Bloomberg Index Services Limited: Benchmark Procedures Handbook

May 2024

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1. Introduction

Purpose

This document aims to provide stakeholders with guidance on various general policies and procedures relating to the provision of benchmarks by Bloomberg Index Services Limited ("**BISL**"). The provision of individual benchmarks may be governed by multiple documents (including this document) and should be read in conjunction with each document referred to in the respective benchmark methodology to fully understand the calculation of the benchmark. Additionally, individual benchmarks may differ from the approaches detailed in this document; please refer to each benchmark's respective methodology for the specific policies and procedures applicable to each benchmark.

Design Principles

BISL aims to broadly meet the following core design principles in its benchmarks. The benchmark ought to be:

- representative of the market or asset class being measured, and desired risk exposures sought by benchmark users;
- replicable, offering a sufficiently sized universe without unnecessary turnover and transaction costs; and
- objective and transparent, with clearly defined and objective rules.

Benchmarks administered by BISL are designed to meet these fundamental criteria, as all benchmarks are designed to be rules-based with inclusion determined by transparent eligibility criteria that have been set to measure different asset classes accurately and comprehensively.

2. Governance Structure

Benchmark Regulation

BISL is authorized by the UK's Financial Conduct Authority to conduct benchmark administration under the UK BMR¹. BISL can be found on the <u>FCA's register</u> and remains available for use by EU supervised entities during the EU BMR transition period.

Governance Structure

BISL uses three primary committees to provide overall governance and oversight of its benchmark administration activities:

- The Product, Risk & Operations Committee ("**PROC**") is responsible for the first line of control over the creation, design, production and dissemination of benchmarks administered by BISL.
- The oversight function is provided by Bloomberg's Benchmark Oversight Committee ("**BOC**"). The BOC is independent of the PROC and is responsible for the review and challenge of the BISL Board of Directors and the PROC regarding relevant aspects of the provision of Benchmarks by BISL, as set out in the UK BMR.
- The Risk Committee ("**RiskCo**") advises the Board, the PROC and the BOC on the Company's overall risk appetite, tolerance and strategy and oversees the Company's risk exposure and risk strategy.

BISL also organises Index Advisory Council ("IAC") meetings for certain families of benchmarks. The IAC meetings afford a cross-section of various market participants the opportunity to offer feedback regarding Bloomberg's benchmarks and related services which, in turn, will enable Bloomberg to improve the benchmarks and related services. Each IAC meeting is for advisory purposes only and has no decision-making power or function. Bloomberg will decide unilaterally whether, and how, to respond to any feedback, comment, or recommendation that results from an IAC meeting.

¹ Regulation (EU) 2016/1011 of the Parliament and the Council of the European Union on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and associated secondary legislation (("EU BMR"), as such regulation forms part of "retained EU law" (as defined in the European Union (Withdrawal) Act 2018 as amended) ("UK BMR").

3. Conflicts of Interest

Overview

BISL is a wholly-owned subsidiary of Bloomberg L.P. (collectively with its affiliates, **Bloomberg**). BISL is an independent benchmark administrator and neither BISL nor Bloomberg issue, underwrite or act as placing agent or market maker for any securities or financial products and are not involved in investment fund administration. As such, many of the inherent conflicts of interest that might arise with respect to more traditional financial services providers do not apply.

BISL recognizes that potential conflicts of interest may arise in acting as a benchmark administrator. Potential sources of conflicts may include those between BISL employees, stakeholders, service providers, third parties, Bloomberg and benchmark users. Such potential conflicts include the following:

- Employees, stakeholders and directors may have competing outside business interests.
- Organizational structure, whereby committee members or direct line managers may have broader roles within Bloomberg which may conflict with carrying out their role for BISL.
- Outsourced service providers who may have a competing interest with the constitution and/or performance of the benchmark.
- Third parties, including Bloomberg affiliates who provide data, including input data, to BISL benchmarks and may have competing mandates or strategies.

BISL has robust governance and oversight structures in place (discussed above) and is committed to conducting its business in accordance with the highest ethical standards, consistent with guidelines that prevent and manage actual or potential conflicts of interest, in order to best serve its clients as well as to comply with applicable regulatory standards.

BISL has established a conflicts of interest policy and related procedures for the identification, disclosure, management, mitigation and avoidance of actual or potential conflicts of interest.

In addition, BISL has other policies and procedures in place addressing potential conflicts of interest, including those on:

- Information Security;
- Confidential Information;
- Gifts and Entertainment;
- Personal Account Dealing;
- Disclosure of Outside Interests;
- Anti-Bribery;
- Anti-Corruption;
- Hiring and Remuneration; and
- Whistleblowing.

