4th floor
Ropemaker Place
25 Ropemaker Street
London
EC2Y 9LY
United Kingdom

tel +44 20 7260 2000
fax +44 20 7260 2001
www.markit.com

11 February 2013

Mr. Alp Eroglu
International Organization of Securities Commissions (IOSCO)
Calle Oquendo 12
28006 Madrid
Spain

Submitted via: Benchmarksconsultationresponses@IOSCO.org

Re: **Financial Benchmarks**

Dear Sir/Madam:

Markit[1] is pleased to submit the following comments to the International Organization of Securities Commissions ("***IOSCO***") in response to its Consultation Report on *Financial Benchmarks* (the "***Consultation Report***" or the "***CR***").[2]

Introduction

Markit is a provider of financial information services to the global financial markets, offering independent data, valuations, risk analytics, and related services across regions, asset classes and financial instruments. Our products and services are used by a large number of market participants to reduce risk, increase transparency, and improve the operational efficiency in their financial markets activities. Markit is an index provider for various index families across regions and asset classes, including bonds, credit default swaps and loans. We administer and publish the composition of all Markit indices and also calculate the levels of the Markit iBoxx suite of bond indices and other third-party indices.

Markit has been actively and constructively engaged in the discussion regarding regulatory reform of the financial markets. We regularly provide regulatory authorities with our insights on current market practice, for example in relation to valuation methodologies, the provision of scenario analysis, and the use of reliable and secure means to provide daily marks. We have also advised regulatory bodies on potential approaches to enable the timely and cost-effective implementation of newly established requirements, for example through the use of multi-layered phase-in or by providing participants with a choice of means for satisfying regulatory requirements. Over the last two years, we have submitted over 40 comment letters to regulatory authorities around the world and participated in numerous roundtables. In the context of the discussion regarding the regulation of benchmarks and indices we have submitted responses to *The Wheatley Review,*[3] the FSA's *Consultation Paper on the regulation and supervision of benchmarks*,[4] as well as to the European Commission's *Consultation Document on the Regulation of Indices*.[5]

Executive Summary

---

[1]Markit is a financial information services company with over 2,900 employees in Europe, North America, and Asia Pacific. The company provides independent data and valuations for financial products across all asset classes in order to reduce risk and improve operational efficiency. Please see www.markit.com for additional information.
[2] IOSCO Consultation Report: Financial Benchmarks. January 2013.
[3] The Wheatley Review of LIBOR: initial discussion paper. Markit letter to the HMT regarding the initial discussion paper (07 September 2012) *available* here.
[4] FSA Consultation Paper: The regulation and supervision of benchmarks. Markit letter to the FSA regarding consultation paper (16 January 2013) *available* here.
[5] Consultation Document on the Regulation of Indices: A Possible Framework for the Regulation of the Production and use of Indices serving as Benchmarks in Financial and other Contracts. Markit letter to the European Commission regarding the consultation document (29 November 2012) *available* here.

Benchmarks ("***BMs***") and indices have a long established history of providing transparency and liquidity to the financial markets, including for the less liquid market segments. These benefits have not only been recognized by market participants, but also by various regulatory authorities that have approached index providers over the years with a desire to increase the transparency, liquidity, and tradability of their local markets by creating indices for them. IOSCO should note the benefits that indices and benchmarks provide to market participants and their contribution to making financial markets more efficient and liquid, fostering a sound basis to provide financing that drives economic growth.

The Libor-related events have put "benchmarks" into the spotlight and caused the marketplace and regulators to re-examine these instruments. We agree that the underlying facts of any manipulation of Libor or other benchmarks should be investigated and failings of the existing mechanisms identified and addressed. However, given the multitude of products that could potentially be regarded as benchmarks, any regulatory approach should be proportionate to enable a timely implementation for the most relevant benchmarks while avoiding unintended consequences for the broader market. Specifically, we believe there should be a clear distinction between benchmarks and indices, as well as between Libor-type products and others given the significant differences that exist between them.

We commend IOSCO for publishing this comprehensive Consultation Report on Financial Benchmarks and for outlining alternative policy options in regards to the appropriate level of regulatory oversight for the benchmarking process, the relevant standards for calculation, credible governance structures to address conflicts of interest, and the appropriate level of transparency and openness in the benchmarking process.[6] We believe that many commercial providers of benchmarks and indices are aware of these issues already today and, in many cases, address them through appropriate means. We appreciate the opportunity to provide IOSCO with our comments and responses.

General questions and comments

1. Applicability of certain issues

With the CR having a wide scope and discussing both benchmarks and indices, IOSCO should note that many of the issues it raised will not necessarily be applicable to all products that are in scope of the report. For example, whilst governance and methodology issues are relevant to the determination of the composition of traded indices, due to the nature of these products, the index price might not be calculated by the index sponsor but set bilaterally between counterparties to each transaction. The discussion about challenges in relation to contributions, methodology, and contributors will therefore not be relevant for these products.[7]

2. Benchmark administration by public bodies

IOSCO states that it "did not consider BM Administration by public bodies to be in scope." However, it went on to say that "BMs where a public body acts as mechanical Calculation Agent, as defined in Annex A, are within scope."

We believe it would be useful for IOSCO to clarify the grounds on which it believes that BM Administration by public bodies should not be in scope for regulatory scrutiny or oversight. It is our view that publicly administered BMs, the importance of which can be significant, are exposed to the same issues as other BMs while the incentives to address them will often be low.[8] In this context, we also encourage IOSCO to clarify what is meant by the term "mechanical Calculation Agent".[9]

[6] IOSCO Consultation Report: Chapter 1, Goals.
[7] This applies, for example, to the traded CDS indices Markit iTRAXX and Markit CDX.
[8] This can result in, for example, a lack of innovation or an inability to make timely changes to the index if market conditions change. This issue is evidenced by examples where commercial entities have successfully designed and launched indices with improved design that now serve as alternatives to the indices that are provided by public entities. In the case of CPIs, for example, indices

3. Survey-based inputs vs. contributions

We note that IOSCO uses the term "survey or estimate based" to describe the mechanism that is often applied to collect submissions to a BM.[10] However, we believe that such description is not applicable to the majority of the relevant indices and benchmarks and we therefore recommend distinguishing between "survey-based" mechanisms, where submitters provide an opinion, estimate or view, and "contribution-based" mechanisms, where submitters provide a specific number or price that they derived from various inputs. IOSCO should note that we will use the term "contribution-based" throughout our response, as we believe it more accurately describes the nature of the information that we collect for our indices.

Responses to IOSCO's specific questions

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

We agree with IOSCO that, in the wake of the Libor events, rapid and determined action needs to be taken by all stakeholders to restore confidence in the benchmarks that are widely used as reference in the financial markets. However, as part of this process it will be equally important to identify where the real issues lie, which types of products are most prone to such types of issues, and address them in a targeted manner. In contrast, we believe it would be an error to indiscriminately classify various products as Libor-type benchmarks and treat them as such.

The CR defines "benchmarks" as products "that are used to determine the cash flows or the value of a financial product, or are used as performance benchmarks." We are concerned that this definition is not only very wide but also fairly vague, and would capture many instruments that are not benchmarks and/or do not carry Libor-type characteristics.[11] This would result in creating an unnecessary burden for some products that are not exposed to the same issues as Libor-type benchmarks and make any implementation more difficult for a limited additional value. On that basis we are supportive of IOSCO's deliberation on proportionate options,[12] where Libor-type "benchmarks" would be exposed to explicit regulatory oversight similar to the regime being implemented in the UK,[13] while other relevant products that IOSCO believes should be exposed to more scrutiny would conform to an industry Code of Conduct ("***Code of Conduct***" or "***CoC***"). In this respect, we believe that the standards of best practice for benchmark price assessments that have recently been published by industry associations[14] can provide IOSCO with helpful guidance.

As basis for this approach, IOSCO would need to clearly distinguish between "Libor-type benchmarks" and "indices". While the CR contains a definition of "benchmark",[15] we note that the terms "index" and "benchmark" are used almost interchangeably throughout the CR.[16] However, such an interchangeable use combines two distinct products and use cases. Specifically, we believe that a more appropriate definition of

---

that are provided by commercial index sponsors adjust for new goods and changes in consumption habits based on price movements in a more timely manner than the "official" CPIs.

