0398% over the last five years.



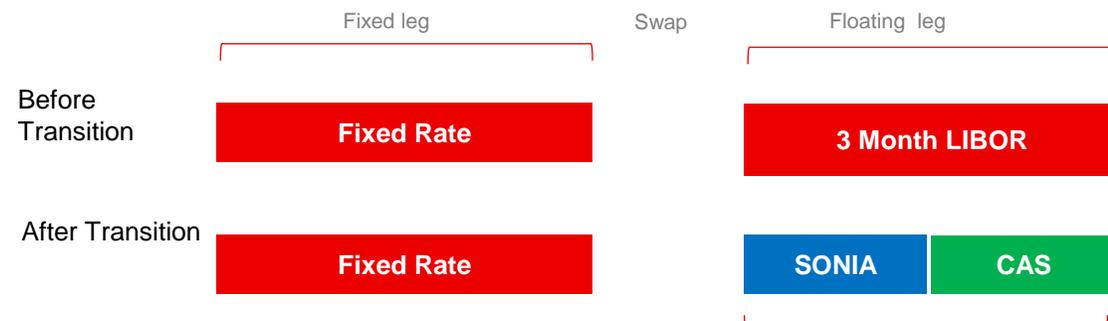
Start date	End date	Days in period	Loan amount (£m)	3m GBP LIBOR (%)	Bank Rate (%)	Lending Margin (%)	3m£L to SONIA CAS (%)	SONIA to Base Rate spread (%)	All in rate (%)	Interest due (£)
10-Mar-21	10-Jun-21	92	5.00	0.07725		3.00			3.0773	38,781.78
10-Jun-21	10-Sep-21	92	5.00	0.08125		3.00			3.0813	38,832.19
10-Sep-21	10-Dec-21	91	5.00	0.08427		3.00			3.0843	38,447.75
10-Dec-21	10-Mar-22	90	5.00	0.09843		3.00			3.0984	38,199.82
10-Mar-22	10-Jun-22	92	5.00		0.1	3.00	0.1193	-0.0398	3.1795	40,070.41
10-Jun-22	12-Sep-22	94	5.00		0.1	3.00	0.1193	-0.0398	3.1795	40,941.51
10-Sep-22	12-Dec-22	93	5.00		0.1	3.00	0.1193	-0.0398	3.1795	40,505.96

Note: All numbers used above are for illustrative purposes only, with the exception of the 3mth GBP LIBOR fixing on 10-Mar-21 and the official 3m GBP LIBOR to SONIA CAS as announced on 5-Mar-21.

# Example 3: Transitioning a derivative hedge (of loan Example 1) off LIBOR to SONIA compounded in arrears at cessation of LIBOR

## Current loan characteristics:

Current Reference Rate	3 month GBP LIBOR
Current Lending Margin	3% (example only)
Maturity	31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec



## Proposal: Switch to SONIA compounded in arrears at cessation

Proposed Reference Rate	SONIA (compounded in arrears)
Current Lending Margin	Unchanged at 3% (example only)
Maturity	Unchanged at 31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

Start date	End date	Days in period	Swap Notional (£m)	Fixed Rate (%)	Fixed Flows (£)	3m GBP LIBOR (%)	Com-pounded SONIA (%)	CAS (%)	Floating rate used for swap (%)	Floating Flows (£)	Net Flows (£)
10-Mar-21	10-Jun-21	92	5.00	0.90	11,342.47	0.07725			0.07725	973.56	10,368.90
10-Jun-21	10-Sep-21	92	5.00	0.90	11,342.47	0.08125			0.08125	1,023.97	10,318.49
10-Sep-21	10-Dec-21	91	5.00	0.90	11,219.18	0.08427			0.08427	1,050.49	10,168.69
10-Dec-21	10-Mar-22	90	5.00	0.90	11,095.89	0.09843			0.09843	1,213.52	9,882.37
10-Mar-22	10-Jun-22	92	5.00	0.90	11,342.47		0.0489	0.1193	0.1682	2,119.78	9,222.68
10-Jun-22	12-Sep-22	94	5.00	0.90	11,589.04		0.0491	0.1193	0.1684	2,168.44	9,420.60
10-Sep-22	12-Dec-22	93	5.00	0.90	11,465.75		0.0490	0.1193	0.1683	2,144.10	9,321.66

Note: All numbers used above are for illustrative purposes only, with the exception of the 3mth GBP LIBOR fixing on 10-Mar-21 and the official 3m GBP LIBOR to SONIA CAS as announced on 5-Mar-21.

## How would switch to SONIA compounded in arrears at cessation work?

The loan would switch as in Example 1. The swap fixed leg would remain unchanged but the floating leg, currently referencing 3m LIBOR would switch to SONIA + CAS, to align with the new reference rate on the loan.

