



Control processes defined in relation to governance, quality and accountability activities over the ICE U.S. Treasury Indices and their adherence to the International Organization of Securities Commissions (“IOSCO”) Principles for Financial Benchmarks

As at April 4, 2018

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Introduction

ICE Data Indices, LLC (“IDI”) is a U.S. subsidiary of Intercontinental Exchange, Inc. (“ICE”), and is the administrator under the ICE Data Services business unit for the following:

- ICE U.S. Treasury Indices - 15 Indices based on U.S. Treasury Bonds of maturities ranging from 0-30 years, including leveraged and inverse indices.
- NYSE Indices - Approximately 300 proprietary and partner indices that cover multiple asset classes and include blue chip, national and regional indices as well as sector, smart beta, and thematic indices.
- ICE BofAML Indices - More than 5,000 fixed income, currency and commodity indices.

More information on the above index families can be seen at: <https://www.theice.com/market-data/indices>

Background to the IOSCO Principles for Financial Benchmarks

In July 2013, the Board of the International Organization of Securities Commissions (“IOSCO”) issued the Principles for Financial Benchmarks¹ with the aim of promoting the reliability of Benchmark determinations and ensuring benchmark governance, quality and accountability.

IOSCO issued the Principles with the recommendation that they guide all financial benchmark administrators. IOSCO allows a proportionate approach to be taken with respect to the size and risks posed by the relevant benchmark and/or benchmark administrator and the benchmark-setting process.

About ICE and ICE Data Indices, LLC

ICE operates the leading network of regulated exchanges and clearing houses. ICE’s futures exchanges and clearing houses serve global commodity and financial markets, providing risk management and capital efficiency. ICE is a public company listed on the NYSE under the trading symbol ICE and is regulated by the SEC. Information about IDI affiliates may be obtained by visiting: <https://www.theice.com/index> and through its public filings.

ICE Data Services, part of ICE, was launched in 2003 in recognition that exchanges are natural producers and disseminators of data based on the price discovery role they play and the growing demand for customized market data across a range of formats. ICE acquired NYSE Euronext (2013), SuperDerivatives (2014) and Interactive Data Corporation (2015), significantly expanding its analytics and connectivity services to help meet the growing needs of the market. In October 2016, ICE acquired S&P Global’s Standard & Poor’s Securities Evaluation (SPSE) and Credit Market Analysis (CMA) businesses and in October 2017 ICE acquired the BofA Merrill Lynch Global Research Index platform.

In 2017, IDI was formed as a wholly owned subsidiary of Intercontinental Exchange Holdings, Inc. and part of ICE Data Services. IDI combines the acquired Bank of America Merrill Lynch Global Research division’s fixed income index platform, the NYSE Index group and the Interactive Data Corporation ETF and Index Services group, which have been producing indices since 1973, 1965, and 2015 respectively. IDI combines leading reference data, evaluated pricing and analytics along with an established track record in index provisioning spanning 50 years to deliver unique, best-in-class index solutions as an Index Administrator and as a provider of calculation services for certain third-party indices and intraday estimates of an exchange traded fund’s net asset value per share.

¹ Available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>

NYSE® is a registered trademark of NYSE Group, Inc., an affiliate of IDI and is used by IDI with permission and under a license.

About ICE U.S. Treasury Indices

The ICE U.S. Treasury Indices were developed as a broad representation of the U.S. Treasury market. The indices include a core market index measuring the performance of all fixed-rate, dollar denominated U.S. Treasury bonds with at least one year to maturity, indices covering varying maturity ranges of the Treasury market, a short-term index to measure the performance of Treasury bonds, notes, and bills with less than one year to maturity, and indices to measure the performance of Treasury Inflation Protected Securities.

The ICE U.S. Treasury Indices are suitable to be licensed as benchmarks for financial instruments such as Exchange Traded Funds, Mutual Funds, or derivatives, as well as for performance measurement or other research purposes.

European Benchmark Regulation (EU BMR) Requirements

The ‘Regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds’ (“EU Benchmarks Regulation” or “the Regulation”)² entered into force on June 30 2016; most of the provisions came into effect on January 1, 2018. The Regulation introduces a common framework and consistent approach to benchmark regulation across the EU. It aims to ensure benchmarks are robust and reliable, and to minimize conflicts of interest in the benchmark-setting processes.

IDI, as a third country Benchmark Administrator is subject to the requirements of the Regulation and it is IDI’s intention, as permitted under the Regulation, to meet compliance by applying the IOSCO Principles.

While the Regulation came into effect on January 1, 2018, the Regulation’s transitional provisions allows for users based in the European Union to continue using existing and new Benchmarks provided by Benchmark Administrators, including IDI, until January 1, 2020, by which time IDI must be endorsed or recognized, or be subject to supervision in an equivalent jurisdiction.

IDI intends to apply for recognition in the UK through the FCA as the relevant competent authority, and we are engaged with FCA, ESMA and other European authorities on the regulation and its application.

To support our recognition application, an external assurance assessment of our business against the IOSCO Principles for Financial Benchmarks as set out in this statement has been completed and our statements under the Relevant Activities section were found to be fairly stated.

Further information

IDI’s contact details in relation to the ICE U.S. Treasury Indices are:

- By email to: ICEIOPVCalIndices@theice.com;
- By telephone to: Bedford: +1 781 687 8112;
- By post at: ICE Data Indices, 32 Crosby Drive, Bedford, Massachusetts 01730.

Further details about IDI and ICE U.S. Treasury Indices can be found at <https://www.theice.com/market-data/indices>.

² Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1011&from=EN>

Principles and responses

Principle 1 – Overall Responsibility of the Administrator

IOSCO Principle 1	IDI's Response
<p>The Administrator should retain primary responsibility for all aspects of the Benchmark determination process. For example, this includes:</p> <ul style="list-style-type: none">a) Development: The definition of the Benchmark and Benchmark Methodology;b) Determination and Dissemination: Accurate and timely compilation and publication and distribution of the Benchmark;c) Operation: Ensuring appropriate transparency over significant decisions affecting the compilation of the Benchmark and any related determination process, including contingency measures in the event of absence of or insufficient inputs, market stress or disruption, failure of critical infrastructure, or other relevant factors; andd) Governance: Establishing credible and transparent governance, oversight and accountability procedures for the Benchmark determination process, including an identifiable oversight function accountable for the development, issuance and operation of the Benchmark.	<p>Context</p> <p><i>IDI was established in 2017 and is the index administrator under the ICE Data Services business for the ICE U.S. Treasury Indices, formerly branded under the Interactive Data Corporation name since 2015.</i></p> <p><i>The ICE U.S. Treasury Index Series was developed as a broad representation of the U.S. Treasury market and includes a number of indices and sub-Indices ranging from one month to thirty years. All ICE U.S. Treasury Indices are market value weighted and designed to measure the performance of the U.S. dollar-denominated, fixed rate U.S. Treasury market.</i></p> <p><i>IDI has sole responsibility for all aspects of the development, determination and dissemination, and operation of the ICE U.S. Treasury Indices. The IDI Index Governance Committee (“IGC”) reviews and approves all aspects of the benchmark, including the methodology, and oversees and manages the conflicts of interest framework, the control framework and the operations of the determination process.</i></p> <p>Relevant Activities</p> <p>In response to (a) of the Principle, the IGC is responsible for approving new benchmarks/methodologies and they review all material changes to the benchmarks. Please refer to Principles 5 – Internal Oversight, 6 – Benchmark Design and 10 – Periodic Review for further information.</p> <p>Regarding (b) of the Principle, IDI disseminates index values to its clients directly or through third party data vendors in accordance with its license arrangements and data agreements. Please refer to Principle 15 – Internal Controls over Data Collection for the activities surrounding the daily determination and dissemination of the ICE U.S. Treasury Indices.</p> <p>In response to (c) of the Principle, the index methodologies note the decisions IDI may take in response to exceptional market conditions.</p>

IOSCO Principle 1**IDI's Response**

Index provisioning is supported by disaster recovery (“DR”) and business continuity plans (“BCP”) to safeguard index operations in an emergency that may threaten the company’s normal business cycle. Disaster recovery plans and business continuity plans are tested at least annually.

Transparency over decisions affecting the compilation of the index is provided through index constituent, corporate action and return files, which reflect changes to an index for each rebalance period and are provided to subscribers on a scheduled basis.

Regarding (d) of the Principle, the IGC serves as an oversight function with respect to all Indices offered by IDI. It meets, at least on a quarterly basis, and its responsibilities, which are outlined in the Governance Committee Charter, include, but are not limited to overseeing the development, design, governance, issuance, and operation of the indices; reviewing and approving any proposed and implemented changes to the methodology documents; identifying and managing existing and potential conflicts of interest; reviewing and approving policies and procedures adopted by IDI relating to the index business, and reviewing the control framework on at least an annual basis. Please refer to Principle 5 – Internal Oversight for further information.

