



Roundtable Discussion on Evolution of ICE LIBOR

Meeting at Swiss National Bank

29th September 2015

Agenda

1. Welcome and Introduction - Dr Sébastien Kraenzlin, Head of Money Markets at Swiss National Bank
2. Background to LIBOR evolution position papers - Finbarr Hutcheson, President, ICE Benchmark Administration
3. Discussion on proposed LIBOR enhancements - Finbarr Hutcheson
 - Waterfall approach for submissions
 - Eligible counterparty types for submissions
 - Transaction window for submissions
 - Application of Expert Adjustment and Expert Judgement for submissions
 - Expanding submission panel sizes
 - Embargo of submissions
 - Future proposals for the evolution of LIBOR

Appendix - Overview of ICE LIBOR

Proposed LIBOR Enhancements

i. Submissions waterfall

IBA's proposals are to base LIBOR on transactions where there is adequate activity and having a waterfall of submission methodologies so that rates can be published in all circumstances.

| Submission Level | Submission Type | Submission Method |
|------------------|---------------------------|--|
| Level 1 | Transactions | 1. Volume Weighted Average Transaction Price |
| Level 2 | Derived from Transactions | 2. Historical Transactions |
| | | 3. Interpolation |
| | | 4. Extrapolation/Parallel Shift |
| Level 3 | Expert Judgement | 5. Expert Judgment - Formula |
| | | 6. Expert Judgment - Framework |

Do you agree with the proposed waterfall approach for LIBOR submissions?

ii. Eligible Counterparties for submissions

IBA recommends that banks' funding trades with corporates should be included in eligible transactions for submissions.

Do you agree with using corporates as counterparty types providing they meet the required minimum thresholds for all transactions?

iii. Transaction Window and Publication Time

LIBOR is currently set as of 11:00 and published at approximately 11:45 (London time). Fulfilling the strategic objective of the Financial Stability Board for anchoring LIBOR in transactions requires an increase in the trade data on which to base submissions.

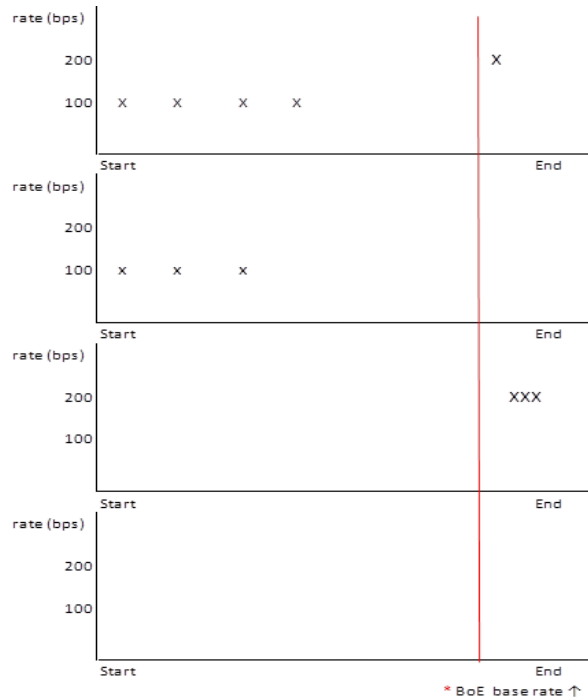
Below are illustrated, in simple terms, four scenarios for banks with different distributions of trades over a transaction window and in the table underneath are four options for implementing different transaction windows and publication times. The red vertical line towards the end of the window illustrates an unexpected base rate increase of 100 bps.

Bank A – during a transaction window, Bank A booked 4 trades at 100 bps and one trade at 200 bps just before the close of the window.

Bank B – Bank B has booked 3 trades during the transaction window and all for 100 bps

Bank C - Bank C has booked 3 trades just before the close of the window and all at 200 bps

Bank D – Bank D has not booked any trades during the transaction window



| Window & Publication Option | Pros | Cons |
|--|---|--|
| 1. Window is 24hrs since previous submission. Publish at 11:45 London Time | <ul style="list-style-type: none"> Increases availability of transactions Formulaic approach, reduces need to apply Judgement | <ul style="list-style-type: none"> Trades may have different value dates Stale submission may not represent market at publication time |
| 2. Window is previous business day. Publish at 11:45 | <ul style="list-style-type: none"> Increases availability of transactions and no crossing value dates Allows submitters more time to validate | <ul style="list-style-type: none"> May not represent market at publication time - potential issue for derivative referencing products |
| 3. Same day transaction window from 06:00 to 13:30 and publish at 14:15 | <ul style="list-style-type: none"> Increases availability of transactions – but not as much as options 1 & 2 Reduces impact of stale transactions | <ul style="list-style-type: none"> Operational impacts on submitters and users from later publication time |
| 4. Window is 24hrs since previous submission but rate is “as of 11:00” | <ul style="list-style-type: none"> Increases availability of transactions Rate current at publication time | <ul style="list-style-type: none"> Reduces level 1 submission type as submitters may be required to apply judgement for “as of 11:00” rate |

