Second Review of the Implementation of IOSCO's Principles for Financial Benchmarks by Administrators of EURIBOR, LIBOR and TIBOR

OICU-IOSCO

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Contents

1. About this Report

This report sets out the findings of Review (**Review**) of the implementation of IOSCO's Principles for Financial Benchmarks (**Principles**) by the administrators of the:

- Euro Inter-Bank Offer Rate (**EURIBOR**);
- London Inter-Bank Offer Rate (**LIBOR**); and
- Tokyo Inter-Bank Offer Rate (**TIBOR**).

In this report, these benchmarks are referred to collectively as the **IBORs**.

This report provides an overview of findings, background to the review, details of how the review was conducted, as well as more detailed findings in respect of each individual administrator.

The Review was conducted, and this report was prepared, by a **Review Team** constituted of staff drawn from IOSCO members. The composition of the Review Team is set out later in the report.

2. Overview of Findings

This report is a follow-up to IOSCO's Review of the administrators of the IBORs (**First Review**) which was published in July 2014.

The First Review contained remedial recommendations for the three administrators intended to strengthen their implementation of the Principles. This report sets out the findings of the Review into the direction of travel taken by the administrators towards implementing the recommendations of the First Review.

<u>Key Findings</u>

The Review found that all three administrators have been proactively engaged in addressing the issues raised by the First Review.

Similarly to the First Review, this Review found that there was an important distinction between the level of progress made in implementing the Principles related to the quality of the benchmark (in particular, Principles 6, 7 and 9) and the other Principles which deal with governance, transparency and accountability.

Governance, transparency and accountability

In regard to the Principles related to governance, transparency and accountability, the Review found that a majority of the recommendations made by the First Review had been implemented by the administrators. While there was further work identified, this related to only a limited number of points which were specific to certain administrators.

The Review saw evidence that all the administrators had developed and improved their policies and procedures in a number of areas including conflicts of interest, consultation with stakeholders and internal oversight.

Areas where further work was identified, in respect of one or more of the administrators, included ensuring that conflict of interest policies were applicable to all relevant individuals and publishing sufficient information around the functioning of the Oversight Committee, or equivalent body.

Quality of benchmark design

When considering the Principles relating to the quality of the benchmark (in particular Principles 6 – 9), the Review Team was mindful of the on-going work by the administrators to implement the "IBOR+" recommendations made by the FSB OSSG in its report *Reforming Major Interest Rate Benchmarks* (further details about this are contained in this report).

All three administrators are in the process of conducting work, including data collection exercises, round tables and public consultations, to develop and engage with stakeholders on approaches to evolve the three benchmarks to better anchor them in market transactions.

This report stresses, however, that for the most part this work is still at the stage of planning and consulting on how the design of the benchmarks can be improved, to better anchor the benchmark in market transactions. As such, the level of implementation of the relevant Principles will depend on the final outcome of the planned work, rather than the plans themselves.

The Review Team considers that the process of evolving the benchmarks, in line with the FSB OSSG program, should be seen as a vehicle towards the implementation of these Principles. However, implementation of Principles 6 – 9 is not a one-off process. Rather, benchmark design must continue to be responsive to changes in the market for the underlying interest the benchmark seeks to represent.

As such, the administrators should continue to have regard to the objectives of these Principles as they work to ensure the benchmark is truly representative of the underlying interest.

Active markets

A common theme across the three administrators was a need for further work to develop their thinking around whether the transactions they use for input data come from an 'active market' and, more importantly, what procedures they have in place if the underlying markets are either not active or representative of the underlying interest the benchmark seeks to represent. This work is all the more important as the benchmarks evolve to be further anchored in transaction data.

Transparency of benchmark determinations

All three administrators have yet to meet the objectives of Principle 9 concerning the publication of an explanation of the how particular benchmark determinations have been made (by reference to the activity of the market and any expert judgement). The three administrators have stated that they have plans in place to address this. It is expected that the implementation of this Principle will be conducted in parallel with the continuous evolution of the benchmarks to further anchor their methodology in transactions. In this regard, the three IBORs are either currently - or will soon be - subject to direct regulation as well as enhanced governance. Pending the evolution of the IBORs to a predominantly transaction-based methodology, the Review Team understands that the administrators of EURIBOR, LIBOR and TIBOR should be able to evidence how the benchmark is derived (for example, to its oversight committee or other body or to the appropriate regulatory authority as part of their on-going scrutiny of the benchmark).

Recommended remediation

The Review Team has made recommendations for each administrator in order to strengthen the implementation of the Principles.

IOSCO expects administrators to take decisive steps, as soon as possible, to implement the recommendations.

As the majority of the recommendations from the First Review have been implemented or are subject to on-going work related to the evolution of the benchmarks, the Review Team does not recommend a follow up review.

Relevant national authorities should monitor the progress made by the three administrators to implement the recommendations of this report.

3. Background

3.1. IOSCO Principles for Financial Benchmarks

In July 2013, IOSCO published the final report, *Principles for Financial Benchmarks*[1] (**Final Report**). The Final Report set out 19 principles (**Principles**) for the operation of financial benchmarks. The Final Report stated that the Principles should be understood as a set of recommended practices that should be implemented by benchmark administrators and submitters.

Specifically, the Principles were intended to promote the reliability of benchmark determinations. They addressed benchmark governance, benchmark and methodology quality, as well as accountability mechanisms that are intended to:

- protect the integrity of the benchmark determination process and to address conflicts of interest;
- promote the quality and integrity of benchmark methodologies and determinations;
- address vulnerabilities in the submission process;
- address situations where the benchmark ceases to exist or stakeholders need to transition to another benchmark; and
- increase accountability by establishing complaints processes, documentation standards and audit reviews

The Financial Stability Board (**FSB**) endorsed the Principles as the global standard for benchmarks, as did the G20 Leaders in their declaration in September 2013, following their summit in St Petersburg.

3.2. First IOSCO Review of the Administrators of EURIBOR, LIBOR and TIBOR

<u>Background to the First Review</u>

At its August 2013 Plenary, the FSB endorsed a proposal from its Official Sector Steering Group (**OSSG**) that it request that IOSCO undertake a review of EURIBOR, LIBOR and TIBOR against the Principles and report its findings back to the OSSG. This was in the context of work being conducted by the FSB, via the OSSG, on reforming interest rate benchmarks, which is discussed in the *FSB Work on Financial Benchmarks* section below.

On 3 September 2013, the chairs of the OSSG formally requested that the IOSCO Board conduct this review. At its meeting in September 2013 in Luxembourg, the IOSCO Board agreed to this request. It approved terms of reference for the Review to be conducted by a

[1] Available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf

Review Team comprised of members from the IOSCO Task Force on Financial Benchmarks and the IOSCO Assessment Committee.

In July 2014, IOSCO published the findings of the First Review,[2] in conjunction with an FSB report concerning benchmarks reform (see below).

Methodology of the First Review

The First Review was undertaken as a desk-based exercise, using responses provided by the administrators of EURIBOR, LIBOR and TIBOR to a methodology incorporating a questionnaire.

Based on this methodology, the Review Team in the First Review rated the implementation of each Principle by the three administrators as being either fully, broadly, partly or not implemented.[3]

Findings of the First Review

The First Review found that all three administrators had made significant progress in implementing a majority of the Principles. Good progress was observed in implementing the Principles on governance, transparency and accountability. However, further progress was needed in ensuring that the Principles on benchmark design, data sufficiency and transparency of benchmark determinations are implemented.

No rating was made in relation to Principle 7 on data sufficiency, due to a lack of information having been provided by the administrators. Principle 15 was deemed to be 'Not Applicable' given the methodologies of the benchmarks under review.

The level of implementation varied by administrator, with the First Review finding that only Principles 1 and 19 had been fully implemented by all three administrators. Principles 2, 4, 5, 8, 10, 11, 12, 14, 16, 17 and 18 had been either fully or broadly implemented by all administrators. The other five Principles had been only partly implemented or not implemented by at least one administrator, were not rated in the First Review, or were not applicable.

With respect to those Principles that were not rated 'fully implemented', the First Review identified the Key Indicia in the assessment methodology that were not met, disclosed the representations made by the administrators around planned changes in policies and practices and set out recommendations to guide the IBOR administrators in implementing all the

[2] *Review of the Implementation of IOSCO's Principles for Financial Benchmarks by Administrators of Euribor, Libor and Tibor*; available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD444.pdf.

[3] A description of the meaning of these terms can be found in the Report of the First Review

Principles. It also recommended a further review in mid-2015 based on the First Review's assessment methodology to identify whether the administrators have made any progress in addressing the recommended remediation work.

3.3. FSB Work on Financial Benchmarks

In 2013, the FSB created the OSSG, which comprises central banks and markets regulators and seeks to coordinate international work to review and reform interest rate benchmarks. The OSSG guides the work of the Market Participants Group (**MPG**), which was tasked with examining the feasibility and viability of adopting additional reference rates and potential transition issues in respect of moving to use of those rates.

The OSSG focussed in the first instance on interbank benchmarks that were most widely used in the global financial system — EURIBOR, LIBOR and TIBOR — with the expectation that reform in these major markets would provide an impetus for similar enhancements in other key markets.

In July 2014, the FSB published the report, prepared by the OSSG, *Reforming Major Interest Rate Benchmarks.*[4] This report, which was published in conjunction with the findings of the First Review and a report by the MPG,[5] called on the IBOR administrators to address the recommendations arising from the First Review and made additional recommendations around underpinning the benchmarks, to the greatest extent possible, in transaction data — this process was referred to as IBOR+ — and developing alternative risk-free rates.

In July 2015, the FSB published the interim report of this work, *Progress in Reforming Major Interest Rate Benchmarks — Interim report on implementation of July 2014 FSB recommendations.*[6]

This interim report stated that the administrators of EURIBOR, LIBOR and TIBOR had all taken major steps towards implementing IBOR+. These steps included reviews of respective benchmark methodologies and definitions, data collection exercises and feasibility studies, consideration of transitional and legal issues, and broad consultations with submitting banks, users and other stakeholders.

Furthermore, in recent years authorities in all three jurisdictions where the IBOR administrators are located had taken action to more formally regulate these benchmarks. The interim report also noted that OSSG members had made concrete progress in identifying potential risk-free rates.

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[4] Available at http://www.financialstabilityboard.org/wp-content/uploads/r_140722.pdf

[5] *Final Report of the Market Participants Group on Reforming Interest Rate Benchmarks*, 22 July; available at: http://www.financialstabilityboard.org/wp-content/uploads/r_140722b.pdf

[6] Available at http://www.financialstabilityboard.org/wp-content/uploads/OSSG-interest-rate-benchmarks-progress-report-July-2015.pdf

4. Details of the Review

4.1. Purpose of the Review

This Review was undertaken to take forward the recommendation arising from the First Review, mentioned above, for a subsequent review to assess administrators' progress in addressing the recommended remediation work.