[9] While Annex A provides a definition for "Calculation Agent" it does not seem to further specify the meaning of "mechanical". IOSCO Consultation Report: Annex A.

[10] IOSCO Consultation Report: Chapter 2, Quality and Integrity of Methodologies.

[11] For example, indices that are used solely for performance attribution or bespoke indices that might be created for only one or a small number of transactions and users.

[12] "Such distinctions could, for example, lead the Task Force to recommend full regulation in one instance but rely on voluntary codes in another." IOSCO Consultation Report: Chapter 3, Drawing Regulatory Distinction.

[13] FSA: The regulation and supervision of benchmarks. December 2012.; HM Treasury Initial Discussion Paper: The Wheatley Review of LIBOR. August 2012.; HM Treasury The Wheatley Review of LIBOR Final Report. September 2012.

[14] GFMA Principles for Financial Benchmarks. 30 November 2012.

[15] IOSCO Consultation Report, Annex A.

[16] For example, IOSCO states "some benchmarks, indices in particular". IOSCO Consultation Report: Chapter 2, Transparency.

benchmark that might be in scope of regulatory oversight ("***BM***") would be "a commercial or published price assessment, distributed regularly to third parties and extensively used as a reference in determining the pricing of, or the amount payable pursuant to, a financial instrument or contract."[17] In contrast, an index is a basket of instruments or constituents that aims to track the performance of an asset class or a market segment subject to a defined set of rules. Of course, if such index serves as the basis for the calculation of a reference number that is a widely referenced benchmark, that calculation process may also be the subject to benchmark regulation. On that basis, we will refer to the following categories of instruments throughout our response:

- Category A: a composite price that is calculated based on a set methodology or formula, the purpose of which is to serve as a reference to determine the cash flows of financial contracts;[18]
- Category B: a defined set of instruments that is maintained by a set of rules, the purpose of which is to track the performance of an asset class or a market segment;[19] and
- Category C: a defined set of instruments that is maintained by a set of rules, the purpose of which is to serve as a reference to determine the cash flows of financial contracts.[20]

Category A describes Libor-type instruments where the price for a *single*[21] variable is determined based on contributions or inputs. In contrast, Category B describes *indices* that consist of multiple, often hundreds, of underlying instruments and Category C those indices whose levels are used as reference in financial contracts.

In order to ensure that a regulatory regime for benchmarks is proportionate and effective in achieving the regulatory objectives we believe that, across the various asset classes, Category A and, to the extent the calculation of the index value is a "benchmark," Category C should be regarded as areas for potential direct regulatory oversight if the reference numbers that they provide are "widely referenced"[22] in financial contracts. However, IOSCO should note that, given the large number of components that most indices are based upon, Category C products are only to a much more limited degree exposed to the challenges that exist for Category A products, e.g. the potential for manipulation. Category B, i.e. indices that are produced for use as, for example, performance benchmarks, should generally not be in scope for direct regulatory oversight.

Further, IOSCO should take the following aspects into account when designing an appropriate scope for any regulatory regime:

- Bespoke indices for bilateral transactions should be out of scope as they only have relevance to a small number of parties and will therefore have only a limited economic impact.

[17] GFMA Principles for Financial Benchmarks. 30 November 2012.
[18] An example of Category A would be the LIBOR fixings
[19] Examples include equity indices by S&P, FTSE, Eurex, and Topix, commodity indices published by RICI or S&P, fixed income indices from Barclays, S&P and Markit, and derivative indices from S&P and Markit.
[20] We note that IOSCO seems to express the view that an index that is used as an underlying for an ETP is a BM : "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." IOSCO Consultation Report: Exhibit 1 Examples of the impact of Benchmarks in a retail context. We believe that the fact that an ETP is dedicated to tracking the composition of an index should not per se make this index a benchmark. This is because the value of the ETP will, as IOSCO correctly stated, be based on the value of the underlying assets which neither the BM Administrator nor the BM level it might determine have a direct influence on if the ETP is based on physical replication.
[21] Or a small number.
[22] We believe that the notion of "widely referenced" is consistent with the concept of "economic impact" that IOSCO considers using to draw regulatory distinctions. One possible approach to determine whether a BM is "widely referenced" would be to define a number of relevant factors and assign the task of applying them to existing BMs to the relevant regulatory authority. This approach would be similar to the process established for the Clearing determination for OTC derivatives.

- The principles of any regulatory regime applying to benchmarks should apply equally across all asset classes. However, the regime should also be sufficiently flexible to reflect differences between asset classes and products.

- In case that a benchmark product provided by a specific sponsor is identified as "widely referenced",[23] this categorization should apply also to all competing products in this category, even if those might not be as widely referenced at that point in time. We believe that such approach, where the entire product category would be in or out of scope based on its economic impact, will be necessary to secure a level and consistent playing field between competing benchmark sponsors and to avoid creating opportunities for regulatory arbitrage.

- As IOSCO recognizes in the CR,[24] several distinct functions will need to be performed to ensure the proper operation of a Benchmark. Specifically, these are the roles of a) the Benchmark Sponsor who owns the intellectual property ("***IP***") of the index and sets the index rules, b) the Benchmark Administrator ("***BMA***") who is responsible for the application of the index rules, c) the Benchmark Calculation Agent ("***BMCA***") who determines the value of the index, and d) the Benchmark Publisher.[25] While these functions can be performed by a single entity, in practice they are often performed by different, specialized entities. We therefore urge IOSCO to carefully consider this market practice in the design of any regulatory regime.

A. Methodology

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

We agree with IOSCO that a "credible BM should take into account the salient features of the underlying interest in their design"[26] and we believe that many of the characteristics that IOSCO listed are relevant when designing an appropriate methodology.[27] We also believe that, when designing an index, index sponsors in general will follow this principle as part of current market practice, for example in areas like constituent selection criteria.

As a consequence of this principle being applied, we believe that IOSCO will need to recognize that significant differences will have to exist between the various benchmarks and indices depending on the nature of asset class[28] and the underlying instruments.[29] Such differences might relate to the nature of the underlying data,[30] the degree of judgment required in the submission and the calculation process, the ability to rely on transaction data, the need for differing data cleansing and calculation mechanisms, governance mechanisms, and the assignment of roles and responsibilities.

3. What measures should Administrators take to ensure the integrity of information used in BM-setting and that the data is bona fide? Please highlight any additional measures required where BMs 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

---

[23] Please see footnote 22 for details of how this determination could be made.
[24] See the chart on page 59 that distinguishes between Input Collection, Compilation, Methodology, Calculation Agent, and Dissemination.
[25] ESMA & EBA Consultation Paper: Principles for Benchmarks-Setting Process in the EU. 11 January 2013.
[26] IOSCO Consultation Report: Methodology.
[27] IOSCO Consultation Report: Exhibit 2 Characteristics of underlying interests measured by Benchmarks.
[28] For example equity vs fixed income vs commodities.
[29] In the asset class of credit, for example, one could distinguish between bonds, loans, and CDS.
[30] For bond indices, for example, it is only through the use of evaluated bond prices or contribution-based prices that the consistent, objective, and timely valuation of each of the underlying components of indices can be achieved, given that transactions do not take place for all index components on a daily basis.

Administrators. Are these measures adequately reflected in the discussion of roles and responsibilities of the Administrator discussed in section E?

We agree with IOSCO that "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."[31] Please find below our thoughts on some of the relevant issues and measures that, based on our experience, can be effective in mitigating potential risks.

- **Data inputs**

We agree with IOSCO that it is important for a BMA to carefully determine which data inputs are most appropriate for the calculation of its benchmark, and that its decision should reflect the structure and liquidity of the underlying market. Existing practices that have been established for indices may provide IOSCO with useful guidance in this respect. For example, compared to other asset classes, liquidity in the bond and OTC derivatives markets is limited and the majority of trading occurs bilateral outside of exchanges or trading venues. Index providers for these asset classes can therefore rely on transaction data only to a limited extent and will often have to use contributed pricing[32] or a variety of alternative pricing sources instead.

