



# LIBOR: Interest rate benchmark reform

July 2019

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On 19 March 2019, the Working Group on Sterling Risk-Free reference Rates published a discussion paper on "Conventions for referencing SONIA in new contracts", inviting feedback by 30 April 2019 (<https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/discussion-paper-conventions-for-referencing-sonia-in-new>).

The discussion paper is intended to raise market awareness of existing conventions for referencing SONIA directly in contracts (particularly the conventions that have developed in the sterling bond market), as well as encourage the further adoption of SONIA (including in the syndicated loan markets). It is also intended to support infrastructure providers in developing the necessary changes to enable market participants to reference SONIA.

## 1. Introduction: a bit of History

Loan Pricing was traditionally a combination of the cost to the Lender of financing a loan and the "mark up" on that cost, known as the Margin. The Margin was simply a matter of market trends, and competitive pressures, but as the Loan Markets became more sophisticated and large syndicated Loans emerged, the question of the cost of funds was not simply a matter of pricing, but an indicator of the relative financial strength of lenders and the need to secure.

The London Interbank Offered Rate (LIBOR) was historically the rate quoted by one bank trading in London at which it would agree to deposit a given amount of money in a given currency for a given period with another. This would then represent the cost to the second Bank of sourcing the money that it needed to make a loan (and served as a proxy for the cost of funding a loan from deposits). This reflected the increasingly common market practice of funding lending from interbank borrowing, rather than from a lender's own funds (which, of course, was one of the problems that was dramatically highlighted when Northern Rock collapsed in 2008).

Originally defined by lenders as the rate at which they could source funds for themselves, it was recognised that for a Borrower this was pricing into the cost of the loan the market perception of how risky a bank borrower in the interbank market might be (we'll come back to this). Furthermore, in a syndicated facility, all the lenders needed to agree on their cost of funds to avoid multiple rates of interest on a single loan that would be administratively unworkable.

The practice developed of trying to create an artificial benchmark by referring to the rates at which one "Prime Bank in the London Interbank Market" would offer deposits to another. Cue a lot of debates about what was a Prime Bank and the development of the practice of asking "reference banks", being banks that everyone agreed were prime banks to quote rates, and taking an average of those rates (sometimes with a disregard, depending on how many reference banks you had).

This slightly cumbersome mechanic evolved into the present screen rate system, under which a panel of banks quote their offered rates and an administrator, formerly the BBA and now ICE calculated the rate, which was then displayed on financial index screens such as Telerate and Reuters.

In its current form, LIBOR is determined at the beginning of the agreed interest period, thus allowing Borrowers and Lenders to manage their Loan exposures effectively.

By contrast, a base lending rate simply reflects the cost of funds which a bank determines subjectively on a day to day basis. While it traditionally varies little from the rate quoted by the Bank of England as lender of last resort in the UK (for obvious market perception reasons), lenders are free to set their own rates and to vary them at will. For bilateral transactions, calculating interest on a daily basis is not necessarily problematic, although again, historically Borrowers tended to prefer to use LIBOR because of the independence of the Benchmark (and the fact that it was usually slightly cheaper than Base).

## 2. Calculation of LIBOR

LIBOR is calculated for five currencies (CHF, Euro, GBP, YEN, USD) and seven maturities daily from 11 to 16 Contributor Panel Banks. Since October 2014, the Panel Banks have made available between 11.00 and 11.20 London time the interest rates at which they would make available to each other blank loans of commercial size on the London interbank market. The arithmetic mean is calculated from these interest rates, eliminating extreme reports (the fewer contributing banks there are, the fewer extreme reports are eliminated), and this interest rate is published after 11.45 a.m.

Besides the LIBOR there also are other Interbank offered rates for different markets and currencies, in particular the EURIBOR which is a major euro interest reference rate, administrated by the European Money Markets Institute (EMMI). It is the rate at which euro interbank term deposits are being offered within the Eurozone by one prime bank to another at 11.00 am CET for spot value. Submissions are made by a panel of 20 banks.

## 3. Problems with LIBOR

The LIBOR scandal refers to the fraudulent manipulations of the LIBOR reference interest rate and other interest rates (EURIBOR, Japanese TIBOR) in the interbank business discovered in 2011.

