ICE Benchmark Administration™

BENCHMARK STATEMENT - ICE LIBOR

1. Introduction

ICE Benchmark Administration Limited (IBA) is the Benchmark Administrator for four systemically important benchmarks:

- ICE LIBOR – the widely used benchmark for short term bank borrowing rates
- ICE Swap Rate – the global interest rate swap benchmark for swap rates and spreads
- LBMA Gold Price – the principal global benchmark for daily spot gold prices, and
- LBMA Silver Price – the principal global benchmark for daily spot silver prices.

This Benchmark Statement is published by IBA in compliance with Article 27 of the European Benchmarks Regulation (BMR).

The BMR regulates the provision of, contribution to and use of benchmarks. Recital (6) of the BMR sets out its overarching purpose:

"[…] in order to ensure the proper functioning of the internal market and improve the conditions of its functioning, in particular with regard to financial markets, and to ensure a high level of consumer and investor protection, it is appropriate to lay down a regulatory framework for benchmarks at Union level."

2. About ICE LIBOR

LIBOR was initially developed in the 1980s to facilitate syndicated debt transactions, Eurodollar transactions in the main. Its development was further driven by the growth in new financial instruments which also required standardised interest rate benchmarks.

The benchmark indicates the interest rate that banks pay when they borrow on an unsecured basis. It is fundamental to the operation of both UK and international financial markets, including markets in interest rate derivatives contracts, loans and bonds. LIBOR is used to determine payments made under derivatives by a wide range of counterparties including but not limited to small businesses, large financial institutions and public authorities.

IBA took responsibility for administering LIBOR in February 2014 with the aim of ensuring both the integrity of the benchmark determination process and that LIBOR could remain an effective interest rate benchmark over the long term.

LIBOR is published every UK business day for five currencies: US Dollars; Pounds Sterling; Euros; Japanese Yen; and Swiss Francs. Each currency has seven tenors: Overnight /Spot Next; 1 Week; 1 Month; 2 Months; 3 Months; 6 Months and 12 Months.

LIBOR is determined using contributions of input data from contributor banks in five currency panels that range in size from 11 to 16 banks. The LIBOR banks in each currency panel are required on every UK business day to send IBA the rates at which they believe they would be able to obtain funding in each of the maturities in that currency.

For each currency and tenor, the calculation methodology for LIBOR is a trimmed arithmetic mean. By trimming the top and bottom quartiles of contributor banks' submissions from the calculation, outlier submissions are excluded from the final calculation. The submissions remaining after the trimming are arithmetically averaged and the result is rounded to five decimal places.

3. BMR requirements

LIBOR is a Critical benchmark pursuant to Article 3(1)(25) of the BMR and, as such, an enhanced regulatory regime is applicable.

At the discretion of the National Competent Authority (NCA), the applicable BMR requirements for a Critical Interest Rate benchmark are the general ones in Title II and/or the specific requirements in Annex I for Interest Rate benchmarks.

The requirements in both Title II and Annex I apply in respect of LIBOR.

3.1 Requirements for Critical benchmarks

The following is a summary of the applicable BMR requirements for Critical benchmarks:

- <u>Article 7 (Accountability framework requirements):</u>

  The administrator of a Critical benchmark must appoint an independent external auditor to review and report at least annually on the administrator's compliance with the benchmark methodology and the BMR.

- <u>Article 15 (Code of Conduct):</u>

  The administrator of a Critical benchmark must notify the code of conduct to the relevant competent authority which, in IBA's case, is the FCA in London. The competent authority must verify within 30 days whether the content of the code of conduct complies with the BMR.

- <u>Article 20 (Critical benchmarks):</u>

  Article 20 states that the European Commission will review at least every two years the list of Critical benchmarks.

- <u>Article 21 (Mandatory administration of a critical benchmark):</u>

  Under the BMR, the FCA could compel IBA to continue to publish the benchmark for a period not exceeding 24 months.