We appreciate that IOSCO, while highlighting some specific conflicts of interest that might arise, also acknowledges the advantages of contribution-based pricing, e.g. the fact that it allows "more information to be incorporated into the submission, such as actual trades". That said, we agree with IOSCO that BMAs that largely rely on voluntary submissions to their benchmarks will need to consider a number of factors to ensure their integrity:

- **Nature of the submissions**

IOSCO should note that differences in the nature of the contributions can have a significant impact on their reliability. For example, submissions that are "book-of-record" prices will be exposed to significant scrutiny and "safeguards" on the Submitter level already, in particular if the Submitters are regulated entities that are subject to compliance rules and have established control structures.[33]

- **Partial / selective reporting and continuity of participation**

BMAs that rely on contributions will typically establish one or several business requirements to ensure that they receive such contributions on a regular basis and they are of sufficient quality. For example, contracts might be in place between BMAs and their Submitters that specifically require them to deliver submissions for instruments they have positions in or are active in.[34]

- **Composition of submitting panels**

We believe that the rules that govern participation in panels of contributors to benchmarks need to be transparent and result in panels that appropriately reflect the nature of the benchmark and ensure accurate representation of the relevant market segment.

[31] IOSCO Consultation Report: Quality and Integrity of Methodologies.
[32] As stated above we believe that IOSCO should more clearly distinguish between "survey-based" and "contribution-based" benchmarks given the differences in the quality of the underlying information.
[33] Since these "book-of-record" prices are used as an input into the risk management of the Submitters, they will have teams dedicated to controlling their submissions to ensure the consistency of their internal marks with observable market data. For this purpose they will typically use a variety of data inputs.
[34] Also, for some services, Submitters might only receive pricing levels back from the Administrator for those instruments that they contributed for (give-and-get approach), and often only if their contributions were deemed to be of sufficient quality.

For the various indices that we sponsor, we generally work to ensure that contributor panels include the vast majority of the active market makers[35] in the underlying products. Specifically, for Markit's European bond indices, we derive pricing of the index constituents from contributed quotes that are submitted by active market makers in the relevant markets[36] and we validate this data against end-of-day book-of record prices. For Markit's US bond indices, where post-trade transparency exists for the underlying market, we derive pricing of the index constituents from a variety of sources that include TRACE[37] transaction levels, quotes and end-of-day book-of-record prices. These data inputs, coupled with the use of sophisticated pricing technology and specialist evaluators, form the basis for the production of accurate, transparent and timely pricing of the bonds underlying these indices.

- **Panel size**

Our experience in operating contribution-based pricing services for a variety of indices and financial instruments has shown that increasing the size of a contributor panel per se does not automatically improve the quality of the pricing, and sometimes might have the opposite effect.[38]

We believe that the optimal panel size for a contribution-based benchmark will depend on the number of parties that are active in the underlying market. Equally, the decision whether further contributors should be added to a given panel should depend on whether firms that are not panel members are likely to contribute independent, accurate and knowledgeable information. Finally, the optimal size of the panel will not be static and it will be important to review panel membership on a regular basis in order to reflect changes in the relevance and activity of the contributors.

We agree that, for contribution-based inputs, the BMA should establish mechanisms that help maintain the accuracy of individual benchmark submissions and enhance the integrity of the benchmark. To the extent that relevant information beyond the actual submissions is available, the BMCA should use it to corroborate submissions in conjunction with employing sophisticated and robust cleansing techniques.

- **Use of discretion by the BMA**

We believe that the BMA's activities should largely rely on the methodology that has been specified in the control framework and has been made transparent to users of the index. However, sometimes it will be necessary for the BMA to exercise discretion. For example, for indices that are subject to regular reviews to be "most representative"[39] the Administrator may occasionally decide to postpone a roll date in view of unexpected and extreme market conditions.[40]

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.*

---

[35] We consider active market makers to be institutions that are making two-way markets on a significant portion of the traded instruments in a market segment.
[36] Relevant markets from an index perspective are the market segments from which the index constituents are drawn.
[37] TRACE: Trade Reporting and Compliance Engine. TRACE is the Financial Industry Regulatory Authority's (FINRA) corporate and agency bond market real-time price dissemination service. More information on TRACE is available here.
[38] Simply adding further contributors to a panel will often result in reducing the quality of the resulting index, not improving it. For example, for a product with only 5 active market makers, the goal of the index sponsor should be to encourage those 5 firms to contribute to the service. Adding a further 5 contributors that are not market makers and do not follow the market on an ongoing basis will only add "noise" to the composite price and reduce its quality and informational content.
[39] IOSCO Consultation Report: Exhibit 2 Characteristics of underlying interests measured by Benchmarks.
[40] For example, at the time of the Lehman default, Markit as the index sponsor deemed it appropriate to delay the roll of the various Markit CDX products in order to maintain liquidity in the product.

We believe that IOSCO's approach to discussing measures that can ensure the quality and integrity of BM methodologies is generally sensible.

We agree that the verification of submissions must play an important role for every BMA and index sponsor. Specifically, a BMA would typically run series of tests to ensure a high degree of quality of the submissions that it receives. These tests would include checks for technical issues,[41] analysis of the data to ensure it is plausible,[42] comparison between submitters[43] to create a consensus and, finally, consistency checks against other sources of market data. A further measure that BMAs can employ to support the integrity of the data is to enable market participants to challenge published prices ex post, which will often be based on additional data that they have access to.

We agree with IOSCO that both BMAs and Submitters should aim for a high quality of the submissions by use of supporting data.[44] We therefore believe that BM Submitters should be required to provide the relevant data underlying their submissions to the BMA if so requested by the BMA. This is because access to this data will allow the BMA to validate or question submissions on the level of the individual Submitter with much more confidence and to perform sophisticated analysis on a higher level across the various Submitters. However, IOSCO should recognize that Submitters sometimes might not be in a position to submit all relevant data, for example for confidentiality reasons. Also, the amount of data might sometimes surpass the ability of the BMA to receive it, particularly if some underlying information is of more qualitative nature and cannot be processed easily. Submitters should therefore only be required to submit all input data to the BMA if and where so requested by the BMA.

- **Sample size**

We agree with IOSCO that the sample size is an important consideration for BMAs to ensure the reliability of any BM calculation they perform.[45] However, we believe that, beyond the actual size of the sample, it will be equally important for the credibility of the product that the BMA publishes the relevant transparency measures that are related to it.[46, 47]

- **Calculation methodology**

We agree with IOSCO that any BMA should carefully consider which calculation method would be most likely to result in a reliable BM level given the nature of the underlying data. While a trimmed average seems to be a commonly used approach it might often be helpful to also apply clustering methodologies. Further, for instruments with low liquidity, an evaluation that is based on historical relationships between instruments can be used.

We note that IOSCO seems to assume that Markit in its role as the index administrator for the tradable CDS indices Markit CDX and Markit iTRAXX is applying a "smoothing mechanism to interpolate prices". However, we do not believe that the fact that we might use "smoothing mechanisms" for some of our services is relevant in the context of this CR.[48] We are open to discussing our view with IOSCO in further detail if so desired.

---

[41] For example, the accuracy and consistency of dates and data formats.
[42] For example, representative of market conventions, typical curve shape, or mathematical inconsistencies.
[43] Including the performance of staleness and outlier tests.
[44] IOSCO Consultation Report: Chapter 2, Verification of submissions.
[45] IOSCO Consultation Report: Chapter 2, Verification of submissions.
[46] For example the number of submitters, the number of accepted submissions, or the range of submissions.
[47] A price determined by a panel of 5 contributors where only 1 contribution is rejected gives a different indication to a price determined by a panel of 6 contributors where 4 contributions are rejected. A large deviation in the inputs tends to be fairly common in illiquid segments of the markets and/or during periods of market stress.
[48] IOSCO Consultation Report: Chapter 2, Calculation options. We suspect that IOSCO might refer to approaches that we use in the context of some of our general pricing services.

B. Transparency

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 BM 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 judgment is used, contingency measures (e.g., methods when transaction data is unavailable, etc.), publication of information supporting each BM determination, etc. Please provide examples where you consider there are currently significant gaps in the provision of this information.

