

# **Financial Benchmarks**

## **Consultation Report**



**OICU-IOSCO**

**THE BOARD  
OF THE  
INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS**

**CR01/13**

**JANUARY 2013**

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## Foreword

The Board of the International Organization of Securities Commissions (IOSCO) has published this Consultation Report.

This Consultation Report is prepared by the IOSCO Task Force on Financial Market Benchmarks (Task Force). IOSCO seeks the views of stakeholders on the questions posed in this report to inform its final Principles on Financial Benchmarks.

## How to Submit Comments

Comments may be submitted by one of the three following methods **on or before 11 February 2013**. To help us process and review your comments more efficiently, please use only one method.

**Important:** All comments will be made available publicly. Anonymous comments will not be accepted. Comments will be converted to PDF format and posted on the IOSCO website. Personal identifying information will not be edited from submissions.

### 1. Email

- Send comments to [Benchmarksconsultationresponses@IOSCO.org](mailto:Benchmarksconsultationresponses@IOSCO.org)
- The subject line of your message must indicate '*Financial Benchmarks.*'
- If you attach a document, indicate the software used (e.g., WordPerfect, Microsoft WORD, ASCII text, etc.) to create the attachment.
- Do not submit attachments as HTML, PDF, GIFG, TIFF, PIF, ZIP or EXE files.

### 2. Facsimile Transmission

Send by facsimile transmission using the following fax number: + 34 (91) 555 93 68.

### 3. Paper

Send 3 copies of your paper comment letter to:

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Your comment letter should indicate prominently that it is a '*Public Comment on Financial Benchmarks.*'

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# Chapter 1 Introduction

*This chapter explains why IOSCO is undertaking this work and how it interacts with other relevant national, regional or international reviews. It also sets out the objectives and scope of the work, provides examples of the use of Benchmarks and summarizes the characteristics of a credible Benchmark.*

## Background and consideration of other work streams

Benchmarks, as defined in the Glossary in Annex A, are referenced by an extensive range of financial instruments in both retail and institutional markets, as illustrated in Exhibit 1.

Recent investigations and enforcement action regarding attempted Benchmark manipulation, in particular involving LIBOR,<sup>1</sup> EURIBOR and TIBOR<sup>2</sup> have generated unprecedented regulatory and public focus on certain Benchmarks. Concerns over the fragility of certain Benchmarks – in terms of both their integrity and the continuity of provision – have the potential to undermine market confidence, which may affect the real economy and investors.

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<sup>1</sup> CFTC Press Release (December 19, 2012) describing issuance of Order settling charges against UBS AG and UBS Securities Japan Co., Ltd. available at: <http://www.cftc.gov/PressRoom/PressReleases/pr6472-12>;  
CFTC Order in the Matter of UBS AG and UBS Securities Japan Co., Ltd. available at: <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfubsorder121912.pdf>

UK FSA Press Release (December 19, 2012) relating to the UBS fine for significant failing in relation to LIBOR and EURIBOR, available at: <http://www.fsa.gov.uk/library/communication/pr/2012/116.shtml>; the FSA Final Notice (December 19 2012) <http://www.fsa.gov.uk/static/pubs/final/ubs.pdf>

Swiss FINMA press release on UBS <http://www.finma.ch/e/aktuell/Pages/mm-ubs-libor-20121219.aspx>

CFTC Press Release (June 27, 2012) describing issuance of Order settling charges against Barclays PLC available at: <http://www.cftc.gov/PressRoom/PressReleases/pr6289-12>; CFTC Order in the matter of Barclays PLC (June 27, 2012) available at: <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfbarclaysorder062712.pdf>

UK FSA press release regarding fine for misconduct related to LIBOR (June 27, 2012) available at: <http://www.fsa.gov.uk/library/communication/pr/2012/070.shtml>; the FSA Final Notice (June 27, 2012) available at: <http://www.fsa.gov.uk/static/pubs/final/barclays-jun12.pdf>

<sup>2</sup> Japan FSA Press Releases (December 16, 2011) regarding administrative action against UBS Securities Japan Ltd and UBS AG, Japan Branches available at: <http://www.fsa.go.jp/en/news/2011/20111216-3.html>; administrative action on Citigroup Global Market Japan Inc. available at: <http://www.fsa.go.jp/en/news/2011/20111216-2.html>; and administrative action against Citibank Japan Ltd. available at: <http://www.fsa.go.jp/en/news/2011/20111216-1.html>

Therefore, IOSCO decided to constitute a Board Level Task Force on Financial Market Benchmarks (“Task Force”) at its meeting of September 6, 2012, in order to develop global principles on Benchmark related issues.

The Task Force intends to draw on the related work undertaken by IOSCO Committee 7 on Commodity Futures Markets and individual IOSCO members, as appropriate, to inform the development of principles for Benchmarks. This includes the IOSCO *Principles for Oil Price Reporting Agencies* (“PRA Principles”) and significant reviews of domestic interbank Benchmarks, notably the CFTC *UBS Order*, the CFTC *Barclays Order*<sup>3</sup> and FSA Final Notices, and the *Wheatley Review of LIBOR* Final Report.<sup>4</sup> The Task Force aims to produce its own final report in April 2013.

IOSCO has an important role in creating an overarching framework of principles for Benchmarks used extensively in financial markets, as recognized by the G-20 and the Financial Stability Board. Regular co-ordination and co-operation with other related regional and international initiatives on financial Benchmarks is vital to achieve a robust and effective framework. The Task Force, together with the Chairman of the Board, will represent IOSCO in other international work initiatives on Benchmarks. Key work streams include:

- **Regulatory:** the European Commission’s Consultation on the regulation of indices,<sup>5</sup> the European Securities and Markets Authority’s Consultation on principles for Benchmark-setting processes, and the BIS Board of Governors Economic Consultative Committee.<sup>6</sup> The Task Force and IOSCO Chairman will engage with these work streams as appropriate to ensure coordination and consistency.
- **Industry:** a proposal by Argus Media, ICIS and Platts for a price reporting code for independent price reporting agencies (IPRO),<sup>7</sup> and best practice standards for conducting Benchmark price assessments issued by the Global Financial Markets Association (GFMA).<sup>8</sup>

## Goals

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<sup>3</sup> *CFTC Barclays Order* (June 2012)

<sup>4</sup> *The Wheatley Review of LIBOR*, Final Report, (September 2012)

<sup>5</sup> *Consultation on a Possible Framework for the Regulation of the Production of Indices serving as Benchmarks in Financial and Other Contracts*. (5 September 2012)

<sup>6</sup> Press Release available at: <http://www.bis.org/press/wnew.htm>

<sup>7</sup> Draft IPRO CODE (April 30, 2012)

<sup>8</sup> GFMA *Updated Principles for Financial Benchmarks* (November 2012)

To address concerns regarding the potential inaccuracy or manipulation of Benchmarks and maintain confidence in the credibility of Benchmarks, the Task Force is seeking to articulate policy guidance and principles for Benchmark-related activities (including those related to effective self-regulation) and consider issues related to transition. To inform this work, the Task Force will:

- identify Benchmark-related issues across securities and derivatives and other financial sectors and identify the relevant policy issues including:
  - the appropriate level of regulatory oversight of the process of Benchmarking;
  - the standards that should apply to methodologies for Benchmark calculation, and credible governance structures to address conflict of interests in the Benchmark setting process within the reporting financial institutions as well as in the oversight bodies; and
  - the appropriate level of transparency and openness in the Benchmarking process.

The Consultation Report also discusses potential provisions for replacement and issues Market Participants might confront when seeking to make a transition to a new or different Benchmark.

### **Intended audience and recipients**

This Report and subsequent principles (once developed) will be relevant to a wide range of stakeholders including: Benchmark Administrators, Submitters, users of Benchmarks, Regulatory Authorities, Self-Regulatory Organisations with responsibilities related to Benchmarks, regulated exchanges that list derivatives and securities which reference Benchmarks and clearing organizations that clear securities and derivatives referencing or related to Benchmarks. Please refer to **Annex A** for a definition of key terms.

### **Scope of Work**

The Task Force notes that a significant proportion of global financial activity is linked to Benchmarks and the universe of Benchmarks is large and diverse. To inform its work, the Task Force has reviewed a selection of Benchmarks, representing a number of asset classes and jurisdictions. An illustrative list of types of Benchmarks considered, observations and common themes from the review are set out in Annex B.

The review focused on risks to the credibility of Benchmarks, or risks to users arising from the Benchmark's Methodology, transparency and governance arrangements. The issues identified in the Task Force's review and Consultation are likely to be relevant to most Benchmarks and across most asset classes. Whilst the forthcoming principles should be applicable to all Benchmarks and asset classes, we expect IOSCO members to assess the applicability, monitoring or oversight of such principles to Benchmarks determined or used in their domestic jurisdictions.

The Task Force did **not** consider Benchmark Administration by public bodies to be in scope. However, Benchmarks where a public body acts as mechanical Calculation Agent, as defined in Annex A, are within scope.

Whilst the Task Force expects final principles to reflect the findings of the review and the Consultation responses, the Task Force will **not** make specific recommendations relating to any given Benchmark.

## Exhibit 1 Examples of the impact of Benchmarks in a retail context

### Examples of the impact of Benchmarks in a retail context

*Benchmarks are typically determined in wholesale markets, but are often used beyond their original purpose - including in financial and investment products for retail consumers or investors. This box sets out two examples of this: firstly, the use of EURIBOR as an interest rate Benchmark in European residential mortgages; and secondly, the use of indices in Exchange-Traded Products (ETPs).*

#### **EURIBOR and mortgages**

- The Euro Inter-Bank Offered Rate (or EURIBOR) is a gauge of the rate of interest charged for unsecured interbank funding in the wholesale Euro money markets, and is compiled daily by the European Banking Federation.
- EURIBOR is widely used as a variable interest rate in bilateral and syndicated loan agreements denominated in Euros as well as for hedging and speculation on fluctuations in interest rates in the Euro money markets.
- In theory, as EURIBOR is intended to measure unsecured bank funding costs, use of this rate in wholesale lending provides banks with a measure of the cost of bank funding on which to base the margin applied to borrowers. Many European banks use EURIBOR as the variable rate of interest charged on residential mortgages. In 2012, about 40% of loans to households in the Euro area are based on floating rates and EURIBOR is the most common reference rate used, in particular in Spain.
- When used in this way, EURIBOR determines cash flows between household borrowers and lenders. Furthermore, many of these residential mortgages and loans are later packaged and used as collateral for asset-backed securities, which are then sold to both institutional and retail investors. These securities also pay a coupon, which may also be based on EURIBOR.
- The use of a single interest rate Benchmark throughout the product chain has network effects including reducing the risk of mismatch in interest rate cash flows – but exposes retail customers directly to changes in EURIBOR.

#### **Exchange Traded Products**

- Exchange-Traded Products are a class of financial instruments designed to reproduce the performance of a defined index or Benchmark (which may be compiled by a third party).
- ETPs allow investors to obtain exposure to a wide variety of markets through relatively simple and accessible investment structures. ETPs are becoming increasingly popular as cost-efficient investment vehicles for both retail and institutional investors; total assets under management in this sector were estimated at US \$1,600bn in Q3 2012. The value of the investment is directly linked to the performance of the Benchmark intended to be reproduced (see below).
- There are currently over 4,000 different ETPs, tracking a wide variety of Benchmarks and indices. The Benchmarks used cover a range of asset classes and examples include: equity indices; fixed income indices; spot commodities and futures; and alternative investments.
- One method by which ETPs are able to reproduce the performance of a Benchmark is to directly invest in the instruments which the Benchmark is intended to represent. For example, an S&P 500 ETP which seeks to track the price performance of the S&P 500 equity index may invest directly in the securities contained in the index
- Some ETPs also reproduce the performance of a particular index by engaging in derivatives transactions, known as “synthetic” replication. The value of a particular ETP is driven by two factors: relative demand and supply of the ETP; and the value of the underlying assets held by the ETP.
- Consequently, the assets the ETP invests in are directly dictated by the composition of the Benchmark that the ETP intends to reproduce. In this way, the value of the ETP will be directly linked to the value of the Benchmark.

## Characteristics of a Credible Benchmark

In line with IOSCO's objectives of ensuring that markets are fair, efficient and transparent,<sup>9</sup> the Task Force considers Benchmarks should have the following characteristics in order to be credible:

- **Representative:** a Benchmark should clearly convey the economic realities of the underlying interest it seeks to measure to its users;
- **Reliable:** the data relied upon to construct the Benchmark should be sufficient to represent that interest and the data should be bona fide;<sup>10</sup>
- **Transparent:** there should be sufficient transparency over the Methodology, calculation and inputs to allow users to understand how the Benchmark is derived and its potential limitations; and
- **Subject to clear governance and accountability mechanisms.**

The discussion and questions in Chapter 2 seek to elicit comment on issues which may threaten these characteristics, and potential areas for policy guidance and principles.

## CONSULTATION QUESTION

1. *Do you agree with the scope of the report and intended audience? Are there other Benchmarks or stakeholders that have idiosyncrasies that should place them outside of the scope of the report? Please describe each Benchmark or stakeholder and the idiosyncrasies that you identify and the reasons why in your view the Benchmark or stakeholder should be placed outside of the scope of the report.*

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<sup>9</sup> IOSCO's *Objectives and Principles of Securities Regulation*

<sup>10</sup> This characteristic is drawn from FR06/12 *Principles for Oil Price Reporting Agencies*, Report of the Board of IOSCO (5 Oct 2012) at pp. 6 and 28. Although developed in the context of derivatives, the criteria directly address the characteristics of a Benchmark. These characteristics were found to lessen the susceptibility of the Benchmark (and in turn a derivatives contract that references the Benchmark) to manipulation.