- Article 22 (Mitigation of market power of critical benchmark administrators):

  Administrators of Critical benchmarks must ensure that licences of, and information relating to, such benchmarks are provided to all users on a fair, reasonable, transparent and non-discriminatory basis.

- Article 23 Mandatory contribution to a critical benchmark:

  Under the BMR, the FCA would have the power to compel contributor banks to continue to provide LIBOR submissions to IBA for a period not exceeding 24 months.

  An administrator of one or more Critical benchmarks must, every two years, submit to its competent authority an assessment of the capability of each Critical benchmark it provides to measure the underlying market or economic reality.

3.2 Requirements for interest rate benchmarks

Annex I of the BMR contains a specific regulatory regime for interest rate benchmarks to ensure:

- Accurate and sufficient data used in an hierarchy
- An independent oversight committee
- An independent external audit of compliance with the benchmark methodology and the BMR, and
- Contributor systems and controls requirements.

More detail on each of these requirements follows below.

3.2.1 Accurate and sufficient data

The BMR states that the data must be accurate and sufficient and must be used in the following order of priority:

- The contributor's transactions in the underlying market that a benchmark intends to measure or, if not sufficient, its transactions in related markets
- The contributor's observations of third party transactions in those markets
- Committed quotes
- Indicative quotes or expert judgements.

LIBOR is based on contributor bank submissions, determined in response to the LIBOR Output Statement through the use of a standardised, transaction data-driven Waterfall Methodology, as set out below:

Level 1 (Transaction-Based)

Where a contributor bank has sufficient eligible transactions, a volume weighted average price ("VWAP") of such eligible transactions, with a higher weighting for transactions booked closer to 11:00 am London time. Eligibility criteria for transactions are specified by IBA.

Level 2 (Transaction-Derived)

Where a contributor bank has insufficient eligible transactions to make a Level 1 submission, it will seek to make a submission based on transaction-derived data, including time-weighted historical eligible transactions adjusted for market movements and linear interpolation. Eligibility criteria for transaction derived data are specified by IBA.

Level 3 (Expert Judgement)

Where a contributor bank has insufficient eligible transactions or transaction-derived data to make a Level 1 or a Level 2 submission, it will submit the rate at which it could fund itself at 11:00 am London time with reference to the unsecured, wholesale funding market. Each Panel Bank agrees its defined Level 3 submission methodology with IBA, basing its rate on transactions, related market instruments, broker quotes and other market observations.

The waterfall allows for appropriately framed Expert Judgement at Level 3 to ensure that contributor banks can always make a submission, even if liquidity and transaction data are very sparse on a particular day or in particular tenors.

3.2.2 An independent oversight committee

The administrator must have an independent oversight committee, the details of which must be made public, along with any declarations of any conflict of interest and the processes for election or nomination of its members. The oversight committee must hold no less than one meeting every four months and must keep minutes of meetings. The oversight committee must have responsibilities as provided for in the BMR.

IBA has an independent Oversight Committee, chaired by a non-executive director, with publicly available minutes, membership and terms of reference. The Oversight Committee has central banks as Observers – the Bank of England, the United States Federal Reserve and the Swiss National Bank. The Committee also has broad representation from users, through industry associations such as the Loan Market Association, the Investment Association and the European Venues & Intermediaries Association. The composition of the Committee includes infrastructure providers and LIBOR contributor banks as well.
The composition of the LIBOR Oversight Committee is published by IBA, along with any declarations of any conflict of interest, at:

https://www.theice.com/iba/libor

IBA's processes for the election or nomination of Committee members is published at:

https://www.theice.com/publicdocs/IBA_Selection_of_Committee_Members.pdf.

The LIBOR Oversight Committee generally meets every two months. Redacted minutes of the Committee's meetings are published at:

https://www.theice.com/iba/libor.