Principle 2 – Oversight of Third Parties

IOSCO Principle 2	IDI's Response
<p>Where activities relating to the Benchmark determination process are undertaken by third parties - for example collection of inputs, publication or where a third party acts as Calculation Agent - the Administrator should maintain appropriate oversight of such third parties. The Administrator (and its oversight function) should consider adopting policies and procedures that:</p> <ol style="list-style-type: none"> Clearly define and substantiate through appropriate written arrangements the roles and obligations of third parties who participate in the Benchmark determination process, as well as the standards the Administrator expects these third parties to comply with; Monitor third parties' compliance with the standards set out by the Administrator; Make Available to Stakeholders and any relevant Regulatory Authority the identity and roles of third parties who participate in the Benchmark determination process; and Take reasonable steps, including contingency plans, to avoid undue operational risk related to the participation of third parties in the Benchmark determination process. <p>This Principle does not apply in relation to a third part from whom an Administrator sources data if that third party is a Regulated Market or Exchange.</p>	<p>Context</p> <p><i>No third parties are involved in the determination of benchmark rules or methodologies or in the calculation of the ICE U.S. Treasury Indices.</i></p> <p><i>However, in order to determine the ICE U.S. Treasury Indices, evaluated pricing services and reference data are sourced from an affiliated US entity, ICE Data Pricing & Reference Data, LLC ("PRD")</i></p> <p><i>The Evaluated Pricing Services ("EVS") Group within PRD provide bid-side evaluations which are market-based measurements, that are processed through a rules based pricing application and represent its good faith determination as to what the holder may receive in an orderly transaction (for an institutional round lot position typically \$1million USD or greater current value or local currency equivalent) under current market conditions. These evaluations are price inputs in the index calculations.</i></p> <p><i>ICE Data Analytics LLC, another IDI affiliate, supplies analytical data, such as yield, convexity, and duration calculations which are used in the ICE U.S. Treasury Indices.</i></p> <p><i>As explained above, while there are elements of the benchmark process that are undertaken by third parties, IDI is the administrator and has sole responsibility for the integrity and reliability of the ICE U.S. Treasury Index Series determinations. IDI meets this responsibility when utilizing third party providers by exercising oversight of their services.</i></p> <p>Relevant Activities</p> <p>With respect to (a) of the Principle, IDI has inter-company agreements in place with its affiliates and legal agreements with all third party suppliers. These agreements set out the services provided by the entity and the terms of service that apply.</p> <p>Third party provider contract requirements are reviewed by the legal department in conjunction with other IDI teams to ensure that:</p> <ul style="list-style-type: none"> Terms are appropriate for the service being performed; Contingency and back up conditions are included (where possible); and

IOSCO Principle 2

IDI's Response

- The responsibilities of all parties are clearly defined.

All agreements are signed by an authorized signatory.

In relation to recommendation (b) and (d) of this Principle, IDI's Third Party Review Framework outlines IDI's approach to third party oversight, which includes the steps IDI follows before engaging in a business relationship with a third party. The framework requirements include performing a due diligence exercise on the third party; establishment of legal agreements with roles and responsibilities clearly stated; and the review cycle.

The Third Party Review Framework is reviewed annually by the IGC.

Prior to onboarding a third party provider, and at least annually thereafter, Compliance and Legal, in conjunction with the index team, perform a due diligence review as deemed necessary depending on the significance of the services provided by the third party, and the extent to which they are used by IDI in the indices. IDI will not engage/continue with third parties where their compliance state is not appropriate.

In 2018, IDI completed a due diligence review of PRD which is the primary data source for the ICE U.S. Treasury Indices. Based on that due diligence, IDI was satisfied that the control environment at PRD was adequate and in line with the requirements under IOSCO.

In a due diligence review, third parties are required to respond to a questionnaire. Compliance, Legal and the Index team review the completed questionnaires and other materials to assess the firm's:

- Controls in the areas of governance, operations, data input/output, disaster recovery and business continuity;
- Disciplinary history;
- Staff experience; and
- Regulatory standing.

The results of due diligence assessments are presented to the IGC.

Oversight of third party services is also carried out by applying manual and IT dependent validation controls on each index calculation to monitor for

IOSCO Principle 2

IDI's Response

erroneous/unrepresentative data. Please refer to Principle 15 – Internal Controls over Data Collection for further information.

In relation to recommendation (c) of this Principle, the ICE U.S. Treasury Index Series Methodology states that evaluated pricing and reference data is sourced from PRD. The Methodology is publically available on IDI's website.

Furthermore, IDI is required to comply with requests from regulatory authorities to disclose the identity and role of third parties. Please refer to Principle 19 - Cooperation with Regulatory Authorities for further information.

For recommendation (d) of this Principle, clear communication channels, which includes email support lines and telephone numbers, for issue escalation exist between IDI and the third parties involved.

Additionally, IDI's BCP for its response to emergency situations includes the failed delivery of third party vendor data or services.

Further Explanation

In 2018, IDI completed a due diligence review of PRD, which is the primary data source for the ICE U.S. Treasury Indices. For other third party data suppliers, IDI performs due diligence exercises on an annual basis as deemed necessary depending on the significance of the services provided by the third party, and the extent to which they are used by IDI in the indices.

Principle 3 – Conflicts of Interest

IOSCO Principle 3	IDI's Response
<p>To protect the integrity and independence of Benchmark determinations, Administrators should document, implement and enforce policies and procedures for the identification, disclosure, management, mitigation or avoidance of conflicts of interest. Administrators should review and update their policies and procedures as appropriate.</p> <p>Administrators should disclose any material conflicts of interest to their users and any relevant Regulatory Authority, if any.</p> <p>The framework should be appropriately tailored to the level of existing or potential conflicts of interest identified and the risks that the Benchmark poses and should seek to ensure:</p> <ol style="list-style-type: none"> Existing or potential conflicts of interest do not inappropriately influence Benchmark determinations; Personal interests and connections or business connections do not compromise the Administrator's performance of its functions; Segregation of reporting lines within the Administrator, where appropriate, to clearly define responsibilities and prevent unnecessary or undisclosed conflicts of interest or the perception of such conflicts; Adequate supervision and sign-off by authorised or qualified employees prior to releasing Benchmark determinations; The confidentiality of data, information and other inputs submitted to, received by or produced by the Administrator, subject to the disclosure obligations of the Administrator; Effective procedures to control the exchange of information between staff engaged in activities involving a risk of conflicts of interest or between staff and third parties, where that information may reasonably affect any Benchmark determinations; and 	<p>Context</p> <p><i>One of IDI's main objectives as an index administrator is to protect the integrity and independence of Benchmark determinations. From an independent legal entity basis and as a Group entity within the ICE Corporate structure, identification, disclosure, management, mitigation or avoidance of Conflicts of Interest is critically important to users and our customers.</i></p> <p><i>The following components are designed to ensure that conflicts of interest are identified, disclosed, managed, mitigated, or avoided by IDI:</i></p> <ul style="list-style-type: none"> <i>Strong compliance and oversight arrangements within IDI;</i> <i>Physical segregation and appropriate reporting lines for employees;</i> <i>The Group's Global Code of Business Conduct;</i> <i>The Group's Global Personal Trading Policy;</i> <i>IDI's Conflict of Interest Policy and Register; and</i> <i>IDI's Conflict of Interest Compliance Monitoring Framework.</i> <p>Relevant Activities</p> <p>IDI safeguards against conflicts of interest in the determination process of the ICE U.S. Treasury Indices in line with the IDI Conflicts of Interest Monitoring Framework.</p> <p>Applicable policies that employees are bound by that address conflicts of interest include:</p> <ul style="list-style-type: none"> ICE Business Gifts, Meals and Entertainment Policy; ICE Global Code of Business Conduct; ICE Global Personal Trading Policy; and IDI Conflicts of Interest Policy. <p>The IDI Conflicts of Interest Policy is subject to annual review and approval by the IGC.</p>

IOSCO Principle 3	IDI's Response
<p>g) Adequate remuneration policies that ensure all staff who participate in the Benchmark determination are not directly or indirectly rewarded or incentivised by the levels of the Benchmark.</p> <p>An Administrator's conflict of interest framework should seek to mitigate existing or potential conflicts created by its ownership structure or control, or due to other interests the Administrator's staff or wider group may have in relation to Benchmark determinations. To this end, the framework should:</p> <p>a) Include measures to avoid, mitigate or disclose conflicts of interest that may exist between its Benchmark determination business (including all staff who perform or otherwise participate in Benchmark production responsibilities), and any other business of the Administrator or any of its affiliates; and</p> <p>b) Provide that an Administrator discloses conflicts of interest arising from the ownership structure or the control of the Administrator to its Stakeholders and any relevant Regulatory Authority in a timely manner.</p>	<p>With respect to (a) of the recommendations, all IDI employees and IGC members are required to declare any potential conflicts of interest that arise in the course of their work.</p> <p>Employees disclose outside business activities in the Compliance Reporting System ("CRS") for review and approval by the Compliance team.</p> <p>To ensure that conflicts are appropriately managed, identified conflicts of interest are discussed at the quarterly IGC meetings.</p> <p>Annually, employees receive training on ICE's Global Personal Trading Policy and the Global Code of Business Conduct as administered by the Group.</p> <p>IDI logs all identified potential conflicts of interest and their corresponding categorization, corrective actions and owners in the Conflicts of Interest Register. No material conflicts have been identified.</p> <p>On an annual basis, Legal, Compliance and the IDI Management Committee specifically consider the potential conflicts of interest that proposed members of the IGC may create. The ICE Data Indices Selection, Renewal and Replacement of Governance Committee Members Process requires the IDI Management Committee to ensure that IGC members do not have conflicts of interest that cannot be adequately managed. Please refer to Principle 5 -Internal Oversight for further information.</p> <p>With respect to (b) of the recommendations, IDI staff involved in the Index determination process are subject to the additional requirements for covered persons under the ICE Global Personal Trading Policy. Such employees are not permitted to trade in an instrument or product that is linked to any IDI index.</p> <p>The additional requirements of covered persons include disclosing all personal trading accounts. In addition U.S. staff members are only permitted to maintain an account at a designated broker.</p> <p>Trading activity is reviewed at least quarterly to identify any potential violations or unusual patterns in behavior. Additionally, the CRS automatically monitors employees' trading activity against the prohibited list and flags violations for investigation by IDI Compliance.</p> <p>With respect to (c) and (f) of the recommendations, to ensure that index employees are</p>

IOSCO Principle 3

IDI's Response

distinctly removed from the offer or sale of any index related products and that they are also separated from affiliates that provide services to IDI, at least annually, Compliance performs a review of IDI reporting lines.