Furthermore, in 2013 the FSB recommended that IOSCO conduct a further review of EURIBOR, LIBOR and TIBOR in mid-2015, reporting back to the OSSG on its findings by the fourth quarter of 2015.

The objectives of this Review were to provide:

- A *qualitative* assessment of further implementation of the Principles, including a description of any remaining gaps and inconsistencies between the administrators' current policies and practices and the Principles.

- A description of actions taken and plans by the administrators to change their policies and practices to fully implement the Principles, taking into account the Review Team's findings and recommendations from the First Review; and

- An outline of actions administrators should take to address any remaining gaps and inconsistencies in implementation and a time frame for doing so.

Unlike the First Review, this Review was not intended to provide a specific rating of the adoption of each Principle individually by each administrator. Instead, it was intended to provide a more general 'direction of travel' on the administrators' progress in implementing the Principles.

IOSCO agreed to adopt this 'direction of travel' approach because the relevant administrators were still in the process of changing their methodologies to address the OSSG IBOR+ recommendations on benchmark design (discussed in the *FSB Work on Financial Benchmarks* section of this report) and that this program was not expected to be completed before 2016. Furthermore, at the time of conducting the Review, the relevant administrators were in jurisdictions where there was a changing regulatory environment for benchmarks.

4.2. Review Team

This Review was conducted by a Review Team drawn from staff of members of IOSCO's Assessment Committee and its Task Force on Financial Market Benchmarks (**TFFMB**). The Review Team was co-chaired by staff from the UK FCA and ASIC Australia and comprised staff selected from BaFin Germany, CFTC USA, FSMA Belgium, FSB South Africa, JFSA Japan and MAS Singapore.

The names of the individual members of the Review Team are provided below under the heading *Assessment Process*. Members of the Review Team were selected based on their expertise in benchmark regulation, in the case of TFFMB participants, and their experience in undertaking IOSCO implementation reviews, in the case of Assessment Committee participants.

4.3. Review Methodology

Assessment Methodology

As with the First Review, this Review was conducted as a desk-based exercise involving administrators' responses to an assessment methodology incorporating a questionnaire. As recommended in the First Review, this Review based its assessment methodology on the one used in the First Review, but with some changes.

The first and most significant change from the approach taken in the First Review was that, in general, administrators were instructed to answer questions only where there had been some change to the answer, or the supporting information, when compared to the response from the First Review. That is, the administrators were asked to update their response to the assessment methodology used in the First Review.

However, there were also a small number of new questions that administrators were asked to answer in full. The relevant questions, three in total, related to Principle 6 and 7. There were also questions for each Principle relating to anticipated changes in the future and actions relating to the remedial recommendations from the First Review which were to be answered in full.

Key questions were included to enable the Review Team to determine the extent to which the administrator had: (1) addressed the deficiencies in specific Key Indicia that were noted in the First Review; (2) had made or progressed the changes in the "planned policies and practices" it had represented in the First Review would be made; and (3) carried out the recommendations made in the First Review.

The assessment methodology was sent to the administrators in late July 2015, with responses due by 28 August 2015.

Supporting Evidence

In addition to their narrative responses to the questions in the assessment methodology, the administrators were asked to provide sufficient evidence to allow the Review Team to verify their responses. This evidence could include:

- With respect to policies and procedures, supporting documentation, as well as internet links to such documents; and

- Data, examples or other evidence to substantiate the implementation of relevant practices.

It should be noted that the findings of this Review are based primarily on responses and supporting information provided by the administrators. While the Review Team did seek to address any inconsistencies in the information supplied, it did not seek third party verification of its accuracy.

Assessment Process

For the initial stage of the assessment, the Review Team was split into sub-teams to review each benchmark. The allocation was as follows:

- LIBOR: Carlos Molinas, Gladys Asogbon and David Mendes da Costa from the FCA; Jakobus Feldkamp from BaFin; Thomas Yee from MAS;

- TIBOR: Steven Bardy and Adam Coleman from ASIC; Masaya Hatoma from the JFSA;

- EURIBOR: Lieven Baert and Randy Priem from the Belgian FSMA; Robert Rosenfeld from the US CFTC and Elmarie Hamman and Prinasha Pillay from the FSB South Africa.

The Review Team met on 18 September 2015 to discuss their initial assessment, address any assessment issues that had arisen, and determine how the findings in this Report would be presented. This ensured a consistency in approach.

The administrators were also given an opportunity to review and comment on the sections of the Report which commented on their progress in implementing the Principles and recommendations arising from the First Review.

Reporting Date

As noted above, under *Assessment Methodology*, the IBOR administrators were asked to respond to the assessment methodology by 28 August 2015. **The Review Team designated this date as the reporting date for this Review.**

This means that the findings in this report are as of this date. The Review Team has not necessarily considered any developments that may have taken place since 28 August 2015. However, *in some cases*, this report notes where it has become aware that there have been changes since that date that may be relevant to implementation of the Principles.

5. EURIBOR

5.1. Introduction

What is EURIBOR?

EURIBOR is the rate at which euro interbank term deposits are offered by one prime bank to another prime bank within the Eurozone, and is calculated at 11:00 a.m. (CET) for spot value (T+2). The banks of the panel (**Panel Banks**) have been selected to ensure that the diversity of the euro money market is adequately reflected. The choice of banks quoting for EURIBOR is based on market criteria, such as their volumes in euro-interest rate related instruments, especially in the money market.

As part of the recommendations issued by the European Banking Authority (**EBA**) and the European Securities and Markets Authority (**ESMA**) in January 2013, EURIBOR has focused on maturities with the highest use and volume of underlying transactions. Since November 2013, the overall number of tenors was reduced from 15 maturities to 8. The EURIBOR index is currently calculated and published for the following 8 tenors: 1 and 2 weeks and 1, 2, 3, 6, 9 and 12 months.[7]

How is EURIBOR determined?

Every submitter Panel Bank is required to directly input its data no later than 10:45 a.m. (CET) on each day that the Trans-European Automated Real-Time Gross-Settlement Express Transfer system (**TARGET**) is open. EURIBOR is quoted for spot value (T+2) and on an act/360 day-count convention. It is displayed to three decimal places. Panel Banks contribute for the maturities defined by the Steering Committee.

At 11:00 a.m. (CET), the calculation agent processes the EURIBOR calculation. For each maturity the calculation agent eliminates the highest and lowest 15% of all the quotes collected. The remaining rates are then be averaged and rounded to three decimal places.

Administration and governance of EURIBOR

EURIBOR is administered by the European Money Market Institute (**EMMI**), whose members are national banking associations in the Member States of the European Union which are involved in the Eurozone.[8] EMMI assumed responsibility for the administration of EURIBOR in June 2014 (formerly known as Euribor-EBF). EMMI is governed by the

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7 http://www.emmi-benchmarks.eu/assets/files/D2832A-2013-EURIBOR%20tenors%20to%20be%20reduced%20as%20of%201%20November%202013.pdf

8 http://www.emmi-benchmarks.eu/

provisions of Title III of the Law of 27 June 1921 on the not-for-profit associations, the international not-for-profit associations and the foundations.

The General Assembly is the body primarily responsible for adopting polices that govern the operation of EMMI and the determination of EURIBOR. The Steering Committee is the central governance body that is responsible for controlling the operation of EURIBOR, in particular the adherence of the Calculation Agent and Panel Banks to their code of conduct. The Conflicts of Interest Oversight Committee monitors potential conflicts of interest at the administrator level.

There are currently 24 Panel Banks that contribute to EURIBOR:

- 21 banks from EU countries participating in the euro from the outset;
- A bank from a EU country not participating in the euro from the outset ;
- Two large international banks from non-EU countries but with important Eurozone operations.

The Panel Banks are required to comply with the procedures and governance rules specified by EMMI. The EURIBOR Code of Conduct includes guidance for Panel Banks on what information they should give preference to in determining these rates. EMMI is currently consulting on open issues in the predominantly transaction-based design of the EURIBOR benchmark and EMMI's transition considerations.

EMMI's administration of EURIBOR is governed primarily by the EURIBOR Code of Conduct and the Code of Obligations for the Panel Banks (**COPB**). The COPD sets out how Panel Banks are meant to behave in relation to their submission of reference rates to EMMI.

Since July 2014, the determination and dissemination process for EURIBOR has been outsourced to Global Rate Set System (**GRSS**). EMMI set up minimum requirements that must be met by the calculation agent, which are reflected in the calculation agent Code of Conduct and Service Level Agreement.

Regulation of EURIBOR

Until the application of the European Regulation on financial benchmarks, which will grant power to the Member States to designate a competent authority in respect of benchmarks, EMMI is not a supervised entity.

5.2. Progress made since First Review

a. General Overview of Implementation

There were 12 Principles where implementation was reported as not being 'fully implemented' (or 'not applicable' in the First Review). In respect of 9 of these Principles (Principles 4, 8, 11, 12, 13, 14, 16, 17 and 18) the Review Team has noted the progress to date — including on addressing any recommendations arising from the First Review — and has *not made any further recommendations*.

However, additional work is needed to fully implement Principles 6, 7 and 9.

The progress that has been made on implementing these Principles has been based on work that is still in progress and not yet completed, in the form of the ongoing project — referred to as the EURIBOR+ project — to better anchor the calculation of EURIBOR in transaction data

While the work that has been done on the EURIBOR+ project is largely positive and could be seen to be a vehicle towards compliance with Principles 6, 7 and 9, the Review Team was of the view that further work should be done. In these cases recommendations have been made. The Review Team also acknowledges that EURIBOR+ implementation is being conducted in line with the general timelines set out by the FSB OSSG.

However, the Review Team notes that there is a critical difference between plans and their implementation. While the direction of travel has, so far, been positive, the final status of the implementation of several of the Principles on benchmark quality will depend on the outcomes of this ongoing work. Keeping the momentum towards EURIBOR+ is critically important.

The Review Team considers it important that any changes planned by EMMI in respect of EURIBOR and EURIBOR+ result in a benchmark that meets Principles 6, 7 and 9. This will be a continuous process of adaptation to the underlying interest that EURIBOR represents and EMMI should therefore continue to have regard to the objectives of the Principles as it considers how EURIBOR should be determined going forward.

Finally, the Review Team would like to highlight that, during the assessment period and after the reporting date of 28 August 2015, EMMI took steps to further implement the Principles, which are not taken into account in section (c) of this chapter.

In particular, EMMI’s General Assembly approved an update of the EURIBOR Code of Conduct on 17 September 2015, which was launched on 1 October 2015 and became effective on 30 November 2015. Under this updated Code, Panel Banks are expected to declare their compliance with the Code of Conduct. This revised Code of Conduct, amongst other things, includes a clearer distinction between Steering Committee ‘members directly or indirectly affiliated to Panel Banks’ and ‘non-Panel Bank members’.

