



# Statement of Compliance with IOSCO Principles

Citigroup Global Markets Limited

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## Introduction: Statement of Compliance

Citigroup Global Markets Limited (“**CGML**”) develops, calculates, publishes, and offers financial products referencing, a range of rules-based investment strategy indices which may include components from commodities, credit, equities, fixed income markets and/or foreign exchange (“**FX**”) (or a combination of such underlying interests). Such indices may also be licensed for use by third parties.

Citi considers certain of these indices to fall within the definition of a ‘Benchmark’ as set out in the final report on “*Principles for Financial Benchmarks*” as published by the International Organization of Securities Commissions on July 17, 2013 (the “**IOSCO Principles**”) <sup>1</sup>. Accordingly, CGML is an Administrator of these indices (each a “**Benchmark**”) for the purposes of this Statement of Compliance.

CGML, as an established index provider, affirms the importance of accuracy and integrity of Benchmarks in the pricing of financial contracts and, more generally, financial markets. CGML is committed to administering its Benchmarks in accordance with the IOSCO Principles and other relevant industry standards and is taking proactive steps in response to new industry and regulatory standards on financial benchmarks, including the European Union regulation on indices used as benchmarks in financial instruments and financial contracts (the “**Benchmark Regulation**”) <sup>2</sup>.

This Statement of Compliance seeks to describe the extent of CGML’s compliance with the IOSCO Principles with respect to the Benchmarks <sup>3</sup>. As contemplated by the IOSCO Principles, in assessing the extent of CGML’s compliance, CGML has sought to implement the Principles in a manner proportionate to the size and risks posed by each Benchmark and/or the Administrator and the Benchmark-setting process.

For the avoidance of doubt, this Statement of Compliance is not intended to cover benchmarks owned and calculated by other business areas of Citi, including, but not limited to, benchmarks which may include components from commodities, credit, equities, fixed income markets and/or FX (or a combination of such underlying interests) where such benchmarks are administered by affiliates of Citigroup Global Markets Limited including, but not limited to, Citigroup Global Markets Inc., Citigroup Index LLC and Citibank N.A., which shall be covered by separate Statements of Compliance where relevant.

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<sup>1</sup> Capitalised terms used in this document, but not defined, shall have the meaning ascribed to such terms in the IOSCO Principles.

<sup>2</sup> Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EC and Regulation (EU) No 596/2014.

<sup>3</sup> In addition to CGML acting in relation to Benchmarks as outlined above, Citi also offers financial products to its clients which may reference bespoke strategies and baskets, which are not presently considered by CGML to be Benchmarks for the purposes of the IOSCO Principles. Although such financial products are not therefore within the scope of this (or any other) Statement of Compliance, Citi is committed to ensuring that all such financial products are offered in accordance with all applicable laws and relevant industry standards.

The content of this Statement of Compliance follows the order of the IOSCO Principles, which can be grouped into four sub-sections: Governance, Benchmark Design, Quality of the Methodology and Accountability. This Statement of Compliance serves as a summary of CGML's control framework.

Further information regarding CGML, the Benchmarks it administers and this Statement of Compliance are available upon request.

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## GOVERNANCE

### Section 1: Overall Responsibility of the Administrator

CGML, as Administrator, is responsible for the following aspects of the Benchmark Administration process:

- **Development:** CGML, through its Front Office Functions, develops index ideas as part of a derivatives and structured financial products business that forms part of its Citi Markets and Securities Services division. These ideas focus on systematic, rules-based, investable investment strategy indices, enabling investors and other market counterparties to gain exposure to investment allocation strategies, through index linked financial products and derivatives.
- **Determination and dissemination:** The Citi Benchmark Administration Team (“**BAT**”), a group within CGML's Research & Equity Advisory division, and independent from Front Office Functions, is responsible for (i) implementing the index ideas as Benchmarks and testing a defined Methodology, and (ii) the ongoing calculation, publication and maintenance of CGML Benchmarks. Separate reporting lines are maintained between the BAT and the Front Office Functions in order to mitigate any material conflicts of interest which may arise between CGML and the clients of its sales and trading business units in respect of Benchmarks administered by CGML.

In respect of certain Benchmarks, third parties may be appointed to calculate and publish the Benchmark value or perform other specified aspects of Benchmark determination in accordance with a defined Methodology for each respective Benchmark and subject to appropriate and proportionate monitoring of such third parties. Notwithstanding any such appointment, CGML, as Administrator, retains the intellectual property and the responsibility for determining Benchmarks values.

- **Operation:** CGML is responsible for the ongoing operation of the Benchmark Administration process, including taking appropriate contingency measures in the event of unavailability of inputs, market disruption or failure of critical infrastructure. Any contingency measures that are not directly addressed in the rules document describing each Benchmark and its determination methodology (the “**Index Conditions**”) shall be subject to the Administrator's process for the exercise of Expert Judgment.
- **Governance:** An Index Governance Committee (“**IGC**”) provides governance and internal oversight in respect of all aspects of CGML's Benchmark Administration activity. The responsibilities of the IGC include, without limitation, overseeing Benchmark Administration activity undertaken by CGML personnel, including reviewing and challenging all aspects of (i) Benchmark design, (ii) the integrity of Benchmark determination processes, and (iii) relevant control frameworks. The roles and responsibilities of the IGC are further described in Section 5.