We generally agree with IOSCO's proposals in relation to the transparency of BM Methodologies as discussed in the CR.

As an independent provider of indices across various asset classes Markit has a long and established history of licensing access to our index services and data to a large and diverse range of parties, including trading and clearing venues, and providing a high level of granular transparency around our methodologies within our index documentation that is available on our public website. For example, in addition to the rulebooks detailing all of the factors that feed into the design of our indices, we have created separate pricing methodology documentation that outlines the procedures and fallback mechanisms around this area. We further make available data around the depth of information received for individual prices or liquidity scores of the underlying bonds, as this information will enable index users to more easily assess the pricing quality of sub-index segments and individual index components.

We agree with IOSCO that, for BMs that are re-assessed and re-balanced on a regular basis, the resulting changes to the underlyings of the BM should be "transparent to stakeholders and users".[49] For example, for Markit's iTRAXX and CDX indices the rules that define the construction of new index series are publicly available and they leverage publicly available data to ensure transparency and certainty. Initial membership lists for new index series are available at least 10 days before the launch of the new series, with final membership being published 2 days before the roll.

IOSCO stated that Administrators should "provide enough detailed information to allow users to recreate BM outputs".[50] We believe that this is the case for our bond indices where we publish a preview of changes to constituents.[51]

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?

We agree that it is important for users of BMs to understand the contingency measures that the BMA will use during times of market stress or disruptions. We believe that this objective can be best achieved if the BMA addresses many specific issues[52] in detail ex ante through the specification of contingency procedures in writing.[53]

---

[49] IOSCO Consultation Report: Exhibit 2 Characteristics of underlying interests measured by Benchmarks.
[50] IOSCO Consultation Report: Transparency of Benchmark Methodologies.
[51] Markit indices are rules-based to ensure that they are objective and replicable. Both the constituent lists and the selection criteria used to determine which constituents are included in each index are publicly available on our website. In addition, our indices are produced with high quality analytical data both for the individual issues and for the indices themselves. Markit indices are available from Markit directly and from all major financial information vendors.
[52] For example situations where the preferred source of data is no longer available.
[53] For example, index rules would typically address changes in the determination of index levels, and rebalancing dates due to market disruption events.

However, it will be impossible for the BMA to foresee all potential future eventualities[54] and there will be situations where the BMA can only react ad hoc once an event has occurred. We believe that, in such situations, the BMA should discuss any measures that it is planning to implement with the relevant stakeholders and the governance committees and make them transparent to interested parties.

In our role as an index sponsor we will cover many eventualities in our rulebooks.[55] In case of extraordinary events that are not described in our rulebooks, we would consult with the relevant Oversight Committee ("***OC***") and stakeholders to identify the most appropriate way to resolve the situation. The resulting decision will be announced on our website to all index users and included in our rulebooks for future reference.

7. What steps should an Administrator take to notify Market Participants of material changes to a BM Methodology (including to BM components) and to take their feedback into account?

We believe that the BMA should discuss any material change to the BM methodology with the relevant stakeholders in an appropriate forum, for example the governance committees or a wider group of BM users. Where possible, material changes should be announced sufficiently in advance of their implementation and updated in the rulebooks and other BM materials. Drawing on our experience as an index sponsor, we would also publish a press announcement in case of a significant index change[56].

Further, ahead of any regular rebalancings for our bond indices, a preview list is published with predicted changes to the index constituents at the next rebalancing. This list details the new index constituents and the bonds that are joining or leaving the indices at the next rebalancing, based on information that is available at that point in time. The details of the rebalancing process and the frequency of the publication of the preview file are documented in the publicly available rulebook of each family of indices.

IOSCO stated that "prior to a change" the Administrator should have engaged or formally consulted with a wide range of market participants. For the avoidance of doubt, we believe that any requirement for the BMA to engage with the relevant stakeholders "prior to a change",[57] while justified for material changes in the methodology, should not apply to regular index rebalancings that are performed according to the published rule book.

8. How often should the Administrator review the design and definition of the BM to ensure that it remains representative?

We generally believe that the BMA should review the design of a BM on a regular basis and ad hoc where specific issues have arisen. The appropriate frequency for such reviews should be determined taking the characteristics of the product and the underlying market into account.

For example, as an index sponsor, we perform an annual index review for our bond index families. Such reviews will cover significant changes to the index methodology that are due to long-term trends in the markets underlying the indices. In addition, we also conduct ad hoc reviews in case of sudden developments that require an immediate review of the indices. We generally believe that annual reviews will be sufficient for Category B and C products, while more frequent and stringent reviews might be necessary for Category A benchmarks given their systemic importance and greater susceptibility to potential manipulation. In contrast, less frequent reviews seem appropriate for one-time index strategies that are of a limited lifespan.[58]

---

[54] Please see our response to Question 3 for further details.
[55] For example the data cleaning methodology covers situations where submissions for some instruments are not received, or how late information about ratings or bond redemptions is handled within the index rebalancing process.
[56] For example a new classification/pricing methodology or a significant expansion of the index universe.
[57] "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." IOSCO Consultation Report: Chapter 2, Transparency over changes to the Methodology.
[58] Many bespoke indices/trading strategies are only sold once with a fixed life of, for example, 3 years.

C. Governance

9. The CR 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 CR 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?

We believe that IOSCO correctly identified most of the relevant conflicts of interest that can arise to the various entities that are involved in the Benchmarking process. We agree that an effective control framework should be able to identify and mitigate potential conflicts of interest to the extent possible and that such framework should be transparent with its effectiveness being monitored. [59]

In relation to the ownership and control of Administrators, IOSCO should note that recent experience in relation to Libor and similar BMs has shown that many BMs that are sponsored *without* the involvement of commercial sponsors are not only exposed to significant conflicts of interest but also often suffer from a lack of professional scrutiny on the received submissions and the calculation methodologies.

Further, we question the validity of IOSCO's view that the incentive "to maintain an index even if the quality or representativeness of the Benchmark is in question" is particularly relevant to "Administrators who are commercial entities".[60] We believe that, to the extent that such incentive exists, it will be relevant to *all* categories of Administrators to a similar degree, regardless of whether they are commercial entities or not. In contrast, this incentive might even be less relevant for commercial Administrators given the scrutiny that market participants will exercise on their products and their ability to switch to indices that are provided by competing commercial Administrators and that address any shortcomings of the existing index.

Please see our response to Question 14 for further comments in relation to the management of conflicts of interest.

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 BMs. For example, where Administrators simultaneously act as the trade body for Submitters to the BM. What is the minimum level of independent representation this committee or body should include?

We believe that Oversight Committees can play an important role in the context of financial BMs. We agree that the OC's composition should ensure that it is independent and effective and that it should comprise "a balance of submitters, users, as well as other key stakeholders".[61] We believe that, in order to provide independent scrutiny, it is important that, where possible, a significant number of the OC's members are independent and are not involved in the submission of data to or the administration of the BM.

We agree that the OC can perform several important functions for a BM: firstly, it provides independent inputs and oversight over the rules and rules change process for the BM, secondly, it can help identify potential conflicts of interest and assess whether the measures to mitigate them are sufficient, thirdly, it can provide valuable input into the definition, methodology and calculation of the BM, as well as into the CoC for the Submitters.

[59] IOSCO Consultation Report: Chapter 2, Conflicts of interest.
[60] "For example, Administrators who are commercial entities may have an economic interest in maintaining the publication of the Benchmark even when the quality of representativeness of the Benchmark in question." IOSCO Consultation Report: Chapter 2, Conflicts of interest.
[61] Consultation Report: Chapter 2, Oversight Committee.

We agree that the conflicts of interest that the BMA is exposed to should be discussed at the level of the OC, with necessary mitigation measures agreed, and oversight of their implementation performed. We also believe that the OC should discuss any significant breaches and initiate changes to how conflict of interest issues are mitigated. However, given the nature of the OC, it should not be expected to deal with these issues on a daily basis. In contrast, the actual day-to-day work on many of these issues will need to be performed by the BMA itself, particularly in relation to the cleansing and validation of input data that it receives from the Submitters. We therefore believe that IOSCO should clarify that the OC, in its oversight function, would deal primarily with the resolution of higher-level, more structural and/or severe issues that are critical to the efficient design as well as to the continuous provision and accuracy of the BM.