In addition, the revised Code of Conduct elaborates on the Steering Committee’s responsibility to follow-up on any remedial action identified during internal and external reviews and also assigns the Steering Committee to define what constitutes a ‘material change’ of the EURIBOR benchmark, ensuring that stakeholder consultation procedures concerning material changes of the EURIBOR benchmark are performed in accordance with the EMMI Benchmarks Consultation Policy, and to approve, monitor, and oversee the implementation of the proposed changes. Moreover, the Code of Conduct includes a tiered sanction framework for breaches of the Code of Conduct and defines a common framework for Panel Banks’ internal and external audits. Finally, EMMI has also been working on intraday re-fixing procedures applicable for the implementation of the EURIBOR Intraday Re-fixing Policy and published at the end of October 2015 a consultation paper regarding the transition to EURIBOR+

b. EURIBOR+

EMMI initiated the EURIBOR+ project with the objective of having a transaction-based benchmark determination methodology for EURIBOR. Although this is an evolutionary process to further anchor EURIBOR in transaction data, EMMI does not consider EURIBOR+ as a new and distinct benchmark.

The EURIBOR+ project has been divided into two stages. The first stage is completed and was focused on the formulation of a robust and reliable methodology using transactional data gathered through two extensive data collection exercises from over 50 banks. The initial development and design work was conducted under the guidance of a dedicated taskforce and involved analyses of this transaction data, formulation of the new methodology and a series of stakeholder outreach exercises.

The second stage, which has been under way since early 2015 — and is ongoing — is composed of the pre-implementation planning needed for the introduction of the new methodology. During this stage, EMMI is focusing on transition planning and specifying the operational and infrastructure requirements necessary for the transition. EMMI has held several workshops with panel banks and the end-user community in order to present the new methodology.

EMMI published a consultative position paper on 30 October 2015, which is available on EMMI’s website.[9] It is noted that the consultative position paper was launched after this Review was conducted. The position paper gives an account of EMMI’s draft methodology for a EURIBOR based on transactions while adapting to changes in the financial markets underpinning EURIBOR. At the same time, the document summarises EMMI’s planning for the implementation of the predominantly transaction-based determination methodology.

EMMI states that it aims to eliminate the frequent use of expert judgment through implementation of EURIBOR+.

[9] The consultative position paper is available at: http://www.emmi-benchmarks.eu/assets/files/Euribor_Paper.pdf

Key areas considered in the position paper, which were not assessed by the Review Team as they were still under consultation at the moment of the Review, are:

- **Specification of the underlying interest.** Rather than the current EURIBOR specification, which states that *"EURIBOR is the rate at which euro interbank term deposits are being offered within the EU and EFTA countries by one prime bank to another at 11.00 a.m. Brussels time"*, EMMI would like to clarify the underlying interest for EURIBOR as *"the rate at which banks of sound financial standing could borrow funds in the EU and EFTA countries in the wholesale, unsecured money markets in euro"*. The intention of EMMI is thus, amongst other things, to better reflect the borrowing rate for banks, which can be understood as a wholesale funding rate where interbank deposits constitute one possible source of funding only.

- **Eligible counterparty types**. In the position paper, EMMI clarifies that the concept of prime bank as the party borrowing funds would be retained. This concept continues to be reflected as a criterion that the banks that form the EURIBOR panel have to be of sound financial standing. In general terms, banks in the euro area categorized as 'significant' by the ECB under the Single Supervisory Mechanisms would be regarded as satisfying this criterion. However, this would not be an exclusive condition.

- **Eligible transactions**. Transactions conducted in the wholesale unsecured money markets would have to be provided by the Panel Banks. The following types of unsecured borrowing transactions would be eligible: a) unsecured cash deposits attracted from deposit-taking corporations (except those of the central bank subsector), other financial institutions, official sector institutions, non-financial corporations that are not categorised as small business customers in the Basel III LCR regulations, insurance corporations, and pension funds, irrespectively of their geographic location, and b) short-term securities, irrespective of the type and location of the counterparty

- **Submission rate.** The submission rate would be the volume-weighted average rate of the set of eligible transactions.

- **Data sufficiency.** EMMI proposes to use a gap-filling technique where a panel bank's most recent volume-weighted average rate within a given number of days would be used when a panel bank has no transactions to report.

- **Calculation methodology**. After application of the gap-filling technique, the submission rate associated to non-zero transaction volumes would be arranged in ascending order from lowest to highest. The median group of this ordered list is then identified as: a) the group of four central rates, when the ordered list of submission rates is composed of an even number of elements, or b) the group of five central rates, when the ordered list of submission rates is composed of an odd number of elements. The benchmark would then be obtained as the simple average of the elements in the median group.

- **Fall-back arrangements.** In case of data insufficiency, EMMI has designed a tiered contingency approach. Under the Tier 1 fall-back arrangement, the methodology would be replaced by a formulaic approach that provides a volume-weighted average that incorporates volume and rates submitted on the preceding days of the contingency period. If, under the Tier 1 contingency approach, there remained risk that the benchmark was not representative, the Tier 2 fall-back arrangement would be triggered. The Tier 2 arrangement would entail that Panel Banks would be convened to provide quote submissions.

c. Summary of implementation by category of Principle

This section provides a summary of EMMI's progress in implementing the Principles since the First Review, based on the categories of Principle.

Summary of implementation by category of Principle

Principles relating to governance (Principles 1-5)
Summary of implementation status in the First Review The governance framework Euribor-EBF had in place at the time of the First Review was already closely aligned with the Principles at the time of the First Review. Specifically, the ratings for EMMI's predecessor in the First Review for Principles 1-5 were as follows: • **Principle 1 (Overall responsibility of the administrator)** – Fully Implemented; • **Principle 2 (Oversight of third parties)** – Fully Implemented; • **Principle 3 (Conflict of interest for administrators)** – Fully Implemented; • **Principle 4 (Control framework for administrators)** – Broadly Implemented (no sufficient arrangements in place to ensure that the quality and integrity of EURIBOR is maintained; control framework doesn't fully address the management of internal risk; insufficient evidence of policies ensuring that the staff at EMMI, involved in determinations of EURIBOR, possess the relevant levels of expertise); To address this, the Review Team **recommended** that Euribor-EBF should:

- Follow the recommendations given for Principles 6, 7, 9, 11, 12, 13 and 14.
- Address the management of risk at the level of Euribor-EBF in the Euribor-EBF control framework.
- Adopt policies and practices that ensure Euribor-EBF staff determining EURIBOR levels possess the relevant levels of expertise.

- **Principle 5 (Internal oversight)** – Broadly Implemented (no formal procedures for the cessation of tenors).

  To address this, the Review Team **recommended** that Euribor-EBF should:

  - Adopt policies and procedures to define the Steering Committee's competences with respect to remedial actions highlighted in the results of audits.
  - Establish procedures for the cessation of tenors.

Description of implementation progress since the First Review

Principle 4:

- EMMI has implemented a new Risk Management Framework, and a number of supporting policies, procedures, and practices were adopted.
- EMMI's internal organisation structure has been revised according to a three lines of defence model.
- EMMI has developed a new Training and Development Policy to ensure that EMMI staff members have the necessary skills and competences and remain up to date with new trends, skills, and expertise.

Principle 5:

- EMMI has developed the new EURIBOR Transition Policy to be applicable in the event of the discontinuation of EURIBOR or of one or more of its tenors.
- A revised Audit policy has been adopted, which contains a section on issue remediation.
- EMMI adopted an Issue Management Policy describing the standards and processes for the identification, escalation, remediation, reporting and tracking of issues

identified through internal and external assessments or audits.

- EMMI has developed a Consultation Policy which defines material changes to the EURIBOR benchmark and procedures for consulting stakeholders.

Other work conducted to implement the Principles:

- The composition of the EURIBOR Steering Committee reflects less reliance on members from the banking industry and now includes stakeholders and industry experts, who are independent of Panel Banks.

- Documentation has been established on the procedures relating to clear communication and reporting channels between EMMI and third parties.

- An external provider has been commissioned to run the external review of GRSS and EMMI has reviewed the Panel Banks' compliance with the COPB.

- Online forms for whistleblowing and complaints, as well as the Conflict of Interest Policies (both at EURIBOR level and Association level) and the Whistleblowing and Complaints Policies and Procedures are publicly available on the EMMI website.

- The declarations of interests signed by the EURIBOR Steering Committee members are publicly available on the EMMI website.[10]

Review Team comments and recommendations

The Review Team considers the work undertaken by EMMI addresses the recommendations from the First Review, although a number of areas were identified where further work is possible. In particular the Review Team highlights that EMMI should consider:

- Monitoring the completion by GRSS of the remedial actions arising from an external review; and

- Adopting a succession plan for relevant staff members and in view of the overall control framework.

The Steering Committee's responsibilities do not currently include the review and follow-up of any remedial action identified during internal and external reviews. The extent of progress made toward the implementation of the above proposals should be monitored.

[10] http://www.emmi-benchmarks.eu/euribor-org/steering-committee.html

The Review Team recommends that EMMI:

- Finalise the process of expanding the Steering Committee's responsibilities with regards to changes to, and termination of, EURIBOR;

- Expands the Steering Committee's responsibilities to include reviewing and following up remedial actions following internal or external reviews.

Principles relating to quality of the benchmark (Principles 6-10)

Summary of implementation status in the First Review

The ratings for EMMI's predecessor in the First Review for Principles 6-10 were as follows:

- **Principle 6 (Benchmark Design)** – Partly Implemented (failure to evidence compliance with the design process requirements);

  To address this, the Review Team **recommended** that Euribor-EBF should adopt and implement a process that incorporates the factors in Key Indicium 6.1(b)(ii)-(v).

- **Principle 7 (Data Sufficiency)** – Not Rated (insufficient material provided to allow the review Team to assess implementation of the data sufficiency principle);

  The Review Team **recommended** that Euribor-EBF should continue addressing Principle 7 as a matter of urgency by:

  - Continuing work on collecting and sharing with IOSCO and other relevant authorities the data and analysis that was requested by the Methodology in connection with Principle 7.

  - Continuing to work on exploring options to anchor EURIBOR in actual transactions drawn from active markets, including necessary further design, methodological and/or definition changes. This would include:

    - Defining what it considers an 'active' market in the interest EURIBOR seeks to represent, including describing the minimal acceptable level of activity necessary to demonstrate an active market;

    - Completing an analysis of methodologies to provide a basis for deciding whether the transactions are anchored in active markets; and

    - Making the necessary consequential changes from any broadening of permissible transactions beyond interbank unsecured transactions.

  - Following the recommendations made in connection with Principle 9.

- **Principle 8 (Hierarchy of data inputs)** – Fully Implemented;

- **Principle 9 (Transparency of benchmark determinations)** – Not Implemented (the information submitted in the First Review did not evidence that the specific information called for by principle 9 was disclosed with respect to each benchmark determination);

  The Review Team **recommended** that Euribor-EBF should:

  - Work decisively towards publishing with each benchmark determination the concise statements called for by Principle 9.
  - Work in close cooperation with the Panel Banks on a facility that would permit Panel Banks to disclose to Euribor-EBF the data upon which their rate submissions are based, subject to appropriate confidentiality protection.

  To assist Euribor-EBF with its implementation of these remedial actions, the Review Team noted that Principle 9 does not require the disclosure of any individual transaction information or other confidential or proprietary information.