Pursuant to these policies, among other things, employees engaged in the provision of benchmarks are also subject to holding periods and pre-approval requirements for securities transactions. In addition, employees may not have their compensation based on the performance (level) of the benchmarks BISL administers and employees are prohibited from misusing confidential information for their personal gain or improper purposes.

Identifying Conflicts

BISL periodically examines its business practices to identify activities that may cause a conflict of interest. To facilitate this review, all BISL employees, governance and oversight committee members and members of BISL's board of directors disclose outside business activities at least annually.

Data Providers and Data Extrapolation

Bloomberg benchmarks are rules-based, and their construction is designed to consistently produce benchmark levels without the exercise of discretion in the day-to-day calculation. Unless otherwise specified in the methodology document for a particular benchmark, the benchmarks are produced without the interpolation or extrapolation of input data.

In addition, BISL seeks to avoid contributions of input data that may be subject to the discretion of the source of such data and instead seeks to use input data that is readily available and/or distributed for a number of non-index or benchmark-creation purposes. Accordingly, unless otherwise specified in the methodology document for a particular benchmark, the benchmarks require no 'contributors' to produce and no codes of conduct with any such sources are required.

Policies and Training

BISL requires mandatory compliance training for all BISL employees including new joiners, oversight committee and board members on the conflicts of interest policy and other policies and procedures addressing conflicts, as noted above.

Material Residual Conflicts

Having regard to the governance, controls, and procedures in place to mitigate the potential conflicts of interest identified, BISL does not consider there to be any residual material conflicts.

4. Benchmark and Methodology Launch & Changes

New methodologies are prepared by the relevant product managers and must be approved by BISL compliance prior to publication. In certain circumstances, for example, where there is a new data source, outsourcing, input data contribution, manual processes or other potential risks associated with the benchmark deemed material, the proposed launch of a benchmark may be escalated to the PROC for approval.

BISL will review the benchmarks (both the rules of construction and data inputs) on a periodic basis, to determine whether they continue to reasonably measure the intended underlying market interest, the economic reality or otherwise align with their stated objective. Out-of-cycle reviews may result from extreme market events, market feedback and/or material changes to the applicable underlying market interests.

If there is any resulting change to the methodology, BISL will first determine whether a proposed change to a benchmark is material taking into account the following factors:

- The economic, financial and/or operational impact of the change;
- Whether the change affects the original purpose of the Benchmark; and/or
- Whether the change is consistent with the overall objective of the Benchmark and the underlying market interest it seeks to measure

Material changes related to the benchmarks together with the key elements of the methodology that would, in BISL's view, be affected by the proposed material change, will be made available in advance to stakeholders whose input will be solicited via a consultation. The stakeholder engagement will set forth the rationale for any proposed changes as well as the timeframe and process for responses. BISL endeavors to provide at least two weeks for the consultation period, however the length of the consultation period may vary taking into account factors including complexity of the topic, market circumstances, materiality and client impact.

During the consultation process, in addition to feedback received from stakeholders via the public consultation process, BISL may solicit feedback from IAC members and/or other relevant stakeholders who may be specifically impacted by proposed methodology changes. Subject to requests for confidentiality, stakeholder feedback and BISL's responses will be made accessible upon request.

Following the end of the consultation, the relevant information is reviewed by BISL, which will make a decision on the methodology change. The decision will be announced to stakeholders at the same time, detailing the changes and time-frame for implementation. BISL will endeavor to provide at least two weeks for review prior to any material change going into effect. In the event of extreme market circumstances, such as a shift in the market or regulatory structure of the underlying economic reality which requires a change to the methodology to maintain representativeness, this period may be shorter. Methodology changes will be reflected in updated versions of the applicable methodology document.

Where methodology changes are not deemed material, BISL may make changes to the methodology without a formal public consultation and will publish revised methodologies to stakeholders at the same time. BISL reserves the right to consult with stakeholders on all changes whether or not they are deemed by BISL to be material.

5. Cessation Policy

BISL may from time to time terminate a benchmark ("**Discontinued Benchmark**") for a number of reasons including, but not limited to:

- Changes in market structure
- Lack of requisite data
- Poor quality of data
- The input data no longer represents the market or economic reality it is intended to measure
- Insufficient number of constituents eligible for inclusion for a given methodology
- Insufficient usage
- Superseded by another BISL benchmark
- Regulatory or practical concerns
- The benchmark no longer meets its stated objective, or
- Any other condition which makes the benchmark no longer representative of the market or economic reality it is intended to measure.