## Section 2: Oversight of Third Parties

CGML may, in respect of identified Benchmarks, appoint third parties to act as Calculation Agent or perform specified aspects of the Benchmark determination process (such as determining the composition and weights of the components of the Benchmark) (together, the “**Third Party Providers**”). Any appointment of a Third Party Provider shall be disclosed in the relevant Index Conditions, which are made available to investors in financial products referencing Benchmarks (“**Benchmark Linked Products**”).

Where CGML, as Administrator, appoints a Third Party Provider to carry out such activities, it has policies and procedures in place to maintain appropriate oversight of such Third Party Provider including ensuring that (i) the provision of inputs and services are governed by legal agreements, (ii) appropriate and proportionate monitoring of such Third Party Provider is conducted on a periodic basis, (iii) the identity and role and responsibilities of such Third Party Provider are defined in the written arrangements between CGML and the respective Third Party Provider, and (iv) contingency plans are put in place to avoid undue operational risks associated with the appointment of such Third Party Provider.

The BAT monitors, and shall periodically assess and review, the performance of Third Party Providers at a frequency as determined appropriate by BAT. The scope of each such review will depend on the nature of the service provided by the relevant Third Party Provider but may be expected to include:

- the quality of service being provided by the Third Party Provider, including adherence to agreed service standards;
- any material changes to the terms of the contractual arrangements; and
- any matters of concern relating to the Third Party Provider (including, without limitation, any delay in the provision of data or services, any errors or complaints received in respect of such Third Party Provider and/or any other operational or other risks associated with the continued appointment of the Third Party Provider).

Where practicable, the BAT shall monitor the determinations of Third Party Providers through tests and other reconciliation processes designed to verify such Benchmark values as calculated by the relevant Third Party Provider. Such reconciliation processes may be undertaken either pre- or post-publication of the relevant Benchmark value as considered appropriate by the BAT. The Third Party Provider may consider any discrepancies identified by BAT, but shall in all cases be expected to independently determine the Benchmark value and any adjustments or corrections it deems necessary. Any corrections and/or adjustments made by a Third Party Provider to a Benchmark value will be subject to BAT monitoring.

CGML has the ability to terminate the appointment of any Third Party Provider acting as a Calculation Agent and to appoint an alternative Calculation Agent, which may be a different Third Party Provider or CGML or one of its affiliates.

Notwithstanding the appointment of Third Party Providers, CGML retains responsibility for the Administration of its Benchmarks (please refer to Section 1).

### **Section 3: Conflicts of Interest for Administrators**

During the normal course of business, CGML performs a number of roles in respect of Benchmarks, including designing Benchmarks, acting as Administrator and acting as Calculation Agent of its Benchmarks. In addition, CGML and its affiliates, through their Front Office Functions, structure, offer, sell, issue and enter into Benchmark Linked Products and may undertake market making and/or hedging transactions in respect of any Benchmark or any of its underlying components. Owing to the multiple roles that CGML performs with respect to its Benchmarks, potential conflicts of interest may arise.

Citi policy sets out a framework for the management of conflicts of interest for all Citi employees globally (including all CGML personnel). A Citi Code of Conduct also exists, which CGML personnel are required to confirm periodically that they have read, understood and that they will comply with the principles, policies and laws outlined therein.

In addition, CGML has developed procedures relating to Benchmarks tailored to the level of existing or potential conflicts of interest identified and the level of risk associated with the Benchmarks administered by CGML. These procedures are designed to protect the integrity and independence of CGML's Benchmark determination process and ensure that it can appropriately identify, disclose, manage, mitigate or avoid existing or potential conflicts of interest and that appropriate escalation procedures are in place.

CGML has organised the management and supervision of its Benchmark Administration activity in a manner that seeks to manage and mitigate conflicts of interests that may arise and to separate the Calculation Agent function from the Front Office Functions. To this end:

- the BAT has been established as a group within CGML's Research & Equity Advisory division, which is independent from Front Office Functions. Consequently, BAT personnel have separate reporting lines within the Research & Equity Advisory division in order to preserve the independence and supervision of the Benchmark Administration function;
- the BAT personnel and supervisors involved in the ongoing calculation, publication and maintenance of CGML Benchmarks are not involved in the offer, sale, entry into, trading or hedging of any Benchmark Linked Products;
- the goals, rewards and incentives for BAT personnel are not directly or indirectly tied to the levels or performance of any Benchmark;
- the collection of and/or observation of data, information and other inputs used for the purpose of determining a Benchmark is undertaken by BAT except in the case of a limited number of Benchmarks where the BAT sources intermediate calculations from Front Office Functions instead of sourcing the raw data underlying such intermediate calculations. As part of CGML's ongoing commitment to the integrity of Benchmark Administration, the BAT continues to evaluate the potential for such intermediate calculations to be performed by the BAT.
- The data inputs used in the determination of Benchmarks may be sourced externally or internally. The internal data inputs may include levels, prices or values (as relevant) of

instruments or rates, in each case determined and used by Citi in the ordinary course of its business as a dealer (i.e. as a market maker in relevant instruments), for its own valuation purposes, and/or for the purposes of its own audited books and records (“**Citi Internal Values**”). The BAT may also observe the results of request-for-quote (“**RFQ**”) auction processes undertaken by Front Office Functions. Please also refer to Section 7;

- escalation procedures relating to Benchmark calculation and Administration are independent from Front Office Functions (please refer also to Sections 5 and 16); and
- the Citi Code of Conduct and Citi policy require CGML to protect the confidentiality of non-public data, information and other inputs submitted to, received by, or produced by BAT and in general, to communicate information on a need-to-know basis and in accordance with relevant legal and regulatory obligations.