- **Principle 10 (Periodic review)** – Fully Implemented.

Description of implementation progress since the First Review

Principle 6:

- EMMI has instituted a variety of on-going data collection processes that provide data on the size, liquidity, volume, concentration and market dynamics of the unsecured euro money markets.
- EMMI represented that it will continue the data collection processes, explore additional data sources and enhance its back-testing and monitoring processes.

Principle 7:

- As described above, EMMI has instituted a variety of data collection processes and analyses, and is collaborating with the European Central Bank, to develop a methodology for, and manage the transition to, a predominantly transaction-based EURIBOR+.

Principle 9:

- Currently EMMI publishes a general description of methodological procedures, which is published on the EMMI website and has been sent to all data vendors.
- EMMI has stated that full compliance with Principle 9 will be achieved following the planned transition to a transaction-based EURIBOR in the third quarter of 2016.

Other work conducted to implement the Principles:

- EMMI has continued work with respect to Principles 8 and 10 as a means to support the planned transition to EURIBOR+ as well as its existing analysis of the market underlying EURIBOR.

Review Team comments and recommendations

EMMI has undertaken significant data collection and analytical processes as a means to better understand the market underlying EURIBOR as well as funding sources and facilitate the planned transition to EURIBOR+. This work reflects a serious engagement by EMMI to address the deficiencies noted in the First Review and support the development of a predominantly transaction-based EURIBOR+. EMMI cannot at this time provide the type of disclosure called for by Principle 9 with each benchmark determination.

The Review Team acknowledges EMMI's representation that it is "currently implementing a transition from the EURIBOR design to a EURIBOR design methodology which is anchored on transactions (EURIBOR+)" and has consulted on transitioning to EURIBOR+ in July 2016.

The Review Team notes that evolving EURIBOR towards a benchmark anchored in further transactions is critical in order to move towards compliance with Principles 6, 7 and 9.

Principles relating to quality of the methodology (Principles 11-15)

Summary of implementation status in the First Review

The ratings for EMMI's predecessor in the first Review for Principles 11-15 were as follows:

- **Principle 11 (Content of the methodology)** – Broadly Implemented (procedures lacking for consistent use of market judgement, market stress and stakeholder consultation);

  To address this, the Review Team **recommended** that Euribor-EBF should:

  - Adopt procedures to encourage consistent use of expert judgment across all Panel Banks;
  - Adopt procedures to govern the determination of EURIBOR in times of market stress or disruption, or in periods when data sources may be absent;
  - Adopt clear procedures that set out when and how it will consult with stakeholders on amendments to the EURIBOR methodology and associated documents; and

- Amend the EURIBOR methodology so that it covers the identification of its potential limitations, including its operation in illiquid or fragmented markets and the possible concentration of inputs.

- **Principle 12 (Changes to the methodology)** – Broadly Implemented (material change not clearly documented, procedures lacking for stakeholder consultation);

  To address this, the Review Team **recommended** that Euribor-EBF should:

  - Amend its policies (including the EURIBOR CoC) to define what constitutes a material change to the methodology.

  - Develop and adopt formal stakeholder consultation procedures in relation to changes to the methodology that are deemed material by the Steering Committee. These need to be appropriate and proportionate to the breadth and depth of EURIBOR's use and the nature of its stakeholders. These procedures should also provide that public consultation should occur for all amendments.

- **Principle 13 (Transition)** – Partly Implemented (policies lacking that stakeholders were aware of a possible cessation of EURIBOR; and policy for a basic contingency plan for the non-determination of EURIBOR was not evolved enough);

  To address this, the Review Team **recommended** that Euribor-EBF should:

  - Conduct further work on, and adopt policies concerning, developing a suitable fall-back rate EURIBOR that would apply in situation where EURIBOR was not available or ceased being determined.

  - When working towards policies and procedures required by the Principle, Euribor-EBF will be expected to take into account due guidance by the FSB-OSSG and supervisory authorities.

- **Principle 14 (Submitter code of conduct)** – Broadly Implemented (there were not sufficient policies in place to discourage the interim withdrawal of Panel Banks);

  To address this, the Review **recommended** that Euribor-EBF should intensify its work on policies to discourage and mitigate the interim withdrawal of Panel Banks.

- **Principle 15 (Internal controls over data collection)** – Not applicable.

Description of implementation progress since the First Review

Principle 11:

- Existing fall-back provisions have been complemented in the EURIBOR COC by the EURIBOR Transition Policy which would be executed in the event of a possible cessation of EURIBOR or of one or more of its tenors.

Principle 12:

- A Consultation Policy has been adopted stating that EMMI will publicly consult stakeholders on any material change to EURIBOR. The consultation procedure follows the same process for all material changes.

- It is the Steering Committee's responsibility to determine whether a proposed change to the EURIBOR benchmark is "material" according to the definition for material changes outlined in the policy.

Principle 13:

- The transition plan considers the elements outlined in the EURIBOR Transition Policy, developed since the First Review.

- The policy is applicable to the administration and operation of the EURIBOR benchmark in the event of: EURIBOR being completely discontinued; the cessation of one or more of its tenors; or a methodological change that may qualify for a seamless transition.

- For the transactions-based EURIBOR methodology, EMMI is considering a two-tiered fall-back arrangement:

    - The first fall-back arrangement, triggered by a contingency threshold based upon the on-going data analysis described above, would leverage lagged rate and volume data that Panel Banks had already submitted.

    - The second fall-back arrangement would be a quote-based calculation arrangement based on inputs which will inform each Panel Bank's quote. EMMI will develop guidelines governing these inputs and document them in a revised COC and Code of Obligations for Panel Banks.

- EMMI has performed a parameterisation analysis for these contingency triggers based on 2012-2013 data and detected that the implementation of these fall-back arrangements is intended to be an exceptional situation, with an expected implementation of the first fall-back arrangement at most once every two years and the second fall-back arrangement on much rarer occasions.

Principle 14:

- EMMI has addressed several letters to Panel Banks since the first review, urging them to remain on the panel.

- Concerns regarding Panel Banks' withdrawal from the EURIBOR panel are discussed and included in the minutes of the Steering Committee meetings.

- EMMI does not have a contractual relationship with Panel Banks and has no legal means to enforce their participation in the EURIBOR panel.

Review Team comments and recommendations

EMMI states that it aims to eliminate the frequent use of expert judgment in the daily EURIBOR benchmark determination through the successful implementation of the EURIBOR+ project. The transactions-based EURIBOR methodology is intended to rely primarily on Panel Banks' actual transactions. As explained above, under the fall-back provisions of Principle 13, expert judgment in the form of formulaic adjustments would be used in the event there are insufficient transactions. Reliance on such a formulaic approach appears to promote consistency in the use of expert judgment. The Review Team thus encourages, similarly as for Principles 6, 7 and 9, that EMMI continues its efforts to evolve EURIBOR to further anchor the benchmark in transactions.

The Review Team does not make any recommendations for the implementation of Principle 11 to 14.

Principles relating to accountability (Principles 16-19)

Summary of implementation status in the First Review

The ratings for EMMI's predecessor in the First Review for Principles 16-19 were as follows:

- **Principle 16 (Complaints procedures)** – Broadly Implemented (not yet adopted its complaints policy and procedures);

  To address this, the Review Team **recommended** that Euribor-EBF should approve and implement its Complaints Policy and Procedures.

- **Principle 17 (Audits)** – Broadly Implemented (ensure and confirm the commission of an independent external auditor);

  To address this, the Review Team **recommended** that Euribor-EBF should:

  - Ensure and confirm the commission of an independent external auditor.
  - Publicly disclose the results of the external audit.

- **Principle 18 (Audit trail)** – Broadly Implemented (ensure that record-keeping requirements cover not only ‘complaints’, but also ‘any queries and responses relating to data inputs');

  To address this, the Review Team **recommended** that Euribor-EBF should ensure that its record-keeping requirements cover not only ‘complaints’, but also ‘any queries and responses relating to data inputs’.

- **Principle 19 (Cooperation with regulatory authorities)** – Fully Implemented.

Description of implementation progress since the First Review

Principle 16:

- A complaints policy has been adopted to receive, address and manage complaints regarding activities and operations relating to the administration, determination and publication of the EURIBOR benchmarks.

- Complaints can be filed with EMMI through a secured access online form or may be filed by letter, telephone or e-mail.

Principle 17:

- KPMG was appointed as an independent external auditor to conduct an external audit between 17 and 28 November 2014.

- After a tender process, to which seven major audit firms were invited to participate, the EMMI General Assembly appointed Ernst & Young as EMMI’s accredited statutory auditor on 14 May 2015 for a three-year mandate.

- EMMI has formalised the appointment process for both internal and external auditors in its revised Audit Policy.

Principle 18:

- EMMI has addressed the recommendation mentioned during the First Review and now states that its records cover more than just complaints alone. As such, EMMI documents a list of all the records retained, not only by EMMI but also by the calculation agent and the Panel Banks.

Other work conducted to implement the Principles:

- EMMI acknowledges that additional reporting arrangements may need to be

developed once it becomes a supervised entity. In light of this, EMMI has started sharing information through regular contacts with the FSMA.
Review Team comments and recommendations The Review Team does not make any recommendations for the implementation of Principle 16 to 19.

6. LIBOR

6.1 Introduction

What is LIBOR?

LIBOR is a set of rates that provide an indication of the average rate at which a contributor bank can obtain unsecured funding in the London interbank market for a given period (or 'tenor') in a given currency.

LIBOR is produced for five currencies and in seven tenors ranging from overnight to 12 months.

Individual LIBOR rates are the end-product of a calculation based upon submissions from the contributor banks (or 'panel banks'), which range from between 11 and 18 banks for each currency calculated. Submissions are made in all tenors for each currency.

Currently, LIBOR is produced in the following five currencies:

- CHF (Swiss Franc)
- EUR (Euro)
- GBP (Pound Sterling)
- JPY (Japanese Yen)
- USD (US Dollar)

How is LIBOR determined?

For each currency on which they make submissions (and in every tenor of that currency), panel banks are asked to submit an answer to the question "At what rate could you borrow funds, were you to do so by asking for and then accepting interbank offers in a reasonable market size just prior to 11am London time?" For each tenor, the highest and lowest quartiles of the panel banks' submissions are removed and the average of the remainder forms the relevant rate.

IBA distributes these figures at approximately 11.45a.m. (London time).

Recent LIBOR history

Following the Wheatley Review,[11] the original administrator, the British Bankers Association LIBOR Ltd. (BBALL) agreed to transfer the administration of LIBOR to ICE Benchmark Administration Ltd (IBA), a wholly owned subsidiary of Intercontinental Exchange, Inc. (**ICE Group**). This became effective on 1 February 2014.

IBA is a UK company and is based in London. IBA was established for the sole purpose of administering benchmarks.