The process for terminating a Discontinued Benchmark is as follows:

- For a Discontinued Benchmark that has known usage, the PROC will review the proposed termination of the Discontinued Benchmark, taking into account the reasons for the proposed termination, the impact on stakeholders (if any), the availability of alternative products and any other factors it considers appropriate in the circumstances.
- The PROC at its discretion may decide to consult with stakeholders regarding the proposal to terminate the Discontinued Benchmark. In deciding whether to consult with stakeholders, the PROC may consider the known usage of the Discontinued Benchmark and potential impact to stakeholders and/or market. Stakeholder consultations will also be undertaken when the methodology of the relevant benchmark specifies that a consultation is required.
- If the PROC approves the termination, users of the Discontinued Benchmark will be provided with as much prior notice of the termination as is reasonable in the circumstances, typically 90 days. If the Discontinued Benchmarks is widely used or otherwise determined by BISL to be an important benchmark without a reasonable substitute, the notice period may be extended, as warranted.
- The PROC may determine that it is appropriate to provide shorter prior notice or no prior notice of the termination of the Discontinued Benchmark if circumstances exist that are beyond the control of BISL, including material changes to the underlying market, lack of access to required data, regulatory change or political events, that materially affects the ability of BISL to administer the Discontinued Benchmark.
- In the event there is no known usage of the Discontinued Benchmark then PROC approval is not required and BISL may terminate the Discontinued Benchmark without prior notice.

Any advance notice period is subject to BISL being reasonably able to continue administering and calculating such benchmark during such period (for example, BISL has access to requisite data on commercially reasonable terms, is not subject to any litigation or other claims, has adequate internal resources and capabilities, etc.).

6. User Fall-Back Provisions

Users and other stakeholders who have financial instruments or other products that reference one or more BISL benchmarks are encouraged to take steps to ensure that:

- contracts or other financial instruments that reference one or more BISL benchmarks, have robust fall-back provisions in the event of material changes to, or cessation of, the referenced benchmark(s); and
- users or stakeholders are aware of the possibility that various factors, including external factors beyond the control of BISL, might necessitate material changes to the referenced benchmark(s).

7. Restatement Policy

BISL considers the following factors (to the extent relevant to the specific benchmark) to determine whether to restate and the nature of the restatement. Not all conditions need to be present to warrant a restatement, and certain factors may be more determinative than others depending on the circumstances of given error.

- The relative importance of the data field impacted by the error;
- Impact to end investor and/or clients' non-financial objectives;
- When the error occurred and when it was discovered;
- The number of benchmarks affected;
- Whether the impacted benchmarks are linked to tradable products;
- The magnitude of the error;
- The impact on the replicability of the benchmark;
- The burden of restatement on client re-processing relative to the impact of the error; and
- The impact of the restatement on analytical tools.

A decision to restate any Benchmark results in the restatement of all impacted Benchmarks. Real-time indices are not considered for restatement, all real-time dissemination is considered indicative. Discrepancies discovered after 12 months will not be corrected unless BISL in its discretion decides that such restatement is necessary.

Fixed Income

For Fixed Income Benchmarks, the general guidelines followed by BISL described above are applied based on the type of error or issue identified, however BISL will exercise its discretion and reserves the right to restate or not as each decision will be determined by the individual circumstances.

Error categories include:

- Incorrect inclusion
- Incorrect exclusion
- Incorrect security attributes
- Incorrect return attribute
- Incorrect analytical calculation

The error type will then be reviewed against the impact to the benchmark, number of benchmarks impacted, the timing of the error and other factors deemed relevant for the individual circumstances as outlined in the general guidelines above when determining whether to restate the Benchmark.

Equity

An error to an equity Benchmark in excess of 3 basis point over one day will automatically be reviewed for restatement. If the Benchmark in error is a Primary benchmark (listed below) and has occurred in the last 2 business days, a restatement will be made for all impacted benchmarks. Errors occurring beyond the last 2 business days will be evaluated on a case-by-case basis.

Real-time indices are not considered for restatement as all real-time dissemination is considered indicative.

Primary benchmarks:

- Bloomberg US Large Cap Equity Index (B500T)
- Bloomberg Developed Markets Large & Mid Cap Index (DMTR)
- Bloomberg Emerging Markets Large & Mid Cap Index (EMTR)

If the error affects a non-Primary benchmark the following factors will be reviewed to determine whether to restate. Best efforts will be made to address errors in non-Primary benchmarks as outlined in the table below:

Event	Action (If discovered within 2 business days)			
Missed corporate action				
Spin-off	Restate benchmarks and reissue file			
Regular cash dividend				
Special cash dividend				
Stock split				
Stock dividend, bonus				
Mergers & acquisition	Update made the next business day; no restatement and no reissuance of files			
Delisting				
Reclassification				
Change in listing				
IPO incorrectly added	Update made at next rebalance			
Rebalance				
Incorrect add				
Incorrect removal	Unless the error is discovered during pro-forma period, update will be made at next rebalance			
Share changes				

8. Expert Judgment and Discretion

The benchmarks methodologies are rules-based, and their construction is designed to consistently produce values without the exercise of expert judgment or discretion under the standard methodology, in day-to-day benchmark calculation. Nevertheless, BISL may use expert judgment or discretion in certain limited circumstances, with regards to the following:

- Extraordinary circumstances (such as a fundamental shift in the economic or regulatory structure of the underlying market) during a market emergency;
- A market disruption event; or
- Interruptions, issues and non-availability of data including input or non-input (e.g. ESG) data.

Discretion refers to the right of BISL to make a determination in calculating a Benchmark with respect to its methodology. Expert judgement refers to the exercise of discretion with respect to the use of Input Data. Instances of discretion or expert judgement may include BISL making a decision to modify, derive or substitute input or non-input (e.g. ESG) data points according to what it considers suitable in a particular situation, in order to maintain benchmark constituents as set out in the methodology and ensure that the benchmark continues to represent the market and economic reality that it seeks to measure, and the stated objectives of the benchmark.

Discretion may be applied to (but not limited to) areas of benchmark construction or calculation and may include actions such as:

- Delaying or estimating the value of input or non-input data
- Adjusting the benchmark methodology
- Excluding or amending a constituent, input or non-input data
- Mapping of non-input data, such as ESG data, to entities and sub-entities of benchmark constituents / issuers
- Maintaining logical Benchmark membership by reviewing constituent characteristics such as country assignment, float factors, foreign ownership limits, or corporate action applications

When expert judgment or discretion is required, BISL aims to be consistent in its application, with instances of discretion subject to review by members of BISL. In certain circumstances, exercises of expert judgment or discretion are reviewed by senior members of BISL management and Bloomberg Compliance teams, and are reported to the PROC. BISL maintains and enforces policies and procedures to prevent conflicts of interest from inappropriately influencing benchmark construction, production, and distribution, including the use of expert judgment or discretion.

9. Market Disruptions Events

Market disruption event occurs when there is the occurrence of one or more material events which makes it impossible or not reasonably practicable for BISL to publish a benchmark level on any benchmark relevant day.

If, on any benchmark relevant day, a market disruption event occurs or is occurring that BISL, in its sole discretion, materially affects the benchmark, BISL may:

- defer or suspend the calculation and publication of the benchmark and any other information relating to the benchmark until the next benchmark business day on which such disruption event is not continuing; and/or
- make such determinations and/or adjustments in relation to (a) the methodology used to calculate that benchmark as BISL considers necessary in order to maintain the objectives of the benchmark, or (b) the benchmark level as BISL considers appropriate in order to preserve the underlying objectives of the benchmark, including but not limited to calculating a substitute level for the benchmark based on but not restricted to the last published level of any disrupted benchmark and such level or value may be zero, where, in the reasonable view of BISL, this would give an objective and accurate determination; and/or
- discontinue the calculation of the benchmark per the documented cessation procedures

10. Complaints

BISL maintains a written complaints procedures policy, which can be requested on our <u>website</u> by which benchmark users and other market stakeholders can submit complaints or other feedback including, without limitation, concerning whether a specific benchmark determination is not representative of the underlying market interest it seeks to measure, perceived misapplications of benchmark methodologies in relation to a benchmark determination and other decisions made by BISL in relation to its business and operations.

Complaint Handling Process Summary

- After a complaint is submitted, it will be routed to the appropriate members of the Bloomberg benchmarks compliance team who will acknowledge the complaint within five business days.
- Once the complaint is acknowledged it will be reviewed in an impartial, fair and timely manner by compliance and if appropriate, stakeholders within BISL and/or governance committees or other personnel who will

investigate and process the complaint in accordance with BISL internal Complaints Handling Procedures. Records of any such investigation shall be retained for at least five years or as otherwise required by applicable law.

- Depending on the nature of the issue identified in the complaint, the matter will be appropriately escalated to relevant BISL governance and oversight committees.
- A written response should be provided to the complainant by the investigating compliance officer once the issue is resolved informing them of the outcome. BISL Compliance may regard a complaint as resolved when a final response to the complainant has been made and it is reasonable to consider that the complainant will not undertake further action with regards to the Complaint.
- If a complaint results in a change to a benchmark, such change will be published as soon as possible in accordance with the terms of the respective benchmark methodology. If warranted, and subject to Bloomberg's internal policies, BISL will report matters to appropriate regulatory authorities and make an appropriate announcement to stakeholders of remedial actions that have been taken to satisfy a complaint.

More Information

To request a copy of Bloomberg's complaints policy or to submit a complaint regarding a Bloomberg index or index determination, please send correspondence to idxcomplaint@bloomberg.net or to the following postal address:

Bloomberg Index Services Limited c/o Bloomberg L.P., 3 Queen Victoria Street, London EC4N 4TQ, United Kingdom Attn: Index Compliance

Version Tracker:

Date	Update
September 2023	Initial publication
January 2024	Update to the Restatement Policy
May 2024	Update to the Cessation Policy

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