The terms of reference of the Committee, which include the responsibilities required by the BMR, include:

- Reviewing the definition and methodology of LIBOR at least annually
- Overseeing any changes to the benchmark methodology and requesting IBA to consult on proposed changes
- Overseeing IBA's control framework insofar as it affects LIBOR and the management and operation of LIBOR
- Overseeing IBA's adherence to its Published Methodologies, including calculation, refix and business continuity policies insofar as they affect LIBOR
- Assessing internal and external audits or reviews insofar as they affect LIBOR and monitoring the implementation of identified remedial actions
- Reviewing and approving procedures for cessation of the benchmark, including any consultation about a cessation
- Overseeing the LIBOR Code of Conduct and reviewing it regularly
- Monitoring the input data and contributors and the actions of IBA in challenging or validating contributions of input data
- Taking effective measures in respect of any breaches of the LIBOR Code of Conduct and reporting to the FCA any misconduct of which the oversight function becomes aware, including any anomalous or suspicious input data
- Overseeing any third party involved in the provision of the benchmark, including calculation or dissemination agents
- Considering existing or potential conflicts of interest and establishing whether they are material, and
- Keeping the terms of reference under regular review.

The terms of reference are published at:

https://www.theice.com/publicdocs/LIBOR_Oversight_Committee_Terms_of_Reference.pdf.

3.2.3 Independent external audit

The BMR requires an independent external audit of the administrator's compliance with the benchmark methodology and the BMR. The first external audit must be carried out six months after the introduction of the Code of Conduct and subsequently every two years. The Oversight Committee may require an external audit of a contributor to an interest rate benchmark if dissatisfied with any aspects of its conduct.

Independent external audits of IBA's compliance with the benchmark methodology for ICE LIBOR and with the BMR will be carried out annually. The first external audit in the context of the BMR will be carried out six months after the introduction of the LIBOR Code of Conduct for the BMR and subsequently every year.

3.2.4 <u>Contributor systems and controls requirements</u>

Annex I sets out requirements for contributors' systems and controls, which must include:

- An outline of responsibilities within each firm, including internal reporting lines and accountability, including the location of submitters and managers and the names of relevant individuals and alternates
- Internal procedures for sign-off of contributions of input data
- Regular internal reviews of input data and associated procedures
- Disciplinary procedures for actual or attempted manipulation of the benchmark
- Effective conflicts of interest management procedures and communication controls
- Physical separation of submitters from interest rate derivatives traders and rules against collusion
- Measures to prevent, or limit, inappropriate influence over persons involved in the provision of input data
- No direct link between the remuneration of employees involved in the provision of input data and the remuneration of, or revenues generated by, persons engaged in another activity where a conflict of interest may arise
- Controls to identify any reverse transaction subsequent to the provision of input data
- Detailed record-keeping in relation to a bank's LIBOR submissions, and
- The compliance function reporting any findings to management on a regular basis.

All of these requirements are included within the LIBOR Code of Conduct. All submitters and their direct managers are required to acknowledge in writing that they have read the Code and will comply with it.

4. Expert Judgement

No expert judgement is exercised by IBA in the calculation of LIBOR.

As described above, LIBOR contributor banks use transaction data where possible as stipulated in the LIBOR Output Statement. Depending on the availability of reference transactions, banks also use expert judgement to a greater or lesser extent in their submissions.

The LIBOR Code of Conduct requires a contributor bank to ensure that any exercise of discretion or expert judgement is:

- Appropriately framed to ensure that it is based as far as possible on data that is capable of verification
- Applied consistently in accordance with the associated methodology, and
- Suitably recorded in a manner that can be made available on request by IBA or a relevant regulator or auditor.

5. Usage of LIBOR

LIBOR is the primary benchmark for short term interest rates globally. It is written into standard derivative and loan documentation, such as the ISDA terms, and is used for an increasing range of retail products such as mortgages and student loans and for other commercial purposes.