Governance and oversight of LIBOR

The principal committee established by IBA for the governance and oversight of LIBOR is the Oversight Committee. The Oversight Committee is comprised of benchmark submitters, benchmark users, independent non-executive directors and other relevant experts. The Committee's role is to ensure the integrity of LIBOR. The Oversight Committee also oversees the industry-led Code of Conduct.

Calculation agent for LIBOR

IBA had previously outsourced the collection of submissions, 'fat finger' checks and the calculation of LIBOR to Thomson Reuters Benchmarks Services Limited as calculation agent. This activity was governed by a contract and associated service level agreement between IBA and the Calculation Agent.

The calculation of LIBOR was brought in-house by IBA on 8 December 2014.

Regulation of LIBOR

The Wheatley Review concluded that there should be statutory regulation around LIBOR. Therefore, both administering LIBOR and making submissions to LIBOR became regulated activities from 1 April 2013. LIBOR is regulated by the UK Financial Conduct Authority (**FCA**).

Contributor banks are also regulated. Submissions from contributor banks must comply with FCA regulation, which encompasses transparency, scrutiny and accountability of the submitters. The regulation of LIBOR also allows IBA to collect not only the submitted rates but also all relevant supporting information on a daily basis.

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

6.2 Progress made since First Review

a. General Overview of Implementation

The First Review found that there were 13 Principles which were not rated as fully implemented one of which was not applicable to LIBOR. In respect of 8 of these Principles (Principles 4, 6, 11, 12, 13, 14, 16, and 18) the Review Team has noted the progress to date — including on addressing any recommendations arising from the First Review — and has *not made any further recommendations*.

In evaluating the progress of IBA since the First Review, the Review Team distinguished between the recommendations which are related to the transition plans from LIBOR to LIBOR+ as recommended by the FSB OSSG and the remaining recommendations. The first set of recommendations relates to the Principles of quality of the benchmark design and is part of an on-going and dynamic transition process.

In regards to the recommendations not related to the plans for transition to LIBOR+, the Review Team is of the view that the direction of travel since the First Review has been fairly positive. In particular, the Review Team notes that IBA has:

- Brought the LIBOR collection and calculation agent activities in-house, which it did on 8 December 2014;
- Documented and published a Conflicts of Interest Policy;
- Substantially improved and standardised the information it receives from contributing banks by introducing a Daily Template for submissions which includes transactional and non-transactional data received on a daily basis from all contributors;
- Conducted two significant data collection exercises to better measure the evolution of the underlying and related markets;
- Documented and published various policies and procedures relevant to the LIBOR submission and calculation process and to the Oversight Committee; and
- Continued the improvement of its surveillance tools.

While the Review Team felt that the work conducted by IBA was fairly positive, there were a number of areas in which the Review Team was of the view that further work should be done. In particular, the Review Team made the following recommendations for these Principles:

- IBA should publish the selection criteria for OC members;

- IBA should continue to evaluate alternative fall-back options and develop appropriate written policies and procedures; and

- IBA should establish a cycle for internal and external audits or otherwise ensure that these are conducted periodically.

As a response to FSB OSSG recommendations, a number of concrete steps have been taken by IBA concerning the quality of the benchmark design, including several data collection initiatives. The Review Team notes that much of the work which IBA reported relates to plans which were, at the time of the Review, still being consulted on by stakeholders (though IBA's Second Position Paper) and consequently have not been executed at the time of the Review. An overview of the proposals is provided in the next section.

The Review Team views this work as a positive step by IBA and recognises that it is being conducted in line with the timelines set out by the FSB OSSG. However, the Review Team notes that there is a critical difference between plans and their implementation. While the direction of travel has, so far, been positive, the final status of the implementation of several of the Principles related to the quality of the benchmark design will depend on the outcomes of this on-going work.

The Review Team considers it important that any changes planned by IBA must result in a benchmark that meets Principles 6 and 7. This is a continuous process of adaptation to the interest LIBOR represents and IBA should therefore continue to have regard to the objectives of these Principles.

b. LIBOR+

IBA is in the process of implementing the recommendation of the FSB OSSG to further anchor LIBOR in transactions data. Although this is a LIBOR evolutionary process, and hence will not result in a new and distinct benchmark, this project is referred to as 'LIBOR+'. As part of this process, IBA has published two consultative Position Papers which consider a variety of proposals for evolving LIBOR.

The Position Papers are available on IBA's website[12] and were published on 20 October 2014 and 31 July 2015. It is noted that the Second Position Paper was still at the stage of collecting responses when this Review was conducted.

The Position Papers highlight a number of limitations and issues with LIBOR, as it currently stands, which the Position Papers look to address. These include:

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12 The First Position Paper is available at: https://www.theice.com/publicdocs/ICE_LIBOR_Position_Paper.pdf ; The Second Position Paper is available at: https://www.theice.com/publicdocs/ICE_LIBOR_Second_Position_Paper.pdf)

- Significant reductions in the number of transactions in the interbank unsecured lending market since the global financial crisis of 2007 – 2009;

- The level of activity in the underlying market remaining too low in some tenors to support an entirely transaction-based rate; and

- Each submitting bank having developed its own methodology for determining its LIBOR submission, resulting in a variety of approaches.

IBA, though the consultation process, has outlined a number of proposals for evolving LIBOR into a more transaction-based benchmark and trying to create a more unified approach for submitters to follow when determining the rates they contribute.

IBA proposes a 'waterfall of methodologies' made of three levels: (1) transactions; (2) data derived from transactions (including interpolation and extrapolation); and (3) expert judgement. It is proposed that panel banks look to form their determinations using methods from Level 1 first and only have recourse to Level 2 and 3 where there is a lack of representative data or in times of market stress.

Key areas considered in the Second Position Papers are:

- **Eligible transaction types** – IBA has proposed a hierarchy of transaction types in which unsecured deposits and primary issuances of commercial paper and certificates of deposit are to be used by submitters in the first instance. Where these are not available, IBA proposes that certain Floating Rate notes or Floating Rate Certificates of Deposit may be considered.

- **Eligible Counterparty types** – IBA has set out which counterparties to eligible transaction types should be considered. The consultations suggest including corporates as eligible counterparties. It is proposed that no adjustments be made to the transacted rates to take account of the nature of the counterparty.

- **Locations of transactions** – IBA has proposed to create an 'Approved List of Funding Locations' and then to work with each panel bank to select which locations from the list they should use.

- **Timing of transactions –**. IBA is seeking views on a number of options for basing LIBOR at a point in time or over a period of time (e.g., 06:30 – 13:30 or the previous 24 hours).

- **Data derived from transactions –** IBA has set out suggestions for how historical transactions may be taken into account as part of a determination and methods around interpolation and extrapolation.

- **Expert judgement –** IBA proposes a waterfall approach where transaction data is situated in the first level. On a second level, panel banks should each devise an algorithmic formula which provides a determination on days where there is insufficient transaction data. Further to this, it is proposed that each bank should have a framework in place for how expert judgement may be used to determine their submission. IBA has set out proposals on when and what information should be considered in using expert judgement.

c. Summary of implementation by category of Principle

This section provides a summary of IBA's progress in implementing the Principles since the First Review, based on the categories of Principle.

Principles relating to governance (Principles 1-5)
Summary of implementation status in the First Review IBA's governance framework for LIBOR were already closely aligned with the Principles at the time of the First Review with some work that remained to be done on ensuring all conflicts of interest are managed and/or mitigated. • **Principle 1 (Overall Responsibility of the Administrator)** was rated fully implemented. • **Principle 2 (Oversight of Third Parties)** was rated fully implemented. • **Principle 3 (Conflicts of Interest for Administrators)** was rated partially implemented for the following reasons: o IBA had not documented conflicts of interest policies and procedures that are specific to IBA and its benchmark administration roles o IBA had not disclosed certain potential conflicts of interest to users which affected the ability of users to understand all the material conflicts of interest. o The ICE Group Code of Conduct that IBA used did not define what a conflict of interest is for IBA. o The ICE Group's conflicts of interest policies did not ensure that there were adequate remuneration policies that ensure all staff who participate in the determination of LIBOR were not directly or indirectly rewarded by the levels of LIBOR. To address these issues, the Review Team **recommended** that IBA should:

- Document a conflicts of interest policy and procedures that are specific to IBA and its benchmark administration roles.

    - This documented conflicts of interest policy should define what a conflict of interest is appropriately, given the imperative to ensure the credibility of LIBOR and the potential interests of the ICE Group; and

    - The policy should also specifically ensure that there are adequate remuneration policies that ensure that all staff who participate in the determination of LIBOR are not directly or indirectly rewarded by the levels of LIBOR.

- Disclose potential conflicts of interest to LIBOR users.

- **Principle 4 (Control Framework for Administrators)** was rated broadly implemented because IBA did not have proper documentation of its conflict of interest policy and did not have sufficient arrangements to ensure the quality and integrity of LIBOR is maintained in line with Principles 6 to 14.

  To address this, the Review Team **recommended** that IBA should follow the recommendations given for Principles 3, 6, 7, 9, 11, 12, 13 and 14.

- **Principle 5 (Internal Oversight)** was rated broadly implemented as the terms of reference (**TOR**) of IBA's Oversight Committee and documentation on the Committee members' declarations of conflicts of interest and the processes for the election, nomination or removal and replacement of the Committee's members were not made publicly available.

  To address this, the review Team **recommended** that IBA should Publish the TOR, the declarations of conflicts of interest and processes for election, nomination or removal and replacement (including selection criteria) of Oversight Committee members.

Description of implementation progress since the First Review

Work conducted by IBA to implement the recommendations from the First Review:-

Principle 3:

- IBA has documented and implemented a conflicts of interest policy (**Policy**) specific to IBA's benchmark administration roles in response to recommendations made for Principle 3. The Policy, which is available on IBA's website:[13]

13 Available at: https://www.theice.com/publicdocs/IBA_conflicts_of_interest_policy.pdf

- o Identifies and discloses several types of conflict including those related to the various members of the Oversight Committee (**OC**) and the ownership structure of IBA.

- o Considers the effect of remuneration and notes that that “IBA staff’s remuneration is not linked to ICE LIBOR.”

- o Requires all identified conflicts to be reported to the Benchmark Administration Manager who is to maintain a Conflicts Register and Logs.

- IBA stated that, in its view, “holding a product linked to an IBA benchmark (such as a mortgage linked to LIBOR, for example) is not a conflict of interest where the individual has no influence or discretion with regard to the product”.

Principle 5:

- IBA has published a document on the process for nomination, removal and replacement of OC members. The document does not appear to set out the selection criteria for OC members.

Further planned work carried out by IBA to implement these Principles:-

- The calculation activities were brought in-house on 8 December 2014, as planned. Thomson Reuters has ceased to have any involvement in setting LIBOR.

- A new independent non-executive director, Mary John Miller, has been appointed to the Board and chairs the OC.

- The Committee has also been enhanced through the introduction of more central bank observers and representation from users.[14]

- In line with Principle 4, IBA has developed its surveillance tools through a variety of means, including ‘fat finger’ tests; analysis of data across all currencies, tenors and Submitters; and collecting granular information on how each Submission is determined.