In instances where BAT sources Citi Internal Values, such inputs are not specifically created for the purpose of creating or determining a Benchmark and, in determining such Citi Internal Values, Citi typically seeks to apply principles and assumptions that are widely recognized in the financial services industry. However, unlike levels, prices or values that are published by an investment exchange and/or a recognized financial information provider, those that are determined by Citi, in the ordinary course of its business, may differ from those that are determined by another market participant. Stakeholders should be aware of the potential conflicts of interest that may arise.

Further details of CGML’s Benchmark Administration controls and processes are described in the remainder of this Statement of Compliance including, without limitation, Sections 4, 5, 7, 8 and 15.

The Index Conditions for each Benchmark typically include a summary of certain risk factors and limitations associated with the relevant Benchmark including a description of the material conflicts of interest that may exist as a consequence of CGML and its affiliates carrying out multiple roles in connection with Benchmarks and Benchmark Linked Products. Further details may be made available upon request in respect of a CGML administered Benchmark.

#### **Section 4: Control Framework for Administrators**

CGML has developed a control framework that documents the controls in respect of Benchmark design, development, calculation, publication and ongoing maintenance, as well as the policies and procedures, training and IT systems that support the overall control environment. The control framework is subject to periodic review by CGML. CGML shall take additional steps, as appropriate and necessary, following such review to further develop and enhance its control framework dependent on the level of existing or potential conflicts of interest identified in the context of (i) its Benchmarks, (ii) the extent of the use of Expert Judgment, and (iii) the nature of the data inputs used in the Benchmark determination process.

**Conflicts of Interest:** CGML, as Administrator, maintains organisational and administrative arrangements (including policies and procedures) to identify, manage, mitigate or avoid existing or potential conflicts of interests that may arise from the process of Benchmark Administration (please refer to Section 3).

**Internal Oversight:** CGML is focused on managing risk (including operational risk) associated with its Benchmark Administration related activities. To this end, the IGC was established and provides oversight of CGML's Benchmark Administration activities. The IGC includes balanced representation from a number of Citi's Front Office Functions and risk/control functions (please refer to Section 5).

**Escalation and Whistleblowing:** All CGML personnel are obligated to comply with the Citi Code of Conduct, which sets the expectation that personnel will, and encourages personnel to, escalate all possible violations of a law, regulation, Citi policy or ethical standards. The Citi Code of Conduct outlines Citi's expectations as to what should be reported and how such reporting should take place. There are multiple mechanisms available for Citi personnel to raise concerns (including an effective whistleblowing mechanism) to the Citi Ethics Office, including via telephone, email, website, mail and facsimile.

**Benchmark Complaints Procedures:** Complaints regarding Benchmarks shall be handled in line with the Citi internal complaints procedures for receiving and investigating complaints. Citi policy requires CGML, as Administrator, to follow specified procedures in relation to complaints received in respect of Benchmarks. Users of CGML Benchmarks may address any concerns or complaints in respect of the relevant Benchmark Linked Product to their Citi sales representative or alternatively the BAT. CGML seeks to resolve any complaints on a timely and fair basis (please refer to Section 16).

**Benchmark Administration Process:** The BAT has established processes for the calculation, ongoing maintenance and publication of Benchmarks. Specifically, the BAT maintains procedures for (i) implementing the index ideas initiated by Front Office Functions as Benchmarks and testing a defined Methodology, and (ii) the ongoing calculation, publication and maintenance of Benchmarks. The Index Conditions disclose the determination methodology for the relevant Benchmark including, without limitation, the input data and sources, selection and reweighting methodology and the daily calculation methodology. In addition, the Index Conditions contain a description of market and component events, market disruption and other extraordinary events which may be reasonably anticipated, together with a description of the consequences of such

events for the determination of the Benchmark, including the use of Expert Judgment. Please refer to Sections 6 to 15 (inclusive) for further details.

**Maintenance, Periodic Review and Communication:** The BAT shall identify a sample of Benchmarks or groups of similar Benchmarks administered by CGML, which are determined from input data of the same nature, and which provide specific measures of the same or similar market or economic reality (each such group, a “**Benchmark Family**”), to be periodically reviewed each year from the population of Benchmarks administered by CGML. The BAT shall then determine whether an identified Benchmark or Benchmark Family within the sample remains fit-for-purpose (please refer to Section 10).

During the review process, CGML shall consider a number of factors relevant to the specific Benchmark or Benchmark Family including the original design considerations, calculation methodologies, data inputs, Stakeholder feedback (where deemed appropriate) including any complaints and audit findings. In the event that CGML determines that a Benchmark Methodology should be modified or is no longer suitable, the IGC shall be required to approve any such modification or discontinuation of the Benchmark and notify Stakeholders accordingly (please refer to Sections 12 and 13).

**Information Published and Made Available:** Index Conditions documents are made available to investors in Benchmark Linked Products and other authorised users of the relevant Benchmark through a number of channels (e.g. with the associated prospectus, offering document, trade confirmation or other legal document associated with the related Benchmark Linked Products, and, in the case of Benchmark Linked Products distributed to retail investors, also through a website) (please refer to Section 11).

**Expertise:** CGML has implemented measures to ensure that all CGML personnel involved in Benchmark Administration activity possess the necessary levels of expertise and competence and are subject to periodic performance reviews and assessments.

