

Moorgate Benchmarks (Ltd & GmbH) Control Framework

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Change History

Version Number	Editor	Date	Comments
0.1	Gareth Parker	1/7/2018	First draft
0.2	Tobias Sproehnle	8/7/2018	Comments, review
1.0	Gareth Parker	30/7/2018	Live document
1.1	Gareth Parker	10/02/2019	Calculation agent update
1.2	Gareth Parker	04/12/2019	Updated
1.3	Gareth Parker	17/07/2020	Update for Moorgate Benchmarks GmbH
1.4	Tim Black	20/07/2020	Review
1.5	Gareth Parker	31/07/2020	Consolidation of minor edits.
1.6	Gareth Parker	04/01/2021	Updated regulatory status (UK BMR)

Distribution

Name	Firm/Department	Location
Gareth Parker	Moorgate Benchmarks	London
Tobias Sproehnle	Moorgate Benchmarks	London

SUMMARY

Moorgate Benchmarks Ltd and Moorgate Benchmarks GmbH (“the companies”) are both benchmark administrators regulated under the UK Benchmarks Regulation (UK BMR).

Both companies provide the following services:

- Benchmarks that they individually administer
- Calculation agent services
- Legal representation for third-country administrators
- Endorsement of third-country benchmarks

The companies share a single benchmark / index calculation function, based in Giessen,

Germany, and a benchmark / index review team, also based in Giessen. Administration of benchmarks is managed from either London (benchmarks administered by Moorgate Benchmarks Limited) or from Gießen (benchmarks administered by Moorgate Benchmarks GmbH).

Both administrators wish to ensure their indices and benchmarks, and the indices and benchmarks for which they provide the above services, are regarded as being entirely accurate, reliably calculated, and being appropriately governed. As such this control framework has been built to remove or minimise risk in the conduct of business. This control framework is the responsibility of Moorgate Benchmarks Limited's Board and the directors of Moorgate Benchmarks GmbH, is overseen by the Moorgate Benchmarks Oversight Function, and is regularly reviewed. All policies and procedures have been built to be compliant with the IOSCO Principles and both UK and EU BMRs, and are separately approved by Moorgate Benchmarks Limited's Board and the directors of Moorgate Benchmarks GmbH.

RISK LEVEL

The companies calculate and administer, within the terminology of the UK Benchmarks Regulation, significant and non-significant benchmarks. Expert judgement is rarely permitted under the methodologies of benchmarks the companies administer, but where it is used in the determination of benchmarks this is carried out by acknowledged experts, who are appropriately trained, and subject to conflicts of interest and expert judgement policies which ensure that where expert judgement is exercised this is done in an honest, impartial, appropriately controlled manner. There are no contributors to the benchmarks.

Operational Risk

As a benchmark administrator, responsible for ensuring high quality in the review of and calculation of indices, Moorgate Benchmarks has built its own calculation and data management engine in a multiply-redundant form that will run in multiple iterations in the cloud. Non-price data that is critical to calculations (such as shares in issue and corporate actions data) is sourced from multiple providers in order to provide redundancy.

In certain cases (such as endorsement recognition and some administration arrangements), calculation will be carried out by clients benchmark calculators. In these circumstances, the calculation agent will be subject to control under this framework and Moorgate Benchmarks' suite of governance documents, which ensure suitable operational risk controls are in place at those calculation agents.

Governance risk

Governance risk for both companies is controlled within the Moorgate Benchmarks' Oversight Function and the Index Management Committee, for which separate terms of reference are maintained and periodically reviewed.

Business Continuity & Disruption Contingency

Moorgate Benchmarks' calculation services is operated within the cloud, and is therefore multiplicatively redundant. Other data is held within Microsoft cloud services, and therefore both multiplicatively redundant and regularly backed up.

In the event of disruption to Moorgate's usual place of business, business can be carried on from any internet-enabled location. This element of Moorgate's control framework was extensively stress-tested through the Coronavirus crisis, where no gaps in service provision or issues occurred with administration.

Where aspects of benchmark administration are outsourced, Moorgate Benchmarks will ensure this is and continues to be only to entities that can demonstrate suitable continuity and disruption procedures.

The responsibility for ensuring suitable controls are in place lies with the Moorgate Benchmarks Oversight Function.

Input Data Monitoring

Pricing data for benchmarks administered by the companies is regulated data sourced from appropriate exchanges, readily available data sourced from reliable, long-standing vendors, or is concluded trades or firm bids and offers controlled by the relevant benchmark family Input Data Policy. Additionally, Moorgate Benchmarks' administration function, its calculation function, its calculation agents & data providers carry out daily comparisons of input data received from alternative providers, and flag differences for verification.