D. Accountability

11. Should the Submitters establish accountability procedures to assess their compliance with operational standards and scrutiny of BM submissions?

We agree with IOSCO that it is important for BM Submitters to measure their compliance with the relevant standards. To achieve this goal, they should keep all relevant records and should make them available to the BMA where requested, which might be on an ongoing basis for the data that is underlying their submissions. Further, we believe that the regular performance of internal and/or external audits of the submission process on the level of the Submitter might be useful. Finally, we believe that the BMA should provide its Submitters with relevant information in this context, for example on how they perform in relation to the timeliness and accuracy of their submissions relative to their peers as well as detailed statistical analysis on the quality of their contribution over a defined period of time.

12. Are the measures discussed in the CR (e.g., Audit Trail, external audits and requirement for regulatory cooperation) sufficient to ensure the accountability of the Submitters? Should additional mechanisms be considered?

We believe that the measures proposed by IOSCO such as complaints procedures and documentation requirements are generally appropriate and sufficient. In addition, as mentioned in our response to Question 4, we believe that the Submitters should be required to provide the BMA, on the BMA's request or as specified in the CoC for Submitters, with the relevant information that is underlying their submissions.

We generally agree that "where Administrators or Submitters become aware of, or suspect a failure to comply with BM-related policies and procedures, the Administrator should take action to address such failure". However, we would caution that a requirement "to immediately notify any relevant Regulatory Authority" might lead to many unnecessary notices and should hence be limited to "significant" failures.

14. Are the measures discussed in the CR (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?

We believe that the measures discussed in the CR in relation to the accountability of the Administrator are generally sufficient. To further illustrate our view please find below some details of the measures that Markit, in its role as an index sponsor, has established today:

- **Quality assurance and adjustments**

Index sponsors will typically have responsibility for the administration of an index, such as the publication and maintenance of the relevant rules, the daily calculation of the index, and the execution of index rolls and rebalancings.[62] Any material adjustments to the rules or calculated levels should be performed by index sponsors in consultation with the relevant OCs.

In addition, index sponsors will often deploy internal audits to ensure their operational efficiency. Markit Indices, for example, are subject to monthly Key Performance Indicator ("***KPI***") metrics that are presented to and assessed by our management team. Potential deficiencies are addressed as part of our issue resolution and management policy. The efficiency of our index compilation and publishing procedures is also measured against client feedback as well as the number of complaints and issue escalation.

- **Challenges and complaints**

Any challenges and questions in relation to our indices can be submitted via well-managed and tracked email and telephone contact points that are available on our website. Queries that are submitted in this manner will be recorded in our system by our client support team and will be escalated to the appropriate department or team for review. Clients will be provided with detailed feedback on their challenged issues. Should there be a need to make amendments to any components of the index as a result of such challenges, the issue will be raised to the appropriate index committee to solicit feedback and proceed accordingly as per the index rules.

- **Contributor relationship**

As Calculation Agent for the Markit iBoxx indices we require market makers to contribute bond prices on a daily or more frequent basis[63] to ensure the timely calculation of the index levels.[64] Our agreements prescribe technical standards that Contributors are expected to conform with when submitting their data to us. Such standards were designed to ensure the uniformity of the data and to minimise the potential for errors. Once received, we will apply a number of cleaning tests to the contributed dataset including its comparison to data sources that are available externally.

As part of our standard process and in an effort to ensure high quality of data we are in regular contact with the Markit iBoxx contributors and provide them with feedback on the quality of their submissions. This communication is facilitated by the provision of weekly and monthly data quality reports and regular management review meetings.

- **Governance**

In addition to the accurate and timely pricing of their components and sufficient transparency around rules and procedures, we regard the appropriate governance structure as a further key success factor for both indices and BMs. We therefore agree with IOSCO that BMAs should identify and manage the specific conflicts of interests they are exposed to. However, we question why IOSCO seems to focus its remarks on entities with specific ownership structures[65] as we believe that such requirements would have to apply to Administrators generally regardless of their ownership structure.

Markit's index division, which acts as the Administrator and/or Calculation Agent for indices where Markit is the index sponsor as well as for 3rd party indices, is part of our overall financial information and services business. Leaving physical presence (location) and accounting standards aside, we see little reason for our index business to operate out of a separate legal entity. This is because we are not exposed to the conflicts

[62] Depending on the structure of the underlying market and whether the index sponsor acts also as the Calculation Agent.
[63] Depending on the index family, contributions will be submitted on a real-time, intra-day or end-of-day basis.
[64] A detailed description of the Markit iBoxx bond price contribution process is available here.
[65] "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 BM; structure financial contracts or instruments that reference the BM; are active participants in the underlying market of the BM; or carry large positions on products linked to the BM. IOSCO Consultation Report: Chapter 2, Conflicts of interest.

of interest that, as IOSCO mentions,[66] might arise if we were to also offer execution and/or clearing services or if the pricing of our indices relied mostly on our own contributions.

Our experience in managing indices across several asset classes has shown that, to be effective, the design of any index governance arrangement must reflect, amongst other factors, the nature and purpose of the index, the liquidity and transparency of the underlying market, the role of the index sponsor[67] and the expertise of the user base. Markit's indices are independent, objective and transparent and the committee structure of our indices is set up to reflect these factors by asset class and index family. The structure is well documented in the published rules of each index family and we regard it as a key ingredient for the success of our indices.

Specifically, each of Markit's cash bond index families has an Index Oversight Committee ("***IOC***") and a Technical Committee ("***TC***"):

- IOCs are formal bodies largely comprised of asset managers, consultants, and, where relevant, local regulators,[68] who provide advice to the index sponsor with regards to the development of the Markit iBoxx indices and related products. The objective of these consultations is to assist in the creation of highest quality standards for the indices and to ensure that they are upheld by Markit and all other parties associated with the cash bond index production. We believe that the IOCs should advice the index sponsor on market changes, the potential for new index creations, how to maintain the highest quality of standards, transparency, and ensure the continued viability of the index.[69] IOCs will generally meet at least once a year and also ad hoc whenever necessary. The decisions of our IOCs are made publicly available on our website as an announcement.[70]

- TCs advise Markit with regard to legal, trading, and operational issues including the monthly index rebalancings, the definition or revision of index rules, the creation of new indices, improvements to existing indices, and additional analytical values for calculation or publication. TCs typically meet at frequencies between monthly and annually depending on the rebalancing frequency for the index and also ad-hoc where necessary. Any decisions taken by the TC are submitted to the IOC for review and approval.

- **Public vs. commercial BM providers**

We believe that some public sector involvement in the operation of BMs may be useful, for example in form of regulatory oversight of Category A Libor-type BMs.[71] However, as a general principle, we strongly believe that the creation and administration of indices and BMs is best performed as a private sector activity as to ensure that innovations continue to occur, it remains competitive and high quality products are made available to the market.[72]

---

[66] "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." IOSCO Consultation Report: Chapter 2, Conflicts of Interest.

[67] For example, the Calculation Agent vs. the Administrator.

[68] We believe that the members of IOCs should include a wide variety of stakeholders. While participation in the IOCs for Markit's indices varies between index family and local market requirements, on average they consist of 10 members.

[69] For example, the iBoxx IOCs will advise Markit on issues related to the quality of index calculations, the definition or revision of index rules, the creation of new indices, products and services, and improvements to existing indices, products and services.

[70] Decisions of the IOC are available here.

[71] "The new administration should fulfil specific obligations as part of its governance and oversight of the rate, having due regard to transparency and fair and non-discriminatory access to the benchmark. These obligations will include surveillance and scrutiny of submissions, publication of a statistical digest of rate submissions, and periodic reviews addressing the issue of whether LIBOR continues to meet market needs effectively and credibly." The Wheatley Review of LIBOR: Final Report.

[72] For example, the development of Category B type instruments that measure the performance of an asset class or its sub-sectors needs to be able to move at the speed of the marketplace in order to best fulfil market participants' needs. These types of indices require greater innovation and must evolve quickly in order to stay competitive.