With respect to (d) of the recommendations, index calculations are automated. However, activities are in place to safeguard the integrity of the published indices. Please refer to Principle 15 – Internal Controls over Data Collection for further information. Index levels are signed-off by a designated reviewer prior to their dissemination.

Regarding (e) and (f), the Global Code of Business Conduct requires employees to comply with applicable laws and regulations; protect confidential and material non-public information; and prevent bribery. Furthermore, IT controls including user access and change procedure controls are operated to protect the integrity and confidentiality of data relevant to the ICE U.S. Treasury Indices.

In relation to (g) of the recommendations, it is ensured that staff are not directly or indirectly incentivized by index levels because compensation targets are set according to company-wide performance as opposed to business unit performance. Managers do not set salary or bonus levels unilaterally; changes to salary and variable remuneration targets are approved by management and HR to ensure that they align to ICE's compensation and performance approach.

Regarding (a) of the second set of recommendations, at least quarterly, Compliance reviews the Conflicts of Interest Register to identify and determine how to address actual and potential conflicts of interest. This includes the review of conflicts stemming from its structure within the ICE Group as well as individual conflicts of those involved in the benchmark determination process.

Entities within the ICE Group who are users of the ICE U.S. Treasury indices are not given any preferential treatment. The business relationship is bound by the license agreement.

In response to (b) of the second set of recommendations, all identified conflicts, their mitigations and corresponding owners are recorded in the Conflicts of Interest Register and discussed with the IGC. Such potential conflicts include:

IOSCO Principle 3**IDI's Response**

- IDI uses the data and services provided by ICE group entities such as PRD; and
- The IDI Governance and IDI Management Committees are composed of employees who perform roles for other ICE group entities and for whom Benchmarks are relevant.

Conflicts of Interest arising from IDI's ownership and corporate structure are acknowledged in the disclaimers published with IDI methodologies and other public documents.

Principle 4 – Control Framework for Administrators

IOSCO Principle 4	IDI's Response
<p>An Administrator should implement an appropriate control framework for the process of determining and distributing the Benchmark. The control framework should be appropriately tailored to the materiality of the potential or existing conflicts of interest identified the extent of the use of discretion in the Benchmark setting process and to the nature of Benchmark inputs and outputs. The control framework should be documented and available to relevant Regulatory Authorities, if any. A summary of its main features should be Published or Made Available to Stakeholders.</p> <p>This control framework should be reviewed periodically and updated as appropriate. The framework should address the following areas:</p> <p>a) Conflicts of interest in line with Principle 3 on conflicts of interests;</p> <p>b) Integrity and quality of Benchmark determination:</p> <ol style="list-style-type: none"> i. Arrangements to ensure that the quality and integrity of Benchmarks is maintained, in line with principles 6 to 15 on the quality of the Benchmark and Methodology; ii. Arrangements to promote the integrity of Benchmark inputs, including adequate due diligence on input sources; iii. Arrangements to ensure accountability and complaints mechanisms are effective, in line with principles 16 to 19; and iv. Providing robust infrastructure, policies and procedures for the management of risk, including operational risk. <p>c) Whistleblowing mechanism:</p> <p>Administrators should establish an effective whistleblowing mechanism to facilitate early awareness of any potential misconduct or irregularities that may arise. This mechanism</p>	<p>Context</p> <p><i>The Operational Risk and Control Register designed by IDI provides a comprehensive assessment of all identified risks and controls for IDI against the business objective of “maintaining compliance with ICE Data Services licenses and compliance requirements”, which includes the IOSCO Principles.</i></p> <p><i>The document serves as a master repository and reference for the following:</i></p> <ul style="list-style-type: none"> • <i>Key controls designed to mitigate risks associated with the benchmark determination processes and their administration consistent with each of the IOSCO Principles;</i> • <i>Identified risks, control gaps and relevant remediation activities in progress to mitigate risks to an acceptable level;</i> • <i>Relevant regulatory requirements to which IDI is subject;</i> • <i>Relevant policies and procedures which contribute to the governance of IDI; and</i> • <i>Systems and applications relevant to the benchmark determination processes and their proper administration.</i> <p><i>Within the register, identified risks are assigned to owners and on-going assessment methods for such risks are documented. Each of the risks requires oversight to ensure that they are being managed within the bounds of the IGC’s risk appetite and to inform a view on the performance of controls.</i></p> <p><i>None of the ICE U.S. Treasury Indices are based on submissions, therefore the additional requirements for benchmarks based on submissions do not apply. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</i></p> <p>Relevant Activities</p> <p>IDI has formally documented the control framework within the Operational Risk Framework; it represents the policies, processes and activities that have been established in support of IDI’s objective as an administrator to achieve compliance with these Principles. At least annually, the control framework is reviewed and approved by</p>

IOSCO Principle 4	IDI's Response
<p>should allow for external reporting of such cases where appropriate.</p> <p>d) Expertise:</p> <ul style="list-style-type: none"> i. Ensuring Benchmark determinations are made by personnel who possess the relevant levels of expertise, with a process for periodic review of their competence; and ii. Staff training, including ethics and conflicts of interest training, and continuity and succession planning for personnel. <p>Where a Benchmark is based on Submissions:</p> <p>Administrators should promote the integrity of inputs by:</p> <ul style="list-style-type: none"> a) Ensuring as far as possible that the Submitters comprise an appropriately representative group of participants taking into consideration the underlying Interest measured by the Benchmark; b) Employing a system of appropriate measures so that, to the extent possible, Submitters comply with the Submission guidelines, as defined in the Submitter Code of Conduct and the Administrators' applicable quality and integrity standards for Submission; c) Specifying how frequently Submissions should be made and specifying that inputs or Submissions should be made for every Benchmark determination; and d) Establishing and employing measures to effectively monitor and scrutinise inputs or Submissions. This should include pre-compilation or pre-publication monitoring to identify and avoid errors in inputs or Submissions, as well as ex-post analysis of trends and outliers. 	<p>the IGC.</p> <p>A summary of the control framework's main features is made available to stakeholders within this report. It includes control activities in the following areas:</p> <ul style="list-style-type: none"> (a) How conflict risks that arise as a result of IDI's corporate and ownership structure; employees' outside business and personal relationships or otherwise are identified, registered, mitigated and reviewed. Please see Principle 3 – Conflicts of Interest for further details. (b) (i) and (ii) Control procedures exist at all stages of the benchmark determination process to ensure the quality and integrity of benchmarks, including the design and ongoing maintenance of the Benchmarks and its methodologies. These are covered in Principles 6 to 15. <p>The control framework also includes details on IT General Controls that exist across all systems relevant to the Benchmark determination process: user access management; systems change controls; computer operations and backup procedures.</p> <p>The ICE U.S. Treasury Indices are calculated using input data sourced from third parties, primarily from PRD. See Principle 2 – Oversight of Third Parties for more information on due diligence reviews of third party data sources.</p> <p>To ensure the integrity of inputs to the ICE U.S. Treasury Indices, the index team reviews automated system reports to validate movements in bond prices and calculated index levels. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</p> <p>(iii) Control procedures exist to ensure:</p> <ul style="list-style-type: none"> - Complaints are escalated to Compliance, Legal and the Index team and overseen by the IGC. Please refer to Principle 16 – Complaints Procedures; - IDI is subject to an appropriate audit plan as covered in Principle 17 - Audits; - Queries received from regulators, governmental authorities or any other enforcement body are escalated to Compliance and Legal for timely response as covered in Principle 19 – Cooperation with Regulatory Authorities; and

IOSCO Principle 4**IDI's Response**

- All data, information, documents and records relevant to the benchmark determination process, including complaints, are retained by ICE for at least 5 years (covered in Principle 18 – Audit Trail).

(iv) In the Operational Risk and Control Register, risks to the index business are identified, assessed and managed by IDI consistent with the ICE Enterprise Risk Management Policy guidelines. The Operational Risk and Control Register is owned by Enterprise Risk and is presented annually to the IGC for review.

Within the Operational Risk and Control Register:

- Controls are identified, evaluated and mapped to each risk under the IOSO Principles and assessed to establish the adequacy in mitigating the risk to an acceptable level;
- Risks, control gaps and relevant remediation activities are identified;
- Relevant regulatory requirements to which IDI is subject are identified;
- Relevant policies and procedures which contribute to the governance of IDI are listed; and
- Systems and applications relevant to the benchmark determination processes are registered.