It is also used as a barometer to measure the health of the banking system and as a gauge of market expectation for future central bank interest rates. It is the basis for settlement of interest rate contracts on many of the world's major futures and options exchanges.

LIBOR has global significance with trillions of outstanding business in maturities ranging from overnight to more than 30 years.

6. Publication timings

The usual publication time for LIBOR is 11.55 London time on London business days.

IBA has an Error Policy which is published at:

https://www.theice.com/publicdocs/ICE_LIBOR_Error_Policy.pdf

The Error Policy sets out the circumstances under which IBA would restate one or more currency/tenor pairs:

- An error is reported to IBA by 15.00 London time on the day of the error, and
- The error had an impact on the published LIBOR value of at least 3 bps.

Any refixed rates would be published by IBA by no later than 16.00 that day.

IBA would make an announcement by shortly after 15.00 London time if a refix were under consideration, stating the affected currency and tenor. This would be published at:

https://www.theice.com/iba/market-status

7. Changes to, or the cessation of, the benchmark

Article 28 of the BMR requires an administrator to publish, a procedure concerning the actions to be taken by the administrator in the event of changes to or the cessation of a benchmark:

7.1 Procedures for consultation

IBA typically designs evolutionary enhancements to benchmarks, and it is important for IBA to gain feedback on proposed changes where they are material to the benchmark.

IBA therefore consults publicly from time to time on proposed material changes in relation to IBA benchmarks.

IBA's Consultation Policy outlines the considerations that inform public consultations and the steps that IBA takes when seeking feedback on material proposals.

The Consultation Policy is published at:

https://www.theice.com/publicdocs/IBA_consultation_process.pdf

7.2 Changes to, or cessation of, the benchmark

The BMR requires an administrator to include in the Benchmark Statement, to the extent known, how changes to (or the cessation of) the benchmark may have an impact on the financial contracts, or on financial instruments that reference the benchmark or on the measurement of the performance of investment funds.

The steps in the Consultation Policy would be followed if IBA proposed to make a material change to LIBOR or to cease producing the benchmark. A cessation of the benchmark might be because IBA was not able to continue to produce the benchmark or there was a fundamental change in the underlying interest that the benchmark seeks to represent.

The factors that would be considered in the context of the cessation of a benchmark are as follows:

- The timing of cessation
- How much notice should be given
- Whether any transitional measures should or could be implemented
- Stakeholder engagement, and
- Identification of possible alternative benchmarks and migration thereto.

As stated above, the responsibilities of the LIBOR Oversight committee include reviewing and approving procedures for cessation of the benchmark, including any consultation about a cessation.

If cessation of LIBOR were under consideration, IBA would engage closely with the relevant stakeholders, including:

- The FCA and any other relevant regulatory body
- Users of the benchmark – directly (for example, by email to registered licensees and by conference calls where appropriate), through any relevant association(s) and/or through paid advertisements
- Contributors of input data – i.e the LIBOR contributor banks
- Redistributors of the benchmark, and
- The media.

IBA would also include relevant information and relevant contact details on its website.

IBA's BMR Changes and Cessation Procedure for LIBOR is published at:

https://www.theice.com/publicdocs/LIBOR_Changes_and_Cessation_Procedure.pdf

In July 2017, Andrew Bailey, the Chief Executive of the FCA, announced that the FCA will no longer seek to sustain the benchmark through its influence or legal powers after the end of 2021.He outlined that LIBOR could continue beyond 2021, but without the regulators compelling banks to participate. He also announced that the FCA was seeking contributor banks' agreement to sustain LIBOR for the transitional period to the end of 2021. IBA welcomed this, as it brought an element of certainty in the short-term while IBA continues to transform LIBOR.

As part of LIBOR's ongoing development, IBA will continue to work with regulators, banks, market participants and other stakeholders regarding the future of the benchmark beyond the end of 2021. Through this work, IBA hopes to identify a framework to seek to continue to publish the LIBOR rates that are critical to the global financial system and which banks are willing to support, alongside the alternative risk-free rates that are being developed.