We also believe it would be wrong to assume that challenges in relation to governance or conflicts of interest do only exist to a lesser degree for a BM that is provided by a public body. In contrast, we believe that they are likely to be very much exposed to the same issues, for example because these bodies generally have more limited incentives to ensure the application and effectiveness of the BMs they create, including the continuous updating of their design to safeguard the accuracy of the BM data. It is worth noting that some of the Libor-related problems might have arisen precisely because these benchmarks were *not* administered by commercial entities. This is because commercial BM providers will only ever succeed in creating viable products if they manage to establish credible governance structures, produce accurate and reliable data, and provide sufficient transparency around their methodologies and data inputs.

15. If recommended, how frequently should Administrators be subject to audits? Should these be internal or external audits?

We believe that BMAs should perform regular internal audits and, where appropriate, be subject to external audits annually.

E. Role and responsibilities of Administrators

17. The CR 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?

We believe that the measures proposed by IOSCO for Submitters, i.e. a control framework and a Code of Conduct, should generally be sufficient to address potential conflicts of interest. We also agree that many of the issues that are covered by the BMA's governance policies should also be part of the CoC for Submitters.[73]

However, we reiterate our view that any "detailed policies on how to corroborate submissions with appropriate data"[74] as part of the control framework for the Submitters will need to be flexible enough to reflect the characteristics of the underlying market the BM relates to and potential changes in market conditions. Further, we do not believe that this element of the CoC should be made publicly available in detail as it might compromise the BMA's intellectual property rights. Finally, the burden that is placed on the Submitter to be in compliance with the Code of Conduct must be proportionate to the relevance and severity of the conflicts of interest it might be exposed to.

18. What would be the key differences in the code of conduct for BMs based on different input types, for example transactions, committed quotes and/or expert judgment?

We agree with IOSCO that "no methodology is immune from attempts to manipulate the BM".[75] In this context it is important to note that any rules-based BM calculation methodology that is purely mechanical and excludes the use of expert judgment might be prone to manipulation. This is because any potential manipulator will find it easier to analyze the impact that certain submissions will have and decide how to skew its submission in order to achieve the desired BM level as a result.

That said, we believe that differences in the CoC should be based upon, for example, how the submissions are generated and what data hierarchy is used. In general, the CoC will be more relevant and more work needs to be done to complete it if the submissions and/or the calculation incorporate a degree of expert judgment. However, we believe that this will be unavoidable for certain asset classes and/or assuming that at some point market conditions could potentially become distressed.

[73] IOSCO Consultation Report: Chapter 2, Code of Conduct for Submitters.
[74] IOSCO Consultation Report: Chapter 2, A Robust Control Framework.
[75] IOSCO Consultation Report: Quality and Integrity of Methodologies.

Equally, the need for the BMA to expose submissions to closer scrutiny, and hence request the underlying data from the Submitters, might differ between BMs. For example, for BMs that are based on exchange-traded instruments one might see less or no need for such requirement, as submissions will be actual transactions. However, IOSCO should note that many sponsors of equity indices will, nevertheless, solicit the services of a specialized, independent 3rd party Calculation Agent for their indices to ensure that the resulting index level is indeed accurate. While there might be less uncertainty about the accuracy of the pricing inputs, the 3rd party Calculation Agent will play an important role in checking whether the index level accurately reflects corporate actions or index rebalancings.

Chapter 3 Discussion of options for enhanced oversight of Benchmark activities

When discussing different options for establishing enhanced oversight of BMs, we strongly agree with IOSCO that "different approaches may be appropriate for various Benchmark asset classes" and that "a one-size-fits-all approach may not be appropriate" given the large variety of products that are covered in the CR. We believe that any regulatory approach should be proportionate to the degree of regulatory concerns related to a specific product category. Furthermore, we welcome IOSCO's approach of "drawing regulatory distinctions" as, we believe, such approach could provide an informed basis to assign the overall universe of products to different categories and design appropriate regimes for them. As stated above, we agree with IOSCO that an approach that combines "full regulation in one instance but rely on voluntary codes in another"[76] seems generally appropriate. That said please find our responses to IOSCO's specific questions below.

19. What are the advantages and disadvantages of making BM submissions a regulated activity?

We believe that, in the interest of continued market functioning, trust in the reliability of financial BMs needs to be restored as quickly as possible. In general, making the activity of submitting to Libor-type BMs a regulated activity can be a credible step to ensuring that Submitters put sufficient effort into warranting the accuracy of their submissions. However, we urge IOSCO to consider the following issues in this context.

BMAs that rely on regular, voluntary contributions from Submitters for the construction and/or calculation of a BM will need to create sufficient incentives for the Submitters to contribute data on an on-going basis and aim for the accuracy of their contributions. In our experience, various mechanisms can be used to help advance this balance, but not one set of rules will work in all cases. Regulation that imposes overly burdensome requirements and/or liabilities on Submitters carries the risk of discouraging them to contribute. This would have the negative side effect of reducing not only the quality of existing BMs but also potentially their number, and would hence reduce transparency in the marketplace and discourage efforts to improve data availability for illiquid market segments.

IOSCO should therefore ensure that any regulatory regime for indices and BMs is not unnecessarily burdensome to result in discouraging firms to participate in contributing to these products. Specifically, it should be carefully calibrated and proportionate. This could be achieved by exposing only Category A Libor-type BMs to direct regulatory oversight, which should be coupled with the ability of regulatory authorities to persuade firms to contribute to these BMs if needed.[77] We believe that for products in Category B and C direct regulatory oversight is less warranted, and IOSCO should rely on market forces driving Code of Conduct and transparency requirements for these instruments as they will need to stay competitive in the marketplace. It is worth noting that some specific industry principles have already been proposed.[78]

---

[76] IOSCO Consultation Report: Chapter 3, Drawing Regulatory Distinctions.

[77] "We reserve the right to consider requiring firms to submit to LIBOR if we begin to have concerns that the continuity of LIBOR, or a particular currency panel, is at risk or the size of the a particular currency panel is not sufficiently representative." FSA Consultation Paper, Section 4.24. "Banks, including those not currently submitting to LIBOR, should be encouraged to participate as widely as possible in the LIBOR compilation process, including if necessary, through new regulatory compulsion." Wheatley Review of LIBOR, Section 5.19 and 5.28.

[78] GFMA Principles for Financial Benchmarks. 30 November 2012.

20. What are the advantages and disadvantages of making BM Administration a regulated activity?

Please see our response to Question 23.

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 BM activities (discussed in Chapter 3)? Please provide specific recommendations as to how the distinctions discussed in Chapter 3 should inform oversight mechanisms.

We generally agree with IOSCO that regulatory distinctions between different indices and BMs could be based, amongst other factors, on their systemic relevance and the number of parties involved[79] as well as the existing degree of regulatory oversight of the relevant procedures.[80] We further believe that IOSCO should apply a regulatory distinction based on the extent to which these products are already subject to scrutiny and largely comply with the relevant principles on the basis of market mechanisms as well as on the degree to which these instruments can be manipulated.

On the basis of applying these regulatory distinctions many Category A Libor-type BMs should be exposed to explicit regulatory oversight.[81] In contrast, we believe that other relevant index/BM products, i.e. Categories B and C, would most appropriately be ruled by an industry Code of Conduct. This is, amongst other factors, because the scope of adoption and retention for these instruments is already largely determined by their relevance as well as the transparency, appropriateness and robustness of their methodologies, governance and control mechanisms, particularly if they are offered by competing commercial index providers. They are hence exposed to a significant degree of scrutiny by market participants today and IOSCO should expect them to be largely in line with the major principles already. Further, in contrast to Category A type BMs, indices mostly consist of a large number of instruments which, by definition, makes them less susceptible to any attempts of manipulation.

We believe that the concept of “economic impact” is relevant to draw regulatory distinctions, consistent with our view that the product must be “widely referenced” to be in scope. However, we acknowledge that making such determinations will be challenging. We believe that one option to address this issue in a systematic manner would be to define a number of relevant factors, some of which are already mentioned in the CR,[82] to then assign the task of applying them to various BMs to the relevant regulatory authority.[83]

22. What distinctions, if any, should be made with regard to BMs created by third parties and those created by regulated exchanges?