(c) All employees of IDI are subject to the ICE Global Code of Business Conduct and the additional Global Corporate Compliance policies which includes the Global Reporting and Anti-Fraud Policy. Violations or suspected violations of the Code of Business Conduct or the law are required to be reported per the Global Reporting and Anti-Fraud Policy. ICE has established a hotline which employees or customers can use to report concerns. ICE's policy is to not retaliate against any employee who in good faith reports a complaint or concern. Material concerns of any potential misconduct or irregularities will be escalated to the Legal department, and will be reported externally, when and as appropriate.

(d) i) and ii) Hiring and orientation procedures, which include pre-hire phone screening, live interviews, pre-hire testing (as required), background screening, training and policy acknowledgment are administered by HR and the business. IDI

IOSCO Principle 4

IDI's Response

assesses candidates to ensure they are suitable for the role.

All new hires have required training to complete on joining IDI; this includes ethics and conflict of interest training. This training is re-administered annually for all IDI staff.

Managers review employee performance bi-annually. Performance concerns are escalated to HR and the implementation of performance development plans are considered as appropriate.

Principle 5 – Internal Oversight

IOSCO Principle 5	IDI's Response
<p>Administrators should establish an oversight function to review and provide challenge on all aspects of the Benchmark determination process. This should include consideration of the features and intended, expected or known usage of the Benchmark and the materiality of existing or potential conflicts of interest identified.</p> <p>The oversight function should be carried out either by a separate committee, or other appropriate governance arrangements. The oversight function and its composition should be appropriate to provide effective scrutiny of the Administrator. Such oversight function could consider groups of Benchmarks by type or asset class, provided that it otherwise complies with this Principle.</p> <p>An Administrator should develop and maintain robust procedures regarding its oversight function, which should be documented and available to relevant Regulatory Authorities, if any. The main features of the procedures should be Made Available to Stakeholders. These procedures should include:</p> <ol style="list-style-type: none">a) The terms of reference of the oversight function;b) Criteria to select members of the oversight function;c) The summary details of membership of any committee or arrangement charged with the oversight function, along with any declarations of conflicts of interest and processes for election, nomination or removal and replacement of committee members. <p>The responsibilities of the oversight function include:</p> <ol style="list-style-type: none">a) Oversight of the Benchmark design:<ol style="list-style-type: none">i. Periodic review of the definition of the Benchmark and its Methodology;ii. Taking measures to remain informed about issues and risks to the Benchmark, as well as commissioning external	<p>Context</p> <p><i>IDI has in place the IGC which is responsible for overseeing the management and operation of all areas of index administration, including consideration of any conflicts of interest identified, to protect the integrity of the Index determination process and control framework.</i></p> <p><i>Members of the IGC are selected from across the ICE Group to represent various administrator functions so that it can provide effective scrutiny of IDI, as well as to include a balanced representation on behalf of a range of stakeholders, and to counterbalance conflicts of interest.</i></p> <p><i>The IGC meets at least quarterly and at each meeting, members discuss conflicts of interest as a standing agenda item. They also discuss performance issues; regulatory matters, any relevant market events that may impact IDI or the Indices; complaints and use of Expert Judgment as applicable.</i></p> <p><i>None of the ICE U.S. Treasury Indices are based on submissions, therefore the additional requirements for benchmarks based on submissions do not apply. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</i></p> <p>Relevant Activities</p> <p>The main features of the procedures relating to the IGC, including the criteria for selection, and membership are made available to stakeholders within this report.</p> <p>In relation to (a) of the Principle, the Governance Committee Charter provides the terms of reference for the IGC and this is a publically available document on IDI's website.</p> <p>In response to (b), members of the IGC are selected and reviewed by the IDI Management Committee in accordance with the ICE Data Indices Selection, Renewal and Replacement of Governance Committee Members Process. The criteria for selection includes: having a role and/or expertise that is relevant to benchmarks; being able to provide constructive challenge; and having the ability to contribute to the effective oversight of the benchmarks.</p>

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IDI's Response

- reviews of the Benchmark (as appropriate);
- iii. Overseeing any changes to the Benchmark Methodology, including assessing whether the Methodology continues to appropriately measure the underlying Interest, reviewing proposed and implemented changes to the Methodology, and authorising or requesting the Administrator to undertake a consultation with Stakeholders where known or its Subscribers on such changes as per Principle 12; and
 - iv. Reviewing and approving procedures for termination of the Benchmark, including guidelines that set out how the Administrator should consult with Stakeholders about such cessation.
- b) Oversight of the integrity of Benchmark determination and control framework:
- i. Overseeing the management and operation of the Benchmark, including activities related to Benchmark determination undertaken by a third party;
 - ii. Considering the results of internal and external audits, and following up on the implementation of remedial actions highlighted in the results of these audits; and
 - iii. Overseeing any exercise of Expert Judgment by the Administrator and ensuring Published Methodologies have been followed.

Where conflicts of interests may arise in the Administrator due to its ownership structures or controlling interests, or due to other activities conducted by any entity owning or controlling the Administrator or by the Administrator or any of its affiliates:

The Administrator should establish an independent oversight function which includes a balanced representation of a range of Stakeholders where known, Subscribers and Submitters, which is

The ICE Data Indices Selection, Renewal and Replacement of Governance Committee Members Process and composition of the IGC is reviewed by the IDI Management Committee on an annual basis.

In response to (c) of the Principle, the IGC includes representation from Legal and Compliance, Technology, Information Security, Product management, Quantitative Analysis and Risk and Operations. The Index team is represented on the IGC but their members do not have any voting rights. There are no material conflicts of interest that have been disclosed by members of the IGC.

The IDI Management Committee is responsible for ratifying proposals to change the composition of the IGC in accordance with the ICE Data Indices Selection, Renewal and Replacement of Governance Committee Members Process. This includes the appointment or replacement of members proposed by the IGC on consultation with IDI Legal and Compliance; renewal; and the termination of Members which may be necessary for IDI to carry out for the IGC to continue to fulfil the Charter.

Regarding (a) of the Principle's recommendations for the IGC's responsibilities over Benchmark design, the Governance Committee Charter details their role:

- i. The IGC oversees the development, design, issuance and operation of the indices. Additionally they are responsible for reviewing, at least annually, each benchmark and methodology;
- ii. The IGC remains informed and knowledgeable of issues and risks to the benchmark (including regulatory, legal and commercial), as well as commissioning external reviews of the benchmark (as appropriate).

The IGC meets at least quarterly. Standing agenda items for the IGC include conflicts of interest, performance and market events, regulatory events, use of expert judgment and complaints;

- iii. The IGC reviews any proposed and implemented changes to the benchmark methodology documents and approves the proposal or requests a consultation with stakeholders or subscribers; and
- iv. The IGC reviews and approves procedures for termination of the benchmark, including guidelines that set out how IDI should consult with subscribers and other

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<p>chosen to counterbalance the relevant conflict of interest.</p> <p>Where a Benchmark is based on Submissions:</p> <p>The oversight function should provide suitable oversight and challenge of the Submissions by:</p> <ul style="list-style-type: none"> a) Overseeing and challenging the scrutiny and monitoring of inputs or Submissions by the Administrator. This could include regular discussions of inputs or Submission patterns, defining parameters against which inputs or Submissions can be analysed, or querying the role of the Administrator in challenging or sampling unusual inputs or Submissions; b) Overseeing the Code of Conduct for Submitters; c) Establishing effective arrangements to address breaches of the Code of Conduct for Submitters; and d) Establishing measures to detect potential anomalous or suspicious Submissions and in case of suspicious activities, to report them, as well as any misconduct by Submitters of which it becomes aware to the relevant Regulatory Authorities, if any. 	<p>stakeholders about such cessation.</p> <p>Regarding (b) for the oversight of the integrity of benchmark determination and control framework, the Governance Committee Charter details their role:</p> <ul style="list-style-type: none"> i. The IGC oversees the management and operation of the Benchmark, including activities related to Benchmark determination undertaken by a third party. The findings of third party due diligence reviews are reviewed by the IGC. Please refer to Principle 2 – Oversight of Third Parties for further information; ii. The IGC evaluates the results of internal and external audits, and ensures implementation of remedial actions proposed in the audits. Audit findings are discussed with the IGC and they are kept updated on the progress of any remedial actions. Please refer to Principle 17 - Audits for further information; and iii. The IGC documents and oversees decisions that involve discretion. <p>The Governance Committee Charter is reviewed and approved by the IDI Management Committee on at least an annual basis.</p>