## **Chapter 2      Discussion of Potential Issues**

*This chapter discusses issues that may undermine the credibility of Benchmarks identified by the Task Force, including vulnerabilities arising from different input types and levels of transparency. Chapter 4 expands on some aspects of the discussion on Methodology, in particular the assessment of the sufficiency of information for a credible Benchmark including being representative of the underlying interest.*

*Finally, this chapter looks at the governance mechanisms for Benchmark setting activities. In each section, the Task Force considers measures which could help address the issues identified.*

*The areas considered are:*

- A. Methodology**
- B. Transparency**
- C. Governance**
- D. Accountability**
- E. Role and responsibilities of Administrators**

## A. Methodology

Benchmarks can represent an underlying interest in a number of different ways. Some common methods for gathering inputs and calculation techniques are described below.

Credible Benchmarks should take into account the salient features of the underlying interest in their design (e.g., consideration of how to accommodate limited liquidity may be of greater relevance to niche credit indices, than mainstream equity indices). This includes consideration of the following generic features, and other factors should also be considered as appropriate.

### Exhibit 2 Characteristics of underlying interests measured by Benchmarks

#### Characteristics of underlying interests measured by Benchmarks

- **Size and liquidity:** The size of the market should inform the selection of an appropriate compilation mechanism and governance processes. For example, a Benchmark that measures a smaller market may be impacted by single trades and thus be more prone to potential manipulation. A Benchmark for a larger market may not be well represented by a small sample of participants.

Where markets exhibit low liquidity, it may be useful to consider related markets during the Benchmark setting process given the lack of observable transactions – for example, changes in a less liquid instrument such as jet fuel might be informed by movements in the larger Brent crude oil market. The liquidity of the underlying market will also inform the level of expertise required in determining the representative measurement of that market. Finally, the size and liquidity of the underlying market will help frame questions surrounding the adequate frequency of Benchmark publication.

- **Relative market size** may also be a concern. Where the size of a market referencing a Benchmark is significantly larger than the volume of the underlying market, the incentive for Benchmark manipulation may increase; the ease of manipulation would depend on the size of the underlying market and the Benchmark submission process.
- **Transparency:** There may be varying levels of clarity regarding trading volumes and positions of Market Participants, particularly in non-regulated markets and instruments. In those cases, it is worth considering whether a Benchmark represents the full breadth of the market; the role of specialist participants who might be in a position to give an overview of the market; and the feasibility, costs and benefits of providing additional transparency in the underlying market. For example, in the absence of trade repositories, the level of trading in some OTC derivative markets is opaque to Market Participants.
- **Market concentration:** The design of Benchmarks should consider the distribution of trading amongst participants. A concentrated market with few significantly active players might require a different Methodology compared with markets that have a large number of equally sized buyers and sellers. In a concentrated market, balance should be struck between sourcing information from informed participants and preventing market abuse by the dominant players.
- **Market dynamics:** Stock indices, Credit Default Swap (CDS) indices and bond indices are examples of where the underlying population of instruments used to calculate the Benchmark should be re-assessed and re-balanced, taking into account market dynamics, so as to provide the most representative Benchmark for the asset in question (e.g., an index of representative CDS), whereas interbank borrowing rates or commodity Benchmarks may reference a more static underlying set of assets/trades. Any dynamic changes to the assets underpinning a Benchmark, should also be transparent to stakeholders and users.

**CONSULTATION QUESTION**

*2. Do you agree that the design of a Benchmark should clearly reflect the key characteristics of the underlying interest it seeks to measure?*

**A.1 Quality and Integrity of Methodologies**

The range of different Methodologies reflects the varied nature of the underlying interests represented by Benchmarks. Methodologies differ in their respective strengths and weaknesses. In particular, some Methodologies are less prone to conflicts of interest, some are more able to provide an accurate and stable representation of the market, and others provide more resilience to market stresses.

No Methodology is immune from attempts to manipulate the Benchmark - especially where the conflicts of interests are not mitigated, and the Benchmark setting process lacks transparency. A key element of any Benchmark Methodology is the selection of inputs:

<b>Input Types</b>	<b>Commentary</b>
<p><b>Transactions and trade data:</b></p> <p>A number of Benchmarks are based on (a subset of) transactions or trade data reported to the Administrator or Calculation Agent. For example, certain overnight interbank borrowing rates are compiled from transactions reported directly to the Central Bank or via brokers; whilst some indices referencing instruments trading on exchanges (equity indices) are compiled from transactions reported to these entities.</p>	<p>Transaction based approaches are supported by executed trades and thus rely less on Submitter discretion over what to report. These approaches also allow for a more thorough verification of submissions using actual historical data.</p> <p>In practice, there is considerable variation in the coverage and usage of trade inputs in transaction-based Benchmarks. Some consider all the trades executed on a particular market or exchange, others rely on subsets of transactions, or transactions conducted through intermediaries or brokers. In some cases, the Methodology may permit discretion as to which transactions to include.</p>

<p><b>Committed quotes/auctions</b></p> <p>In auctions or ‘committed quotes’ systems, the Submitters are required to trade at the level they indicated for the Benchmark formation process if a trade request is initiated. A variant of this is an auction process, where the Benchmark is calculated through firm and executable bids and offers.</p>	<p>An advantage of committed quotes is that, in theory, they force Submitters to quote at a price they are willing to trade at. Although this reduces incentives to manipulate, Submitters may submit wide bid-offer spreads at times of stress to avoid their quotes being executed.</p> <p>This method requires similar trade conditions to ensure consistency (minimum size, tenor, number of trades, etc.) which can be hard to implement. It is also not always feasible that all Market Participants trade on every day (at their committed level), and operational costs are likely to be higher. For example, it would be difficult to imagine that all contributors to inter-bank rates would need to borrow a minimum amount in all currencies and tenors. In this case, higher operational costs and the balance sheet requirements of executed trades would be a disincentive for Submitters to participate in Benchmark setting.</p>
<p><b>Survey or estimate based</b></p> <p>Surveys, estimates and uncommitted quotes rely on Submitters’ perception of market conditions, whether for themselves or for other entities. These estimates, aggregated by the Administrator, provide the basis for the Benchmark. There is no obligation for Submitters to execute trades at such levels, although submissions may be informed by trade data or other information - for example, other information or judgement may be used to supplement transactions to a different extent depending on market liquidity.</p>	<p>These types of methodologies are prevalent for cash markets such as interbank borrowing or credit Benchmarks. Indeed the balance sheet (lending and borrowing for instance) impact of conducting many trades can be very material; therefore providing a measure of the market through other, less balance-sheet intensive means, can provide a net benefit.</p> <p>Surveys potentially allow more information to be incorporated into the submission, such as actual trades, related market references and other market information. They are also more resilient to market turbulence and provide less volatile estimates of the market in such conditions. In certain cases, they can smooth out market volatility.</p> <p>Given the potential for conflicts of interest (see below), this type of estimation and judgement might be more prone to manipulation without suitable safeguards: where a Market Participant is not required to execute at the submitted level, survey responses or quotes may not indicate where trades would occur but may be influenced by private financial incentives.</p>

## A.2 Vulnerability of Data inputs

For each input type, the following vulnerabilities should be considered and addressed:

**Voluntary submission of inputs to an individual fixing or determination:** Many Benchmarks rely on voluntary submissions by Market Participants. In some cases, submitting entities self-report to Administrators and can choose whether to participate in the submission process and to what extent. For example, hedge fund indices rely on voluntary reporting by fund managers on investment strategy and performance.

Partial or selective reporting of data or gaps in availability of submissions may undermine the credibility of the Benchmark as a representation of the underlying interest and the resilience of the Benchmark to market stress. For example, the selective reporting of data may also skew or bias the Benchmark. In the IOSCO Report on Principles of Oil Reporting Agencies, IOSCO strongly encouraged Submitters to submit all their market data so as to ensure the representativeness of the inputs.

To mitigate these concerns, Administrators should develop procedures and policies governing submission discipline and frequency for contributing entities.

**Continuity of participation:** Another significant risk posed by voluntary submission of inputs, is that Submitters may cease to participate in the Benchmark altogether. As identified in the Wheatley Review, the representativeness, and in extremis, the viability and continuity of the Benchmark itself could be threatened if a sufficient number of Submitters are no longer willing to contribute to the Benchmark setting process.

Encouraging or requiring submissions could be an option in certain cases; and this is further considered in Chapter 3. The UK FSA's Consultation Paper on the regulation and supervision of Benchmarks discusses requiring firms to participate in submission.<sup>11</sup>

**Administrator discretion:** Administrators may also exercise discretion in the selection and composition of inputs and (where applicable) over when the composition of inputs is rebalanced. For example, Administrators may be able to alter the algorithms used to compile stock or other indices to rebalance the weighting or the composition of components or choose which inputs to use on the basis of other information or judgments.

**Composition of Submitting Panels (where applicable):** Traditionally, Panels are composed of active Market Participants or market makers; some Benchmarks produced by trade associations rely solely on the input from their member firms. Other Benchmark Panels have further eligibility criteria, which may involve some compliance with ethical standards, market size, geographic coverage, or rules on adequate market behavior.

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<sup>11</sup> See *The Regulation and Supervision of Benchmarks: Consultation Paper* UK Financial Services Authority, December 2012

Participation in Panels may also be selective. For example, some families of indices use inputs from a self-selected group of Market Participants. This may give rise to conflicts of interest e.g. where these participants have large positions in the instruments referenced by the Benchmark, an incentive to participate is created.

The size and composition of a Panel may undermine a Benchmark's integrity if it is not representative of the underlying market. For example, active participants may have a more informed view of the market and thus may be able to give better estimates of its level. However, these participants may also have greater incentive to adjust Benchmark levels in favorable directions. In cases where Submitters also own, control or are represented by the Benchmark Administrator, conflicts of interest may be particularly acute if robust governance safeguards are absent.

Administrators should consider how to balance measures to encourage regular participation whilst ensuring that conflicts of interest arising from the composition of the Panel are identified and subject to controls (see sections C and E).

Panel inclusion criteria should consider at least the following factors:

- Whether Panel members follow requirements set out by the Administrator.
- Whether Panel members are subject to any regulatory provisions with respect to submitting inputs to the Benchmark.
- Any jurisdictional issues relating the location of the Submitters (if different from location of Administration).
- Provisions for changes in Panel composition (noting that this may alter the nature of the Benchmark).

### **A.3 Verification of submissions**

Because inputs may be subject to error or deliberate manipulation, the Administrator should seek to verify the accuracy and plausibility of the inputs. This could take the form of identifying and, if appropriate, seeking clarification over outliers.

The effectiveness of controls and verification processes will depend on the existence and complexity of underlying data that can be used to corroborate inputs, the availability of supporting records and adequate Audit Trail, as defined in Annex A, and the ability of the Administrator to monitor irregularities. Where submission of inputs is selective, it is important to consider how the Administrator would be able to access non-submitted data and records, or compare inputs against each other or the final Benchmark figures.

Some Benchmarks reviewed by the Task Force monitored submissions for non-deliberate errors ('fat-finger errors') but did not indicate whether they checked submissions beyond this. This lack of review may leave Benchmarks vulnerable to potential manipulation. Some Administrators

reserve the right to query submissions, but in order to be effective, Administrators need to implement clear and consistent policies to that effect.

It is important that both Administrators and Submitters find ways to ensure the quality of their submissions by using supporting data in underlying or related markets, and monitor submissions to detect for possible manipulation. The Task Force also believes that Administrators should communicate regularly with the relevant regulatory authorities to communicate any misgivings or suspicions regarding the submissions they monitor.

### **Bona Fide**

The integrity of the Benchmark Methodology may suffer if the input data is not bona fide or binding. For example, for transaction or committed quote-based Benchmarks, Submitters should have executed or have been prepared to execute an arm's-length transaction. Greater scrutiny may be needed for inter-group/affiliate transactions to ensure their bona fide nature.

### **Sample size**

Inputs may not effectively represent the underlying interest if the sample size is inadequate. Overall the size of the input sample should be sufficiently broad to be representative of the underlying interest being measured and to ensure that attempted manipulation of the Benchmark inputs is made much more difficult.

## **A.4 Calculation options**

Benchmarks rely on various calculation and compilation methods, which aggregate the inputs to create a single Benchmark.

Some Benchmarks rely on averaging processes; however simple averages can be skewed by outlier submissions and so many Benchmarks mitigate this risk by using medians or trimmed averages whereby the top and bottom quartiles are eliminated before averaging.

To avoid giving undue influence to smaller trades, most transaction-based rates use some form of volume-weighted averages. Some other Benchmarks use randomly selected prices or inputs at the end of the trading day.

Trimmed averages have the advantage of being easily understood, transparent and easy to replicate. Another advantage is that averages smooth volatility compared to randomised approaches, and therefore may be more appropriate for certain markets.

The algorithms for averaging can be more complex, involving smoothing mechanisms and interpolations. CDS indices, for instance, use such a smoothing mechanism to interpolate prices for non-liquid individual components. The exact calculation Methodology might not always be transparent in these cases.

Some strategy indices use more sophisticated methodologies to calculate the input weights or input values for the Benchmark. Volatility indices, for example, use the variance calculation

based on the price of a sample set of data. As above, the calculation Methodology might not always be transparent.

Some Benchmarks use estimated data and backfilling in their calculation. The exact degree of discretion in the calculation and the precise calculation Methodology itself might not always be transparent to users in these cases.

Administrators should consider the potential for different calculation methodologies to create incentives that enhance the integrity of the input data. Trimmed averages reduce the individual incentive to try to manipulate Benchmarks by large amounts, while the incorporation of a Methodology with an element of commitment by the Submitter (as described in A1) may increase the incentive to provide accurate inputs.