All CGML personnel involved in Benchmark Administration activities are required to complete ongoing training on Benchmark Administration pursuant to Citi policy and receive training relevant to the activity that they undertake. In addition, all new employees are subject to Citi-wide training courses on matters such as ethics, compliance and information security.

**Audit and Accountability:** CGML, as Administrator, is subject to review by the Citi internal audit division in line with the appropriate audit cycle and maintains written records of key data, events, procedures and other documents for audit and regulatory purposes (please refer to Sections 17 to 19 inclusive).

## Section 5: Internal Oversight

The IGC is the Oversight Function in respect of Benchmark Administration activity undertaken by CGML personnel. The IGC is responsible for providing internal oversight, reviewing and challenging on all aspects of:

- **Benchmark design:** Reviewing and approving the launch of a new Benchmark or a Benchmark Family (as the case may be);
- **Integrity of Benchmark determination processes:** Overseeing the use of Expert Judgment, reviewing and considering regulatory, operational and other risks, the nature and sources of Benchmark inputs, Methodologies, the identification and management of existing or potential conflicts of interest, and reviewing the oversight of appointed Third Party Providers; and
- **Integrity of control frameworks:** Overseeing the effectiveness of governance and controls over the key aspects of the Benchmark determination process including, without limitation, (i) oversight of operational measures designed to mitigate conflicts of interest, (ii) overseeing the exercise of Expert Judgment, (iii) overseeing the appropriateness of existing Benchmarks through periodic review of Benchmarks and their respective Methodologies (please refer to Section 10), (iv) considering audit findings relating to Benchmark Administration activities, and (v) overseeing any modifications to be made to, or the discontinuation of, a Benchmark or Benchmark Family (as the case may be) (please refer to Sections 12 and 13 respectively).

The IGC shall also seek to remain informed about issues and risks to Benchmarks and shall be consulted in respect of any complaints received in respect of a Benchmark.

The Chair, or Chairs, of the IGC are nominated by CGML with regard to their experience and seniority from CGML's risk/control functions.

In order to provide effective challenge and governance, the IGC is composed of individual representatives (or their designees) from certain Front Office Functions and risk/control functions within Citi who have been (i) nominated by their respective Front Office Function or risk/control function, and (ii) accepted by the Chair(s).

The composition of the IGC is such that it provides a balanced representation of a range of internal stakeholders and is designed to mitigate any potential conflicts of interest.

Each individual Member shall have (i) an appropriate level of seniority and experience to participate as a member of the IGC, and (ii) knowledge and expertise relating to the activities of the Front Office Function or risk/control function represented by the relevant individual, in each case as determined by the relevant Front Office Function or risk/control function and subject to acceptance by the Chair(s).

An individual Member of the Committee may be removed by a Chair or by the Front Office Function or risk/control function which the individual represents. A new member may be nominated and accepted as a Member as described above.

## BENCHMARK DESIGN

### Section 6: Benchmark Design

CGML, through its Front Office Functions, develops index ideas as part of Citi Markets' derivatives and structured financial products business across a variety of asset classes and may include components from commodities, credit, equities, fixed income markets and/or FX (or combinations of such components from such asset classes). Each Benchmark represents a rules-based investment strategy index, designed with the aim of meeting a particular market or client demand.

Benchmarks are designed by CGML personnel who are familiar with the underlying market(s) for the components of the proposed Benchmark, taking into consideration any features which are specific to the relevant market(s).

The design considerations which are factored into the Benchmark design process include the following:

- **Defined Objective:** The Benchmark should have a clearly defined objective with respect to following a specified investment strategy;
- **Relevance of Components:** The components of the Benchmark should be considered appropriate in light of the defined objective of the Benchmark;
- **Replicability:** The performance of the Benchmark should be capable of being replicated by Market Participants trading in the underlying components of the Benchmark; and
- **Capacity:** The Benchmark should be designed with the aim of being replicable and scaled for a reasonable volume of Benchmark Linked Products.

In assessing these design considerations, the underlying components of the proposed Benchmark will be considered by reference to (i) the adequacy of the components used to represent the relevant Interest; (ii) the size and liquidity of the relevant market (e.g. whether there is sufficient trading to provide observable, transparent pricing); (iii) the relative size of the underlying market in relation to the anticipated volume of trading in Benchmark Linked Products; (iv) the distribution of trading among Market Participants (market concentration); and (v) market dynamics.

The IGC shall review and approve each proposal to launch a new Benchmark or Benchmark Family (as the case may be) and shall take into account the design considerations mentioned above.

## Section 7: Data Sufficiency

CGML aims to use data that it deems sufficient to accurately and reliably represent the Interest measured by the Benchmark and typically seeks to use data which is (i) based on prices, rates, indices and/or values that have been formed by competitive forces of supply and demand, and (ii) anchored by observable transactions entered into at arm's length in the underlying market. In other instances, CGML may use certain Citi Internal Values (as further discussed below) determined in the ordinary course of its business where it deems appropriate and proportionate to do so.