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[14] The Terms of Reference and composition of the Committee can be found at https://www.theice.com/iba/libor

Review Team comments and recommendations

The Review Team notes that governance arrangements have been implemented in practice, including for Principle 3 concerning conflicts, following policies and practices that IBA has put in place since the First Review.

The Review Team notes that IBA does not request that staff disclose whether they hold LIBOR products where they cannot influence the product (e.g., a mortgage linked to LIBOR). The Review Team considers that there could still remain a conflict with the process of providing the benchmark. IBA may wish to consider requesting full disclosure of such holdings by staff in the future.

The Review Team notes that IBA has published many of the policies regarding the OC in line with Principle 5. The published document on the process for nomination, removal and replacement of OC members, however, does not set out the selection criteria for OC members.

Further, while IBA has published the types of conflicts which OC members may face, IBA may wish to consider publishing the actual declarations of OC members on its website.

Recommendations:

- IBA should publish the selection criteria for OC members.

Principles relating to quality of the benchmark (Principles 6-10)

Summary of implementation status in the First Review

IBA's implementation of these Principles was not uniformly advanced at the time of the First Review.

- **Principle 6 (Benchmark Design)** was rated partly implemented as the design process of the Benchmark did not clearly involve reference to the underlying nature and dynamics of the market being represented.

  To address this, the Review Team **recommended** that IBA should:

  - Continue collecting, classifying and refining data to understand the activity and liquidity for the interbank market and for each segment of the unsecured wholesale funding markets.

  - Work with the FSB OSSG recommendations (when available) to ensure the design of LIBOR is fit for purpose.

- **Principle 7 (Data Sufficiency)** was not rated as there was insufficient robust data available for the Review Team to make a determination.

  To address this, the Review Team **recommended** that IBA should continue addressing Principle 7 as a matter of urgency by:

  - Initiating work on collecting and sharing with IOSCO and other relevant authorities the data and analysis that was requested by the Methodology in connection with Principle 7.

  - Continuing to work on exploring options to anchor LIBOR in actual transactions drawn from active markets, including necessary further design, methodological and/or definition changes. This would include:

    - Defining what it considers an 'active' market in the interest LIBOR seeks to represent, including describing the minimal acceptable level of activity necessary to demonstrate an active market;

    - Completing an analysis of methodologies to provide a basis for deciding whether the transactions are anchored in active markets; and

    - Making the necessary consequential changes from any broadening of permissible transactions beyond interbank unsecured transactions.

  - Following the recommendations in connection with Principle 9.

- **Principle 8 (Hierarchy of Data Inputs)** was rated fully implemented.

- **Principle 9 (Transparency of Benchmark Determinations)** was rated not implemented due to the lack of any statement being published explaining either specific information on market size and liquidity or an explanation of the extent of use of expert judgement in determinations.

  To address this, the Review Team **recommended** that IBA should:

  - Work decisively towards publishing with each benchmark determination the concise statements called for by Principle 9.

  - Continue working with the Contributor Banks to streamline the facility that would permit Contributor Banks to disclose to IBA the full data upon which their rate submissions are based, subject to appropriate confidentiality protection.

- **Principle 10 (Periodic Review)** was rated fully implemented.

Description of implementation progress since the First Review

Work conducted by IBA to implement the recommendations from the First Review:-

Principle 6:

- Conducted a data collection exercise, with each of the panel banks providing transaction data (for the currencies they submit).

- Used this data to model a number of different methodologies on which it is currently consulting as part of its LIBOR+ implementation. This has included considerations of how to widen the set of permissible transactions for Submitters to take into account in making submissions.

Principle 7:

- Created a definition of 'active market' in line with Principle 7.

- Published two Position Papers to consult on the evolution of LIBOR. The proposals in these papers have been influenced by the strategic direction set by the FSB OSSG to make LIBOR based on transactions to the greatest extent possible.

Principle 9:

- Put in place arrangements to collect data on a daily basis form LIBOR Submitters to substantiate their Submissions and to bring it closer to compliance with Principle 9. IBA is seeking to publish a regular retrospective statement on the underlying information actually used to determine the Benchmark.

Further planned work carried out by IBA to implement these Principles:-

- IBA is considering ways to enlarge the panel size and is in discussions with the FCA on this point.

- As part of its First Position Paper, IBA issued a questionnaire to understand how far each LIBOR currency and tenor is used in the market place. The responses indicated that all currencies and tenors are currently utilised extensively and for a variety of purposes.

Review Team comments and recommendations

The Review Team notes that IBA has conducted significant work in regards to Principle 6 and 7, including data collection exercises and the publication of two Position Papers as part of its consultation.

It is positive that IBA has undertaken this work and, in line with the FSB OSSG recommendations, it indicates that IBA is working to further anchor LIBOR in transaction data. The Review Team wishes to highlight that the level of implementation of these Principles, including Principle 8 (Hierarchy of Data Inputs) which was rated as fully implemented in the First Review, will depend upon the final design of the benchmark and so IBA should continue to have regard to the objectives of these Principles in its on-going work.

The Review Team also notes that while IBA has considered ways to widen its range of eligible transactions for consideration by submitters, it is not clear how far these transactions will take place within an 'active market' as defined by the administrator.

Finally, whilst IBA is collecting data regularly from its submitters and states that it intends to publish a regular retrospective statement on the actual data underlying its determinations, no statement has yet been published.

Recommendations:

- IBA should analyse how far the range of possible eligible transactions come from active market, collecting further data from the market where appropriate.

- IBA should continue its efforts to use the transaction data received from submitting banks to support changes in its methodology and anchor LIBOR in market transactions as a means of complying with Principles 6, 7 and 9.

Principles relating to quality of the methodology (Principles 11-15)

Summary of implementation status in the First Review

Implementation of the Principles concerning the quality of the Methodology was fairly advanced at the time of the First Review.

- **Principle 11 (Content of the Methodology)** was rated broadly implemented primarily because the Methodology did not include ways to identify and deal with limitations of the Benchmark and IBA had not established criteria for excluding Contributor Banks.

  To address this, the Review Team **recommended** that IBA should:

  - Amend the Code of Conduct to ensure it refers to the fall-back arrangements and contains provisions addressing the minimum data needed to determine a benchmark, or any models or extrapolation methods.

  - If necessary, due to any change in the process by which LIBOR is calculated, adopt procedures to promote the consistent use of expert judgment within the IBA (as opposed to within the Contributor Banks).

- Document ways to identify and deal with the limitations of LIBOR and establish criteria for excluding Contributor Banks.

- **Principle 12 (Changes to the Methodology)** was rated broadly implemented as whilst there were procedures around consultation, these had not been published and individual consultation responses were not published.

  To address this, the Review Team **recommended** that IBA should:

  - Publish its consultation procedure and individual consultation response; and

  - Clarify in its written policies how changes in the methodology will be scrutinised and by whom.

- **Principle 13 (Transition)** was rated partly implemented as only a basic contingency plan existed at the time of the First Review which required further work including the development of policies around a fall-back rate.

  To address this, the Review Team **recommended** that IBA should:

  - Conduct further work on, and adopt policies concerning, developing a suitable fall-back rate LIBOR that would apply in situations where certain currencies or tenors of LIBOR were not available or ceased being determined.

    When working towards policies and procedures required by the Principle, IBA will be expected to take into account due guidance by the FSB-OSSG and the FCA.

- **Principle 14 (Submitter Code of Conduct)** was rated broadly implemented as IBA did not monitor Submitters in regard to their compliance with the Code of Conduct and lacked policies to discourage the withdrawal of Contributor Banks.

  To address this, the Review Team **recommended** that IBA should:

  - Commence a program under which it monitors the compliance by Contributor Banks with the Code of Conduct.

  - Adopt policies to discourage and mitigate the interim withdrawal of Contributor Banks.

    The Review Team recognised that in complying with these recommendations, IBA may work with the FCA to align its policies with the applicable regulation.

- **Principle 15 (Internal Controls over Data Collection)** was found to be not applicable to LIBOR.

Description of implementation progress since the First Review

Work conducted by IBA to implement the recommendations from the First Review:-

Principle 11:

- Published a 'Reduced Submissions Policy' which covers procedures when not all of the Panel Banks contribute a submission.[15]

- Published a 'Policy on Composition of ICE LIBOR Currency Panels' which sets out criteria for inclusion on a panel.[16] Any Panel Bank not meeting these criteria would be excluded from the panel.

  This policy also outlines actions taken to minimise risk for Submitters and to simplify the submission process so as to discourage the withdrawal of the Submitters.

Principle 12:

- Made available on its website its consultation procedure.[17] Regarding individual responses, IBA has set out its policy to publish summaries of responses.

Principle 13:

- Created a Transition Policy (which is available on request to IBA) and established a working group to define a fall-back rate for times when there are too few submissions. No single fall-back rate has been established and, at present, the proposal is to adjust the previous day's rate by reference to relevant risk-free curves.

Principle 14:

- IBA has not taken any further steps to monitor the adherence to the Code of Conduct by the Contributor Banks, but continues to rely on the quality of the code as industry guidance recognised by the FCA (Submitters are bound by MAR 8.2 of the FCA Handbook which does not include a requirement to comply with the Code).

Further planned work carried out by IBA to implement these Principles:-

- IBA is working with the Oversight Committee, the FCA, Contributor Banks and other stakeholders to refine the Methodology.

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15 Available at: https://www.theice.com/publicdocs/ICE_LIBOR_Reduced_Submissions_Policy.pdf

16 Available at: https://www.theice.com/publicdocs/futures/Policy_Composition_ICE_LIBOR_Panels.pdf

17 Available at: https://www.theice.com/publicdocs/IBA_consultation_process.pdf

- IBA has been in regular contact with the FCA to align its policies around Submitters with the FCA Rulebook.

Review Team comments and recommendations

IBA has taken significant steps to address the deficiencies identified in the First Review in regard to these Principles and has worked to implement each of the recommendations.

This has been generally successful however the Review Team notes that in regard to Principle 13, the current proposal of using the previous day's LIBOR rate is an emergency measure rather than a fall back-option.

The Review Team notes that IBA still lacks the monitoring arrangements around the Code of Conduct required by Principle 14; however the effect of this may be mitigated by the FCA's supervision of the Panel Banks as LIBOR Submitters, which achieves a similar outcome to that intended by the Principle. Nevertheless, IBA may wish to consider ways to develop its own procedures to monitor the Contributor Banks' adherence to the Code of Conduct.

Recommendations:

- IBA should continue to evaluate alternative fall-back options and develop appropriate written policies and procedures.

Principles relating to accountability (Principles 16-19)

Summary of implementation status in the First Review

Implementation of the Principles concerning accountability was well advanced at the time of the First Review. Principle 19 was rated fully implemented and Principles 16, 17 and 18 were rated broadly implemented.

- **Principle 16 (Complaints procedures)** was rated broadly implemented as there were no explicit procedures for addressing complaints to the IBA Board of Directors or for making available post-publication changes to the Benchmark following a complaint.