It is important to distinguish between Benchmarks that rely on averaging of inputs, and those that interpolate between inputs to provide a continuous Benchmark time series. The former is prevalent for interbank rates, and the latter for markets with lower liquidity such as Jet Fuel. In general, methods that rely on averages involve the exercise of less discretion by the Administrator than those that rely on interpolation. On the other hand, methods that incorporate interpolation may be more robust to illiquidity or the unavailability of input data than averages.

#### **A.5 The use of third parties**

Some Administrators rely on third parties for part or all of the compilation process. This can include calculation, data collection and/or dissemination of the Benchmark. In these cases, the roles and responsibilities of each party should be clear.

Even assuming the use of a third party, responsibilities and obligations cannot be outsourced and the Administrator should retain ultimate responsibility for the Benchmark setting process and should therefore verify that adequate systems and controls exist in relevant third parties involved in the Benchmark-setting activity.

Some Benchmarks may incorporate the output of another Benchmark or index as one of its constituent variables. Where the relevant component is calculated by another Administrator, the suitability and reliability of the 'component Benchmark' should be considered.

### **CONSULTATION QUESTIONS**

- 3. What measures should Administrators take to ensure the integrity of information used in Benchmark-setting and that the data is bona fide? Please highlight any additional measures required where Benchmarks are survey based. Please also comment on each of the factors identified in the discussion on the vulnerability of data inputs such as voluntary submission, and discretion exercised by Administrators. Are these measures adequately reflected in the discussion of roles and responsibilities of the Administrator discussed in section E?*

4. *What measures should Submitters implement to ensure the integrity of information provided to Administrators? Are these measures adequately reflected in the discussion of a code of conduct for Submitters discussed in section E? In particular, should Submitters submit all input data, and not a selection of such data so as to maximise the representation of the underlying market? Please comment on any practical issues that compliance with such an approach may give rise to.*

## **B Transparency**

### **B.1 Transparency of Benchmark Methodologies**

The Methodology criteria, processes and policies which govern the construction of the Benchmark should be clearly defined and transparent to Market Participants, Regulatory Authorities and others on a fair and non-discriminatory basis (including being free of charge). Transparency should be sufficient to allow interested parties to understand how a Benchmark is derived (including the ability to replicate a published Benchmark level to assess its plausibility and detect inaccuracies or potential manipulation), what it measures and therefore understand the suitability of the Benchmark for their purposes and any limitations or risks of the Methodology.

It is important that the key terminology in the Benchmark is clearly defined as well as the Benchmark's objective. The user should understand clearly what the Benchmark is trying to represent, and how the inputs are obtained and the outputs derived. For instance, the terms 'Prime Bank' or 'Reasonable Market Size' used in certain Benchmarks may not always be clearly defined.

Some Benchmarks use data sourced from different markets and different geographical regions. An example may be a Benchmark that uses, for one or more of its components, market data that dates back to the previous day (for example, because this market is closed on the date of calculation of the Benchmark). The asynchronous elements of the Benchmark might not always be transparent to users in these cases.

Transparency of Methodology is especially important when assessments are based on a mix of both transactional inputs (i.e., completed transactions, bid and offers) and non-transaction market information (expert judgments).

The majority of Benchmarks reviewed by the Task Force published their Methodologies but did not always provide enough detailed information to allow users to recreate Benchmark outputs based on information held by the Administrator.

Potential concerns with Benchmark transparency should be considered in conjunction with the control framework and governance arrangements applicable to the Benchmark. In the absence of a rigorous control framework and appropriate governance arrangements, the transparency of Methodology might facilitate manipulation of submissions in order to influence the Benchmark. For instance, without adequate controls, manipulators may use the transparency of the exact submission procedure, and the times or data used in that procedure to determine exactly how to influence the Benchmark and aid collusion.

## CONSULTATION QUESTION

- 5. What level of granularity with regard to the transparency of Methodologies would enable users to assess the credibility, representativeness, relevance and suitability of a Benchmark on an on-going basis and its limitations with respect to their intended use? Relevant factors could include; criteria and procedures used to develop the Methodology, type of data used, how data is collected, relative weighting of data used, how and when judgement is used, contingency measures (e.g., methods when transaction data is unavailable, etc.), publication of information supporting each Benchmark determination, etc. Please provide examples where you consider there are currently significant gaps in the provision of this information.*

### **B.2 Transparency of contingency provisions for episodes of market disruptions, illiquidity or other stresses**

It is important that users understand the contingency measures used by the Administrator during conditions of market stress. Administrators should clearly disclose these arrangements ex-ante, along with the triggers for their use, the extent to which expert judgement will fill part or all of the inputs and the relevant governance processes. For example, in the absence of daily transaction data, an Administrator may adopt the previous day's rate, subject to sign-off from an oversight committee (or other independent body). Where contingency measures have been adopted, this should be disclosed to Market Participants.

## CONSULTATION QUESTION

- 6. What steps should an Administrator take to disclose to Market Participants and other stakeholders the contingency measures it intends to use in conditions of market disruption, illiquidity or other stresses?*

### **B.3 Transparency over changes to the Methodology**

Administrators should clearly disclose changes to the Methodology (for example, to accommodate changes to the underlying interest). Administrators should set out how prospective changes will be subject to consultation with the interested parties, and changes to Methodology should not occur more frequently than necessary.

Although it appears that it is common for Administrators to announce Methodology changes on the Benchmark website, the exact level of advance engagement with subscribers, users or stakeholders is not always clear.

Some Benchmarks, indices in particular, require periodic changes in composition to remain representative. The exact processes for changes in composition vary. In some cases, it can be hard for the Administrator to publish rebalancing in advance, as this might move the market, to the detriment of certain instruments and market players. However, where the rebalancing cannot be reasonably published in advance, at a minimum, users may benefit from understanding the

Methodology for rebalancing to assess the continued suitability and representativeness of each Benchmark they use.

Prior to a change, the Administrator should ensure they have engaged or, ideally, formally consulted with a wide range of Market Participants – for example, including at least a sample of material users, Submitters, relevant regulatory authorities and other relevant stakeholders. However, the Task Force recognises that, as Benchmarks may be referenced by a very wide range of contracts and users, it may be difficult for the Administrator to clearly establish all relevant stakeholders. For example, this may be the case where Benchmarks are not available on a subscription-only basis or tailored to specific financial contracts or instruments.

Nonetheless, Administrators should use their good faith efforts to make sure that their consultation process is comprehensive, transparent, fair and timely. Users of a Benchmark should also monitor changes to the Benchmark’s Methodology to assess if it remains a suitable reference for the relevant financial products.

## **CONSULTATION QUESTIONS**

- 7. What steps should an Administrator take to notify Market Participants of material changes to a Benchmark Methodology (including to Benchmark components) and to take their feedback into account?*
- 8. How often should the Administrator review the design and definition of the Benchmark to ensure that it remains representative?*

### **B.4 Signalling**

Where public, submissions to Benchmarks may affect the perception of the submitting entities. For example, the credit signalling effect created by publication of LIBOR submissions incentivised lower submissions from Panel banks in order to influence external perceptions of their creditworthiness relative to other Panel members.

This is more acute where the characteristics of the underlying market are not transparent, because the ability of Market Participants to evaluate the plausibility of a given submission is reduced. In such cases, the provision of aggregated information on the market by the Administrator (e.g., a ‘statistical digest’), based on data from the Submitters, can help to mitigate this concern. In certain circumstances, publication of individual submissions provides benefits to the users. However without a suitable control framework, the publication may create risks of manipulation.

Additionally, if Submitters are aware of the pattern of inputs from other contributors, they may be able to gauge the impact of manipulating a particular submission. The publication of individual submissions could be delayed to address this point, as has been recommended in the Wheatley Review. The Administrator should be able to evidence how the Benchmark is derived (for example to its oversight committee or other independent body or to any relevant regulatory

authorities as part of their on-going scrutiny of the Benchmark – see Chapter 3) even if the inputs are not yet publicly available.

## **C. Governance**

Credible Benchmarks should be supported by a governance framework that addresses conflicts of interest and incorporates an oversight committee or other independent body to oversee the production of the Benchmark and all other relevant activities.

### **C.1 Conflicts of interest**

Conflicts of interest can arise at the level of the Submitter, between Submitters at different entities, and between Submitters, Administrators, Calculation Agents and other third parties due to economic incentives and the relationship between Market Participants.

#### **Private economic incentives**

The Wheatley Review notes that the need for judgement on the part of a Benchmark Submitter involves discretion, and that that discretion can be misused. In the case of LIBOR, some contributing banks sought to exploit the conflicts of interest that arose from their respective roles as Submitter to the Benchmark, user of the Benchmark, and wider participant in the market.

Submitters may be financial institutions that operate multiple business lines which include trading on their own behalf in addition to trading on behalf of their clients. In these circumstances, tackling the forms of alleged conflicts reported in the context of the interbank reference rate investigations requires addressing the existence of incentives that staff within such financial institutions may have to collude to favour a particular trading exposure.

An effective control framework should be able to identify and mitigate potential internal and external conflicts to the extent possible. For example, it may be appropriate to implement Chinese walls or physical separation between Submitters and traders within a submitting entity. Similarly, controls could exist to prevent improper communication between Submitters at different entities, and between Submitters, Administrators, Calculation Agents and other third parties. The control framework in place should be transparent and its effectiveness should be monitored (for example by an oversight committee, or audit or compliance functions).

The Task Force notes that for certain financial institutions, the broader framework of existing or planned national and regional bank structure reforms aims to minimise conflicts of interest between banks and their clients through separating, reducing and/or prohibiting certain types of business practices. Whilst not designed to target conflicts of interest with respect to participation in Benchmark setting, these structural reforms may address some of the conflicts outlined above.

Individuals may have a financial incentive to manipulate the level of the Benchmark where their remuneration reflects the performance of a Benchmark-linked asset or liability, or where they trade in instruments, the performance of which is affected by the level of the Benchmark, in a personal capacity. As an example, a trader seeking to manipulate a price might attempt to

influence other staff within his or her organisation that are responsible for inputting submissions to the Administrator.

Individuals may be offered gifts, hospitality or other incentives by other Market Participants to influence the Benchmark. In formulating remuneration and ethics policies Administrators and Submitters should be mindful of incentives for Benchmark manipulation, and take steps to reduce them.

### **Ownership and control of Administrators**

A number of different entities may perform the role of Administrator and/or Calculation Agent – some examples are set out below. Often, but not exclusively, this is determined by the market.

- Trade associations. Notable examples include the BBA (British Bankers' Association), EBF (the European banking Federation) and the Australian Financial Markets Association (AFMA).
- Public entities.
- Regulated exchanges or other trading platforms.
- Price reporting agencies, such as those responsible for calculating international commodity prices.
- Regulated firms such as banks or asset managers.
- Other commercial organisations such as data providers (e.g. Thomson Reuters, Markit) or news agencies.

The governance framework should identify and manage the inherent conflicts of interest posed by ownership structures where Administrators are wholly or partially owned, controlled or influenced by Market Participants who:

- subscribe or contribute to the Benchmark;
- structure financial contracts or instruments that reference the Benchmark;
- are active participants in the underlying market of the Benchmark; or
- carry large positions on products linked to the Benchmark.

For example, Administrators who are commercial entities may have an economic interest in maintaining the publication of the Benchmark even when the quality or representativeness of the Benchmark is in question. Trade bodies which act as Benchmark Administrators are also owned by, and represent the interests of, their members. Trade body members are typically the most active participants in the underlying markets and often carry large positions on products linked to the Benchmark, which may influence the way the trade body discharges its role as Administrator.

Conflicts of interest can also exist within a financial institution that is involved (on a stand-alone basis or through one or more affiliates) in administering an index and simultaneously in

structuring and marketing financial products that are linked to the performance of a proprietary Benchmark.

For example, the financial institution may engage in trading and market-making activities and may hold long or short positions in the index, its components and other instruments or derivative products based on or related to the index for its proprietary account or for other accounts under its management. It may also issue – directly or through an affiliate – other securities in respect of the index or its components, or issue derivative instruments in respect thereof.

To the extent that the financial institution, directly or through its affiliates, serves as issuer, agent, manager, sponsor or underwriter of such securities or other instruments, its interests with respect to such index may be adverse to those of the investors in, or users of, such index.

The financial institution may also undertake proprietary activities, including hedging transactions, which may affect the market price, rate, index or other market factors and, consequently, the index or its component.

Conflicts of interest may be present when there is direct involvement of public bodies in the administration process. There are only a few examples of a public body taking full ownership of the fixing process. However there are several examples of public bodies acting in some capacity, primarily that of compilation or Calculation Agent.

Where a public body takes responsibility for producing a Benchmark, a perception may be created that all risks (e.g., reputational, operational, litigation and conduct risk from the process and potential prudential risks from the resulting rate) are solely borne by the public body. This may undermine the rigour of efforts by the Submitter to ensure the quality of the Benchmark (e.g., by scrutiny of submissions), potentially undermining the quality and integrity of inputs.

Secondly, there may be conflicts of interest where a public body acts as Administrator and has other duties, e.g., supervision of firms involved in the Benchmark process or financial stability objective. In times of heightened stress, these obligations may conflict with its duties as an Administrator.

## **C.2 Oversight Committee**

Whilst the Administrator is ultimately responsible for its governance framework, an external oversight committee (or other independent body) could play an important role in identifying, mitigating and managing the conflicts of interest.

Administrators could establish an oversight committee from a range of Market Participants and other stakeholders to scrutinise the production of the Benchmark, which could enhance the transparency and credibility of a Benchmark. The range of stakeholders on the oversight committee (or other independent body) should comprise a balance of Submitters, users as well as other key stakeholders (such as exchanges if relevant). The committee's composition and rules should ensure that it is independent, not subject to conflicts of interest and effective.