Principle 6 – Benchmark Design

IOSCO Principle 6	IDI's Response
<p>The design of the Benchmark should seek to achieve, and result in an accurate and reliable representation of the economic realities of the Interest it seeks to measure, and eliminate factors that might result in a distortion of the price, rate, index or value of the Benchmark.</p> <p>Benchmark design should take into account the following generic non-exclusive features, and other factors should be considered, as appropriate to the particular Interest:</p> <ul style="list-style-type: none"> a) Adequacy of the sample used to represent the Interest; b) Size and liquidity of the relevant market (for example whether there is sufficient trading to provide observable, transparent pricing); c) Relative size of the underlying market in relation to the volume of trading in the market that references the Benchmark; d) The distribution of trading among Market Participants (market concentration); and e) Market dynamics (e.g., to ensure that the Benchmark reflects changes to the assets underpinning a Benchmark). 	<p>Context</p> <p><i>The ICE U.S. Treasury Indices were developed as a broad representation of the U.S. Treasury market. The indices include: a core market index measuring the performance of all fixed-rate, dollar denominated U.S. Treasury bonds with at least one year to maturity; indices covering varying maturity ranges of the Treasury market; a short-term index to measure the performance of Treasury bonds, notes, and bills with less than one year to maturity; and indices to measure the performance of Treasury Inflation Protected Securities.</i></p> <p><i>The ICE U.S. Treasury Indices may be licensed as benchmarks for financial instruments such as exchange traded funds, mutual funds, or derivatives, as well as for performance measurement or other research purposes.</i></p> <p>Relevant Activities</p> <p>To ensure a newly designed index is appropriate for users and compliant with the IOSCO Principles, IDI reviews its design against the Design Principles Checklist. Newly developed benchmarks are presented to the IGC for assessment and approval.</p> <p>In relation to (a) of the Principle, eligible securities are filtered from the population of bond data based on bond terms and conditions and other characteristics that define the U.S. Treasury market. An index also has a minimum size for constituent securities. All eligible constituent securities data provided by PRD are used in a benchmark calculation.</p> <p>In relation to (b) – (d) of the Principle, the U.S. Bond market is the world's most mature and stable bond market; according to the Securities Industry and Financial Markets Association ("SIFMA"), as of Q1 2017, the market was circa \$40 trillion. Of this, U.S. Treasury represents more than 35% of the total. The average daily volume of traded U.S. Treasury securities was \$505 billion in 2017.</p> <p>In addition the internal Benchmark Index Philosophy document considers the following factors: Broad Representation, Comprehensiveness, Replicability, Objectivity and <i>Transparency</i>, Relevance, Selection Criteria, Measurement, and Stability.</p>

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	In relation to (e) of the Principle, the ICE U.S. Treasury Indices, are rebalanced monthly.

Principle 7 – Data Sufficiency

IOSCO Principle 7

The data used to construct a Benchmark determination should be sufficient to accurately and reliably represent the Interest measured by the Benchmark and should:

- a) Be based on prices, rates, indices or values that have been formed by the competitive forces of supply and demand in order to provide confidence that the price discovery system is reliable; and
- b) Be anchored by observable transactions entered into at arm's length between buyers and sellers in the market for the Interest the Benchmark measures in order for it to function as a credible indicator of prices, rates, indices or values.

This Principle requires that a Benchmark be based upon (i.e., anchored in) an active market having observable Bona Fide, Arms-Length Transactions. This does not mean that every individual Benchmark determination must be constructed solely of transaction data. Provided that an active market exists, conditions in the market on any given day might require the Administrator to rely on different forms of data tied to observable market data as an adjunct or supplement to transactions. Depending upon the Administrator's Methodology, this could result in an individual Benchmark determination being based predominantly, or exclusively, on bids and offers or extrapolations from prior transactions. This is further clarified in Principle 8.

Provided that subparagraphs (a) and (b) above are met, Principle 7 does not preclude Benchmark Administrators from using executable bids or offers as a means to construct Benchmarks where anchored in an observable market consisting of Bona Fide, Arms-Length transactions.

This Principle also recognizes that various indices may be designed to measure or reflect the performance of a rule-based investment

IDI's Response

Context

The ICE U.S. Treasury Index Series was developed to measure the performance of the U.S. dollar-denominated, fixed rate U.S. Treasury market, which is the deepest and most liquid government securities market in the world.

Constituent valuations and reference data for the U.S. Treasury Indices are sourced from an affiliated US entity, PRD which is disclosed in the ICE U.S. Treasury Index Series Methodology.

Relevant Activities

The ICE U.S. Treasury Index Series uses third party evaluated prices sourced from an affiliated US entity, PRD, which is disclosed in the ICE U.S. Treasury Index Series Methodology.

In response to (a) and (b) of the Principle, the PRD evaluated prices are based predominantly on trades, bids and offers or extrapolations from prior transactions in the U.S. Treasury markets. Using these data inputs, and other relevant observable inputs, PRD uses valuation techniques to reflect market activity and value of U.S. Treasury Securities.

IOSCO Principle 7**IDI's Response**

strategy, the volatility or behaviour of an index or market or other aspects of an active market. Principle 7 does not preclude the use of non-transactional data for such indices that are not designed to represent transactions and where the nature of the index is such that non-transactional data is used to reflect what the index is designed to measure. For example, certain volatility indices, which are designed to measure the expected volatility of an index of securities transactions, rely on non-transactional data, but the data is derived from and thus “anchored” in an actual functioning securities or options market.

Principle 8 – Hierarchy of Data Inputs

IOSCO Principle 8	IDI's Response
<p>An Administrator should establish and Publish or Make Available clear guidelines regarding the hierarchy of data inputs and exercise of Expert Judgment used for the determination of Benchmarks. In general, the hierarchy of data inputs should include:</p> <ol style="list-style-type: none">Where a Benchmark is dependent upon Submissions, the Submitters' own concluded arms-length transactions in the underlying interest or related markets;Reported or observed concluded Arm's-length Transactions in the underlying interest;Reported or observed concluded Arm's-length Transactions in related markets;Firm (executable) bids and offers; andOther market information or Expert Judgments. <p>Provided that the Data Sufficiency Principle is met (i.e., an active market exists), this Principle is not intended to restrict an Administrator's flexibility to use inputs consistent with the Administrator's approach to ensuring the quality, integrity, continuity and reliability of its Benchmark determinations, as set out in the Administrator's Methodology. The Administrator should retain flexibility to use the inputs it believes are appropriate under its Methodology to ensure the quality and integrity of its Benchmark. For example, certain Administrators may decide to rely upon Expert Judgment in an active albeit low liquidity market, when transactions may not be consistently available each day. IOSCO also recognizes that there might be circumstances (e.g., a low liquidity market) when a confirmed bid or offer might carry more meaning than an outlier transaction. Under these circumstances, non-transactional data such as bids and offers and extrapolations from prior transactions might predominate in a given Benchmark determination.</p>	<p>Context</p> <p><i>IDI, uses, as the sole data input, evaluated pricing from the EVS Group in PRD for the ICE U.S. Treasury Index Series. Index inclusion criteria in the Index Methodology stipulate the need for pricing from the EVS Group for a security to be included in the Index. PRD has its own methodology for determining evaluated prices and the hierarchy of data inputs used therein.</i></p> <p><i>The Index Methodology Document is made publicly available on the ICE Data Indices website at:</i></p> <p>https://www.theice.com/publicdocs/data/ice-treasury-methodology.pdf</p> <p><i>The U.S Treasury Indices do not rely on submissions.</i></p> <p>Relevant Activities</p> <p>IDI does not prioritize different data types used in the determination of the ICE U.S. Treasury Series. The methodology document specifies the data inputs used for the indices.</p> <p>As referenced in the methodology document, PRD evaluated prices are based predominantly on trades, bids and offers or extrapolations from prior transactions in active fixed income markets. Using these data inputs, and other relevant observable inputs, PRD uses valuation techniques to reflect market activity and the value of U.S Treasury securities.</p> <p>Validation checks are performed on evaluated prices to ensure their accuracy. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</p>

Principle 9 – Transparency of Benchmark Determinations

IOSCO Principle 9	IDI's Response
<p>The Administrator should describe and publish with each Benchmark determination, to the extent reasonable without delaying an Administrator publication deadline:</p> <p>a) A concise explanation, sufficient to facilitate a Stakeholder's or Market Authority's ability to understand how the determination was developed, including, at a minimum, the size and liquidity of the market being assessed (meaning the number and volume of transactions submitted), the range and average volume and range and average of price, and indicative percentages of each type of market data that have been considered in a Benchmark determination; terms referring to the pricing Methodology should be included (i.e., transaction-based, spread-based or interpolated/extrapolated);</p> <p>b) A concise explanation of the extent to which and the basis upon which Expert Judgment if any, was used in establishing a Benchmark determination.</p>	<p>Context</p> <p>IDI has published the ICE U.S. Treasury Index Methodology document, index rules and factsheets which detail the methodology and process involved for the determination and ongoing maintenance of the indices and serve as concise explanations facilitating the ability to understand how a determination was developed.</p> <p>Relevant Activities</p> <p>In response to (a) of the Principle, index levels are determined in accordance with the methodology documents. The methodology documents provide details on: the inputs used in the index; the calculation procedures and methods; and the selection criteria of components used within the index.</p> <p>All applicable documents for the ICE U.S. Treasury Index Series are available on the website https://www.theice.com/marketdata/reports/210 or are available on request.</p> <p>In response to (b) of the Principle, no expert judgment is exercised by IDI in the determination of the Indices.</p> <p>Expert judgment may be exercised by PRD as the provider of U.S. Treasury bond evaluations. Please refer to Principle 2 for information on how IDI oversees the service provided by PRD.</p>