  To address this, the Review Team **recommended** that IBA should adopt procedures that:

  - Allow complainants to address the Board of Directors; and

  - Provide for publishing or making available post-publication changes in the LIBOR-rate following a complaint.

- **Principle 17 (Audits)** was rated broadly implemented as there was no evidence that an auditor had been appointed and the actual frequency of audits was unclear. It was noted, however, that a framework was in development during the time of the First Review.

To address this, the Review Team **recommended** that IBA should:

- Ensure that the internal and external audits plans are developed and approved.
- Ensure that its audit and risk function is established.

- **Principle 18 (Audit Trail)** was rated broadly implemented as there was no record keeping of information on the exercise of expert judgement or the identity of each internal person involved in the LIBOR determination.

  To address this, the Review Team **recommended** that by July 2014, IBA should amend its record keeping policy to require the retention of:

  - Information on the exercise of expert judgment; and
  - The identity of each internal person involved in the determination of LIBOR.

- **Principle 19 (Cooperation with Regulatory Authorities)** was rated fully implemented.

Description of implementation progress since the First Review

Work conducted by IBA to implement the recommendations from the First Review:-

Principle 16:

- Revised its Complaints Policy to explicitly allow complaints to be addressed to the Board of Directors.
- Amended the LIBOR Error Policy,[18] which now states that changes following a complaint will be announced quarterly.

Principle 17:

- Conducted internal audits in 2014 and 2015. IBA uses the ICE group internal audit services and has not established its own audit and risk function.
- IBA informed the Review Team that it has appointed an external auditor to review its compliance with the LIBOR methodology and a wider review in 2016 of IBA's compliance more generally with the IOSCO Principles.

[18] Available at: https://www.theice.com/publicdocs/futures/ICE_LIBOR_Error_Policy.pdf

Principle 18: • Stated that it does not use expert judgement as the administrator in the determination of LIBOR. • Implemented a new interface for interaction with Submitters, the identity of the involved persons being stored in the IBA database.
Review Team comments and recommendations The Review Team is satisfied that, based on the actions listed above in respect of complaints procedures and audit trail, that IBA has taken the necessary steps to implement the appropriate arrangements in regard to Principles 16 and 18 in practice. As regards Principle 17 on Audits, the Review Team noted that the Board of IBA appointed an external auditor during the course of the present Review, however it was not clear that there was a cycle for internal and external audits or any other mechanism in place to ensure that these are conducted periodically. The Review Team encourages IBA to consider whether the use of the group´s internal audit services is appropriate, although it notes that Principle 17 only requires that an "independent internal or external auditor with appropriate experience and capability" is appointed and the establishment of an internal audit function is not required. Recommendations: • IBA should establish a cycle for internal and external audits or otherwise ensure that these are conducted periodically.

7. TIBOR

7.1 Introduction

What is TIBOR?

TIBOR is a series of daily interest rate benchmarks. It is calculated as the prevailing market rate based on rates quoted by Reference Banks, intended to represent the market for transactions between prime banks on the Japan unsecured call market and on the Japan offshore market, as of 11:00a.m each business day. TIBOR is currently quoted for 6 tenors: 1 week, 1 month, 2 months, 3 months, 6 month and 12 months.

Before April 1, 2015, TIBOR was published for 13 different tenors: 1 week and each of the periods from one to 12 months. This reduction in tenors followed a review of TIBOR by JBA TIBOR Administration (**JBATA**), TIBOR's Administrator.

TIBOR includes the following rates:

- Japanese Yen TIBOR, which reflects prevailing conditions in the Japan unsecured call market; and

- Euroyen TIBOR, which reflects prevailing conditions in the Japan offshore market.

From 1 April 2014, the term ‘prime bank’ was clarified in determining TIBOR and is defined as “a bank which is financially resilient (e.g. banks having adequate capital and sufficient liquid assets) and which is a major player in the Japan unsecured call market (or in the Japan offshore market, in the case of Euroyen TIBOR).”

How is TIBOR determined?

By 11:20 a.m. on each business day, Reference Banks quote what they deem to be prevailing market rates, representing the market for transactions between prime banks on the Japan unsecured call market (Japanese Yen TIBOR) and on the Japan offshore market (Euroyen TIBOR) as of 11:00 a.m. Reference Banks quote these rates unaffected by their own positions and submit such rates for each of the 6 tenors to JBATA.

The JBA TIBOR Code of Conduct **(Code of Conduct)** includes certain guidance for Reference Banks on what information they should give preference to in determining these rates. JBATA consulted from 28 August 2015 to 20 November 2015 on establishing a much more specific 'waterfall' of inputs that submitters should use when deriving the relevant rates as part of the 'TIBOR+' process, which is explained in detail in Section 1.2(c).

The two highest and two lowest reference rates submitted by these Reference Banks for each tenor are excluded, and an average of the remaining rates is derived to calculate TIBOR rates, which are then published through price vendors.

Administration and governance of TIBOR

JBATA assumed responsibility for the calculation and publication of TIBOR on 1 April 2014.

Previously, the Japanese Bankers Association (**JBA**) had been responsible for its calculation and publication. The JBA is an industry organisation whose members consist of banks, bank holding companies and bankers' associations in Japan.

JBATA is wholly owned by the JBA. JBATA is run by a board of directors. The board is assisted in its governance of JBATA by three committees:

- JBA TIBOR Administration Committee;
- JBA TIBOR Oversight Committee; and
- JBA TIBOR Planning Committee.

There are currently 17 Reference Banks (15 of which quote rates for Japanese Yen TIBOR and 14 of which quote rates for Euroyen TIBOR). The Reference Banks are required to comply with the procedures and governance rules specified by JBATA.

JBATA's administration of TIBOR is governed primarily by the JBA TIBOR Operational Rules (**Operational Rules**) and the Code of Conduct
The Operational Rules set out how TIBOR is determined and disseminated.

The Code of Conduct sets out how Reference Banks are meant to behave in relation to their submission of reference rates to JBATA.

The determination and dissemination process for TIBOR has been outsourced to Quick Corp., as Calculation Agent. An outsourcing agreement between JBATA and Quick Corp., coupled with provisions of the Operational Rules, governs how Quick Corp. performs this process.

From 1 April 2016, Softbank Corp. will take over from Quick Corp. as Calculation Agent, with substantially similar oversight arrangements in place.

The Osaka Bankers Association (**OBA**) also performs functions related to the determination of TIBOR. It serves as a back-up Administrator of TIBOR and reviews the correctness of the

Calculation Agent's calculations of TIBOR on each business day of the second and third weeks of each month.

Regulation of TIBOR

The amended Financial Instruments and Exchange Act (**Act**) was promulgated in Japan on May 30, 2014 and came into effect on May 29, 2015. On the same day, JBATA was determined by Japan's Financial Service Agency (**JFSA**) to be a "designated financial benchmark administrator", subject to the Act.

As such, JBATA is now regulated directly by the JFSA.

JBATA obtained approval for the Code of Conduct and Operational Rules from JFSA on 26 November 2015, in accordance with the Act.

7.2 Progress made since First Review

a. General Overview of Implementation

There were 15 Principles where implementation was reported not as either 'fully implemented' or 'not applicable' in the First Review. In respect of eight of these Principles (Principles 2, 3, 5, 10, 12, 14, 16 and 17) the Review Team has noted the progress to date — including on addressing any recommendations arising from the First Review — and has *not made any further recommendations*.

In a number of these cases, set out below, this was because JBATA has now been able to demonstrate the implementation of relevant frameworks and policies in practice, which it was not able to do at the time of the First Review, having only recently been appointed TIBOR administrator at this time.

In addition, JBATA has introduced a conflicts management policy and provided additional guidance about the information that Reference Banks should use in making submissions.

The progress made in respect of Benchmark Quality has been in the context of the TIBOR+ project which is seeking to better anchor the calculation of TIBOR in transaction data. This project is being conducted in line with timelines set by the FSB OSSG and is critically important.

While the direction of travel through the TIBOR + project has, so far, been positive, the final status of the implementation of these Principles will depend on the completion and the outcomes of this work. This is reflected in the summary of implementation at part (c) below.

The Review Team considers it important that the changes planned by JBATA in respect of TIBOR and TIBOR+ result in a benchmark that meets Principles 6 and 7. JBATA should continue to have regard to the objectives of the Principles as it considers how TIBOR should be determined on an ongoing basis. Doing this will be a continuous process of adaptation to the underlying interest that TIBOR represents. The work should therefore be treated as a vehicle to facilitate ongoing compliance with Principles 6 and 7.

In addition, TIBOR+ is also the mechanism through which JBATA has proposed to implement Principle 9 (see section (c) below).

b. TIBOR+

As explained above, JBATA is in the process of implementing reforms to the calculation of TIBOR to better anchor TIBOR in transaction data. This project is referred to as TIBOR+. This part of the Report discusses the proposals included in the second consultative document on TIBOR+, *Promoting the JBA Tokyo Inter Bank Offered Rate ('JBA TIBOR') Reforms (2nd Consultative Document)* (**the Second CD**).

The Second CD was issued on 28 August 2015.

Proposals in the Second CD

While presenting two options for reform, the Second CD endorses an approach of maintaining the currently applied concept of treating the Japanese “interbank markets” as the sole underlying markets in respect of TIBOR. That is, the proposal is *not* to expand the underlying market, the data from which will be used to calculate TIBOR at first instance.
Instead, other 'wholesale funding markets' will be deemed 'relevant markets', which will be secondary sources of data for determining reference rates, based on a 'waterfall' approach.
Under this waterfall, the TIBOR reference rate will be derived from the follow data, in order of preference, as follows:

1. Data in the 'underlying' (interbank) markets, which is to be used as follows in order of priority:

    1.1 Actual transaction data;

    1.2 Committed offered rates;

    1.3 Indicative quotes (using a particular methodology to convert changes in these quoted rates into a TIBOR submission rate);

    1.4 Linear Interpolation and/or Retroactive Use, etc. of actual transactions data.

2. Data from markets that are 'quasi-equivalent' to the underlying market, taken to be the Japan offshore market — the underlying interest of Euroyen TIBOR — in the case of Japanese Yen TIBOR and vice versa in the case of Euroyen TIBOR, as well as the

interbank negotiable certificates of deposit market. Different types of data from these markets should be used with the same order of priority as for (1).

3. Data from 'relevant markets', including for non-bank negotiable certificate of deposit, large term deposits, short-term government bonds, repos and others. Submitters are to use a framework to convert changes in these rates to a TIBOR submission rate, in a similar manner to that in 1.3. And

4. Expert judgement, which is not to be used in normal circumstances.

The rationale for taking this approach, which continues to preference data derived from the interbank market, appears to be ensuring that TIBOR continues to reflect and measure the same underlying interest, that is, Yen and Euroyen interbank transactions. It is generally argued in the Second CD that expanding the concept of underlying markets would conceptually alter what TIBOR is seeking to measure.