Input data used in the determination of Benchmarks may include the following non-exhaustive categories of prices, rates, values and other data:

- **Exchange Prices:** These include the published prices for all forms of exchange traded instruments including (i) stocks and other 'cash market' instruments such as exchange traded funds and other exchange traded products, and (ii) futures and options on a variety of underlying assets across asset class including, without limitation, commodity futures, bond futures and interest rate futures.
- **Other Market Data:** These include interest rates, FX rates and other market prices, levels and values published by administrators or third party data providers. Examples include, without limitation, benchmark interest rates (such as LIBOR) and FX rates (such as WM/Reuters), the levels of indices published by third parties, corporate action data for listed shares and third party industry, category, style or similar classifications for shares, commodities or other financial instruments.
- **Official Data and Statistics:** Such as economic, industry or trade data, indicators, forecasts, projections or statistics published by governments, government agencies or international organisations or similar entities.
- **Internal Inputs:** The use of Citi Internal Values is considered on a case-by-case basis, either where adequate and reliable third party data is not readily available to represent the relevant component or Interest or where CGML determines it may be appropriate and proportionate to do so taking into consideration the size and risk posed by the relevant Benchmark.

Whereas Citi Internal Values are not specifically created for the purpose of creating or determining a Benchmark, Stakeholders should be aware of the potential conflicts of interest that may arise in respect of the use of Citi Internal Values (please refer to Section 3). In addition, where the BAT observes the results of RFQ auction processes undertaken by Front Office Functions, Stakeholders should be aware that potential conflicts of interest may similarly arise in respect of the use of such data.

The specific inputs that are used in Benchmark determinations (including the relevant observation time, whether a 'closing time' or an intra-day 'snapshot' at a specified time) are defined in the Index Conditions document for the relevant Benchmark in respect of each use of the relevant input (please refer to Section 11).

## Section 8: Hierarchy of Data Inputs

Benchmarks typically use input data as part of the algorithmic Benchmark determination process both in relation to rebalancing and reweighting determinations and in relation to the calculation of the daily levels of the Benchmarks. In each case, all data inputs used in the determination of a Benchmark are defined in the Index Conditions document for the relevant Benchmark (please refer to Section 11). The data inputs are typically defined by reference to both the source of the data and the time as of which the data is observed.

While the majority of Benchmarks specify a single source for each input rather than utilising a hierarchy of data inputs, the Index Conditions may also specify a secondary or alternative source of data inputs that may be used for a particular input. Presently, CGML does not consider any of its Benchmarks to be dependent on Submissions within the meaning of the IOSCO Principles (please refer to Section 14).

### Typical Data Inputs

As mentioned above, data inputs are typically defined in the Index Conditions by reference to a specified source rather than a hierarchy. Without limitation, the following are examples of typical data inputs:

- **Exchange Prices and Other Market Data:** Third party data of this type (as described in Section 7 above) is sourced from recognised financial information providers (such as Bloomberg and Reuters) as specified in the Index Conditions. On occasion, there may be discrepancies between the specified data source and other recognised information providers, or the data made available by an exchange or clearing house. In such cases the BAT may seek to verify the data with the identified information provider and/or exercise Expert Judgment as further described below.
- **Official Data and Statistics:** Third party data of this type (as described in Section 7 above) is sourced directly from the publishing agency or from recognised financial information providers (such as Bloomberg and Reuters) as specified in the Index Conditions. On occasion, there may be discrepancies between the specified data source and the publishing agency. In such cases the BAT may seek to verify the data with the identified information provider and/or exercise Expert Judgment as further described below.
- **Internal Inputs:** In cases where Citi internal data is used in the determination of a Benchmark (as described in Section 7 above) the data will be sourced by BAT from Citi's internal processes and/or systems.

### Market Disruption

Each Index Conditions document defines the specific market disruption events that are relevant for the components underlying the respective Benchmark, along with the corresponding consequences for the Benchmark determination process if such an event were to occur.

### Expert Judgment

To the extent that (i) a market event is not fully anticipated or addressed in the Index Conditions, or (ii) any necessary data input is unavailable or considered by the BAT to be unreliable for any

reason, then (after applying any applicable fall-back provision specified in the relevant Index Conditions) Expert Judgment may be used in performing the relevant Benchmark determination(s). Expert Judgment may also be used by the BAT in relation to corporate actions and similar market events in order to appropriately reflect the commercial objective of the Benchmark and market practice in relation to such events.

Expert Judgment will be exercised (i) in good faith and in a commercially reasonable manner, (ii) to the extent practicable, reflecting the commercial objective of the relevant Benchmark and market practice, and (iii) to the extent practicable, in a manner which promotes consistency in the exercise of Expert Judgment and the making of determinations in respect of the relevant Benchmark and other Benchmarks administered by CGML (please refer to Sections 9 and 11).

Any exercise of Expert Judgment in non-routine circumstances and which could have a material effect on the Benchmark shall be escalated to the IGC for review and approval in advance wherever possible.

## **Section 9: Transparency of Index Determinations**

Benchmarks are administered and calculated by CGML in accordance with a systematic and formulaic set of rules that are set out in the relevant Index Conditions document (please refer to Section 11).

Furthermore, the majority of Benchmarks are calculated using data sourced from, or derived from, Regulated Markets or other publicly available data. Due to the transparency provided by the disclosure of the rules in the Index Conditions and the widespread use of publicly available input data in Benchmark determinations, the BAT does not publish an explanation alongside every published level of a Benchmark or in connection with the rebalancing or reweighting of Benchmark components in accordance with the methodology described in the Index Conditions. In the case of Benchmarks which use exclusively publicly available input data in Benchmark determinations, these determinations are capable of being independently replicated.

In respect of those Benchmarks that may be calculated using Citi Internal Values, the BAT does not publish an explanation alongside the published level of such Benchmarks or in connection with the rebalancing or reweighting of the relevant Benchmark components. Further information relating to the use of such Citi Internal Values in a Benchmark may be made available upon request.