## Notes / Assumptions

- The 5 year historical median LIBOR-SONIA CAS was fixed on 5-Mar-21 when the FCA announced LIBOR will be non-representative from 31-Dec-21. For 3 month GBP LIBOR, the CAS was fixed at 0.1193%.
- The calculation will be based upon the existing LIBOR tenor (or interest periods) in your agreement(s) with us, in this example 3 months. As the loan and derivative profiles match, the same CAS will be applied.
- The swap is taken out for the duration of the loan and matures on 31-Dec-22. It has interest resets every 3 months. The fixed rate was 0.90% and the floating leg reference rate was 3 month LIBOR. The 'modified following' business day convention is applied.
- The loan and swap are assumed to have the same profile. In the example, they are non-amortising and we and you have agreed to include a clause that switches LIBOR to SONIA compounded in arrears plus the 5 year historical median CAS after LIBOR cessation in both agreements.
- LIBOR provides certainty of funding costs and net interest payment due under the swap, at the beginning of the interest period. In contrast, the average of SONIA rates over an interest or calculation period can only be fully determined at the end of that period. The SONIA based interest rate for an interest or calculation period is in effect calculated by compounding the SONIA rate for each day in an observation period related to the interest or calculation period. **15**

## Example 4: Transitioning a fixed rate loan at the cessation of LIBOR (fixed for the duration of the facility)

### Current loan characteristics:

Current Reference Rate	N/A rate is FIXED
Current Lending Margin	3% (example only)
Maturity	31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

### Proposal: As the rate on the facility is fixed, NO TRANSITION REQUIRED

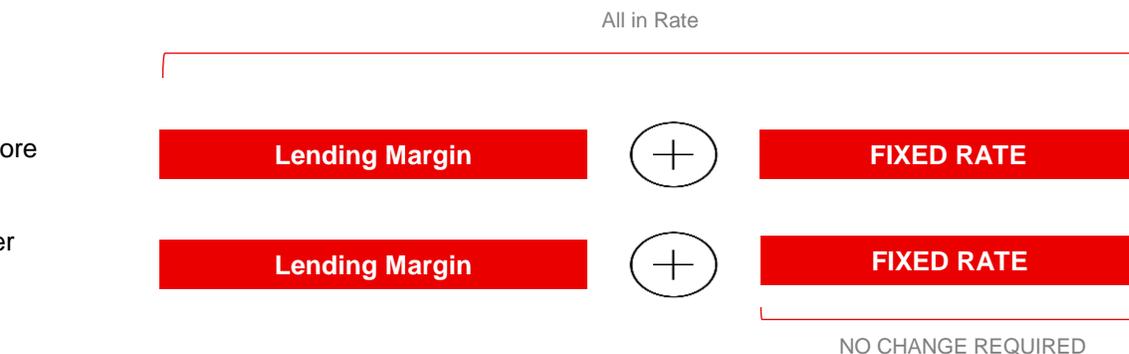
Proposed Reference Rate	NO CHANGE, rate is FIXED
Current Lending Margin	Unchanged at 3% (example only)
Maturity	Unchanged at 31 December 2022
Interest	Quarterly on 10 Mar, Jun, Sep, Dec

### How would transition of a fixed rate loan at cessation work?

As the rate on the loan is fixed for the duration of the facility, there would be no requirement to transition the facility to SONIA or any other ARR.

### Notes / Assumptions

- The fixed rate was determined by reference to 3 month LIBOR
- The rate on the loan is fixed for the remaining term of the facility.
- There is no lending other than the fixed rate loan.
- The fixed rate provides certainty of interest costs and because this rate was fixed prior to the cessation of LIBOR, no further action is required.



Start date	End date	Days in period	Loan amount (£m)	Fixed Rate (%)	Lending Margin (%)	All-in rate (%)	Interest due (£)
10-Mar-21	10-Jun-21	92	5.00	0.90	3.00	3.90	49,150.68
10-Jun-21	10-Sep-21	92	5.00	0.90	3.00	3.90	49,150.68
10-Sep-21	10-Dec-21	91	5.00	0.90	3.00	3.90	48,616.44
10-Dec-21	10-Mar-22	90	5.00	0.90	3.00	3.90	48,082.19
10-Mar-22	10-Jun-22	92	5.00	0.90	3.00	3.90	49,150.68
10-Jun-22	12-Sep-22	94	5.00	0.90	3.00	3.90	50,219.18
10-Sep-22	12-Dec-22	93	5.00	0.90	3.00	3.90	49,684.93

Note: All numbers used above are for illustrative purposes only.

## We are here to help

We are here to support you through this transition so, if you are an existing Santander customer, please speak to your Relationship team for help and support.

## Resources

£RFR WG and FCA: [What is a credit adjustment spread?](#)

£RFR WG: [Path for discontinuation of new sterling LIBOR-linked lending by end-Q1 2021](#)

£RFR WG: [Credit adjustment spread methods for active transition of GBP LIBOR referencing loans](#)

Santander: [What is SONIA?](#)