Associated with this rationale is also ensuring continuity of the TIBOR Benchmark. TIBOR+, as conceived in the Second CD, is an evolution of TIBOR, not a new benchmark to replace it. This means the change to TIBOR+ should not require widespread changes to contracts and the like by end users of TIBOR.

c. Summary of implementation by category of Principle

This section provides a summary of JBATA's progress in implementing the Principles since the First Review, based on the categories of Principle.

A number of key documents relating to JBATA's administration of TIBOR, some of which are referred to in this section, are available on the JBATA website, in English, at http://www.jbatibor.or.jp/english/public/.

These include the TIBOR Operational Rules, the Code of Conduct, Guidelines on Outsourcing TIBOR Calculation/Publication Operations, the Contingency Plan for JBA TIBOR Publication, the Conflict of Interest Management Policy and the Complaints Consultation Management Rule of JBATA.

Summary of implementation by category of Principle

Principles relating to governance (Principles 1-5)
Summary of implementation status in the First Review JBATA was fairly well advanced in implementing a governance framework for TIBOR at the time of the First Review.

- **Principle 1 (Overall Responsibility of the Administrator)** was rated fully implemented.

- **Principle 2 (Oversight of Third Parties)** was rated broadly implemented because of JBATA's lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle.

- **Principle 3 (Conflicts of Interest for Administrators)** was rated as partly implemented because:

  - The Review Team was unable to determine that JBATA had no material conflicts warranting public disclosure; and

  - There were insufficient procedures relating to the handling and exchange of confidential information by staff who may be subject to conflicts.

To address these issues, the Review Team **recommended** that JBATA:

  - Publicly disclose all material conflicts of interest;

  - Adopt procedures to control the exchange of information between staff engaged in activities involving a risk of conflicts of interest.

- **Principle 4 (Control Framework for Administrators)** was rated as broadly implemented because:

  - There were deficiencies with the arrangements under the Operational Rules concerning ensuring the quality and integrity of TIBOR in line with Principles 6 to 15; and

  - The arrangements under the Operational Rules to ensure that accountability and complaints mechanisms are effective, were not in line with principles 16 to 19; and

  - JBATA could not demonstrate a track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address these issues, the Review Team **recommended** that JBATA implement the recommendations made in respect of Principles 6 to 18.

- **Principle 5 (Internal Oversight)** was rated as broadly implemented because of JBATA's lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle.

Description of implementation progress since the First Review

Since the First Review, JBATA has:

Principle 2:

- Reviewed internal rules for 17 Reference Banks, internal audit reports and submissions in respect of the Code of Conduct, and undertaken onsite monitoring of the banks' compliance with the Code;

Principle 3:

- Introduced a Conflicts Management Policy, in December 2014, which sets out potential conflicts and imposes disclosure and confidential information management requirements, overseen by the Oversight Committee;

Principle 5:

- Provided evidence to the Review Team that the Oversight Committee is operating as intended, by considering relevant governance and oversight issues.

Review Team comments and recommendations

The Review Team is satisfied that governance arrangements have been implemented in practice, including for Principle 3 concerning conflicts, based on JBATA's oversight and review activities.

The Review Team is satisfied that the Conflicts Management Policy addresses the additional recommendations made in the First Review relating to Principle 3.

Overall, the Review Team notes the steps taken by JBATA to implement these Principles and does not have any further recommendations.

Principles relating to quality of the benchmark (Principles 6-10)

Summary of implementation status in the First Review

JBATA's implementation of these Principles was not very advanced at the time of the First Review.

- **Principle 6 (Benchmark Design)** was rated as not implemented because, to the extent that TIBOR is taken to represent the level of the market rates in the Japan unsecured call market, there was no evidence that the design of TIBOR sought to represent actual rates.

  To address these issues, the Review Team **recommended** that JBATA adopt and follow a design process that reflects the underlying interest TIBOR seeks to represent and provide any evidence that it has taken steps to assess the underlying market and incorporate this assessment into the design of TIBOR.

- **Principle 7 (Data Sufficiency)** was not rated because JBATA did not provide sufficient information or evidence that would allow the Review Team to conclude that TIBOR is underpinned by data anchored in an active market for the interest it seeks to represent.

  To address these issues, the Review Team **recommended** that JBATA:

  - Collect and share the market data that would enable this Principle to be assessed;
  - Continue work to anchor TIBOR in an active market, considering issues such as the definition of an active market, an analysis of appropriate calculation methodologies and what additional transactions could potentially be taken into account in calculating TIBOR.

- **Principle 8 (Hierarchy of Data Inputs)** was rated broadly implemented because:

  - The Code of Conduct provided Reference Banks a high degree of discretion as to which inputs they use and in what order of preference when making submissions.
  - JBATA could not demonstrate a track record of implementation of this Principle in practice.

  To address these issues, the Review Team **recommended** that JBATA amend the Code of Conduct to provide a clearer hierarchy of data inputs, rather than simply indicating a preference between data inputs and expert judgment.

- **Principle 9 (Transparency of Benchmark Determinations)** was rated not implemented due to the lack of any statement being published explaining either specific information on market size and liquidity or an explanation of the extent of use of expert judgement in determinations.

To address this issue, the Review Team **recommended** that JBATA:

- o Work decisively towards publishing with each benchmark determination the concise statements called for by the Principle; and
- o Work in with the Reference Banks on a facility that would permit Reference Banks to disclose to JBATA the data upon which their rate submissions are based.

Description of implementation progress since the First Review

JBATA has taken a number of steps to implement the Benchmark quality Principles since the First Review. In terms of completed actions, JBATA has:

Principle 6:

- Undertaken an analysis of market data against reference bank submissions, which has fed into the proposed design of TIBOR+;

Principle 7:

- Issued a second Consultative Document in respect of TIBOR+, which considers proposals which intend to provide a much clearer and more specific 'waterfall' of data inputs for reference banks' submissions;

Principle 8:

- Provided more clarity around preferred data inputs in the Code of Conduct; and
- Undertaken review activities in respect of Reference Banks' compliance with the Code of Conduct, including in their TIBOR rate submissions.

Review Team comments and recommendations

The progress which has been made on implementing some of these Principles, notably 6, 7 and 9 — and the relevant recommendations from the First Review — has been based on work that is still on-going and not yet complete, in the form of the on-going TIBOR+ project.

The Review Team welcomes this work and encourages JBATA to complete the implementation of TIBOR+, noting that the extent of implementation of these Principles will depend on the final outcome of the TIBOR+ program.

Principles relating to quality of the methodology (Principles 11-15)

Summary of implementation status in the First Review Implementation of the methodology quality Principles was fairly well advanced at the time of the First Review. • **Principle 11 (Content of the Methodology)** was rated broadly implemented because the Operational Rules and other relevant documents: o Did not contain provisions addressing the minimum data needed to determine a benchmark, or any models or extrapolation methods o Did not contain procedures or practices designed to promote consistency in the exercise of expert judgment; and o Did not expressly address any issues arising from the location of a Reference Bank being in a jurisdiction different to that of JBATA. To address these issues, the Review Team **recommended** that JBATA: o Amend the Operational Rules to ensure they contain provisions addressing the minimum data needed to determine a benchmark; o Amend relevant rules and guides so that they contain procedures designed to promote consistency in the exercise of expert judgment between determinations of TIBOR; and o Amend the criteria in the Operational Rules for including and excluding Reference Banks so that they address any issues arising from the location of a Reference Bank being in a jurisdiction different to that of JBATA • **Principle 12 (Changes to the Methodology)** was rated broadly implemented because of the lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken. To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle. • **Principle 13 (Transition)** was rated broadly implemented because the Operational Rules did not include procedures directly covering specified matters relating to the transition to an alternative benchmark. However, this is only required under the Principles where JBATA deems it appropriate, that is, when an alternative benchmark becomes available.

To address this issue, the Review Team **recommended** that JBATA amend the Operation Rules to include procedures directly covering the specified matters relating to the transition to an alternative benchmark when one is identified.

- **Principle 14 (Submitter Code of Conduct)** was rated broadly implemented because of the lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle.

- **Principle 15 (Internal Controls over Data Collection)** was rated as not applicable.

Description of implementation progress since the First Review

Since the First Review, JBATA has:

Principle 11:

- Implemented measures in the Code of Conduct to limit the use of expert judgement and promote market-based data sources;

- Amended the Operational Rules to require JBATA to consider the implications of accepting reference banks that are not based in the same jurisdiction as JBATA; and

Principle 12:

- Applied its change management framework in practice through the TIBOR+ consultation process;

Principle 13:

- Taken some steps to consider whether TIBOR+ may be able to act as an alternative Benchmark to TIBOR;

Principle 14:

- Undertaken monitoring activities in respect of reference banks' compliance with the Code of Conduct;

Review Team comments and recommendations

The Review Team notes the steps taken by JBATA in respect of Principles 12 and 14 and considers that these demonstrate practical implementation of these Principles and respond to the recommendations from the First Review. The Review Team makes no further recommendations on these Principles.

On Principle 11, the Review Team notes the progress made thus far. However, the full implementation of TIBOR+, as currently planned, would be required to address fully the recommendation concerning consistency of expert judgement, as this would make the use of expert judgement in the calculation of TIBOR exceptional, which the Review Team considers would achieve the same intended outcome as the recommendation from the First Review.

In respect of Principle 13, JBATA should continue to evaluate alternative fall-back rate options and develop appropriate written policies and procedures when an appropriate fall-back rate is identified.

Principle 15 continues not to apply to TIBOR. In future, this Principle may become relevant if the TIBOR methodology is changed to incorporate data from external providers.

Principles relating to accountability (Principles 16-19)

Summary of implementation status in the First Review

JBATA's implementation of an accountability framework was well advanced at the time of the First Review.

- **Principle 16 (Complaints procedures)** was rated broadly implemented because of the lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle.

- **Principle 17 (Audits)** was rated broadly implemented due to lack of a demonstrated track record of implementation in practice. This was due to the fact that JBATA had become administrator of TIBOR only very shortly before the First Review was undertaken.

  To address this, the Review Team **recommended** that JBATA effectively implement its adopted policies and practices in respect of this Principle.

- **Principle 18 (Audit Trail)** was rated fully implemented.

• **Principle 19 (Cooperation with Regulatory Authorities)** was rated fully implemented.
Description of implementation progress since the First Review Since the First Review, JBATA has: **Principle 16:** • Established a liaison office, on 1 April 2014, which had received 159 inquiries by 31 July 2015. This office reports to JBATA's Oversight Committee; **Principle 17:** • Appointed an auditor to give assurance, including on JBATA's self-assessment of its compliance with the IOSCO Principles. Internal and external audits were undertaken in 2014 and Ernst and Young Shin Nihon LLC was re-appointed as the external auditor at the Board meeting held on 17 June 2015.
Review Team comments and recommendations The Review Team is satisfied that, based on the actions listed above in respect of complaints management and audit, that JBATA has demonstrated implementation of Principles 16 and 17 in practice. Overall, the Review Team notes the steps taken by JBATA in respect of the accountability Principles and has no further recommendations concerning accountability.