The role of the oversight committee (or other independent body) could be to contribute to the technical aspects of Benchmark scrutiny and governance arrangements (including scrutiny of submissions, consideration of changes to the Methodology, development and monitoring of the code of conduct for Submitters, scrutiny of the Administrators' internal procedures). Any such committee would benefit from regular meetings, and transparent procedures regarding its membership, processes and decisions.

The oversight committee (or other independent body) could review the appropriateness of the Benchmark definition and Methodology. In particular, as markets evolve, the committee could regularly re-assess if the definition of key terms and inputs is still representative of the underlying interest it seeks to measure. The review may also consider the validity of data used to corroborate inputs.

## CONSULTATION QUESTIONS

9. *The Consultation Report discusses a number of potential conflicts of interest that may arise at the level of the Submitters, between Submitters at different entities, and between Submitters, Administrators and other third parties. Are there other types of conflicts of interest that have not been mentioned that you consider may arise? If so, how best should these conflicts of interest be addressed? Are the measures discussed in the Consultation Report sufficient to address potential conflicts of interests at the level of the Submitters, between Submitters at different entities, and between Submitters, Administrators and other third parties?*
10. *Do you agree that the Administrator's oversight committee or other body could provide independent scrutiny of all relevant activities and management of conflicts of interest? Please comment if and why any different approaches might be appropriate for different kinds of Benchmarks. For example, where Administrators simultaneously act as the trade body for Submitters to the Benchmark. What is the minimum level of independent representation this committee or body should include?*

### D. Accountability

Administrators should establish accountability procedures to assess their compliance with operational standards, scrutiny of Benchmark compilation and transparency set by their Board. These procedures could include:

- **Complaints Processes:** Administrators should have publicly available written procedures for receiving, investigating and retaining records concerning user complaints, including Benchmark determinations and operational concerns.
- **Documentation requirements:** Administrators should have procedures to document all data and judgement used to assess submissions and make publication determinations. This should be retained for a set period and made available to the relevant regulatory authorities on request.

- **Audit reviews:** Benchmark related activities should be captured by external audit to verify the integrity of the relevant processes. Some Administrators already have their output and process audited, or they initiate auditing by an independent third party if requested.

Where Administrators or Submitters become aware of, or suspect a failure to comply with Benchmark related policies and procedures, the Administrator should take action to address such failure, including immediately notifying any relevant Regulatory Authority.

## CONSULTATION QUESTIONS

- 11. Should the Submitters establish accountability procedures to assess their compliance with operational standards and scrutiny of Benchmark submissions?*
- 12. Are the measures discussed in the Consultation Report (e.g., Audit Trail, external audits and requirement for regulatory cooperation) sufficient to ensure the accountability of the Submitters? Should additional mechanisms be considered?*
- 13. How frequently should Submitters be subject to audits? Should these be internal or external audits?*
- 14. Are the measures discussed in the Consultation Report (e.g., complaints process, Audit Trail, external audits and requirement for regulatory cooperation) sufficient to ensure the accountability of the Administrator? Should additional mechanisms be considered?*
- 15. If recommended, how frequently should Administrators be subject to audits? Should these be internal or external audits?*
- 16. Is public self-certification of compliance with industry standards or an industry code another useful measure to support accountability? This approach might also contemplate explanation of why compliance may not have occurred. If so, what self-certification requirements would make this approach most reliable and useful to support market integrity?*

## E. Role and responsibilities of Administrators

### E.1 A Robust Control Framework

The Administrator should have in place a robust control framework, which will underpin suitable governance arrangements.

The **control framework** might include:

- Adequate policies and procedures to verify submissions, including detailed policies on how to corroborate submissions with appropriate data.
- Adequate policies and procedures supporting Benchmark compilation; including policies and record keeping requirements on the use or exclusion of any submissions or related information.
- Record management policies that allow the Administrator to evidence how a particular Benchmark was derived.
- Clear policies on the (delayed) publication of submissions or supporting data.
- Appropriate skills and seniority of staff contributing to the Benchmark compilation process; and suitable management controls.
- Clear provisions for market disruption, illiquidity or other stresses to support market and user understanding of these provisions.
- Consideration of operational risk to ensure a resilient Benchmark, available at the indicated times.
- Clearly defined policies with respect to seeking stakeholder representation.
- Controls to address conflicts of interest, including prevention of improper communication between conflicted parties and remuneration policies, which do not create incentives for improper administration or compilation processes.
- Accountability mechanisms including audit reviews and a complaints process.

These policies should be publicly available, and the Administrator should outline how it intends to monitor their implementation, for example through the oversight committee (or independent body).

## **E.2 Code of Conduct for Submitters**

The Administrator should provide standards and procedures for Submitters in a code of conduct with respect to submission of inputs and managing conflicts of interest. A code of conduct that is required for Submitters and Administrators should monitor their compliance. The code of conduct for Submitters could address many of the issues covered by the Administrators' governance policies, including:

- Standards for the submission of inputs, including validation of submissions with appropriate data prior to submission, corroboration after submission and sign-off. This could be supported by appropriate record management requirements, and these records should be available to the Administrator and any relevant regulatory authority.

- Appropriate skills and seniority of staff contributing to the Benchmark, including training; and suitable management controls.
- Clear provisions for submission of inputs under market disruption, illiquidity or other stresses; and standards with respect to managing operational risk that may disrupt Benchmark submission.
- Controls to address conflicts of interest, the prevention of improper communication between conflicted parties, and remuneration policies that do not create incentives for improper submission.
- Scrutiny of the submission of inputs and management of conflicts of interest through compliance and internal and external audit reviews. These should have sufficient resource, expertise and independence from the relevant business functions.
- Where Submitters become aware of attempted or actual manipulation, or failure to comply with Benchmark related policies and procedures, the Submitters should notify the Administrator and any relevant Regulatory Authority.
- Regular reviews by compliance and internal and external audit to verify the integrity of the process, consistency of the Benchmark determinations, and test the effectiveness of the control framework.

## CONSULTATION QUESTIONS

- 17. The Consultation Report discusses elements of a code of conduct for Submitters. Are the measures discussed (e.g., adequate policies to verify submissions, record management policies that allow the Submitter to evidence how a particular submission was given, etc.) sufficient to address potential conflicts of interest identified or do you believe that other control framework principles should be added?*
- 18. What would be the key differences in the code of conduct for Benchmarks based on different input types, for example transactions, committed quotes and/or expert judgement?*

## **Chapter 3 Discussion of options for enhanced oversight of Benchmark activities**

The implications of the enforcement actions by the CFTC and UK FSA in LIBOR and EURIBOR, which revealed the fragility of major Benchmarks and their significant impact on the economy, require a consideration of whether enhanced oversight of other Benchmarks is appropriate and if so, the form such oversight should take. The range of potential approaches to Benchmark oversight lies between recommending a form of voluntary codes of conduct and direct governmental regulation and supervision of all or part of Benchmark activities. A one-size-fits-all approach may not be appropriate. Different approaches may be appropriate for various Benchmark asset classes (noted above) depending, inter-alia, upon the legal framework of the jurisdiction, the structure, economic impact and potential for market abuse of the Benchmark in question or upon the regulatory status of the relevant Submitters and/or Administrator. Moreover, one or more approaches alone or combined, short term and longer term, may be appropriate.

### **A.1 Approaches to Enhanced Oversight**

A review of the Benchmarks considered by the Task Force reveals that typically neither the act of submission nor the Administrator that constructs the Benchmark is currently subject to direct regulatory oversight. Although in many instances the Submitters and/or Administrators may be part of regulated institutions, it does not appear that the specific Benchmarking activities are explicitly subject to direct regulation.

### **Industry Standards and Voluntary Codes of Conduct**

In a few cases, industry standards through voluntary codes of conduct have been proposed for Benchmark Administrators and/or Submitters by major price reporting agencies Argus, Platts and ICIS.<sup>12</sup> GFMA's final principles include a recommendation that Submitters of data adopt a Contributor Code of Conduct which would include a variety of measures set out in the GFMA principles.<sup>13</sup>

The *IOSCO Methodology* used to assess compliance with IOSCO's principles makes clear that industry standards are a possible method of achieving regulatory objectives.<sup>14</sup> The fact that

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<sup>12</sup> Draft IPRO CODE (April 30, 2012)

<sup>13</sup> GFMA *Principles for Financial Benchmarks* (September 2012) Principle IX Contributor Code of Conduct, p.11

<sup>14</sup> "In most cases the Principles may be implemented by legislation, administrative rules, advisories, guidelines or procedures, market rules.....or professional market codes of conduct...." FRO8/11 Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation (October 2011) , Principles Relating to Secondary Markets p 204

IOSCO will continue to evaluate the success of price reporting agencies in putting into practice the principles set out in the *Oil PRA Principles* will serve as a test as to whether an industry code will be effective.

However, a major criticism of voluntary codes is that they are not grounded in effective, enforceable and sanctionable legal rules, lack an independent enforcement mechanism and may not take adequate account of the wider economic and social interests affected by the Benchmark. Nonetheless, voluntary codes can have a useful function within a regulatory configuration and can be used in conjunction with other robust sanctions for market abuse and other enhanced governance safeguards.

To address such shortfalls, the relevant codes could be recognised by the relevant regulatory authorities. For example, the UK FSA's consultation on the regulation and supervision of Benchmarks notes that the newly named FCA intends to confirm the code of practice for LIBOR Submitters established by the new LIBOR Administrator.

Another approach may be for IOSCO to develop an overarching code of conduct to provide guidance for implementing its policies and principles for Benchmark-related activities, as it did for credit rating agencies.<sup>15</sup> As the case may be, an IOSCO code could offer a degree of flexibility in how its measures are incorporated into the individual codes of conduct for Administrators and/or Submitters according to specific legal and market circumstances. An IOSCO code could require Administrators and/or Submitters to disclose how each provision of the IOSCO code is adopted in their own code of conduct, explain if and how their own codes deviate from the IOSCO code, and how such deviations nonetheless achieve the objectives set forth in the IOSCO policy guidance and principles and IOSCO code.

### **Development of a Self-Regulatory Organisation**

Although voluntary codes are often referred to as self-regulation, as understood by IOSCO, a Self-Regulatory Organisation (SRO) is one that has been given the power or responsibility by a governmental authority to regulate and its rules are subject to meaningful sanctions regarding any part of the securities market or industry.<sup>16</sup> Subject to their domestic legal framework, regulatory authorities might consider whether to recommend legislation or rules forming an SRO or amending the remit of an existing SRO for certain types of Benchmarking activities. A new SRO for benchmarking activities may not be able to address wider concerns such as the use of Benchmarks and as such may only address one aspect of the production of Benchmarks.

### **Direct Regulation of Submission, Submitters and/or Benchmark Administrators**

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<sup>15</sup> *Code of Conduct Fundamentals for Credit Rating Agencies*, Report of the Technical Committee of IOSCO, December 2004 (Revised May 2008), <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD271.pdf>.

<sup>16</sup> *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*, IOSCO, Principle Relating to Self-Regulation p.50 (September 2011)

The Task Force recognizes that the level of regulation will depend on factors such as the level of current oversight, any gaps in current regulation, and any specific problems identified with Benchmarks in a regulator’s particular jurisdiction.

*The Wheatley Review of LIBOR: Final Report* has called for regulation in the United Kingdom of the Administrators as well as the act of submission of data to the Administrator, including an “Approved Persons” regime, to provide the assurance of credible independent supervision, oversight and enforcement, both civil and criminal.<sup>17</sup> Proposals to implement these recommendations are currently under consultation.<sup>18</sup> Moreover, the European Union’s consultation report on indices includes a consideration of similar regulatory approaches.

Although the submission and/or compilation of some of the Benchmarks considered by the Task Force is performed by regulated firms, the specific acts of submission and Benchmark compilation do not appear to be directly covered by the relevant regulatory framework. Therefore one cannot be assured that the mere fact of operating within an otherwise regulated environment will provide sufficient incentive to adhere to best practices. *The Wheatley Review of LIBOR: initial discussion paper* is instructive on this point:<sup>19</sup>

*The fact that activities in relation to LIBOR are not currently regulated activities and subject to specific rules and regulation by the regulator may also have implications for how firms view such activities. The potential attempted manipulation of LIBOR suggests that many individuals within submitting institutions did not regard the activity of submitting to LIBOR in the same way as activities which are regulated activities. In particular, individuals do not appear to have attached the same importance to ensuring that submissions to LIBOR were made accurately and with integrity as they would have done to the performance of a regulated activity such as accepting deposits.*

The decision whether to directly regulate would require an analysis of the market implications (including the economic impact) of a Benchmark being manipulated, the potential for manipulation of a Benchmark to facilitate market abuse, the specific categories of persons involved in Benchmarking activities, the conduct of the Submitter and those persons responsible for the production and publication of the Benchmark. Factors such as the need for new or revised legislation and the adequacy of inspection and enforcement powers also should be considered.

Any decision whether to regulate Benchmark submission and administration necessarily raises the issue of whether responsibility for Benchmarking supervision should be placed with an existing regulator or whether a new regulatory entity should be created. Given the diversity of regulatory structures across jurisdictions it would be necessary to consider which regulatory agencies have the relevant experience and relationship to the Benchmarking activities. As noted

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<sup>17</sup> *The Wheatley Review of LIBOR, Final Report*

<sup>18</sup> <http://www.fsa.gov.uk/library/policy/cp/2012/12-36.shtml>

<sup>19</sup> *The Wheatley Review of LIBOR: initial discussion paper* (August 2012), B.3 p. 53

earlier, in some jurisdictions, this issue may also raise the question of whether some part or all of that responsibility should lie with a SRO.