We agree with IOSCO that, while some BMs are sponsored by regulated entities today, their activities of creating, calculating, and disseminating BMs themselves do not appear to be subject to direct regulation.[84]

---

[79] IOSCO Consultation Report: Chapter 3, B.1 Distinctions based on the economic impact of the Benchmark and B.3 Distinctions based on whether the Benchmark is referenced in exchange traded derivatives and securities.
[80] IOSCO Consultation Report: Chapter 3, 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.
[81] The FSA states that “initially the only regulated benchmark in the UK will be LIBOR.” FSA Consultation Paper, Section 1.10. The Wheatley Review of LIBOR “makes the case for regulation of activities related to LIBOR, and strengthening the sanctions regime.” Wheatley Review of LIBOR, Chapter 2.
[82] For example the extent to which the BM is referenced in financial products and/or exchange listed contracts.
[83] Similar to the approach that has been taken to determine whether an OTC derivative has to be mandatory cleared. CFTC Clearing Requirement Determination Under Section 2(h) of the CEA. 77 Fed. Reg. 74284 (Dec. 13, 2012).
[84] “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.” “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 Consultation Report: Discussion of options for enhanced oversight of Benchmark activities.

We generally believe that the same principles should apply to all entities that perform the activities of BM administration, calculation, or publication, regardless of whether they are already regulated or not. Such approach will allow regulatory authorities to have the same degree of oversight over these activities, regardless of the nature of the entity performing them, while it will also secure a level playing field between competing BMAs, BMCAs, and BM Publishers. However, at the same time, it will be necessary for regulatory expectations to differentiate between asset classes, e.g. equities and bonds, given the nature of the underlying.

To the extent relevant, the same principle should apply to indices. We hence believe that all sponsors of, for example, bond indices should be treated the same, regardless of whether they are an exchange or an independent commercial provider, while all sponsors of equity indices should also be treated equally, regardless of whether they are an exchange or a commercial provider.

24. What are the considerations that should be taken into account if the Submitters to a BM 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?

As stated in response to Question 19 we believe that IOSCO should consider the impact that certain requirements could have on the willingness of Submitters to contribute to a BM given the burden, cost, and risk they will be exposed to. The risk that Submitters might discontinue their contributions is probably highest in the less liquid and transparent segments of the market. Therefore, for those BMs that will be exposed to direct regulatory oversight, it would probably be best if it was coupled with the ability of regulators to convince market participants to also submit. For the others, the regulatory burden on Submitters should be kept at a level that is reasonable and proportionate.

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 BMs is this approach suitable?

As stated above, we believe that it might be justified to establish direct regulatory oversight for Category A Libor-type benchmarks. However, we believe that an industry Code of Conduct in conjunction with other measures such as audits and oversight would be appropriate to mitigate risks for most Category B and C instruments.

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.)?

We believe that the BMA in cooperation with contributors and overseen by the OC will be best positioned to develop a CoC that appropriately reflects the specificities of the BM and the underlying market. We generally believe that a regulatory hook into market participants will be needed to ensure that the CoC is indeed implemented and followed. It might therefore be useful for the CoC to be approved by the relevant regulatory authority.

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 BMs is this approach suitable? What if any complementary arrangements might be necessary, such as new statutory obligations or offences for Administrators and/or Submitters?

We appreciate the fact that IOSCO considers the creation of a Self Regulatory Organization ("***SRO***") for BM activities. We believe that an SRO could be a viable alternative to establishing direct oversight of Category A type products by regulatory authorities. Specifically, to reach regulatory objectives in a timely manner, it might be an efficient and effective approach to make an SRO responsible for looking after compliance with the specific regulatory regime that applies to Libor-type instruments.[85] We therefore encourage IOSCO to further explore this idea.

28. Do you believe that for some BMs reliance upon the power of securities and derivatives regulators to evaluate products that reference a BM 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?

We believe that, for some BMs, this option might potentially suffice and therefore encourage IOSCO to further explore it.

29. Do you believe that users of a BM, specifically the users who are regulated or under the supervision of a national competent authority, should have a role in enhancing the quality of BMs? Which form should this role take: on a voluntary basis (e.g., the user being issued a statement that will only use BMs 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 BMs that fulfill IOSCO principles)?

We believe that, similar to the approach that ESMA has taken in relation to the regulation of Financial Indices,[86] imposing requirements on BM providers via their users might be a useful tool to ensure that principles are implemented. However, it might be difficult to achieve a full reach across all relevant Category A BMs via this approach. For Category B and C instruments, we believe that market participants already drive the quality of indices as index sponsors must provide for users' needs in order to stay competitive.

Chapter 4 Discussion of data sufficiency and transition

A. The sufficiency of data used to construct Benchmarks

30. Do you agree that a BM 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 BMs that are otherwise anchored by bona-fide transactions deal with periods of illiquidity due to market stress or long-term disruption?

Experience has shown that the objective of creating reliable BM values can be achieved more easily in asset classes where the relevant instruments trade on a continuous, rather than on a sporadic basis. We agree with IOSCO that different asset classes require different approaches in the construction of BMs/indices and that a preference for transaction data does not imply that the use of non-transactional information is inappropriate.[87] We are therefore supportive of the use of carefully designed hierarchies of a wide range of data sources, which include non-transactional data and allow for the use of expert judgment where appropriate, and believe this approach can be applied to a broad range of BMs and indices across asset classes.

---

[85] The HMT Wheatley Review and FSA Consultation Paper on the Regulation of Benchmarks both provide proposed regulatory regimes.
[86] "Benchmark users should regularly assess the benchmarks they use in financial products or transactions, and verify that the benchmark used is appropriate, suitable and relevant for the target market." Section F: Principles for users of benchmarks. ESMA & EBA Consultation Paper: Principles for Benchmarks-Setting Process in the EU. 11 January 2013.
[87] IOSCO Consultation Report: Chapter 4, The sufficiency of data used to construct Benchmarks.

Markit is the sponsor of numerous fixed income and derivatives indices, asset classes where instruments do not trade on a regular basis and many not even trade every day. The use of transactional data for the pricing of the components of our indices will therefore, in many instances, not be feasible and/or the reliability of this data as a sole input will not be sufficient. As a result, index construction in these asset classes needs to largely rely on additional pricing inputs many of which are not directly observable in the market. For bond indices, for example, it is through the use of evaluated bond prices and/or contribution-based prices that the consistent, objective, and timely calculation of indices can be achieved, despite the fact that transactions do not take place on a regular basis for many bonds. In practice, we calculate daily levels for the Markit iBoxx bond indices[88] based on multi-contributor pricing from market makers for the underlying bonds. We verify these contributed bond prices against transaction data[89] and other pricing sources, where available, to ensure accuracy based on best practices that have been established within each region.

In sum, we believe that it would be a mistake to assign absolute primacy to transaction prices and require them to dominate the submissions into BM pricing across asset classes, products, and market conditions. Generally, the decision on which data sources a BM calculation should ideally be based upon must depend, amongst other factors, on the nature of the underlying market, whether transactions take place on a regular basis, whether post-trade price transparency is available, the type and granularity of data available,[90] and the quality and usability of the various available data sources. Any requirements for BMs to prioritize certain categories of data sources as inputs must therefore be sufficiently flexible to allow sponsors to reflect the idiosyncrasies of the asset class and adjust to changes in market conditions where necessary. We also believe that this flexibility is needed to avoid stifling competition in the marketplace to create high quality and reliable products that provide investors with the tools they need.

We agree with IOSCO that these determinations must have a temporal element and will evolve over time, for example in response to changes in market conditions. Also, there might be a need for BMs to be priced at times where no transactions can take place because the relevant market is closed.[91] In such cases, it might be possible to use transaction prices for some BM components, while, for example, model-based pricing would apply to others. We support IOSCO's view that it would be useful to make such approach to the pricing of the BM components sufficiently transparent to users of the BM.[92]

31. Are there specific BMs 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 BMs and what value you think such BMs provide?