Additional verification of some data will be provided by Moorgate Benchmarks' clients, whose management of index-based products requires them to constantly compare index data against the performance of their products, and against their expectations derived from independent analysis.

Conflicts of Interest

Moorgate Benchmarks Limited and Moorgate Benchmarks GmbH are aware of the risks to the integrity, accuracy and reliability of indices they calculate or to which they provides endorsement / recognition / administration services, and to the companies' reputation, from conflicts of interest. In view of this, the companies require its personnel and those of the Index Management Committee and client benchmark oversight groups to perform their duties and conduct any personal investment activities under the fundamental principle that they should not take inappropriate advantage of any knowledge they gain as a result of their position. The companies maintain a full Conflicts of Interest and Personal Conduct Policy and require regular certification of compliance with its contents.

APPROVAL

This Control Framework was approved by the Board of Moorgate Benchmarks Limited and the directors of Moorgate Benchmarks GmbH and is reviewed annually.

APPENDIX 1 - Current Governance Committee Members

Moorgate Benchmarks Oversight Function (EU BMR Article 5)			
Name	Role	Capacity	Representing
Mr Nash Jooma	Chairman	Voting Member	Independent
Mr Tim Black	Function Secretary & Head of Governance	Voting Member	Moorgate Benchmarks Limited
Mr Nigel Hyde	Independent Adviser	Voting Member	Independent
Herr David Mark	Independent Adviser	Voting Member	Independent
Herr Mark Pralle	CTO & COO	Attendee	Moorgate Benchmarks GmbH
Herr Tobias Sproehnle	CEO	Attendee	Moorgate Benchmarks GmbH
Mr Gareth Parker	CIO & Chairman	Attendee	Moorgate Benchmarks Limited

Moorgate Benchmarks Index Management Committee			
Name	Role	Capacity	Entity
Mr Gareth Parker	Committee Chairman CIO & Chairman	Voting Member	Moorgate Benchmarks Limited
Mr Tim Black	Committee Secretary & Head of Governance	Attendee	Moorgate Benchmarks Limited
Herr Mark Pralle	CTO & COO	Voting Member	Moorgate Benchmarks GmbH
Herr Devashish Gantayat	Head of Operations	Voting Member	Moorgate Benchmarks GmbH
Mr Mark Penfold	Product Analyst	Voting Member	Moorgate Benchmarks Limited
Mr Shaun Buhre	Index Specialist	Voting Member	Moorgate Benchmarks GmbH

APPENDIX 2 - Documentation Overview

Document Title	Document Purpose
Moorgate Benchmarks Accountability Framework	Provides a framework for ensuring correct management of all benchmark records and documentation .
Moorgate Benchmarks Cessation or Material Change Policy	Provides a framework providing procedures for the management of potential index cessation or potential material changes to index methodology.
Moorgate Benchmarks Complaints Policy	Outlines the procedures for the response to any form of complaint regarding benchmark administration services.
Moorgate Benchmarks Conflicts of Interest and Personal Conduct Policy	Details the responsibilities of individual staff and the broader organization (Moorgate Benchmarks) to adhere to best practice and detailing possible action if policy is not adhered to.
Moorgate Benchmarks Conflicts of Interest Register	A register of all identified conflicts of interest and any remedial action(s) to minimize or eliminate such conflicts.
Moorgate Benchmarks Data Security Policy	Outlines Moorgate Benchmarks policies and procedures covering incident response and data protection and security.
Moorgate Benchmarks Index Management Committee Terms of Reference	The agreed terms of reference for the Moorgate Benchmarks Index Management Committee.
Moorgate Benchmarks Input Data Policy	This framework is used to manage existing indices, approve new indices, approve changes to the methodologies of existing indices, and to oversee indices recognised or endorsed under benchmarks regulations.
Moorgate Benchmarks Organisational Structure Chart	Provides an overview of the organizational structure of Moorgate Benchmarks and the relationship between the various functions etc.
Moorgate Benchmarks Oversight Function Terms of Reference	The agreed terms of reference for the Moorgate Benchmarks Oversight Function.

<p>Moorgate Benchmarks Staff Competence Policy</p>	<p>Outlines the processes used by Moorgate Benchmarks to identify suitably qualified potential staff and to ensure they remain appropriate for their roles on an ongoing basis.</p>
<p>Moorgate Benchmarks Surveillance Arrangements and Organogram</p>	<p>Outlines the surveillance arrangements used by Moorgate Benchmarks to ensure it identifies, mitigates and monitors any known risk factors that may impact the governance or management of benchmarks administered by Moorgate Benchmarks.</p>