8. Potential limitations of a benchmark

The potential limitations of the benchmark (and in particular, the circumstances in which the measurement of the relevant market or economic reality may become unreliable) are described below:

(a) If there is insufficient input data:

- The methodology and procedures for LIBOR are designed to ensure that LIBOR can be published every day. IBA expects to receive submissions every London business day from each of the contributor banks.

- In the event that IBA receives fewer than the expected number of submissions by the time that LIBOR is due to be published, the Reduced Submissions Policy would apply.

  This states that, if 5 or more submissions were received for a particular currency, IBA will calculate LIBOR but with a difference in the number of submissions excluded, as shown in the following table:

Number of contributor banks	Number of Highest Rates Excluded	Number of Lowest Rates Excluded
15 or more	4	4
14 -11	3	3
10 - 8	2	2
7 - 5	1	1

<u>Example:</u> For JPY, 12 contributor banks are expected to submit every day. If only 9 complete submissions were received, the highest 2 and lowest 2 submissions for each tenor would be excluded and the remaining 5 submissions would be averaged.

If 4 or fewer submissions were received for a particular currency, IBA would be likely to re-publish the previous day's published rate for all tenors in that particular currency.

The Reduced Submissions Policy is published at:

https://www.theice.com/publicdocs/ICE_LIBOR_Reduced_Submissions_Policy.pdf.

- In certain extreme circumstances, IBA might lack sufficient input data to determine LIBOR according to the methodology. Such circumstances might arise if an incident in London caused contributor banks to invoke their business continuity management procedures such that an insufficient number were able to make timely LIBOR submissions.

(b) *If there is insufficient underlying market liquidity:*

LIBOR is a benchmark based on contributions of input data from contributor banks. Transaction data are used where possible as stipulated in the LIBOR Code of Conduct.

Depending on the availability of reference transactions, banks also use expert judgement in their submissions. The design of the benchmark therefore makes it unlikely that circumstances would arise in which the degree of liquidity of the underlying market becomes insufficient to ensure the integrity and reliability of the benchmark determination.

It should be noted that liquidity in the interbank unsecured lending market reduced significantly during the global financial crisis of 2007/2009 and the level of activity still remains too low in some tenors to support an entirely transaction based rate.

The stress on the unsecured interbank markets for term borrowing has been driven by several factors:

- A significant increase in perceived risk of bank counterparty default (credit risk)

- Regulatory capital charges

- The introduction of liquidity coverage ratios which have modified the demand and supply of wholesale funding, as banks transition to longer maturity funding and more diverse funding sources (such as capturing funding from corporates), and

- A significant increase in liquidity available to banks through the exceptional measures taken by major central banks in response to the financial crisis, with some banks now having excess deposits.

(c) Any other relevant information:

In March 2016 IBA published the Roadmap for ICE LIBOR, designed to deliver a seamless transition to an even more robust LIBOR. IBA is working closely with the contributor banks to implement more standardisation and to base LIBOR in transactions to the greatest extent possible.

In the Roadmap, IBA introduced the concept of an exceptional market event (EME) which would be a rare and unexpected occurrence that renders data collected during the transaction window unrepresentative, or results in insufficient market data to support a bank's LIBOR submission at publication time. An EME would have both material and widespread impact supported by market evidence. An event impacting a single bank would not constitute an EME, provided there were no identifiable spill-over effects to the broader market.

If IBA declares an EME under the provisions of the Roadmap, IBA will advise contributor banks as to what action they may or must take, for example that only transactions entered into after the event that caused the EME may be included in their calculations on that day.

9. Updates

This Benchmark Statement is subject to review by the LIBOR Oversight Committee at least annually.

It will additionally be reviewed and updated if the information it provides is no longer correct or sufficiently precise, including if there is a material change in the methodology for determining the benchmark.

Date of initial publication: 14 May 2018
Updated: April 2019