## **A.2 Regulation of Use**

In addition to the possible regulation of Submitters, administration and submission, consideration of rules relating to the use of Benchmarks may also be required. Benchmarks are used as reference prices for an extremely wide variety of instruments and contracts. A Benchmark is a measure of a particular underlying market and all parties should understand what the reference Benchmark measures, what its risks are and whether it is robust.

Listing requirements are one means, discussed below, by which use is regulated in many jurisdictions to ensure that financial instruments reference robust Benchmarks. Prospectus requirement may also address these issues. UCITS funds in the EU are regulated with respect to their use of indices.<sup>20</sup>

Transparency can also help ensure that Market Participants can make informed decisions about what a Benchmark measures, its risks and how robust it is. However in some cases transparency may not be sufficient and so it may be necessary to consider where responsibility for assessing the suitability of a Benchmark lies, in particular in the case of retail consumers.

Careful consideration should be given to, among others, the need for and complexity of directly regulating the use of Benchmarks, which is beyond the scope of this report.

## **A.3 Regulatory Power over the Listing of Securities and Derivatives**

As noted above, securities and derivatives regulators currently have regulatory authority over the listing of securities and derivatives on regulated markets.<sup>21</sup> The *IOSCO Objectives and Principles of Securities Regulation* provide that a regulator should be informed of the types of securities and products to be traded on an exchange or trading system and review or approve the rules governing the trading of the product.<sup>22</sup>

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<sup>20</sup> Undertakings for Collective Investment in Transferable Securities Directive (2009/65/EC), Article 53

<sup>21</sup> FRO8/11 *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation* (October 2011) states at Principle 33, Key Issue 4 that “the regulator should, as a minimum requirement, be informed of the types of securities and products to be traded on the exchange or trading system, and should review/approve the rules governing the trading of the product, where applicable. In doing so, the market and/or the regulator should [among other things] consider product design principles, including where applicable, listing requirements and trading conditions.”

<sup>22</sup> FRO8/11 *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation* (October 2011), Principle 33, key issue 4, products and participants at p. 207

Further, where physical commodity Benchmarks are referenced by cash-settled derivatives, a Market Authority (e.g., regulator, exchange or SRO) following IOSCO's *Principles for the Regulation and Supervision of Commodity Derivatives Markets* will specifically need to determine that the Benchmark results in a reliable price.<sup>23</sup> That report's settlement reliability principle states that:

*Settlement and delivery requirements should reflect the underlying market and promote reliable pricing relationships and price convergence and should be regularly evaluated to ensure that they meet this standard. Settlement and delivery terms should be specified and made available to Market Participants.*

The ability of a commodity derivatives Market Authority to review the procedures that are utilised to develop a settlement price for a securities product or a commodity contract may vary depending on whether the price series or index is constructed by a regulated market or a third-party provider. A regulated market is by definition subject to direct oversight by a governmental regulator or SRO, who generally will have power to review the contract if necessary. In contrast, commodity derivatives market authorities generally do not have direct regulatory oversight over third-party Administrators.

IOSCO previously concluded that commodity derivatives Market Authorities responsible for contract design or the review of exchange-traded commodity futures contracts that reference a price series or index should be able to demonstrate that the relevant price series or index is reliable, acceptable, publicly available and timely. In addition to disclosure of the Methodology used to construct an index, commodity derivatives Market Authorities should be able to access the actual reported transactions used to form the price series or index, to be able to assess whether the prices reliably reflect actual physical commodity market prices.<sup>24</sup>

In the case of a third-party price series or index provider, the commodity derivatives Market Authority should be satisfied that the third party provides safeguards against susceptibility to manipulation. Where the market itself generates a cash market price series, the market should be able to demonstrate the specifications of the calculation procedure and the robustness of safeguards in the cash settlement process to protect against susceptibility to manipulation.

These design and listing principles permit a commodity derivatives Market Authority to disallow trading in an exchange traded commodity derivative contract if the commodity derivatives Market Authority finds that a Benchmark is unreliable.

This approach was applied in the *IOSCO Oil PRA Principles* report as an incentive for oil price reporting agencies to adopt policies that are consistent with that report's best practice

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<sup>23</sup> FR07/11 *Principles for the Regulation and Supervision of Commodity Derivatives Markets*, Report of the Technical Committee of IOSCO (September 15, 2011)

<sup>24</sup> FR07/11 *Principles for the Regulation and Supervision of Commodity Derivatives Markets* pp. 21-23. Note that although elements of the principles for contract design are instructive to a designer of OTC derivatives, the contract design principle are not intended to apply to OTC commodity derivatives. p.12

principles.<sup>25</sup> A similar approach could be adopted as an implementation mechanism for any Benchmark principles adopted through the current consultation. IOSCO could encourage members to review their existing listing requirements to ensure that any specific concerns set out in the principles are addressed.

#### **A.4 Enforcement and market abuse powers**

IOSCO member jurisdictions generally have enforcement authority in relation to Benchmark setting where the misconduct is related to financial firms, products, and the provision of financial services or the trading of securities and derivatives, although Benchmark setting is not of itself a regulated activity. IOSCO members in certain jurisdictions may have authority to take enforcement action for misconduct related to manipulation (or attempts) and false reporting affecting Benchmarks and Benchmark setting processes. Additionally, members may have the ability to bring criminal sanctions, or sanctions that otherwise offer effective deterrence in respect of violations or misconduct in the securities and derivatives markets generally.

In certain jurisdictions, consideration is being given to amending legislation to create a specific regulatory regime related to abuse and to bring Benchmarks directly into the scope of market abuse regulation. For example, the European Commission has proposed amendments to the definition of the offence of market manipulation, to capture both attempted and actual manipulation of Benchmarks. Similarly, amendments have been tabled to the criminal offence of “inciting, aiding and abetting and attempt” to include these behaviours in relation to Benchmarks. Another option is to consider the use of criminal or civil sanctions with respect to potential manipulation and consider whether these provide effective enforcement and deterrence.<sup>26</sup>

## **B. Drawing Regulatory Distinctions**

As noted previously, the Task Force has approached the consultation with the perspective that a one-size-fits-all approach may not be appropriate for the universe of Benchmarks considered by

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<sup>25</sup> FR06/12 Principles for Oil Price Reporting Agencies, Report of the Board of IOSCO (October 2012) which stated at p.8: “The use by a Market Authority of its rule approval and/or review authority over derivatives contracts, as appropriate, to refuse admission to exchange trading or central clearing of any oil derivatives contract that references a PRA-assessed price which, in the opinion of the Market Authority, has been developed under policies and procedures that do not reflect effective implementation of the PRA principles and call into question the reliability of an assessment.”

<sup>26</sup> For example, on 11 December 2012, the Serious Fraud Office in UK arrested three men with the investigation into the manipulation of LIBOR. SFO press release available at: <http://www.sfo.gov.uk/press-room/latest-press-releases/press-releases-2012/libor--three-arrested.aspx>

this consultation. Benchmarks differ in their users, affected financial instruments, potential for manipulation and economic impacts. Distinctions also exist between the regulatory status of those who submit data to Administrators and the Administrators themselves, as well as in the regulated status of the underlying market upon which a Benchmark may be based. The Task Force seeks comment on whether these and any other types of distinction in “status” warrant drawing distinctions as to possible forms of enhanced regulatory oversight, as discussed above. Such distinctions could, for example, lead the Task Force to recommend full regulation in one instance but rely on voluntary codes in another. Alternatively, a set of principles may be appropriate for most Benchmarks with specific provisions for certain other types of Benchmark. The following factors might be considered, but no one factor should be determinative in this regard as the overall considerations are inter-related:

### **B.1 Distinctions based on the economic impact of the Benchmark**

IOSCO recognizes that sound domestic markets are necessary to the strength of a developed domestic economy and that domestic securities are increasingly being integrated into a global market.<sup>27</sup> The Task Force is of the view that significant consideration in drawing regulatory distinctions may be the economic impact of the Benchmark in question. Task Force discussions raised the possibility of drawing distinctions between Benchmarks that may have broad, international or domestic economic impact versus Benchmarks that might have more narrow impact. The former type of Benchmarks, as illustrated by LIBOR, which has broad systemic impact, act as a means of transmission of monetary policy and as a “public good” (*i.e.*, rates are widely used as reference rates for loans to non-financial corporations and households).<sup>28</sup>

Conversely, the implementation of a broader framework for the regulation of Benchmarks used in financial contracts and financial instruments may contribute to preventing manipulative activities, rebuilding market confidence in the Benchmark-setting process and provide a legal framework for monitoring and supervising the relevant activities and entities, and if needed for prosecuting potential illegal activities. Even if they have a narrower financial impact as compared to interbank reference rates, other Benchmarks that serve as a basis for financial products (such as Exchange Traded Funds) may also, by their proprietary and/or discretionary nature, raise issues of transparency, market confidence, conflicts of interest and investor protection.

Benchmarks may also differ in regard to whether they are embedded in publicly listed, standardised financial contracts-- e.g., exchange traded securities such as ETFs, exchange traded notes and exchange traded trusts, and commodity futures contracts that are traded broadly and used for price discovery and hedging purposes-- versus privately negotiated bilateral derivatives

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<sup>27</sup> *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*, IOSCO, p10 (September 2011)

<sup>28</sup> See, e.g., European Central Bank comment letter to the European Commission’s public consultation on the regulation of indices

that are neither linked to nor have an effect on exchange-traded futures. This distinction was recognised by IOSCO as a reason to focus its contract design principles on futures contracts.<sup>29</sup>

## **B.2 Distinctions based on a general failure in the Benchmark provision**

The evidence to date is that failures in terms of governance and controls may not simply have occurred in the systemic Benchmarks such as EURIBOR and LIBOR, but also in smaller interest rate Benchmarks such as CIBOR and other Benchmarks such as oil and gas. There may therefore be mounting evidence that the vulnerabilities in the Benchmark process discussed in this paper apply to Benchmarks in general, not just a specific category of Benchmarks. Of their own accord, market forces or self-regulation may not solve these problems.

## **B.3 Distinctions based on whether the Benchmark is referenced in exchange traded derivatives and securities**

As discussed above, securities and derivatives regulators already possess the authority to evaluate financial instruments that are based on Benchmarks. Assuming that existing regulation addresses the reliability and governance concerns raised in this Consultation, there may be no need for enhanced supervision or a less explicit form of supervision could be crafted. IOSCO members could be encouraged to review their applicable listing regulations to ensure that they address whatever principles may be issued following this Consultation.

## **B.4 Distinctions based on the regulatory status of Submitters, administrators and/or the interest measured by a Benchmark – short term and long term responses**

The Task Force does not suggest that the mere fact of being “otherwise regulated” (e.g., banking) obviates the need for a specific evaluation of the requirement for regulation of the Benchmark activities engaged in by an otherwise regulated entity. However, were a decision to be made that Benchmarking activities do warrant enhanced oversight, the fact that actors involved in Benchmarking activities are otherwise regulated may be relevant to decisions as to the level of regulatory scrutiny that should be imposed and the applicable time frames. In other words, regulatory status of the actors involved in Benchmarking activities will be relevant when developing short term and longer term solutions.

For example, when all of the actors who submit data and compile Benchmarks operate in an otherwise regulated status, such as banking, the otherwise regulated status of the actors may

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<sup>29</sup> “Market authorities are likely to find elements of the contract design Principles to be more relevant to any such contracts that are designed to have standardized, futures-like characteristics and, if executed on an electronic trading facility, begin to trade actively like a futures contract, serve a price discovery function and/or are linked to, or otherwise have an effect on, an exchange –traded futures contract.” FR07/11 *Principles for the Regulation and Supervision of Commodity Derivatives Markets*, Final Report, Technical Committee of the International Organization of Securities Commissions (September 2011) p.p. 14-15

facilitate the expeditious design and implementation of a new regulatory framework. If new authorising legislation is needed, the existing regulatory structures could enable a jurisdiction to implement a regulatory program more quickly than if a new regulator had to be created and staffed. In the latter case, the need to create new institutions might result in the development of interim solutions if the need for regulation is viewed as urgent.

The implications of imposing enhanced oversight of benchmarking activities on the relevant market, as well as on segments of the actors in an unregulated market, need to be considered. Distinctions may exist for example between otherwise regulated markets (e.g., banking) and physical commodity markets.

Distinctions might also be drawn based on whether the Administrator is a regulated exchange subject to its own listing requirements or subject to the rules of a third party. A Benchmark that is designed and administered by a regulated exchange and is based on daily transparent transaction data and calculated according to algorithmic methods may raise different integrity issues than when a third party designs and administers a Benchmark.

In conclusion, the Task Force believes that the above-mentioned regulatory distinctions should be taken into account when considering the appropriate level of regulatory oversight to be applied to Benchmark activities.