As stated above, we believe that any asset class where trading of a significant number of the BM components does not take place on a sufficiently regular basis, or where the available transaction prices do not reflect current market value at the time of the BM calculation, will need to be open to the use of other data sources. In general, we believe that this applies to any asset class that is predominantly traded OTC such as OTC derivatives and bonds. However, it is worth stating that even for a BM like Libor a general lack of underlying transaction data will often imply that submissions need to be derived from similar transactions as well as from other data points.

32. What do you consider the limitations or value in BMs referencing asset classes and underlying interests where there is limited liquidity? Please describe the uses and value of such BMs in the financial markets.

[88] Markit does not set any "official" index level for the traded CDS indices iTRAXX and CDX.
[89] Whilst we take transaction prices into account wherever possible, we typically treat them as one of several inputs.
[90] For example, price, number of trades and type of trade.
[91] For example for global BMs that require pricing inputs from different regions.
[92] "The asynchronous elements of the Benchmark might not always be transparent to users in these cases." Section B: Transparency. IOSCO Consultation Paper.

As described in our introductory comments, investors have demonstrated strong demand for indices and BMs for many years as these products provide them with transparency, allow them to measure their performance, and/or provide them with access to an asset class. On the other hand, it is an undeniable fact that some asset classes are, by their very nature, less liquid and less frequently traded than others. Nevertheless, and sometimes even more so for the less liquid asset classes, investors require access to BMs and indices to be able to compare their own investments against broad market trends or, particularly in the case of indices, to be able to gain access to the asset class through the use of ETFs or derivatives. These factors have driven the demand for the creation of indices in the less liquid asset classes. It is worth noting that the creation of indices in particular creates positive external effects by raising transparency to all market participants as well as the public, by making the asset class tradable, and by allowing investors to access it in an easy manner.

33. Do you agree that the greatest weight should be given to transactions in the construction of a BM and that non-transactional information should be used as an adjunct (e.g., as a supplement) to transactions?

We note IOSCO's view that, regardless of the data inputs used, any BM can be manipulated.[93] As we explained in more detail above, we believe that, for a variety of reasons, a requirement to always give the greatest weight to transactions would not be beneficial for the creation of reliable BMs, and could certainly not be applied across all asset classes and market conditions.

34. What factors and how often should Administrators (or others) consider in determining whether the market for a current BM'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 BM's underlying interest?

We believe that the frequency of regular reviews of a BM by the BMA should be linked to the rebalancing or roll frequency of the BM or index. It could hence be monthly, quarterly or semi-annual. However, the BMA should also monitor market developments on an ongoing basis and initiate ad hoc reviews where necessary.

In the case of the traded CDS indices, if we identify that the underlying market is not sufficiently robust anymore and/or regulations drive fundamental market changes, we might come to the conclusion ad hoc that a new, modified index series should be launched to satisfy the needs of the index users. Alternatively, if the underlying market is disrupted for the foreseeable future and no alternative version of the index could address this issue, we might conclude that no new series of the index should be launched. IOSCO should note that, given the nature and structure of these indices, such decisions generally do not seem to present market participants with any major challenges in terms of transition.[94]

B. Transition Issues

35. What precautions by BM Administrators, Submitters, and users can aid BM resiliency during periods of market stress, mitigating the potential need for market transition?

We believe that BMAs and Submitters should aim to define, ex ante, resiliency measures that can be applied in periods of market stress. For example, for BMs that rely on voluntary contributions these measures should contain appropriate fallback mechanisms for situations where a minimum number of contributors is not available, for example the use of a model-based price or a carry forward last day's price.

36. What elements of a BM "living will," drafted by a BM Administrator, should be prioritised?

[93] "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." Section A Methodology. IOSCO Consultation Paper.
[94] For example, indices such as CDX EM.Div and CDX.XO have not rolled in years because of lack of liquidity in the marketplace and the existence of liquid alternatives.

When discussing the need for BMAs to establish a "living will" for the BMs they are responsible for, it will be important to distinguish between the different product categories and cases.

Category A Libor-type BMs should be subject to more demanding expectations in this respect given their relevance to determine cash flows of products that may remain outstanding for many more years. In contrast, transition issues for Category B indices are of a very different nature and seem generally less problematic. This is because these indices are used mainly for current needs and most of their users will already have standard review processes in place that would allow them to switch to another index if and when needed. Also, in many instances a number of close substitutes that provide a very similar exposure to the indices used will be available already. Finally, the transition from one index that is used for performance attribution to another generally does not have a direct economic impact or trigger any cash flows, unlike the transition from one Libor-type BM to another. That said we believe that the issues of transition and living will might generally be less relevant for indices compared to BMs.

37. By what process, and in consultation with what bodies, should alternatives be determined for BM replacement?

We believe that, similar to the approach that has been taken for Libor in the UK, alternatives to an existing Category A BM should be chosen based on a public tender that is managed by the relevant regulatory authority.

38. What characteristics should be considered when determining an appropriate alternate BM? (Examples below) Should any of these factors be prioritised?

- ***Level and Type of Market Activity***
- ***Diversity/Number of BM Submitters***
- ***Length of historical price series for the BM alternative***
- ***BM Methodology***
- ***Existing regulatory oversight***
- ***Existing enforcement authority***
- ***Volume, tenors and contract structure of the legacy trades***

IOSCO should note that the above list contains the relevant elements for the transition of a Category A Libor-type BM. In contrast, for an index that is used for performance attribution, i.e. a Category B instrument, the main characteristics would be those based on variables of the market such as comparable composition, i.e. constituent list, and depth and breadth of the analytical values that are made available. Additionally, while "existing enforcement authority" would be relevant for Category A products where greater regulatory oversight is needed, the characteristics that are used to measure performance (Categories B and C) originally, such as transparency and methodology, would be more relevant for determining an appropriate alternative.

39. What conditions are necessary to ensure a smooth transition between market BMs?
40. What considerations should be made for legacy contracts that reference a BM in transition? To what extent does a substantive legacy book preclude transition away from a BM? What provisions can be included in [new and existing] contract specifications that would mitigate concerns if and when a BM transitions occurs?

We believe that a smooth transition between Category A BMs in legacy contracts could be facilitated if the documentation of contracts specified the relevant procedures that will apply in the event that the BM ceases to exist. This language could include an early termination or a set period of time to find an appropriate substitute. We believe that an appropriate protocol could be decided by the OC.

41. How should a timeframe be determined for market movement between a BM and its replacement? What considerations should be made for:

- ***Altered regulatory oversight?***
- ***Infrastructure development/modification?***
- ***Revisions to currently established contracts referencing the previous BM?***
- ***Revisions to the BM Administrator?***
- ***Risk of contract frustration***

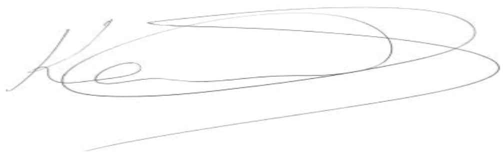
When making any determination as to the time period needed by market participants to transfer from one BM to another one needs to distinguish between a) a transfer from one BM to a different BM that is provided by a different BMA, and b) the transfer of an existing BM to a new BMA.[95]

We believe that the latter situation should generally be straightforward to handle, however one will need to ensure that in any contracts that are referencing the BM there is no link to a specific BMA. We believe that, for example in the case of Libor, a period of 6 months should suffice to transfer the existing BM to a new BMA. This conclusion is based on our view that, in most cases, several providers will possess the required operational capabilities to act as BMA and that, once the code of practice and the relevant contribution procedures have been established, they can continue to be used regardless of any changes to the BMA. Consequently, the major issues to be addressed during a transition period would be the process of choosing the new BMA and the BM Submitters switching their data feeds to it once it has been chosen. We believe that these tasks could be completed within a period of up to 6 months.

* * * * *

Markit appreciates the opportunity to comment on IOSCO's Consultation Report on *Financial Benchmarks.* We would be happy to elaborate or further discuss any of the points addressed above. In the event you may have any questions, please do not hesitate to contact the undersigned or Marcus Schüler at marcus.schueler@markit.com.

Yours sincerely,



Kevin Gould
President
Markit

[95] This would be the current Libor/BBA situation.