Principle 10 – Periodic Review

IOSCO Principle 10	IDI's Response
<p>The Administrator should periodically review the conditions in the underlying Interest that the Benchmark measures to determine whether the Interest has undergone structural changes that might require changes to the design of the Methodology. The Administrator also should periodically review whether the Interest has diminished or is non-functioning such that it can no longer function as the basis for a credible Benchmark.</p> <p>The Administrator should Publish or Make Available a summary of such reviews where material revisions have been made to a Benchmark, including the rationale for the revisions.</p>	<p>Context</p> <p><i>The ICE U.S. Treasury Index Series is reviewed annually by the Index team. The review consists of establishing if the series still performs the function it was designed to, and tracks the performance of the U.S. Dollar Treasury market. It also takes into account any changes that may have occurred relating to data sufficiency; performance issues of the data provider; methodology content and conflicts of interest.</i></p> <p>Relevant Activities</p> <p>Annually, IDI reviews the design of the ICE U.S. Treasury Index Series. The first instance of the review was completed in April 2018. The review determined that the design did not require any changes; it tracked the performance of the U.S. Dollar Treasury market appropriately using input data provided by PRD.</p>

Principle 11 – Content of the Methodology

IOSCO Principle 11	IDI's Response
<p>The Administrator should document and Publish or Make Available the Methodology used to make Benchmark determinations. The Administrator should provide the rationale for adopting a particular Methodology. The Published Methodology should provide sufficient detail to allow Stakeholders to understand how the Benchmark is derived and to assess its representativeness, its relevance to particular Stakeholders, and its appropriateness as a reference for financial instruments.</p> <p>At a minimum, the Methodology should contain:</p> <ul style="list-style-type: none"> a) Definitions of key terms; b) All criteria and procedures used to develop the Benchmark, including input selection, the mix of inputs used to derive the Benchmark, the guidelines that control the exercise of Expert Judgment by the Administrator, priority given to certain data types, minimum data needed to determine a Benchmark, and any models or extrapolation methods; c) Procedures and practices designed to promote consistency in the exercise of Expert Judgment between Benchmark determinations; d) The procedures which govern Benchmark determination in periods of market stress or disruption, or periods where data sources may be absent (e.g., theoretical estimation models); e) The procedures for dealing with error reports, including when a revision of a Benchmark would be applicable; f) Information regarding the frequency for internal reviews and approvals of the Methodology. Where applicable, the Published Methodologies should also include information regarding the procedures and frequency for external review of the 	<p>Context</p> <p><i>The ICE U.S. Treasury Index Series Methodology document provides detail on the process involved with the creation and ongoing maintenance of the ICE U.S. Treasury Indices. It serves as concise explanation facilitating the ability to understand how a determination was developed.</i></p> <p><i>None of the ICE U.S. Treasury Indices are based on submissions, therefore the additional requirements for benchmarks based on submissions do not apply. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</i></p> <p>Relevant Activities</p> <p>IDI reviewed the ICE U.S. Treasury Index Series Methodology document in February 2018 to ensure that it was compliant with all the elements of the Principle.</p> <p>IDI makes the methodology document publically available on the IDI website: https://www.theice.com/marketdata/reports/210.</p> <p>The methodology and factsheets include the following details:</p> <ul style="list-style-type: none"> (a) Definitions of key terms and processes used in the methodology. (b) The qualitative and quantitative procedures used to develop the final index level from the qualifying constituent data. The methodology document considers the event where security prices are not available, in which case the benchmark would likely not be calculated. IDI does not prioritise different data types used in the determination of the ICE U.S. Treasury Series. The methodology document dictates the data input used for the indices. (c) Expert Judgment is typically not utilized in the determination of index levels. If it were to be used, the IGC would oversee such discretionary decisions. (d) The methodology document outlines the approach for exceptional circumstances, which includes periods of market stress or disruption. Appropriate actions are

IOSCO Principle 11	IDI's Response
<p>Methodology;</p> <p>g) The circumstances and procedures under which the Administrator will consult with Stakeholders, as appropriate; and</p> <p>h) The identification of potential limitations of a Benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs.</p> <p>Where a Benchmark is based on Submissions, the additional Principle also applies:</p> <p>The Administrator should clearly establish criteria for including and excluding Submitters. The criteria should consider any issues arising from the location of the Submitter, if in a different jurisdiction to the Administrator. These criteria should be available to any relevant Regulatory Authorities, if any, and Published or Made Available to Stakeholders. Any provisions related to changes in composition, including notice periods should be made clear.</p>	<p>taken which may include delaying publication or suspending the index.</p> <p>(e) In the event of an error in the index level, IDI would take account of the significance, impact, age and scale of the error to determine whether it should be re-stated.</p> <p>(f) IDI notes that the indices, methodology document and market will be subject to regular reviews to ensure they continue to meet the benchmark objective. Please refer to Principle 10 - Periodic Review for further information.</p> <p>(g) The document notes that material changes will follow the Consultation Policy. Please refer to Principle 12 - Changes to the Methodology for further information.</p> <p>Further explanation</p> <p><i>Regarding (h) of the Principle, on review of the ICE U.S. Treasury Methodology document, IDI did not identify potential limitations to the series; the Treasury bond market has sufficient liquidity and trading volumes to support the benchmarks and provide reliable prices on an ongoing basis.</i></p>

Principle 12 – Changes to the Methodology

IOSCO Principle 12	IDI's Response
<p>An Administrator should Publish or Make Available the rationale of any proposed material change in its Methodology, and procedures for making such changes. These procedures should clearly define what constitutes a material change, and the method and timing for consulting or notifying Subscribers (and other Stakeholders where appropriate, taking into account the breadth and depth of the Benchmark's use) of changes.</p> <p>Those procedures should be consistent with the overriding objective that an Administrator must ensure the continued integrity of its Benchmark determinations. When changes are proposed, the Administrator should specify exactly what these changes entail and when they are intended to apply.</p> <p>The Administrator should specify how changes to the Methodology will be scrutinised, by the oversight function.</p> <p>The Administrator should develop Stakeholder consultation procedures in relation to changes to the Methodology that are deemed material by the oversight function, and that are appropriate and proportionate to the breadth and depth of the Benchmark's use and the nature of the Stakeholders. Procedures should:</p> <ol style="list-style-type: none"> i. Provide advance notice and a clear timeframe that gives Stakeholders sufficient opportunity to analyse and comment on the impact of such proposed material changes, having regard to the Administrator's assessment of the overall circumstances; and ii. Provide for Stakeholders' summary comments, and the Administrator's summary response to those comments, to be made accessible to all Stakeholders after any given consultation period, except where the commenter has requested confidentiality. 	<p>Context</p> <p><i>Where a material change is identified as a result of feedback from clients; changes to regulation or legislation; index reviews or certain market events, it is important that such changes are discussed with any appropriate clients and users. Therefore, IDI either consults with users directly or publishes consultation proposals to ensure that the feedback of stakeholders is considered.</i></p> <p>Relevant Activities</p> <p>Material changes follow IDI's Consultation Policy which is made publically available on the IDI website.</p> <p>The Consultation Policy states that a material change is viewed as one which would impact the index calculation or rebalance process, or interpretation of such process.</p> <p>IDI prepares proposals for material changes which are presented to the IGC for consideration and approval.</p> <p>Various factors are taken into account in the preparation of material change proposals, including:</p> <ul style="list-style-type: none"> • Any regulatory or legal implications; • The impact such changes will have on the client base; • The clarity of the proposals; • The number of stakeholders; and • The appropriateness of the consultation period. <p>For custom indices or in the cases where only a limited number of clients are impacted, clients are consulted with directly.</p> <p>Otherwise a public consultation is performed where feedback on the proposed change is sought. The consultation period is provided on the consultation notice.</p> <p>The IDI Index team reviews the feedback and presents the recommended changes</p>

IOSCO Principle 12	IDI's Response
	<p>and consultation findings to the IGC.</p> <p>All changes are reviewed and approved by the IGC.</p> <p>Details of the finalized changes and their timeline for implementation are announced to the market on the IDI website.</p> <p>Identities of respondents are kept confidential unless otherwise advised.</p> <p>Immaterial changes to the methodology, which includes clarifications or changes cosmetic or minor in nature are not be published for consultation, but are announced to market participants using the same process.</p>

Principle 13 – Transition

IOSCO Principle 13	IDI's Response
<p>Administrators should have clear written policies and procedures, to address the need for possible cessation of a Benchmark, due to market structure change, product definition change, or any other condition which makes the Benchmark no longer representative of its intended Interest. These policies and procedures should be proportionate to the estimated breadth and depth of contracts and financial instruments that reference a Benchmark and the economic and financial stability impact that might result from the cessation of the Benchmark. The Administrator should take into account the views of Stakeholders and any relevant Regulatory and National Authorities in determining what policies and procedures are appropriate for a particular Benchmark.</p> <p>These written policies and procedures should be Published or Made Available to all Stakeholders.</p> <p>Administrators should encourage Subscribers and other Stakeholders who have financial instruments that reference a Benchmark to take steps to make sure that:</p> <ol style="list-style-type: none">Contracts or other financial instruments that reference a Benchmark, have robust fall-back provisions in the event of material changes to, or cessation of, the referenced Benchmark; andStakeholders are aware of the possibility that various factors, including external factors beyond the control of the Administrator, might necessitate material changes to a Benchmark. <p>Administrators' written policies and procedures to address the possibility of Benchmark cessation could include the following factors, if determined to be reasonable and appropriate by the Administrator:</p>	<p>Context</p> <p><i>IDI has implemented a Transition Policy and a Benchmark Cessation Procedure, which are published on the IDI website (https://www.theice.com/market-data/indices/regulation) and which set out the steps IDI would take if termination of a benchmark was being considered.</i></p> <p><i>The policy and procedures are structured so as to clearly describe the events that would trigger the termination, the criteria and considerations IDI will take into account when making the termination decision, the engagement stakeholders can expect and the accountability and governance of IDI's decisions.</i></p> <p><i>Typically, termination would be driven in large part by limited use by stakeholders, although there are various ways in which changes impacting the indices can be identified:</i></p> <ul style="list-style-type: none"><i>Feedback obtained by the business from customers;</i><i>Rebalance events;</i><i>Media; and</i><i>Annual or ad hoc Index reviews.</i> <p>Relevant Activities</p> <p>The IGC is responsible for approving proposals made by the Index team to cease production of an index in accordance with the Transition Policy and Cessation Procedure, which are published on the IDI website: https://www.theice.com/market-data/indices/regulation.</p> <ol style="list-style-type: none">IDI states in the Transition Policy that users of a benchmark should consider alternatives in the event that a material change is made to the benchmark or it is terminated. IDI Index License agreements also provide for the termination of a benchmark in some circumstances, with a defined notice period.IDI states in the IDI Transition Policy that users of the benchmarks should consider how they might be affected if any factors, including material changes, termination