## **CONSULTATION QUESTIONS**

- 19. What are the advantages and disadvantages of making Benchmark submissions a regulated activity?*
- 20. What are the advantages and disadvantages of making Benchmark Administration a regulated activity?*
- 21. Do you agree with the factors identified for drawing regulatory distinctions? What other factors should be considered in determining the appropriate degree of oversight of Benchmark activities (discussed in Chapter 3)? Please provide specific recommendations as to how the distinctions discussed in Chapter 3 should inform oversight mechanisms.*
- 22. What distinctions, if any, should be made with regard to Benchmarks created by third parties and those created by regulated exchanges?*
- 23. Assuming that some form of enhanced regulatory oversight will be applied to an asset class Benchmark, should such enhanced oversight be applied to the Submitters of data as well as the Administrator?*
- 24. What are the considerations that should be taken into account if the Submitters to a Benchmark operate in an otherwise unregulated market (e.g., physical oil, gold or agricultural commodity markets) and are not otherwise under any obligation to submit data to an Administrator?*

25. *Do you believe that a code of conduct, either on its own or in conjunction with other measures outlined within the report, would provide sufficient oversight to mitigate the risks that have been identified in Chapter 2? What measures should be established in conjunction with a code of conduct? For which Benchmarks is this approach suitable?*
26. *What other measures outlined in the report, if any, should apply in addition to a code of conduct? If you believe a code of conduct, either on its own or in conjunction with other measures outlined within the report, would provide sufficient oversight to mitigate the risks that have been identified in Chapter 2, what type of code of conduct should apply (e.g., a voluntary code of conduct, an industry code of conduct submitted to and approved by the relevant Regulatory Authority, a code of conduct developed by IOSCO, etc.)?*
27. *Do you believe that the creation of a Self-Regulatory Organisation (e.g., one that exercises delegated governmental powers) and itself subject to governmental oversight, whether or not in conjunction with industry codes, is a viable alternative for sufficient oversight and enforcement to mitigate the risks that have been identified in Chapter 2? For which Benchmarks is this approach suitable? What if any complementary arrangements might be necessary, such as new statutory obligations or offences for Administrators and/or Submitters?*
28. *Do you believe that for some Benchmarks reliance upon the power of securities and derivatives regulators to evaluate products that reference a Benchmark or exercise their market abuse or false reporting powers creates sufficient incentives for the Administrator to ensure sure that Submitters comply with a code of conduct?*
29. *Do you believe that users of a Benchmark, specifically the users who are regulated or under the supervision of a national competent authority, should have a role in enhancing the quality of Benchmarks? Which form should this role take: on a voluntary basis (e.g., the user being issued a statement that will only use Benchmarks that follow IOSCO principles), or on a compulsory basis (e.g., the competent authority could request that users who are registered under their jurisdiction should only use Benchmarks that fulfil IOSCO principles)?*

## Chapter 4 Discussion of data sufficiency and transition

This chapter builds on discussion in Chapter 2 and examines issues surrounding the sufficiency of data used to construct a Benchmark, including considerations of the robustness of the market that underlies a Benchmark. Because markets evolve, this chapter also examines the related issue of whether, and if so, how Administrators, Benchmark users and relevant Regulatory Authorities should plan for the possibility of transitioning away from a Benchmark.

### A. The sufficiency of data used to construct Benchmarks

As noted previously, Benchmark methodologies vary not only with respect to the *types* of data relied upon, which include transactions, bids and offers, valuations based on expert judgements (e.g., extrapolation from prior rates or prices, use of related data, and adjustments for credit quality), but also with respect to the *degree of reliance* on such data. For example, structured products that reference certain indices (e.g., volatility, leveraged or inverse indices) may rely on the bilateral, OTC market, which is often less transparent than exchange-based indices. This is similarly true where a rule-based Methodology requires the application of expert judgement for the pricing of various off-exchange asset classes, includes other parameters (such as a cost of borrowing) in their performance measurement and/or includes a long-term option component for which daily prices are unavailable.

However, in all of these cases, concerns around the sufficiency of data used to construct the Benchmark should be no less relevant.

The *IOSCO Principles for Oil Price Reporting Agencies*, the *Wheatley Review of LIBOR: final report*, and the CFTC's *Barclays* and *UBS Orders* are instructive in this regard, as they all specify a hierarchy of permissible data use that gives the greatest weight to transactions (both in the referenced market as well as transactions in other related markets).<sup>30</sup> Although the hierarchies of data use in the above reports and settlement order differ in detail, they all reflect a broader consensus that interbank borrowing rates and oil prices should be based on actual transactions.<sup>31</sup>

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<sup>30</sup> FR06/12 *Principles for Oil Price Reporting Agencies*, Report of the Board of IOSCO (05 Oct 2012), principle 2.2(b) at p. 13 available at <http://iosco.org/library/pubdocs/pdf/IOSCOPD391.pdf>,

*The Wheatley Review of LIBOR: final report*, Box 4B: LIBOR SUBMISSION guidelines, p.28 available at: [http://cdn.hm-treasury.gov.uk/wheatley\\_review\\_libor\\_finalreport\\_280912.pdf](http://cdn.hm-treasury.gov.uk/wheatley_review_libor_finalreport_280912.pdf),

*CFTC Order in the matter of Barclays PLC* (June 27, 2012), "Determination of Submissions Factors 1-3 paragraph, pp. 32-33 available at: [http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfbarclaysorder\\_062712.pdf](http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfbarclaysorder_062712.pdf)

<sup>31</sup> One of the key findings of the *Wheatley Review of LIBOR* was that "LIBOR submissions should be explicitly and transparently supported by transaction data." *The Wheatley Review of LIBOR: final report*, ¶4.5, p.27 available at: [http://cdn.hm-treasury.gov.uk/wheatley\\_review\\_libor\\_finalreport\\_280912.pdf](http://cdn.hm-treasury.gov.uk/wheatley_review_libor_finalreport_280912.pdf).

Accordingly, the Task Force is of the view that a Benchmark should as a matter of priority be anchored by observable transactions entered into at arm's length between buyers and sellers in order for it to function as a credible indicator of prices, rates or index values. The discipline of observable transactions, providing they are of a bona-fide nature, should give a level of confidence that the price discovery system is accurate.<sup>32</sup> Moreover, a predominant reliance by an Administrator on non-transactional data such as expert judgements (e.g., extrapolating values from related transactions) may increase the potential for manipulation or for an "outlier" trade to corrupt the Benchmark values.<sup>33</sup>

This does not mean that non-transactional information is inappropriate. The hierarchies established by the *IOSCO Principles for Oil Price Reporting Agencies*, the *Wheatley Review of LIBOR: final report*, and the CFTC's *Barclays* and *UBS Orders* allow consideration of other types of information such as bids and offers and adjustments based on expert judgement (e.g., extrapolation from prior or related transactions, adjustments for factors that might influence the quality of data such as, but not limited to, market events or credit quality).<sup>34</sup>

However, at some point, an insufficient level of actual transaction data raises concerns as to whether the Benchmark continues to reflect prices or rates that have been formed by the competitive forces of supply and demand.

Where the underlying market has diminished, it may be necessary to re-evaluate the Benchmark. For example, its definition may need to be reviewed, the range of trades in which it is anchored may need to be reassessed or consideration given to whether a better alternative exists. These issues are examined in more detail in the next section.

The ability to use non-transactional data such as bids and offers may be an accommodation that allows a Benchmark to be produced during periods when daily transactions may not be available.

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<sup>32</sup> The existence of observable market transactions provides visible evidence of market metrics and commercial practices in the referenced market, which not only fosters confidence by Market Participants but also facilitates surveillance by relevant authorities.

<sup>33</sup> See discussion above on conflicts of interest. For example, although attempts at manipulating LIBOR predated the decline in unsecured inter bank borrowing, the decline in this market created other conflicts of interest for banks, and submissions to LIBOR became increasingly reliant on expert judgement rather than transactions, which created an incentive for banks to manipulate the submissions that compile the rate. *The Wheatley Review of LIBOR Initial Discussion paper* at p.9.

<sup>34</sup> FR06/12 *Principles for Oil Price Reporting Agencies*, Report of the Board of IOSCO (05 Oct 2012), principle 2.2(b) at p. 13 available at <http://iosco.org/library/pubdocs/pdf/IOSCOPD391.pdf>, *The Wheatley Review of LIBOR: final report*, Box 4B: LIBOR SUBMISSION guidelines, p.28 available at: [http://cdn.hm-treasury.gov.uk/wheatley\\_review\\_libor\\_finalreport\\_280912.pdf](http://cdn.hm-treasury.gov.uk/wheatley_review_libor_finalreport_280912.pdf), *CFTC Order in the matter of Barclays PLC* (June 27, 2012), "Determination of Submissions Factors 1-3 paragraph, pp. 32-33 available at: <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfbarclaysorder062712.pdf>

The aforementioned reports and orders anticipate the use of non-transactional data as an adjunct (i.e., as a supplement) to transactions.<sup>35</sup>

Whether the extent of a Benchmark's reliance on non-transactional information is appropriate requires an analysis of the *structure* of the underlying market in question and the identification of factors that might be influencing liquidity. The factors discussed in Chapter 2, such as size, liquidity, market concentration and market dynamics, will be relevant to this inquiry.<sup>36</sup>

For example, a low liquidity market might indicate the commercial realities of that market or seasonal fluctuations in a market which otherwise has sufficient commercial activity. Low liquidity markets may also be due to certain markets (e.g., developing markets) being at an earlier stage of development. Alternatively, a market may in fact be diminishing due to slowly occurring structural evolution or, such as LIBOR, because of sudden shocks affecting the ability of the underlying market to function normally. Given this, the size and volume of current transactions in relation to historic metrics should also be considered.

If one concludes that a low liquidity market reflects normal commercial usage and functions as an accurate price discovery market, then verifiable firm (i.e., executable) bids and offers might be credible *estimates* of supply and demand and used as adjunct data in compiling a Benchmark.<sup>37</sup> It will be critical, however, for adequate governance requirements to be in place to ensure the *bona-fide* status of any such adjunct data (e.g., any bids or offers considered should in fact be required to be executed). It also is important in such cases that the transparency framework allows users to understand the potential limitations of a Benchmark operating in an illiquid and imperfect market.

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<sup>35</sup> See FR06/12 *Principles for Oil Price Reporting Agencies*, Report of the Board of IOSCO (October 5, 2012) A PRA should use its market data, giving priority in the following order, where consistent with the PRA's approach to ensuring the quality and integrity of a price assessment: (1) concluded and reported transactions; (2) bids and offers; (3) other market information. If concluded transactions are not given priority, the reasons should be disclosed);

*The Wheatley Review of LIBOR: final report*, Box 4B: LIBOR SUBMISSION guidelines, p.28 -- "The greatest emphasis should be placed on transactions undertaken by the contributing bank."; and

*CFTC Order in the matter of Barclays PLC* "Determination of Submissions" p. 32 (June 27, 2012) -- "Barclays' transactions shall be given the greatest weight in determining submissions, subject to applying appropriate Adjustments and Considerations in order to reflect the market measured by the Benchmark Interest Rate)

<sup>36</sup> Considerations addressing physical commodity markets are discussed in FR07/11 *Principles for the Regulation and Supervision of Commodity Derivatives Markets*, Final Report, Technical Committee of the International Organization of Securities Commissions (September 2011) ("characteristics of underlying physical markets") available at: <http://iosco.org/library/pubdocs/pdf/IOSCOPD358.pdf>

<sup>37</sup> However, a Benchmark based on a low level of transactions and informed by judgements might not necessarily be an appropriate reference for the settlement of a commodity derivatives contract. See FR06/12 *Principles for Oil Price Reporting Agencies*, Report of the Board of IOSCO (05 Oct 2012), p. 5 available at <http://iosco.org/library/pubdocs/pdf/IOSCOPD391.pdf>

All of these determinations have a temporal element; they cannot be a one-off analysis based on static data. As markets evolve, the underlying market for a particular Benchmark could be diminished (e.g., the submissions could become heavily reliant on non-transactional data, or indeed the use of a particular Benchmark may be marginal). In those circumstances the reliance on such a “market” to underpin a Benchmark should be questioned. Accordingly, the duration (and expected duration) of reliance upon non-transaction data also needs to be considered.

Finally, conclusions regarding the robustness of a market should also take into account the impact that the Benchmark has on the economy. For example, one might conclude that a relatively small and illiquid market, where transactions are widely used as a basis for determining rates in financial instruments having a nominal value that is several multiples of the value of the underlying market transactions, is *insufficiently* robust to serve as the basis for a Benchmark.<sup>38</sup>

## CONSULTATION QUESTIONS

- 30. Do you agree that a Benchmark should be anchored by observable transactions entered into at arm’s length between buyers and sellers in order for it to function as a credible indicator of prices, rates or index values? How should Benchmarks that are otherwise anchored by bona-fide transactions deal with periods of illiquidity due to market stress or long-term disruption?***
- 31. Are there specific Benchmarks for which you consider that observable transactional data is not an appropriate criterion or the sole criterion? If so, please provide a description of such Benchmarks and what value you think such Benchmarks provide?***
- 32. What do you consider the limitations or value in Benchmarks referencing asset classes and underlying interests where there is limited liquidity? Please describe the uses and value of such Benchmarks in the financial markets.***
- 33. Do you agree that the greatest weight should be given to transactions in the construction of a Benchmark and that non-transactional information should be used as an adjunct (e.g., as a supplement) to transactions?***
- 34. What factors and how often should Administrators (or others) consider in determining whether the market for a current Benchmark’s underlying interest is no longer sufficiently robust? What effective methods of review could aid in determining the insufficiency of trading activity within the market for a Benchmark’s underlying interest?***

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<sup>38</sup> See generally *The Wheatley Review of LIBOR: initial discussion paper* (August 2012) ¶2.15, p. 12 available at: [http://www.hm-treasury.gov.uk/d/condoc\\_wheatley\\_review.pdf](http://www.hm-treasury.gov.uk/d/condoc_wheatley_review.pdf)

## B. Transition Issues

In some cases, it may be determined (potentially due to concerns described in previous sections) that a financial Benchmark is no longer credible and has no method of revision to assure its credibility in the future. In cases such as this, it may be advisable to limit or cease production of the Benchmark. If the purpose of the Benchmark is of on-going importance to the marketplace, a reliable replacement may have to be identified or created and, after a period of transition, used in place of the original Benchmark.