On an exceptional basis there may be instances where a Benchmark determination is made through the exercise of Expert Judgment or deviations from standard procedures and methodologies (please refer to Section 8). The use of Expert Judgment by the BAT is subject to the oversight of the IGC. The use of non-routine Expert Judgment will be communicated to Stakeholders, as deemed appropriate.

## **Section 10: Periodic Review**

The BAT shall identify a sample of Benchmarks to be periodically reviewed each year from the population of Benchmarks administered by CGML depending on the nature and size of, and the risk posed by, the relevant Benchmark and factors relevant to the specific Benchmark or Benchmark Family (as the case may be) including the frequency of any operational items which have been noted, Stakeholder feedback (as applicable) including any complaints (if any), audit findings, matters arising from reviews of Third Party Providers, or as may be requested by the IGC or otherwise determined appropriate by the BAT.

In reviewing a Benchmark or Benchmark Family (as the case may be), it shall be assessed:

- whether there have been any changes in the underlying components or Interest referenced by the Benchmark which may mean that such components or Interest are no longer adequately represented by the Benchmark in the manner originally intended; and
- whether the Benchmark remains fit-for-purpose.

The IGC shall oversee and consider the findings following any such periodic review of a Benchmark or Benchmark Family (as the case may be).

Any proposed changes to a Benchmark Methodology arising from this review will be subject to the process described in Section 12.

## **QUALITY OF THE METHODOLOGY**

### **Section 11: Content of the Methodology**

The determination methodology for each Benchmark is formalised in the applicable Index Conditions document. An Index Conditions document may govern a single Benchmark or may govern a Benchmark Family, in which case both the common and unique characteristics of the relevant Benchmarks are described.

Index Conditions documents are made available to investors (and potential investors) in Benchmark Linked Products and other Stakeholders of the relevant Benchmark through a number of channels (e.g. with the associated prospectus, offering document, trade confirmation or other legal document associated with the related Benchmark Linked Products, and, in the case of Benchmark Linked Products distributed to retail investors, typically through a website).

The Index Conditions are designed to enable potential investors in Benchmark Linked Products and other Stakeholders to assess and review the characteristics of the relevant Benchmark (including its objectives, technical methodology and parameters) and to make an informed decision with respect to any investment in any associated Benchmark Linked Product or any other proposed use of the relevant Benchmark. CGML acts as Administrator for a variety of Benchmarks and all potential users are responsible for making their own decisions with respect to any use of a Benchmark.

The Index Conditions made available to Stakeholders, as described above, include disclosure of the determination methodology for the relevant Benchmark including, without limitation, the input data and sources, selection and reweighting methodology and the daily calculation methodology, including definitions of key terms and concepts. In addition, the Index Conditions contain a description of market and component events, market disruption and other extraordinary events which may be reasonably anticipated, together with a description of the consequences of such events for the determination of the Benchmark. The Index Conditions typically also contain a consideration of certain risk factors and limitations associated with the relevant Benchmark.

The BAT shall seek to apply the use of Expert Judgment in the manner described in Section 8. In using Expert Judgment to exercise any discretion or to make any determination, the BAT shall be subject to the oversight of the IGC. The IGC shall review any such use of Expert Judgment in extraordinary circumstances.

Newly developed Index Conditions indicate the circumstances where Expert Judgment may be employed and shall provide an overview of such procedures with respect to the use of Expert Judgment (including what constitutes Expert Judgment in Benchmark determination, procedures designed to promote consistency in the use of Expert Judgment and the governance processes in place over Expert Judgment), and error handling and corrections.

CGML has adopted a common framework around the internal approval and periodic review of its Benchmarks. While this is not specifically defined in the Index Conditions, Section 10 of this Statement of Compliance describes the process by which periodic reviews are performed in the context of its Benchmarks.

Similarly, the Index Conditions do not explicitly describe the circumstances in which CGML may consult with Stakeholders. However, the circumstances in which CGML may consult with Stakeholders, as appropriate, are outlined in Principles 12 and 13 of this Statement of Compliance.

## **Section 12: Changes to the Methodology**

Although CGML Benchmarks are governed by a static set of rules that are set out in the relevant Index Conditions and are intended to be comprehensive, it is possible that ambiguities, errors and omissions may occur. In such circumstances, CGML shall follow procedures, which it considers are appropriate and proportionate to the amount and type of Benchmark Linked Products referencing the relevant Benchmark which are currently in existence. In summary, the procedures involve three phases: discovery, planning and execution.

**Discovery:** The BAT will endeavour to resolve such ambiguity, error or omission using Expert Judgment and may, in consultation with the IGC, propose amendments to the Index Conditions to reflect the resolution of such ambiguity, error or omission. In so doing, CGML shall assess the potential impact such change may have on Stakeholders and may, if deemed by CGML to be appropriate and proportionate to the risk and size of the Benchmark, seek to consult with Stakeholders. Any such decision to consult with Stakeholders shall be considered by the IGC.

**Planning:** The BAT in consultation with the IGC shall consider (i) the potential impact on Stakeholders, (ii) whether a change to a Benchmark (including, without limitation, a change to the composition, data inputs or calculation methodology) is necessary to ensure that the Benchmark continues to be fit-for-purpose, and (iii) any feedback received from Stakeholders (as may be deemed appropriate) prior to implementation.