IOSCO Principle 13

IDI's Response

- a) Criteria to guide the selection of a credible, alternative Benchmark such as, but not limited to, criteria that seek to match to the extent practicable the existing Benchmark's characteristics (e.g., credit quality, maturities and liquidity of the alternative market), differentials between Benchmarks, the extent to which an alternative Benchmark meets the asset/liability needs of Stakeholders, whether the revised Benchmark is investable, the availability of transparent transaction data, the impact on Stakeholders and impact of existing legislation;
- b) The practicality of maintaining parallel Benchmarks (e.g., where feasible, maintain the existing Benchmark for a defined period of time to permit existing contracts and financial instruments to mature and publish a new Benchmark) in order to accommodate an orderly transition to a new Benchmark;
- c) The procedures that the Administrator would follow in the event that a suitable alternative cannot be identified;
- d) In the case of a Benchmark or a tenor of a Benchmark that will be discontinued completely, the policy defining the period of time in which the Benchmark will continue to be produced in order to permit existing contracts to migrate to an alternative Benchmark if necessary; and
- e) The process by which the Administrator will engage Stakeholders and relevant Market and National Authorities, as appropriate, in the process for selecting and moving towards an alternative Benchmark, including the timeframe for any such action commensurate with the tenors of the financial instruments referencing the Benchmarks and the adequacy of notice that will be provided to Stakeholders.

of a benchmark; and factors outside of IDI's control, should occur.

The Transition Policy and Cessation Procedures made available by IDI also make clear the following information:

- (a) The extent to which an alternative benchmark may be available and how IDI can assist with identifying an alternative. IDI notes that the suitability of any alternative benchmark would depend on, among other things, the particular needs and circumstances of subscribers and other stakeholders. As such, IDI does not pre-identify any default alternative for any benchmark covered by this policy. However, information on each of the benchmarks currently administered by IDI is available on the ICE website and can assist users in considering any alternative benchmarks.

Provided IDI knew in advance that migration to an alternative benchmark was desired, IDI would seek, to the extent possible to accommodate that migration as part of the planning for the cessation of a benchmark. This is clearly set out in the Cessation Procedure;
- (b) Alternative Indices will be reviewed with subscribers and other stakeholders, and a parallel production period will be contemplated based upon current client usage of the index by subscribers and other stakeholders;
- (c) Should IDI not have a suitable alternative benchmark, IDI's Benchmark Cessation Procedure would be applicable;
- (d) Contractual obligations relating to IDI's right to cease calculation and publication of Indices, for example, as it relates to notice periods, will be considered by the IGC, along with the possible application of a transitional measure; and
- (e) If the termination of an IDI benchmark was under consideration, the IGC would invoke a consultation process with subscribers and stakeholders, as appropriate (See Principle 12 – Changes to the Methodology). All relevant information and relevant contact details would be published on IDI's website.

The Transition Policy and Cessation Procedures are reviewed at least annually by the IGC.

Principle 14 – Submitter Code of Conduct

IOSCO Principle 14	IDI's Response
<p>Where a Benchmark is based on Submissions, the following additional Principle also applies:</p> <p>The Administrator should develop guidelines for Submitters (“Submitter Code of Conduct”), which should be available to any relevant Regulatory Authorities, if any and Published or Made Available to Stakeholders.</p> <p>The Administrator should only use inputs or Submissions from entities which adhere to the Submitter Code of Conduct and the Administrator should appropriately monitor and record adherence from Submitters. The Administrator should require Submitters to confirm adherence to the Submitter Code of Conduct annually and whenever a change to the Submitter Code of Conduct has occurred.</p> <p>The Administrator’s oversight function should be responsible for the continuing review and oversight of the Submitter Code of Conduct.</p> <p>The Submitter Code of Conduct should address:</p> <ul style="list-style-type: none">a) The selection of inputs;b) Who may submit data and information to the Administrator;c) Quality control procedures to verify the identity of a Submitter and any employee(s) of a Submitter who report(s) data or information and the authorization of such person(s) to report market data on behalf of a Submitter;d) Criteria applied to employees of a Submitter who are permitted to submit data or information to an Administrator on behalf of a Submitter;e) Policies to discourage the interim withdrawal of Submitters from surveys or Panels;f) Policies to encourage Submitters to submit all relevant data; and	<p>Context</p> <p><i>None of the ICE U.S. Treasury Indices are based on submissions; therefore, this Principle does not apply. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</i></p> <p>Relevant Activities</p> <p>Not applicable as above.</p>

IOSCO Principle 14**IDI's Response**

- g) The Submitters' internal systems and controls, which should include:
- i. Procedures for submitting inputs, including Methodologies to determine the type of eligible inputs, in line with the Administrator's Methodologies;
 - ii. Procedures to detect and evaluate suspicious inputs or transactions, including inter-group transactions, and to ensure the *Bona Fide* nature of such inputs, where appropriate;
 - iii. Policies guiding and detailing the use of Expert Judgment, including documentation requirements;
 - iv. Record keeping policies;
 - v. Pre-Submission validation of inputs, and procedures for multiple reviews by senior staff to check inputs;
 - vi. Training, including training with respect to any relevant regulation (covering Benchmark regulation or any market abuse regime);
 - vii. Suspicious Submission reporting;
 - viii. Roles and responsibilities of key personnel and accountability lines;
 - ix. Internal sign off procedures by management for submitting inputs;
 - x. Whistle blowing policies (in line with Principle 4); and
 - xi. Conflicts of interest procedures and policies, including prohibitions on the Submission of data from Front Office Functions unless the Administrator is satisfied that there are adequate internal oversight and verification procedures for Front Office Function Submissions of data to an Administrator (including safeguards and supervision to

IOSCO Principle 14**IDI's Response**

address possible conflicts of interests as per paragraphs (v) and (ix) above), the physical separation of employees and reporting lines where appropriate, the consideration of how to identify, disclose, manage, mitigate and avoid existing or potential incentives to manipulate or otherwise influence data inputs (whether or not in order to influence the Benchmark levels), including, without limitation, through appropriate remuneration policies and by effectively addressing conflicts of interest which may exist between the Submitter's Submission activities (including all staff who perform or otherwise participate in Benchmark Submission responsibilities), and any other business of the Submitter or of any of its affiliates or any of their respective clients or customers.

Principle 15 – Internal Controls over Data Collection

IOSCO Principle 15

When an Administrator collects data from any external source the Administrator should ensure that there are appropriate internal controls over its data collection and transmission processes. These controls should address the process for selecting the source, collecting the data and protecting the integrity and confidentiality of the data. Where Administrators receive data from employees of the Front Office Function, the Administrator should seek corroborating data from other sources.

IDI's Response

Context

The Administrator, as described in Principle 2 – Oversight of Third Parties, uses price data from a single source for the ICE U.S. Treasury Index Series. The source is an affiliated US entity, PRD. Data, such as analytics and reference data is sourced from ICE Data Analytics, LLC, another affiliated entity, and the Reference Data group within PRD.

None of the ICE U.S. Treasury Indices are based on submissions as defined by the IOSCO Principles or contributions as defined by EU BMR; all third party data are widely available on a subscription basis for multiple purposes and are not solely provided for the purposes of determining a benchmark.

Further to the selection and collecting of the data, the Index team validates the data inputs for their accuracy and completeness.

Data security is managed in line with the information security corporate policies, and handled by teams in our headquarters in Atlanta. Publication and system operations are also managed by teams there.

Relevant Activities

New and existing sourcing relationships are subject to a due diligence review to establish whether the third party provides timely and quality data that is appropriate. Please refer to Principle 2 – Oversight of Third Parties for further information.

IDI monitors the index calculation system for operation incidents which encompasses the successful collection of data inputs.

To help maintain the integrity of data on the calculation system, automated threshold validation controls are performed on both input data points and aggregated index levels. The index team reviews the automated system reports to validate movements in bond prices and calculated index levels.

Confidentiality of data on the calculation system is maintained through user provisioning tools that limit data access to users with the appropriate levels of approval.

IOSCO Principle 15	IDI's Response
	IDI has established escalation procedures to ensure that any incidents identified by the relevant teams are rectified in a timely manner and escalated and notified to the appropriate teams.