In the aftermath of the financial crash in 2008, interbank lending contracted dramatically and, coupled with the huge uncertainty about which Banks were compromised by holdings of "toxic assets", LIBOR rates increased dramatically. Banks quoting LIBOR rates for the BBA were therefore potentially compromised by having to disclose higher costs of funds which might have implications for the perception of their financial stability in the markets, and a corresponding impact on their, already limited, ability to borrow.

In October 2011, the European Commission had the London offices of the Royal Bank of Scotland searched and confiscated numerous documents on suspicion of manipulation of EURIBOR. In June 2012, it became known that Barclays Bank had been manipulating LIBOR for years. The interest rates quoted by the banks concerned were therefore not based on their actual rates achieved, but were invented. Authorities in the USA, Europe and Japan then suspected that up to 20 banks worldwide could have participated in the manipulations. As a consequence, a number of international Banks were fined.

The banks involved have gained advantages by manipulating the reference interest rates: participants in the manipulation face a lower risk of interest rate changes, outsiders face an additional risk caused by the manipulations. In a similar way as insider trading, self-controlled reference interest rate changes can also be used for speculative trading. Furthermore, private loans are often based on the reference interest rate at the beginning of the month, and by periodically increasing the reference interest rate at the beginning of the month, overpriced interest rates can be negotiated with borrowers.

The Wheatley review was instigated by the UK Government in 2012 and recommended reform, rather than replacement, of LIBOR with more robust verification processes and involvement of market participants in the production and oversight of LIBOR. In 2014, administration of LIBOR was taken over by ICE Benchmark Administration Ltd, and discontinued use of some of the more highly manipulated tenors and currencies quoted, but while this represented an improvement of the system, questions remained as to the accuracy and reliability of LIBOR.

## 4. Reform of Interest rate Benchmarks

The Financial Stability Board (FSB) published a report on reform of interest rate benchmarks in 2014 which adopted a "multi- rate" approach to reform: this involved the reform of the existing IBORs to make them less easy to manipulate, more transparent and more robust by underpinning banks' financing costs with transaction data and improving interest rate setting processes and controls, and at the same time looking to develop alternative reference rates as nearly risk free as possible ("RFRs").

LIBOR reforms to be phased in over 2018/19 will extend the transaction and counterparty types, and other variables to improve availability of LIBOR, but notwithstanding the improvements, there remains a concern that that LIBOR is not sustainable.

On 27 July 2017, the FCA published a speech by Andrew Bailey, Chief Executive of FCA, on the future of LIBOR. The speech announced that after 2021 the FCA would no longer force panel banks to submit interest rates to allow LIBOR to be calculated. The market should therefore not rely on LIBOR being available after 2021. In November 2017, the FCA announced that the current LIBOR panel banks had agreed to support the LIBOR benchmark and remain applicants until the end of 2021.

The move away from existing IBOR benchmarks will therefore take place during the transition period to 2021, however exactly what the alternatives to LIBOR are, and how they will work in a market that has so long been based on the LIBOR mechanism remains unclear.

## 5. RFRs in the pipeline

In the UK, the Working Group on Sterling Risk Free Rates convened by the Bank of England (the "Working Group") has chosen SONIA (the Sterling Overnight Index Average) as the preferred alternative risk-free rate for Sterling.

Since SONIA, unlike LIBOR, is based on real transactions rather than mere statements by bankers, the new RFR is said to be less susceptible to manipulation. However, it works quite differently from LIBOR.

Transition to SONIA and other RFRs presents a number of challenges to markets that have hitherto all used a relatively uniform system of IBORs:

- Unlike LIBOR, SONIA is not a forward looking rate, but is a backward-looking overnight rate. It is not fixed forward and so cannot give certainty as to rates over any period.
- Current operational systems are not set up to calculate interest based on overnight rates rather than by reference to a forward looking period.
- There is no guarantee that the Swaps market will adopt the same approach to the Loans market which could result in a mismatch between hedge transactions and the underlying transactions.
- Different RFRs are proposed for different currencies (irrespective of the market in which they are traded) – some will be based on secured and some on unsecured rates. How does this affect margins for different currencies?
- Local RFRs are published at different times creating operational and pricing difficulties for cross currency transactions.
- RFRs do not build in premia for longer tenors/Interest periods.