**Execution:** The BAT shall be responsible for overseeing and shall consult, as necessary, with the IGC on all three phases of the process and shall consult with the IGC with regard to any proposed amendment to the relevant Index Conditions and may liaise with other teams within Citi with regard to obtaining Stakeholder feedback.

IGC approval is required in connection with any material amendments to the Index Conditions.

Following approval of the IGC, CGML shall seek to notify Stakeholders of its determination to amend the Index Conditions. Such notification shall explain the reason for any such change and shall be communicated to Stakeholders where reasonably possible along with the relevant amended and restated Index Conditions.

### **Section 13: Transition**

To address the need for a possible cessation of a Benchmark (including, without limitation, as a consequence of changes in the underlying components or Interest referenced by the Benchmark which may mean that such components or Interest are no longer adequately represented by the Benchmark in the manner originally intended), CGML shall follow the below procedures, which it considers are appropriate and proportionate to the amount and type of Benchmark Linked Products referencing the relevant Benchmark which are currently in existence. In summary the procedures shall involve three phases: discovery, planning and execution.

**Discovery:** CGML shall assess the potential impact a cessation of a Benchmark may have on relevant Stakeholders and, if it deems appropriate and proportionate to do so, may seek to consult with Stakeholders. Any such decision to consult with Stakeholders shall be considered by the IGC.

**Planning:** CGML shall take an appropriate and proportionate approach and consider (i) the potential impact on Stakeholders, (ii) any feedback received from Stakeholders (as applicable), (iii) the availability of any alternative Benchmark, (iv) the extent to which Stakeholders may wish to transition to an alternative Benchmark and, if so, the practicability of maintaining a parallel Benchmark in order to accommodate an orderly transition to a new Benchmark, (v) the extent to which an alternative Benchmark is investable, (vi) the procedures that it shall follow in the event that a suitable alternative cannot be identified, and (vii) timing aspects for the cessation of a Benchmark and any transition to an alternative Benchmark.

**Execution:** The BAT shall be responsible for overseeing and shall consult, as necessary, with the IGC on all three phases of the process with regard to any proposal to cease publication of a Benchmark and may liaise with other teams within Citi with regard to obtaining Stakeholder feedback.

IGC approval is required in connection with the cessation of any Benchmark.

Following approval of the IGC, CGML shall provide notice to Stakeholders of its determination to cease publication of a Benchmark. Such notification shall be communicated to Stakeholders where reasonably possible.

The Benchmark Linked Products typically include fall-back provisions in the event of a cessation of a Benchmark and/or the launch of a successor Benchmark, as the case may be. The Index Conditions typically contain a description of certain events and circumstances which may result in the cessation of a Benchmark in addition to consideration of certain risk factors and limitations associated with a Benchmark.

## Section 14: Submitter Code of Conduct

CGML Benchmarks are determined using data inputs sourced from third party providers as well as internal Citi sources.

CGML has applied proportionality, contemplated by the IOSCO Principles, in connection with the Submitter Code of Conduct, as follows:

- Third party price providers who provide a generic data service or price dissemination function (i.e. providing financial instrument prices, rates, levels or other market data without regard to the data recipient's specific intended use and where such information is the same to all who enter into agreements to receive such data or who access such public data) are not providing data for the purposes of calculating a Benchmark. Accordingly CGML does not consider these third parties to be Submitters or any of their data to be Submissions.
- In addition to data sourced from third party price providers, the BAT uses Citi Internal Values in the determination of certain of its Benchmarks. All Citi Internal Values used for Benchmark determinations are typically used by Citi in the ordinary course of its business as a dealer (i.e. as a market maker in relevant instruments), for its own valuation purposes, and/or for the purposes of its own audited books and records (i.e. they are made available to address purposes which are unrelated to Benchmark determination). The relevant data is available to authorised users within Citi on shared systems or via communication to group distribution lists without aiming to address any specific intended use by any particular group, including the BAT. Therefore such data is not regarded as Submissions to the BAT in the context of Benchmark Administration.
- The BAT may act as Administrator in respect of Benchmarks which seek to represent an investment or trading strategy as defined by an identified third party on a discretionary basis (an "**Index Advisor**"). In such instances, the Index Advisor will fall within the IOSCO definition of "Submitter" in that they are a legal person providing component weights and rebalancing price data to the BAT and which is used by the BAT in the determination of the relevant Benchmark. The BAT does not currently treat such Index Advisors as Submitters for the purpose of the IOSCO Principles as all other aspects of the determination process are carried out by the BAT and the stated purpose of the Benchmark in each case is to track the investment or trading strategy as employed independently by the identified Index Advisor.
- In certain circumstances, BAT observes the results of a RFQ auction process undertaken by a Front Office Function in the normal course of business for the purpose of transacting in the relevant instruments. CGML does not consider the parties participating in such an auction process to be Submitters or any of their data to be Submissions.

## **Section 15: Internal Controls over Data Collection**

Citi policy requires that adequate controls be in place such that all data inputs are sufficiently transparent and capable of being verified, taking into account the nature of the Interest. Appropriate internal controls, proportionate to the nature of the Benchmark and the risk and size of the Benchmark use, have been developed in respect of data collection and transmission processes where CGML, as Administrator, collects data from external or internal sources.