Principle 16 – Complaints Procedures

IOSCO Principle 16	IDI's Response
<p>The Administrator should establish and Publish or Make Available a written complaints procedures policy, by which Stakeholders may submit complaints including concerning whether a specific Benchmark determination is representative of the underlying Interest it seeks to measure, applications of the Methodology in relation to a specific Benchmark determination(s) and other Administrator decisions in relation to a Benchmark determination.</p> <p>The complaints procedures policy should:</p> <ul style="list-style-type: none"> a) Permit complaints to be submitted through a user-friendly complaints process such as an electronic Submission process; b) Contain procedures for receiving and investigating a complaint made about the Administrator's Benchmark determination process on a timely and fair basis by personnel who are independent of any personnel who may be or may have been involved in the subject of the complaint, advising the complainant and other relevant parties of the outcome of its investigation within a reasonable period and retaining all records concerning complaints; c) Contain a process for escalating complaints, as appropriate, to the Administrator's governance body; and d) Require all documents relating to a complaint, including those submitted by the complainant as well as the Administrator's own record, to be retained for a minimum of five years, subject to applicable national legal or regulatory requirements. <p>Disputes about a Benchmarking determination, which are not formal complaints, should be resolved by the Administrator by reference to its standard appropriate procedures. If a complaint results in a change in a Benchmark determination, that should be Published or Made Available to Subscribers and Published or Made Available to</p>	<p>Context</p> <p><i>IDI provides and publishes the definition of an eligible complaint and the mechanism through which customers can submit their complaints in the IDI Complaints Policy available on the website</i> https://www.theice.com/publicdocs/data/Complaints_Policy.pdf.</p> <p>Relevant Activities</p> <p>IDI provides and publishes the mechanism through which customers can submit their complaints in the IDI Complaints Policy available on the website https://www.theice.com/publicdocs/data/Complaints_Policy.pdf. The IDI Complaints Policy is reviewed at least annually by the IGC.</p> <ul style="list-style-type: none"> (a) As per the Complaints Policy, stakeholders and subscribers can submit a complaint via email or by writing directly to the Index team or the Compliance officer. Contact information is also available in the Complaints Policy. If a complaint is identified by a member of the Index team they have a responsibility to escalate it to Compliance and Legal for resolution and tracking as appropriate, and in accordance with the policy and procedures. (b) Eligible complaints will be investigated by a senior member of IDI staff who was not directly involved in the matter giving rise to the complaint. Customers will be informed within two days that their complaint has been received and is under investigation. On completion of its investigation, IDI may decide that the complaint would not be upheld, or that an action is required. (c) The IGC is made aware of any complaints received by IDI as part of its scheduled meetings. (d) All records and information relating to a complaint is retained for at least five years in accordance with ICE's Record Retention Policy. <p>All other queries or challenges that are not formal complaints will be handled by the</p>

IOSCO Principle 16	IDI's Response
Stakeholders as soon as possible as set out in the Methodology.	<p>client support and Index team.</p> <p>Changes to the index are governed by the Consultation Policy. Please refer to Principle 12 – Changes to the Methodology for further information.</p>

Principle 17 – Audits

IOSCO Principle 17	IDI's Response
<p>The Administrator should appoint an independent internal or external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated criteria and with the Principles. The frequency of audits should be proportionate to the size and complexity of the Administrator's operations.</p> <p>Where appropriate to the level of existing or potential conflicts of interest identified by the Administrator (except for Benchmarks that are otherwise regulated or supervised by a National Authority other than a relevant Regulatory Authority), an Administrator should appoint an independent external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated Methodology. The frequency of audits should be proportionate to the size and complexity of the Administrator's Benchmark operations and the breadth and depth of Benchmark use by Stakeholders.</p>	<p>Context</p> <p><i>The Administrator is subject to an internal audit program from the Internal Audit ("IA") group of Intercontinental Exchange, Inc.</i></p> <p>Relevant Activities</p> <p>Each year, IA develops a risk-based audit plan for ICE affiliates based on a company-wide risk assessment methodology, which considers :</p> <ul style="list-style-type: none">• Management's risk tolerance;• Audit frequency priorities; and• Audit scope priorities. <p>This audit plan is reviewed by senior management and approved by the Intercontinental Exchange, Inc. Audit Committee.</p> <p>Results of all audit projects are formally reported to direct management, senior management, and the Audit Committee.</p> <p>IA tracks internal audit findings to conclusion and communicates their status to senior management and the Audit Committee.</p> <p>In Q2 2017, IA undertook a review of IDI's adherence to the IOSCO Principles regarding the ICE U.S. Treasury indices.</p> <p>Further Explanation</p> <p><i>IDI will make a determination in the future as to whether a periodic external review of IDI's adherence to its index methodologies is necessary.</i></p>

Principle 18 – Audit Trail

IOSCO Principle 18	IDI's Response
<p>Written records should be retained by the Administrator for five years, subject to applicable national legal or regulatory requirements on:</p> <ul style="list-style-type: none"> a) All market data, Submissions and any other data and information sources relied upon for Benchmark determination; b) The exercise of Expert Judgment made by the Administrator in reaching a Benchmark determination; c) Other changes in or deviations from standard procedures and Methodologies, including those made during periods of market stress or disruption; d) The identity of each person involved in producing a Benchmark determination; and e) Any queries and responses relating to data inputs. <p>If these records are held by a Regulated Market or Exchange the Administrator may rely on these records for compliance with this Principle, subject to appropriate written record sharing agreements.</p> <p>When a Benchmark is based on Submissions, the following additional Principle also applies:</p> <p>Submitters should retain records for five years subject to applicable national legal or regulatory requirements on:</p> <ul style="list-style-type: none"> a) The procedures and Methodologies governing the Submission of inputs; b) The identity of any other person who submitted or otherwise generated any of the data or information provided to the Administrator; c) Names and roles of individuals responsible for Submission and Submission oversight; 	<p>Context</p> <p><i>The ICE Record Retention Policy is applicable to IDI and its retention requirements are at a minimum, five years. IDI also has record retention terms in its contracts with key service suppliers.</i></p> <p><i>None of the ICE U.S. Treasury Indices are based on submissions, therefore the additional requirements for benchmarks based on submissions do not apply. Please refer to Principle 15 – Internal Controls over Data Collection for further information.</i></p> <p>Relevant Activities</p> <p>The ICE Record Retention Policy is applicable to IDI. The policy's retention requirements are at a minimum, five years. The Administrator retains the written records as detailed in the Principle and as follows:</p> <p>In response to (a) of the Principle, the security prices, reference data, analytical data and calculated index results have been retained by IDI since commencement of the index series in December 2015.</p> <p>Furthermore, methodologies are also retained.</p> <p>With respect to (b), expert judgment has, to date, never been exercised when determining any of the indices within the ICE U.S. Treasury Index Series.</p> <p>In the event that it should be exercised, all decisions would be logged in the system and retained automatically for a minimum of 5 years.</p> <p>The IGC is responsible for overseeing decisions that involve discretion. Minutes of the IGC are retained.</p> <p>With respect to (c) of the Principle, if a failure or delay in receiving data occurred, or if there was a disruption in the market affecting the Indices, such incidents would be logged, escalated and retained in accordance with ICE's Incident policy.</p> <p>In relation to (d) of the Principle, records of personnel involved in the index determination process are maintained.</p> <p>With respect to (e), IDI has maintained a tracker of electronic communications that</p>

IOSCO Principle 18	IDI's Response
<ul style="list-style-type: none"> d) Relevant communications between submitting parties; e) Any interaction with the Administrator; f) Any queries received regarding data or information provided to the Administrator; g) Declaration of any conflicts of interests and aggregate exposures to Benchmark related instruments; h) Exposures of individual traders/desks to Benchmark related instruments in order to facilitate audits and investigations; and i) Findings of external/internal audits, when available, related to Benchmark Submission remedial actions and progress in implementing them. 	<p>pertain to the ICE U.S. Treasury indices since 2015.</p>

Principle 19 – Cooperation with Regulatory Authorities

IOSCO Principle 19	IDI's Response
<p>Relevant documents, Audit Trails and other documents subject to these Principles shall be made readily available by the relevant parties to the relevant Regulatory Authorities in carrying out their regulatory or supervisory duties and handed over promptly upon request.</p>	<p>Context</p> <p><i>If requested by any regulatory authority to provide information, IDI will respond promptly to their queries, and will cooperate with them fully to ensure they receive a satisfactory and accurate response to their enquiries about the index business. Such requests are handled in the first instance by Compliance.</i></p> <p><i>Compliance and Legal will follow the internal procedure for handling requests from external parties, such as regulators, and assign any tasks to the relevant persons to complete, track and record, and will liaise with senior management as necessary.</i></p> <p>Relevant Activities</p> <p>Employees are required to escalate regulatory requests received to Compliance/Legal on receipt for tracking. Compliance is responsible for being the liaison with the regulator on index related business on all regular and ad hoc requests.</p> <p>To ensure that external communications are correctly identified for appropriate processing, the ticketing tool requires users to select whether a communication received pertains to a query, complaint or regulatory request via the use of a drop down menu.</p> <p>To assess the impact of regulatory requests, discussions with regulators relevant to IDI are considered and assessed by the IGC and IDI Management Committee.</p>