## 6. How does SONIA work?

### Loan Interest Rates:

Sonia is administered by the Bank of England, and has been published since April 2018. It is a measure of the rate at which interest is paid on sterling short-term (Overnight) wholesale funds in circumstances where credit, liquidity and other risks are minimal. It is calculated as the trimmed mean of interest rates paid on eligible sterling deposit transaction.

Although not widely used for Loan transactions, it is in use in the Bond Markets, where the overnight SONIA rates have been aggregated (on a compounded basis) over a given period to match the interest period. So, for example, the interest on a 3 month interest period would be made up of 3 months of daily rates. In order to allow for the fact that the actual interest rate using this method would normally only be known at the end of the interest period, the SONIA-referencing bond market has used a 5 day lag period when referencing the SONIA rate. What this means in practice is that the period over which the daily SONIA rate is compounded (i.e. the SONIA rate reference period) lags the interest period by 5 London banking days; in this way, the final interest payment is known 5 days before it is due to be paid at the end of the interest period.

While this provides a practical solution for the calculation of SONIA referenced interest, it does not, of course, enable interest rates to be fixed at the beginning of an interest period, as they are with LIBOR.

### Swap Rates:

SONIA is used as the RFR benchmark for Overnight Index Swaps ("OIS").

SONIA OIS are interest rate swap agreements under which one party pays an agreed fixed daily rate, and the other receives the compounded SONIA rate derived from the daily published SONIA rates. They therefore depend on each and every SONIA fixing during the period of the OIS

Since the latter part of 2018, one and three month SONIA futures are now available which settle to the mean (one month) and compounded (three month) average SONIA over the underlying period for the future. As such, the futures prices reflect the market expectation of the average value of SONIA observations during the underlying period. This provides a mechanism for hedging the spread risk between OIS and LIBOR.

## 7. Amending Documents

The LIBOR mechanism is deeply embedded in contractual documentation across virtually the whole of the financial markets. Provision needs to be made for amending existing documentation and creating fallbacks in deals currently being documented.

The LMA has produced revised LIBOR Fallback Clauses to provide more flexibility in contemplation of the discontinuation of LIBOR in lending transactions, including the use of shortened interest periods, interpolated and historic rates to allow for unavailability of screen rates or rates for particular tenors, replacement screen rates and reference bank rates but these are all designed as short term measures and are not workable on a permanent basis. The ultimate fallback is to cost of funds, which, of course, comes full circle to the original basis of calculation of interest rates.

Further flexibility is achieved in Loan Documents in the form of the LMA revised replacement of screen rate clause. This allows a shift to a replacement benchmark which is formally selected as a replacement for LIBOR by the LIBOR administrator or the relevant regulator, or which is generally accepted by the relevant market, or by agreement between the parties. This language is also designed to be convergent with the current ISDA documentation.

For existing deals, and for some deals being documented today on the basis of LIBOR in the absence of a concrete alternative, while in some sectors of the markets, protocols exist for wholesale amendment of transaction documents (e.g. ISDA documents) in others, including for loan and bond documents, individual amendments will be required, involving the agreement of the relevant parties, which could be a substantial task for products such as listed bonds.

## 8. What next?

On 18 June 2018, the Sterling Working Group published a provisional timeline setting out milestones for the transition to RFRs in sterling markets before the end of 2021. The timeline indicates that the Sterling Working Group is committed to communicating best practices for referring to SONIA across bonds, loans and derivatives. The Sterling Working Group has concluded that, at the moment, firm quotes for SONIA overnight index swaps in 1, 3, 6 and 12-month tenors are likely to offer the most feasible and robust data sources for a term SONIA reference rate. Further, it anticipates that a term SONIA reference rate could be available in the second half of 2019, subject to various steps being taken in relation to, among other things, listing and trading SONIA overnight index swaps, and governance and control of the new rate.

Working groups have been established in other jurisdictions to consider transitioning away from LIBOR in certain currencies.

In conclusion, market participants should be prepared for LIBOR to be discontinued. They should consider reviewing existing facility agreements to check and as regards new facility agreements they should take into account the possibility of a transition to a new interest rate, even if the replacement rate is not yet known.

The Consultation paper is available at

<https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/discussion-paper-conventions-for-referencing-sonia-in-new-contracts.pdf>

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### More information

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