As with any revision to the market system, a market transition between Benchmarks would necessarily have to be transparent, smooth, and implemented in such a way as to minimise impact to all classes of Market Participants. As noted in the Wheatley Review of LIBOR,<sup>39</sup> preconditions for a Benchmark transition include: 1) a current Benchmark beyond repair, 2) a viable market alternative and 3) a method for smooth transition between the two. Disruptions during transitions of this type can be mitigated through prophylactic measures taken by an Administrator, including steps such as developing a Benchmark “living will.” Precautions of this nature may focus on both temporary and permanent concerns with the credibility, and accuracy, of a market Benchmark.

Temporary concerns with the accuracy of a Benchmark often arise during periods of market stress, where traditionally relied upon data may not be available. In the event of market stress, contingency plans for data collection and use should be clearly defined by the Administrator.<sup>40</sup> Similarly, consideration of a contingency plan is advisable for contracts and other market uses referencing a given Benchmark. The legal documentation relied upon by Market Participants engaged in transactions referencing Benchmarks should also incorporate a contingency plan in the event of periods of market stress.

More serious are concerns with a Benchmark that cannot be adequately addressed within the existing framework. Previous sections of this report have highlighted characteristics of Benchmarks which may signal minor or major weaknesses in governance and Methodology. If these weaknesses are significant enough, it may require the discontinuation of some or all uses of the Benchmark. In these cases, the benefits of an already established “living will” by the Administrator are clearest; with one, the market disruptions associated with a Benchmark transition will likely be reduced, especially for those Benchmarks widely used and referenced.

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<sup>39</sup> *The Wheatley Review of LIBOR: final report.* The discussion of LIBOR alternatives in the Review highlights international cooperation: “International authorities should take forward a discussion of existing applications of inter-bank rates such as LIBOR, the merits of alternative reference rates for certain applications, and the role – if any – that the authorities should play in facilitating or encouraging transition to these reference rates.”

<sup>40</sup> As noted in the recent GFMA *Principles for Financial Benchmarks*: “A contingency plan for conducting the Benchmark price assessment in the event of absence of data from the normal market data sources, market disruptions, failure of critical infrastructure, or other factors. The contingency plan should be operationally distinct from the normal determination process.”

Considerations to be incorporated within a “living will” may be quite broad. It may extend from Methodology changes such as modification of the number and frequency of submissions and reductions in the number and frequency of published rates to more wholesale changes such as plans for transition to a new Administrator or the cessation of all Benchmark activity by an Administrator.

In addition, there are likely to be broader considerations related to a partial, or full, Benchmark transition (dependent on the extent of concerns and the rationale behind the need for the transition) to be addressed by a larger group of stakeholders, including but not restricted to the Administrator, users, Submitters and relevant regulatory authorities. These considerations might include:

- Altered regulatory structure for Benchmark oversight.
- Altered jurisdiction in civil and criminal enforcement authority over the submission, publication and review of the Benchmark.
- The need for Benchmark “consumers” to gain sufficient knowledge of a revised market structure to:
  - Effectively make use of the substitute rate for ongoing market needs; and
  - Efficiently revise current contracts referencing the prior Benchmark with minimal disruption to the contract participants.

The Task Force believes that any Benchmark being considered as a substitute should also be credible. In addition, a replacement Benchmark may need to be compatible with the Benchmark that it replaces. For example, the needs of the stakeholders affected by the transition should be considered. It is likely that, depending on the Benchmark use, one or more of these needs or considerations may be more important than others. They might include:

- Considerations of balance sheet demands.
- Considerations of instrument risks including counterparty, liquidity, and market risk.
- Considerations of the level of use by standardised products and derivatives, which is instrumental in determining the legal complexities of any transition. In most cases, OTC derivatives refer to ISDA master agreements; and a transition could be aided by the adoption of an industry protocol. It is important to note that protocols are entered into voluntarily. When the Benchmark is referenced in other financial instruments or derivatives, which are not subject to such protocols, any changes in definition would have to be agreed bilaterally amongst all participants. This raises the prospect of lengthy and large scale legal challenges to any changes in contractual terms.
- Considerations surrounding the level of use by standardised products within the commercial and retail space (such as loans, mortgages, and other fixed income investments) will be informative in determining the extent of transitional impact for the

wider financial market. As with OTC derivatives, a transition could be aided by the adoption of a relevant industry protocol.

- Considerations of hedging abilities of the related securities and/or derivatives for relevant Market Participants, often dependent on the extent and complexity of derivatives exposure to the reference rate, including:
  - Relative price movement with the former Benchmark;
  - Relative volatility of the Benchmark; and
  - Relative life of the alternate Benchmark, with associated historical data.
- Considerations of replacement legal, regulatory and accounting structures.
- Consideration of legacy trades, and how they may be affected by a revision to, or full substitution of, the current Benchmark process.

As can be seen from this list, a market transition, especially from a rate used by retail, institutional and corporate entities across multiple jurisdictions, assumes the explicit or implicit cooperation of a large number of public and private parties. Further, legal and regulatory structures placed on the current and proposed Benchmark may face similar revisions. Not surprisingly, transitions of this magnitude are rare. To finish this section, we summarize two historical examples that may provide guidance as to general transition principles.

#### CONSULTATION QUESTIONS

- 35. What precautions by Benchmark Administrators, Submitters, and users can aid Benchmark resiliency during periods of market stress, mitigating the potential need for market transition?***
- 36. What elements of a Benchmark “living will,” drafted by a Benchmark Administrator, should be prioritised?***
- 37. By what process, and in consultation with what bodies, should alternatives be determined for Benchmark replacement?***
- 38. What characteristics should be considered when determining an appropriate alternate Benchmark? (Examples below) Should any of these factors be prioritised?***
  - *Level and Type of Market Activity*
  - *Diversity/Number of Benchmark Submitters*
  - *Length of historical price series for the Benchmark alternative*
  - *Benchmark Methodology*
  - *Existing regulatory oversight*
  - *Existing enforcement authority*
  - *Volume, tenors and contract structure of the legacy trades*

- 39. What conditions are necessary to ensure a smooth transition between market Benchmarks?*
- 40. What considerations should be made for legacy contracts that reference a Benchmark in transition? To what extent does a substantive legacy book preclude transition away from a Benchmark? What provisions can be included in [new and existing] contract specifications that would mitigate concerns if and when a Benchmark transitions occurs?*
- 41. How should a timeframe be determined for market movement between a Benchmark and its replacement? What considerations should be made for:*
- Altered regulatory oversight?*
  - Infrastructure development/modification?*
  - Revisions to currently established contracts referencing the previous Benchmark?*
  - Revisions to the Benchmark Administrator?*
  - Risk of contract frustration*

### Exhibit 3 Historical Examples of Market Transition

#### Historical Examples

In late 2005, the New York Mercantile Exchange NYMEX introduced the RBOB gasoline futures contract, a proposed replacement for the then commonly used Reformulated gasoline contract (RFG). Over the previous few years, environmental concerns and resulting legislation had rendered the reformulated blend unusable in the retail market. As a result of these physical market requirements, the former gasoline Benchmark was no longer sufficiently representative of underlying supply and demand; this consideration led to the energy Benchmark transition. In order to mitigate disruptions to activity within the derivatives market, NYMEX continued a parallel listing of the two contracts for a period through January 2007, allowing for a gradual movement of portfolio exposure. It also allowed for similar transitions for related derivatives such as the Goldman Sachs Commodity Index, which included reformulated gasoline in its basket. *Even with this planned transition period, and significant movement in the physical market to RBOB use, open interest for the introduced RBOB contract did not exceed RFG until 10 months after introduction, pointing to a strong inertial force in Benchmark use.*

The second example focuses on a historic Benchmark transition within the FX market, during and after the period of introduction of the Euro at the end of the 1990's. The decision to phase out currencies and their related interest rate Benchmarks was first and foremost a result of the introduction of the new currency, and was not in any way due to methodological concerns. The success of a market transition such as this, which included stakeholders from all regions of the globe and all forms of market participation, demonstrates the feasibility of international market movement from universally used rates.

Challenges were manifold, many specific to currencies such as physical note transition. However, this movement was achieved after a long process of deliberation and planning, with conversion between Benchmarks determined by appropriate regulatory bodies (here central banks), by the parallel use of both Benchmarks for a period of time, like in the case of the previous example, and a sufficient period for legal, technical and regulatory compliance with new obligations for existing exchange and OTC contracts. It was also facilitated by the introduction of primary legislation across the Euro Area, reducing the scope for legal challenge upon transition.

Benchmark transition also prioritised more easily fungible financial instruments, with non-physical use of the currency introduced three years prior to physical bill distribution. This may highlight the benefit of full transition divided over multiple periods, with complex financial instruments addressed only after increased market comfort. The introduction of the Euro also highlighted the potential need for strong regulatory involvement and support, with regulatory bodies such as the ECB during the early days of the currency openly noting its willingness to defend the new currency.

## ANNEX A

### GLOSSARY OF KEY TERMS

**Arm's-length Transaction:** A transaction between two parties that is concluded on terms that are not influenced by a conflict of interest (i.e., most often arising from a relationship such as a transaction between affiliates).

**Audit Trail:** For the purposes of the Benchmark-setting process, the documentation and retention of all relevant data, submissions, other information, judgements (including the rationale for any exclusions of data), analyses, identities of Submitters used in the benchmark-setting process for an appropriate period.

**Benchmark:** The Benchmarks in scope of this report are prices, rates, indices or figures that are:

- a) Made available to users, whether free of charge or on payment;
- b) Calculated periodically, entirely or partially by the application of a formula or another method of calculation to, or an assessment of the value of, one or more underlying assets, prices or certain other data, including estimated prices, rates or other values, or surveys; and
- c) Used for reference for purposes that include one or more of the following:
  - o determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments;
  - o determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument; and/or
  - o measuring the performance of a financial instrument.

**Benchmark Administration:** Includes all stages and processes involved in the production and dissemination of a Benchmark, including:

- a) Collecting, analysing and/or processing information or expressions of opinion for the purposes of the determination of a Benchmark;
- b) Determining a Benchmark through the application of a formula or another method of calculating the information or expressions of opinions provided for that purpose; and
- c) Dissemination to users, including any review, adjustment and modification to this process.

**Administrator:** An organisation or legal person which controls the creation and operation of the Benchmark administration process, whether or not it owns the intellectual property relating to the Benchmark. In particular, it has responsibility for:

- a) The calculation of the Benchmark;
- b) Determining and applying the Benchmark Methodology; and
- c) Disseminating the Benchmark.

**Submitter:** A legal person providing information required in connection with the determination of a Benchmark.

**Calculation Agent:** A legal entity with delegated responsibility for determining a Benchmark through the application of a formula or other method of calculating the information or expressions of opinions provided for that purpose, in accordance with the Methodology set out by the Administrator.

**Benchmark Publisher:** A legal entity publishing the Benchmark values, which includes making available such values to users, on the internet or by any other means, whether free of charge or not.

**Market Authority:** A Regulatory Authority, a Self-Regulatory Organisation, a regulated market or a clearing organisation (as the context requires).

**Market Participants:** Legal entities involved in the production, structuring, use or trading of financial contracts or financial instruments used to inform the Benchmark, or which reference the Benchmark.

**Methodology:** The written rules and procedures according to which information is collected and the Benchmark is determined.

**Panel:** Subset of Market Participants who are Benchmark Submitters.

**Regulatory Authority:** A governmental or statutory body (not being a Self-Regulatory Organisation) with responsibility for securities and/or commodities and futures regulation.

**Self-Regulatory Organisation or “SRO”:** An organisation that has been given the power or responsibility to regulate itself, whose rules are subject to meaningful sanctions regarding any part of the securities market or industry. This authority may be derived from a statutory delegation of power to a non-governmental entity or through a contract between an SRO and its members as is authorized or recognized by the governmental regulator. See *IOSCO Methodology*, Principle 9, p.50. <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD359.pdf>

## ANNEX B

### HIGH LEVEL REVIEW OF SELECTED BENCHMARKS

*This Annex provides examples of Benchmarks in the scope of this report. It sets out common themes and observations from the Task Force's review of the Methodology, transparency and governance arrangements of a sample of Benchmarks.*

#### **Categories of Benchmarks considered**

An illustrative list of major financial markets or asset classes referenced by Benchmarks is set out below. Please note that the Task Force did not consider Benchmarks fully administered by Governments or public bodies (for example measures of inflation such as the CPI). However, Benchmarks where the Government or public bodies acts as Calculation Agent are within scope.

- Interbank Borrowing markets, which are referenced by rates such as LIBOR, TIBOR, EURIBOR, CIBOR, BBSW, and are usually based on banks' estimates of borrowing rates.
- Overnight Lending and Repo markets, which are represented by overnight rates (EONIA, Federal Funds Rate, SONIA) and secured overnight rates (RONIA, CORRA).
- Swap markets, referenced in rates such as the Overnight Index Swap (OIS) and ISDAFIX.
- Equity markets, which cover listed equity securities and bespoke baskets of equities.
- Credit markets, which cover, inter-alia, sovereign bonds, corporate bonds and CDS.
- Commodities markets, which can cover specific commodity spot or futures prices as well as baskets of commodities.
- Energy markets.
- Currency markets, which can be represented by specific or aggregate Benchmarks.
- Alternative investments performance indices, such as hedge fund indices.

#### **Common themes and observations**

The Task Force's review of a sample of benchmarks drew out a number of common themes in respect of their Methodology, transparency and governance arrangements. For ease of reference, the summary of observations provided in this Annex corresponds to relevant areas of discussion in Chapter 2.

##### **A. Methodology**

- (Input types) The majority of Benchmark methodologies require the use of transactions or bids and offers as inputs. However, a substantial number use surveys or estimated rates

or prices as inputs. Additionally, some Benchmarks reviewed used an auction price system to set their Benchmark.