Which of the four implementation options do you think is best?

iv. Expert Adjustment and Expert Judgement

The Wheatley Review provided guidelines for including adjustments to ensure a submission is representative and consistent with the market (see appendix). In evolving to a transaction-based rate, IBA has considered whether adjustments in cases such as changes in policy rates or the credit rating of a submitter should continue to be included.

Do you agree with Expert Adjustment being applied to a transaction or transaction derived rate?

Do you agree with IBA's proposal for Expert Judgment submissions, utilising a formula or framework, where a bank does not have adequate transactions for a level 1 or 2 submission?

v. Expanding Panel Sizes

To increase the volume of transactions for LIBOR submissions IBA wishes to increase the panel members for each currency. It is intended that a standardised transaction-based methodology will reduce risk and barriers to entry for new banks to join panels.

What conditions do you think would need to exist to attract banks to become LIBOR submitters?

What do you think would be an optimum panel size for each currency?

vi. Submission Embargo

Following the 2012 Wheatley Review, there is a 3 month embargo period before individual bank submissions are published. With the proposed new methodology for calculating LIBOR submitters have expressed concerns if a transacted rate submission is published even after 3 months

Do you agree with IBA's proposal of publishing **anonymous** submissions 3 months after publication?

vii. Future Evolution of LIBOR

Are there any proposals not mentioned in IBA's position paper that you think should be considered for the future evolution of LIBOR?

This may include proposals for the submission process and inputs, calculation methodology, publication and factors specific to your local jurisdiction.

APPENDIX

ICE LIBOR Overview

What is ICE LIBOR used for?

- ICE 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 as well as basis for settlement of interest rate contracts on many of the world's major futures and options exchanges

Calculating ICE LIBOR

- ICE LIBOR is a benchmark rate produced for five currencies with seven maturities quoted for each - ranging from overnight to 12 months, producing 35 rates each business day
- ICE LIBOR provides an indication of the average rate at which the LIBOR contributor banks can obtain unsecured funding for a given period, in a given currency. Individual ICE LIBOR rates are the end-product of a calculation based upon submissions from LIBOR contributor banks
- ICE Benchmark Administration maintains a reference panel of between 11 and 18 contributor banks for each currency as detailed below;

| Bank | USD | GBP | EUR | CHF | JPY |
|--------------------------|-----|-----|-----|-----|-----|
| Bank of America | o | | | | |
| Bank of Tokyo-Mitsubishi | o | o | o | o | o |
| Barclays Bank | o | o | o | o | o |
| BNP Paribas | o | o | | | |
| Citibank | o | o | o | o | |
| Credit Agricole | o | o | | | o |
| Credit Suisse | o | | o | o | |
| Deutsche Bank | o | o | o | o | o |
| HSBC | o | o | o | o | o |
| JP Morgan | o | o | o | o | o |
| Lloyds Bank | o | o | o | o | o |
| Mizuho Bank | | o | o | | o |
| Rabobank | o | o | o | | |
| Royal Bank of Canada | o | o | o | | |
| Santander | | o | o | | |
| Societe Generale | o | o | o | o | o |
| Sumitomo Mitsui Bank | o | | | | o |
| The Norinchukin Bank | o | | | | o |
| Royal Bank of Scotland | o | o | o | o | o |
| UBS | o | o | o | o | o |

- Every ICE LIBOR rate is calculated using a trimmed arithmetic mean. Once each submission is received, they are ranked in descending order and the highest and lowest 25% of submissions are excluded. This trimming of the top and bottom quartiles allows for the exclusion of outliers from the final calculation. LIBOR is then published at approximately 11:45 (London time) daily.

Expert Adjustment

Wheatley Review (2012¹) - Box 4.B: LIBOR submission guidelines;

Submissions may also include adjustments in consideration of other variables, to ensure the submission is representative of and consistent with the market for inter-bank deposits. In particular, the information obtained above may be adjusted by application of the following considerations:

- *Proximity of transactions to time of submission and the impact of market events between transactions and submission time*
- *Techniques for interpolation or extrapolation from available data*
- *Changes relative credit standing of the contributor banks and other market participants and*
- *Non-representative transactions.*

¹ Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf.