

Goldman Sachs

Summary of the Global Markets Division Global Benchmark Policy and Control Framework

1. Introduction

This Summary is being published in compliance with Principles 4 and 5 of the Principles for Financial Benchmarks published by the Board of the International Organization of Securities Commissions (“IOSCO Principles”) on 17 July 2013 (the “IOSCO Principles”) and to adhere to Article 6 of the Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 (“European Benchmark Regulation”). Each of Goldman, Sachs & Co and Goldman Sachs International (together, “Goldman Sachs Administrators” and each, a “Goldman Sachs Administrator”), acting through the Global Markets Division, acts as Administrator (within the meaning of the European Benchmark Regulation and/or the IOSCO Principles) of a number of financial indices and strategies that are linked to or referenced by a financial product and which it has identified as “Benchmarks” within the meaning of the IOSCO Principles and the European Benchmark Regulation¹. The Global Markets Division Global Benchmark Policy and Control Framework (the “Framework”) governs the development, determination, operation and governance of the Benchmarks by each Goldman Sachs entity as Administrator.

2. Oversight and Governance

The Global Markets Division Client Index and Strategy Committee (the “Index Committee”) is responsible for the overall oversight of activities related to the administration, determination, development, issuance and operation of Benchmarks (“provision of Benchmarks”). The Index Committee may delegate its responsibilities. The Index Committee meets on a periodic basis and has representatives from the front office and control functions. A summary of the main features of the Index Committee charter is set out in the Schedule.

3. Main Features of the Framework

a) Creation of New Benchmarks: New Benchmarks are approved by the Index Committee which reviews their economic rationale, quality and integrity and assess factors such as the integrity, sufficiency and hierarchy of input data, as well as any potential conflicts of interest that may rise during the provision of Benchmarks. Each new GS Benchmark must also comply with the Global Markets Division Global Benchmark Creation Due Diligence Policy to ensure that the relevant internal controls have been applied and approvals received.

b) Investor Disclosures: The methodology and input data, including the hierarchy of input data, for each Benchmark is documented and made available to counterparties to, or investors in, financial instruments referencing such

¹ Goldman Sachs Administrator may consider certain indices that do not fall within the scope of the European Benchmark Regulation or the IOSCO Principles, as if they are Benchmarks for the purposes of applying the requirements of the Benchmark Regulation and the IOSCO Principles, but shall not be obliged to do so.

Benchmarks (the “Investor Disclosure”). The Investor Disclosure includes the content requirements set out in the Framework. Additionally, Goldman Sachs publishes Benchmark Statements for each family of Benchmarks it administers in accordance with the requirements of the European Benchmark Regulation.

- c) Data Integrity:** Goldman Sachs Administrators maintain controls and processes to identify and correct input data, including calculation errors or anomalies affecting the published level of a Benchmark. Goldman Sachs Administrators also maintain procedures to address business, market, legal, regulatory, judicial, financial, fiscal or other circumstances that could necessitate or make desirable to effect modifications or changes to Benchmarks.
- d) Discretion and Expert Judgement:** Any exercise of discretion or expert judgment is subject to approval by the Index Committee. If a Goldman Sachs Administrator is required or entitled to make a determination in relation to a Benchmark pursuant to the Benchmark methodology and that determination involves the exercise of expert judgement or discretion, then it would be exercised in accordance with the provisions of the ISOCO Principles and the European Benchmark Regulation, as well as the Conflicts of Interest provisions set out in the Framework.
- e) Periodic Review of Benchmarks:** Benchmarks are periodically reviewed by the Index Committee.
- f) Cessation and Transitional Arrangements:** Any discontinuance or termination of a Benchmark will be undertaken in an orderly manner, taking into consideration the potential impact to counterparties to, or investors in, financial instruments referencing such Benchmarks and the integrity of the markets. Other than where there are no outstanding financial instruments linked to a Benchmark, termination of a Benchmark will require escalation, review and approval by the Index Committee.
- g) Oversight of Third Parties:** The Index Committee monitors on a periodic basis whether third parties involved in the provision of Benchmarks are carrying out their functions effectively and in compliance with the applicable law and regulations.
- h) Conflicts of Interests and Information Controls:** In addition to broader Goldman Sachs policies on the management of conflicts of interest, in order to monitor and manage potential conflicts of interest in respect of Benchmarks, Goldman Sachs Administrators have put in place controls and procedures to mitigate and manage conflicts of interest that may arise during the course of the provision of Benchmarks including:
- to monitor and approve the use of discretion or expert judgment;
 - to identify and mitigate personal conflicts of the individuals involved in the provision of Benchmarks;

- to disclose identified existing or potential conflicts of interest within the Investor Disclosures;
- to manage and mitigate conflicts of interest related to trading activities on financial instruments referencing Benchmarks; and
- to safeguard confidential information in relation to the provision of Benchmarks.

i) Retention of records: Written records in relation to the provision of Benchmarks, including documents relating to complaints, are retained in accordance with applicable legal and regulatory requirements.

j) Complaints: All complaints relating to Goldman Sachs' Benchmarks, including complaints related to whether a specific benchmark determination is representative of market value, complaints on a proposed change to the benchmark determination process or on an application of the methodology in relation to a specific benchmark determination, and complaints on other decisions in relation to the benchmark determination process, are handled in accordance with Goldman Sachs' written complaints handling policies and procedures. These policies and procedures require notification of all complaints to the Index Committee and the handling of investigations related to complaints by individuals independent from any personnel who may be or may have been involved in the subject matter of the complaint. Any complaint relating to a GS Benchmark should be sent to gsi-bmr@ny.email.gs.com or your usual Goldman Sachs contact. Goldman Sachs Administrators will investigate complaints in a timely and fair manner and the outcome of the investigation will be communicated to the complainant within a reasonable period of time in accordance to Goldman Sachs complaints handling policies and procedures².

k) Whistleblowing: Goldman Sachs has an established business integrity program in place, to provide its people and the public with various channels through which integrity concerns can be raised without reprisal. The firm prohibits any retaliation for reporting a possible violation of laws, ethics or firm policy, no matter whom the report concerns.

² More information on <https://www.goldmansachs.com/disclosures/mifid/emea-complaints-handling.pdf>

Schedule

Main feature of the Index Committee Terms of Reference

1. Mission Statement

The Committee

- (i) oversees the provision of benchmarks by Goldman Sachs;
- (ii) reviews and approves new Goldman Sachs Benchmarks (as defined in the Framework);
- (iii) reviews and provides challenge on the Benchmark determination process, expected or known usage of the Benchmark and the materiality of existing or potential conflicts of interest identified in respect of the Benchmark;
- (iv) oversees the implementation and control infrastructure for such Benchmarks, and the continuing operation of existing Benchmarks, including exercises of discretion by the Firm in relation thereto; and
- (v) serves as the Oversight Function, under Article 5 of the European Benchmark Regulation of the Goldman Sachs entities acting as Benchmark Administrators under the European Benchmark Regulation.

2. Duties and Responsibilities

The duties and responsibilities of the Index Committee include:

- (i) reviewing and approving new Benchmarks which are implemented by the Global Markets Division as Administrator, in accordance with the Global Markets Division Benchmark Creation Due Diligence Policy;
- (ii) reviewing and challenging the economic rationale, quality and integrity of the new Benchmarks being marketed, implemented and traded by the Global Markets Division;
- (iii) reviewing and providing challenge on the Benchmark determination process, including the Benchmark methodology the market or economic reality that the benchmark is intended to measure, expected or known usage of the Benchmark and the materiality of existing or potential conflicts of interest identified;
- (iv) periodically reviewing the performance, methodology and rationale of existing GS Benchmarks;
- (v) reviewing internal or third party Incidents or adjustment events in the calculation of any Benchmark approved by the Index Committee after they are notified to the Committee;
- (vi) maintaining oversight of and approving the exercise of discretion or expert judgment by Goldman Sachs as Administrator to a Benchmark, including determinations required following Incidents or adjustment events, changes to embedded costs and amendments to the calculation methodology;
- (vii) approving and monitoring the discontinuation or termination of Benchmarks; and
- (viii) considering the results of any internal or external audits, and following up on the implementation of remedial actions highlighted in the results of any such audits.

3. Membership

The Chairperson of the Index Committee defines the size and appoints the members of the Committee (according to skill, expertise and time commitments to the Committee, including understanding of the regulatory requirements applicable to the provision of Benchmarks) and may remove or replace members of the Committee. The Committee must include representation from the Global Compliance Department and the Firm's Legal Department.

A representative(s) of the Firm's Legal Department serves as the Committee's counsel (the "Counsel"). The Counsel must be a Committee member.

If any Committee member is conflicted in relation to a private interest in any transaction or matter to be considered by the Committee, the Committee member must disclose that interest to the Chairperson and Counsel before discussion of the relevant agenda item.