- (Voluntary submission) Submission of inputs is generally voluntary; for example, both the survey-based Benchmarks reviewed, and some transaction based Benchmarks, did not explicitly mandate submission of inputs for each “fixing” or iteration of the Benchmark from submitting entities.
- (Administrator discretion) Discretion may be exercised by Administrators over the inputs, for example, in the weighting and re-balancing of the components used in indices.
- (Continuity) There have been some examples of submitting entities withdrawing from Panels.
- (Composition of submitting Panels) Some Benchmarks draw inputs from a Panel of Submitters (for example, a subset of banks or broker-dealers). The Task Force found there was wide variation in the size of the Panels used in survey-based, auction or transaction-based Benchmarks.
- Panels typically consisted of active dealers in the asset concerned, located in the particular jurisdiction concerned. Criteria for inclusion or exclusion from a Panel were not always clear. Where examples of criteria were given, factors included credit standing, market trading volume and track record of providing submissions.
- (Verification of submissions) Some Benchmarks incorporate a manual review to assess the credibility of inputs, or include a requirement for the Calculation Agent to check whether individual submissions appear to be representative of the trend. Others provide a reference point to help submitting entities frame their submissions.
- (The use of third parties) Third parties may be used to collect inputs, act as Calculation Agents or disseminate fixings.

## **B. Transparency**

- (Transparency of Benchmark methodologies) Many of the Benchmarks reviewed provided some description of their Methodology, however there was considerable variation in the level of detail provided.
- (Transparency of contingency provisions) Similarly, the level of transparency with respect to contingency provisions varied considerably, as did explanations of what could trigger contingency provisions, whether the use of contingency provisions would be disclosed, and who would be made aware.
- (Transparency over changes to Methodology) Administrators of a number of the Benchmarks reviewed by the Task Force indicated revisions to the Methodology, usually online. However, it was not always clear how the need for such revisions was determined

- for example, some Benchmarks are regularly reviewed with the explicit aim of reflecting market developments, whilst Administrators of other Benchmarks did not set out an explicit policy. Arrangements for consultation on revisions, and the extent to which feedback was accommodated were not always clearly set out.

### **C. Governance**

- (Ownership and control of Administrators) Most of the surveyed Benchmarks were either compiled by trade associations or private entities, which are generally unregulated entities. A small number of Benchmarks are compiled by public organizations.
- (Oversight committee) For a small number of the Benchmarks reviewed, an oversight committee (or equivalent body) oversees the production of the Benchmark, and elements of the Methodology (for example on rules for selecting inputs), operating independently of the Administrator, and included some external representation.

### **D. Accountability**

- (Audit reviews) Some, but not all, Administrators are subject to an external audit of their output and processes (or will initiate an external audit on request).

### **E. Roles and responsibilities of the Administrators**

- (Control framework for Administrators) The Task Force found that for the Benchmarks reviewed, the detail of governance arrangements and measures described in the consultation report as a “control framework for Administrators” is often unclear or not publicly disclosed.
- (Code of conduct for Submitters) the review found that some Benchmarks include a code of conduct for Submitters, which addresses some of the issues identified in the Consultation Report.

## ANNEX C

### CONSULTATION QUESTIONS

#### Chapter 1

##### Scope

1. *Do you agree with the scope of the report and intended audience? Are there other Benchmarks or stakeholders that have idiosyncrasies that should place them outside of the scope of the report? Please describe each Benchmark or stakeholder and the idiosyncrasies that you identify and the reasons why in your view the Benchmark or stakeholder should be placed outside of the scope of the report.*

#### Chapter 2

##### Benchmark design

2. *Do you agree that the design of a Benchmark should clearly reflect the key characteristics of the underlying interest it seeks to measure?*

##### Quality and integrity of Methodologies

3. *What measures should Administrators take to ensure the integrity of information used in Benchmarking-setting and that the data is bona fide? Please highlight any additional measures required where Benchmarks are survey based. Please also comment on each of the factors identified in the discussion on the 'vulnerability of data inputs' such as voluntary submission, discretion exercised by Administrators. Are these measures adequately reflected in the discussion of roles and responsibilities of the Administrator discussed in section E?*
4. *What measures should Submitters implement to ensure the integrity of information provided to Administrators? Are these measures adequately reflected in the discussion of a code of conduct for Submitters discussed in section E? In particular, should Submitters submit all input data and not a selection of such data so as to maximise the representation of the underlying market? Please comment on any practical issues that compliance with such an approach may give rise to.*

##### Transparency of Benchmark methodologies

5. *What level of granularity with regard to the transparency of Methodologies would enable users to assess the credibility, representativeness, relevance and suitability of a Benchmark on an on-going basis and its limitations with respect to their intended use? Relevant factors could include; criteria and procedures used to develop the Methodology, type of data used, how data is collected, relative weighting of data used, how and when judgement is used, contingency measures (e.g., methods when transaction data is unavailable etc), publication of information supporting each Benchmark determination, etc. Please provide examples where you consider there are currently significant gaps in the provision of this information.*

Transparency of contingency provisions for episodes of market disruption, illiquidity or other issues

6. *What steps should an Administrator take to disclose to Market Participants and other stakeholders the contingency measures it intends to use in conditions of market disruption, illiquidity or other stresses?*

Transparency over changes to the Methodology

7. *What steps should an Administrator take to notify Market Participants of material changes to a Benchmark Methodology (including to Benchmark components) and to take their feedback into account?*
8. *How often should the Administrator review the design and definition of the Benchmark to ensure that it remains representative?*

Governance

9. *The Consultation Report discusses a number of potential conflicts of interest that may arise at the level of the Submitters, between Submitters at different entities, and between Submitters, Administrators and other third parties. Are there other types of conflicts of interest that have not been mentioned that you consider may arise? If so, how best should these conflicts of interest be addressed? Are the measures discussed in the Consultation Report sufficient to address potential conflicts of interests at the level of the Submitters, between Submitters at different entities, and between Submitters, Administrators and other third parties?*
10. *Do you agree that the Administrator should establish an oversight committee or other body to provide independent scrutiny of all relevant activities and management of conflicts of interest? Please comment if and why any different approaches might be appropriate for different kinds of Benchmarks. What is the minimum level of independent representation this committee or body should include?*

## Accountability

11. *Should the Submitters establish accountability procedures to assess their compliance with operational standards and scrutiny of Benchmark submissions?*
12. *Are the measures discussed in the Consultation Report (e.g. Audit Trail, external audits and requirement for regulatory cooperation) sufficient to ensure the accountability of Submitters? Should additional mechanisms be considered?*
13. *How frequently should Submitters be subject to audits? Should these be internal or external audits?*

## Accountability of the Administrator

14. *Are the measures discussed in the Consultation Report (e.g., complaints process, Audit Trail, external audits and requirement for regulatory cooperation) sufficient to ensure accountability of the Administrator? Should additional mechanisms be considered?*
15. *If recommended, how frequently should Administrators be subject to audits? Should these be internal or external audits?*
16. *Is public self-certification of compliance with industry standards or an industry code another useful measure to support accountability? This approach might also contemplate explanation of why compliance may not have occurred. If so, what self-certification requirements would make this approach most reliable and useful to support market integrity.*

## Code of conduct for Submitters

17. *The Consultation Report discusses elements of a code of conduct for Submitters. Are the measures discussed (e.g., adequate policies to verify submissions, record management policies that allow the Submitter to evidence how a particular submission was given, etc.) sufficient to address potential conflicts of interest identified or do you believe that other control framework principles should be added?*
18. *What would be the key differences in the code of conduct for Benchmarks based on different input types, for example transactions, committed quotes and/or expert judgement?*

## Chapter 3

### Approaches to enhanced oversight

19. *What are the advantages and disadvantages of making Benchmark submissions a regulated activity?*
20. *What are the advantages and disadvantages of making Benchmark Administration a regulated activity?*
21. *Do you agree with the factors identified for drawing regulatory distinctions? What other factors should be considered in determining the appropriate degree of oversight of Benchmark activities (discussed in Chapter 3)? Please provide specific recommendations as to how the distinctions discussed in Chapter 3 should inform oversight mechanisms.*
22. *What distinctions, if any, should be made with regard to Benchmarks created by third parties and those created by regulated exchanges?*
23. *Assuming that some form of enhanced regulatory oversight will be applied to an asset class Benchmark, should such enhanced oversight be applied to the Submitters of data as well as the Administrator?*
24. *What are the considerations that should be taken into account if the Submitters to a Benchmark operate in an otherwise unregulated market (e.g., physical oil, gold or agricultural commodity markets) and are not otherwise under any obligation to submit data to an Administrator?*
25. *Do you believe that a code of conduct, either on its own or in conjunction with other measures outlined within the report, would provide sufficient oversight to mitigate the risks that have been identified in Chapter 2? What measures should be established in conjunction with a code of conduct? For which Benchmarks is this approach suitable?*
26. *What other measures outlined in the report, if any, should apply in addition to a code of conduct? If you believe a code of conduct, either on its own or in conjunction with other measures outlined within the report, would provide sufficient oversight to mitigate the risks that have been identified in Chapter 2, what type of code of conduct should apply (e.g., a voluntary code of conduct, an industry code of conduct submitted to and approved by the relevant Regulatory Authority, a code of conduct developed by IOSCO, etc.)?*
27. *Do you believe that the creation of a Self-Regulatory Organisation (.e.g., one that exercises delegated governmental powers) and itself subject to governmental oversight, whether or not in conjunction with industry codes is a viable alternative for sufficient oversight and enforcement to mitigate the risks that have been identified in Chapter 2? For which Benchmarks is this approach suitable? What if any complementary arrangements might be necessary, such as new statutory obligations or offences for Administrators and/or Submitters?*

28. *Do you believe that, for some Benchmarks, reliance upon the power of securities and derivatives regulators to evaluate products that reference a Benchmark or exercise their market abuse or false reporting powers creates sufficient incentives for the Administrator to ensure sure that Submitters comply with a code of conduct?*
29. *Do you believe that users of a Benchmark, specifically, the users who are regulated or under the supervision of a national competent authority should have a role in enhancing the quality of Benchmarks? Which form should this role take: on a voluntary basis (e.g. the user being issued a statement that will only use Benchmarks that follow IOSCO principles), or on a compulsory basis (e.g., the competent authority could request that users who are registered under their jurisdiction should only use Benchmarks that fulfil IOSCO principles)?*

## **Chapter 4**

### Data sufficiency

30. *Do you agree that a Benchmark should be anchored by observable transactions entered into at arm's length between buyers and sellers in order for it to function as a credible indicator of prices, rates or index values? How should Benchmarks that are otherwise anchored by bona-fide transactions deal with periods of illiquidity due to market stress or long-term disruption?*
31. *Are there specific Benchmarks for which you consider that observable transactional data is not an appropriate criterion or the sole criterion? If so, please provide a description of such Benchmarks and what value you think such Benchmarks provide?*
32. *What do you consider the limitations or value in Benchmarks referencing asset classes and underlying interests where there is limited liquidity? Please describe the uses and value of such Benchmarks in the financial markets.*
33. *Do you agree that the greatest weight should be given to transactions in the construction of a Benchmark and that non-transactional information should be used as an adjunct (e.r., as a supplement) to transactions?*
34. *What factors and how often should Administrators (or others) consider in determining whether the market for a current Benchmark's underlying interest is no longer sufficiently robust? What effective methods of review could aid in determining the insufficiency of trading activity within the market for a Benchmark's underlying interest?*

## Transition

35. *What precautions by Benchmark Administrators, Submitters, and users can aid Benchmark resiliency during periods of market stress, mitigating the potential need for market transition?*
36. *What elements of a Benchmark “living will,” drafted by a Benchmark Administrator, should be prioritised?*
37. *By what process, and in consultation with what bodies, should alternatives be determined for Benchmark replacement?*
38. *What characteristics should be considered when determining an appropriate alternate Benchmark? (Examples below) Should any of these factors be prioritised?*
  - *Level and Type of Market Activity*
  - *Diversity/Number of Benchmark Submitters*
  - *Length of historical price series for the Benchmark alternative*
  - *Benchmark Methodology*
  - *Existing regulatory oversight*
  - *Existing enforcement authority*
  - *Volume, tenors and contract structure of the legacy trades*
39. *What conditions are necessary to ensure a smooth transition between market Benchmarks?*
40. *What considerations should be made for legacy contracts which reference a Benchmark in transition? To what extent does a substantive legacy book preclude transition away from a Benchmark? What provisions can be included in [new and existing] contract specifications which would mitigate concerns if and when a Benchmark transitions occurs?*
41. *How should a timeframe be determined for market movement between a Benchmark and its replacement? What considerations should be made for:*
  - *Altered regulatory oversight?*
  - *Infrastructure development/modification?*
  - *Revisions to currently established contracts referencing the previous Benchmark?*
  - *Revisions to the Benchmark Administrator?*
  - *Risk to contract frustration*

## ANNEX D

### BENCHMARK SETTING PROCESSES

The determination of a Benchmark typically follows various stages and involves many different actors which are described below.

Benchmark setting starts with the submission of information to an Administrator. The information can consist typically of trade data, committed or uncommitted quotes, estimates or survey data (please refer to Chapter 2 for a full discussion). The type and coverage of inputs is governed by the Benchmark Methodology

The second stage occurs at the Benchmark Administrator (or third party contracted by the Administrator). This involves the collection of information from Submitters, the analysis and the determination of the Benchmark according the Benchmark Methodology. A formula or other calculation Methodology is then applied to the information submitted for the Benchmark determination. A third party (Calculation Agent) is sometimes used for part or all of this process.

The last stage involves disseminating the Benchmark to users, which can be done either by the Administrator directly or through a Benchmark Publisher. The Benchmarks can then be used in a variety of contracts and securities.

The Benchmark administration, calculation and publication activities may be performed by distinct legal entities, or grouped together such that one entity performs more than one activity.