**Source selection process:** As mentioned in Section 8, data inputs are typically defined by reference to a specified source and can be classified as either exchange prices or other market data, official data and statistics or internal inputs. The source of inputs for Benchmarks varies by asset class and must be considered by the BAT to be of sufficient quality to represent the Interest that the Benchmark is seeking to measure and are subject to review by the IGC. The BAT shall generally seek to use inputs from external and/or publicly available sources, capable of independent verification to the extent possible.

However, the BAT may on a case-by-case basis consider the use of Citi Internal Values typically in circumstances where adequate and reliable third party data is not readily available to represent the relevant component or Interest or where CGML determines it may be appropriate and proportionate to do so taking into consideration the size and risk posed by the relevant Benchmark. Whereas Citi Internal Values are not specifically created for the purpose of creating or determining a Benchmark, Stakeholders should be aware of the potential conflicts of interest that may arise in respect of the use of Citi Internal Values (please refer to Section 3).

Each input to be used, whether external or internal, shall be described in the Index Conditions for the respective Benchmark. The process for selecting the sources of data are further addressed in Sections 7, 8, 9 and 11 of this Statement of Compliance.

**Collection of data:** The BAT has implemented a number of internal controls that it deems appropriate for the collection of data inputs (whether sourced externally or internally) including, without limitation, data verification and reconciliation processes where practicable, in each case proportionate to the size and risk posed by the relevant Benchmark. Such controls are subject to periodic assessment and enhancement. Where Citi Internal Values are used in the determination of the relevant Benchmark, such Citi Internal Values may not be subject to any additional verification process by the BAT on the basis that, as described above, such internal inputs are not specifically created for the purpose of determining a Benchmark.

In addition, in the case of a limited number of Benchmarks, the BAT sources intermediate calculations from Front Office Functions instead of sourcing the raw data underlying such intermediate calculations. Such intermediate calculations may not be subject to any additional verification process by the BAT.

**Data integrity and Confidentiality:** In order to protect the integrity of data used in the Benchmark determination process, access to the Benchmark determination process environment shall be limited to the BAT personnel (and technology and other support personnel to the extent necessary to perform their roles). Technology-based solutions are implemented wherever practical in the data collection and transmission process.

## **ACCOUNTABILITY**

### **Section 16: Complaints Procedures**

Complaints regarding Benchmarks shall be handled in line with the Citi internal complaints procedures for receiving and investigating complaints. CGML seeks to address any complaints on a timely and fair basis.

In accordance with CGML's procedures in relation to complaints received in respect of Benchmarks, CGML personnel are responsible for escalating internally any such complaints. Any complaint received shall be recorded in a centralised log maintained by Citi Compliance. Any complaints with regard to Benchmarks are escalated to the IGC.

The Compliance department, in consultation with the IGC and the BAT, shall seek to resolve any such complaint as soon as reasonably practicable.

All documents relating to a complaint, including those submitted by the complainant as well as CGML's own records, are required to be retained for a minimum of five years, subject to applicable national, legal or regulatory requirements.

In the event that a complaint results in a change to a Benchmark determination, such change shall be notified to Stakeholders.

An investor with a concern or complaint in relation to a Benchmark Linked Product issued by or entered into with CGML or any of its affiliates may address such concern or complaint initially to the relevant Citi sales representative or via the 'Contact Us' section at [www.citigroup.com](http://www.citigroup.com).

A Stakeholder with a concern or complaint specifically in relation to the Administration of a Benchmark may address such concern or complaint to the relevant Citi sales representative or to the Benchmark Administration Team (BAT), Citi Research & Equity Advisory division at the following address: Citigroup Global Markets Limited, Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB.

## **Section 17: Audits**

CGML, as Administrator, has previously engaged an external consultant to conduct a review of its practices and compliance with the IOSCO Principles in the context of Benchmarks that it administers. Such external review was completed in April 2016.

CGML continues to consider the extent and periodicity of independent audits in respect of reviewing CGML practices and adherence to its stated criteria and the IOSCO Principles and has determined that for the purpose of this Statement of Compliance, a further external assessment was not required. CGML may, as it deems appropriate, seek to appoint an external consultant to conduct a review of its practices and compliance with the IOSCO Principles and the Benchmark Regulation.

The BAT is subject to review by the Citi internal audit division (“**Internal Audit**”) in line with the appropriate, risk based, audit cycle. The scope of such internal audit will not necessarily address CGML’s adherence to (i) its stated criteria and with the IOSCO Principles, and (ii) its stated Benchmark Methodology. However, Internal Audit shall periodically audit the BAT, providing an independent and objective review regarding the effectiveness of governance, risk management and controls that mitigate current and evolving risks associated with the BAT and the Benchmark Administration activity.

Similarly, Front Office Functions are subject to separate risk based reviews by Internal Audit.

## **Section 18: Audit Trail**

Citi policies require the safeguarding of necessary documents and/or information for audits in accordance with legal and regulatory requirements.

CGML, as Administrator, shall retain written records for five years or longer, subject to applicable national legal or regulatory requirements, on:

- data inputs used in the determination of Benchmarks, including but not limited to market data and any other data and information sources relied upon;
- any exercise of Expert Judgment in the determination of a Benchmark, including any deviation from standard procedures and methodologies (including those made during periods of market disruption);
- the identity of each person involved in the Benchmark determination process; and
- any queries and responses relating to data inputs.

**Section 19: Cooperation with Regulatory Authorities**

CGML is committed to cooperating with relevant regulatory authorities to improve the framework for Benchmark regulation or to address an inquiry, subject to applicable legal or regulatory restrictions and contractual or confidentiality obligations.

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