

MSCI REAL ESTATE INDEX CONSULTATION

Should MSCI seek authorization in the EU as an administrator for MSCI asset-based and fund-based real estate indexes?

April 2018

Within this document, “MSCI real estate indexes” or “indexes” refer to MSCI’s asset-based and fund-based real estate indexes, for which Investment Property Databank Limited is the benchmark administrator.

This document does not apply to MSCI equity indexes, for which MSCI Limited is the benchmark administrator, including those focused on real estate (e.g., MSCI REIT indexes).

This consultation may or may not lead to the implementation of the proposal.

SUMMARY AND PROPOSAL

As there is continued uncertainty in the investment community around key provisions of the EU benchmark regulation (“BMR”), and as the BMR may affect data providers and index users differently, MSCI is consulting on the following proposal:

MSCI proposes not to seek authorization in the EU as a benchmark administrator for the MSCI asset-based and fund-based real estate indexes at this time, and to restrict usage of these indexes and benchmarks to non-regulated uses.

Specifically, MSCI is seeking feedback from the real estate investment community on the following assumptions:

- **Data provision:** MSCI real estate indexes rely on data provided voluntarily by the real estate investment community. Uncertainty in the community around the definitions of “readily available” data versus “contributions of input data” leads to ambiguity about who may be considered a “supervised contributor” with regulatory obligations under the BMR. MSCI is concerned that this may lead to a loss of some data providers and thereby to a loss of market representativeness in MSCI real estate indexes.
- **Index use under the BMR:** As applied to the direct real estate investment process, there may be a lack of clarity in the investment community regarding which uses of an index fall within the scope of the BMR. Based on its current understanding, MSCI believes there are few cases where MSCI real estate indexes would be used for BMR purposes.

SUMMARY AND PROPOSAL

MSCI would also like to understand the impact on data providers and funds with regulated uses if MSCI does, or does not, seek authorization as a benchmark administrator for the MSCI real estate indexes:

Impacts on data providers vs users: The BMR may affect certain data providers to MSCI real estate indexes and certain users of MSCI real estate indexes differently. Unfortunately, depending on the interpretation of “input data”, the interests of these two groups may not be fully aligned.

One such example is, assuming data provided for use in the MSCI real estate indexes is determined to be contributed input data under the BMR, an insurance company or pension plan with no BMR regulated uses of an MSCI real estate index may choose not to provide its real estate data for that index due to the imposition of additional regulatory burdens on contributors of input data under the BMR. On the other hand, an AIF fund with a regulated use of the same MSCI real estate index would prefer that all contributors of input data to that index continue to provide their data so as to ensure that the index has the broadest possible market coverage.

The timing of the consultation is in part driven by ESMA’s recent guidance in its [Questions and Answers On the Benchmarks Regulation \(BMR\)](#) on supervised contributors and use of [an index as] a benchmark under the regulation. MSCI also wants to give market participants enough time to make any adjustments, if necessary, once its final decision is announced.

MSCI invites feedback from market participants on or before May 18, 2018 and will announce the results of the consultation on or before June 6, 2018

Please note that nothing in this document constitutes legal advice and MSCI recommends that you discuss the BMR with your own lawyers, compliance teams and advisers, particularly with respect to index uses and the provision of data under the BMR.

TABLE OF CONTENTS

TABLE OF CONTENTS

1. Background
 - [MSCI Asset-based and Fund-based Real Estate Indexes](#)
 - [The EU Benchmark Regulation \(“BMR”\)](#)
 - [Who the BMR Impacts](#)
2. Use of Indexes and Benchmarks under the Regulation
 - [Certain Uses of an Index Qualify it as a Benchmark](#)
 - [Qualifying Uses for Real Estate Investment Funds](#)
 - [MSCI’s Understanding of Regulated Uses of MSCI Real Estate Indexes Under the BMR](#)
3. [Input Data Under the Regulation](#)
4. [Obligations of Supervised Contributors](#)
5. [MSCI’s Proposal and its Implications](#)
6. Discussion Points
 - [Data Provision](#)
 - [Use](#)
 - [Implications of MSCI Seeking or not Seeking Authorization as an Administrator](#)
 - [IOSCO](#)
7. Appendix
 - [Key Data Used for MSCI asset-based real estate indexes](#)
 - [Key Data Used for MSCI fund-based real estate indexes](#)
 - [BMR Article 16 – Governance and Control Requirements for Supervised Contributors](#)

BACKGROUND

MSCI ASSET-BASED AND FUND-BASED REAL ESTATE INDEXES

MSCI real estate indexes* have been developed to aid transparency in an otherwise opaque market. MSCI real estate indexes and related services provide a way to measure real estate investment performance so that asset owners can assess the relative contribution of their interests in the asset class, and fund managers can evaluate the effectiveness of their investment strategies.

MSCI calculates real estate indexes both bottom-up using direct property data (asset-based real estate indexes) and top-down using fund level data (fund-based real estate indexes) provided voluntarily by the investment community.

Over the last 30 years, MSCI has engaged with fund managers and asset owners to gather valuation, financial and descriptive data about their property assets and/or funds. This data is used throughout the many stages of their asset and fund management processes and in investor reporting. By aggregating this data, MSCI has been able to develop indexes of market performance as well as provide like-for-like comparisons of portfolios to a peer group. MSCI real estate indexes are used by major institutional investors as well as central banks, academics, policy makers, treasuries and consultants.

MSCI has implemented a control environment around its index processes including governance and oversight, management of conflicts of interest, transparency of methodology, and processes for data validation.

* Throughout this document, references to MSCI real estate indexes include asset-based and fund-based real estate indexes provided through market data products (primarily factsheets and Global Intel) and asset-based real estate benchmarks delivered in analytical services (primarily PAS). This document does not apply to MSCI equity indexes, including those focused on real estate (e.g., MSCI REIT Indexes).

THE EU BENCHMARK REGULATION (“BMR”)

The European Union “Regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds” - [Regulation \(EU\) no.2016/1011](#) - (“BMR”) entered into force on 30 June 2016; most of the provisions came into effect on 1 January 2018. Although existing benchmark administrators were granted a two-year transition period to 1 January 2020, supervised contributors and users have not been granted a similar transition period.

The regulation intends to create a common framework and consistent approach to benchmark regulation across the EU and has the following objectives:

- Improving governance and controls over the benchmark process, in particular to ensure that administrators avoid conflicts of interest, or at least manage them adequately;
- Improving the quality of input data and methodologies used by benchmark administrators;
- Ensuring that contributors to benchmarks and the data they provide are subject to adequate controls, in particular to avoid conflicts of interest;
- Protecting consumers and investors through greater transparency and adequate rights of redress.

WHO THE BMR IMPACTS

Administrators

Legal or natural persons who have control over the provision of indexes that are used in certain:

- financial instruments traded on trading venues or via systematic internalisers in the EU
- mortgage or consumer credit contracts, or
- investment funds

Users

Those who:

- issue a financial instrument that references an index; determine the amount payable under a financial instrument or a mortgage or consumer credit contract by referencing an index
- measure the performance of an investment fund with the purpose of
 - tracking the return of such index, or of
 - defining the asset allocation of a portfolio, or of
 - computing the performance fees.

Contributors

Authorized natural or legal persons who:

- contribute input data that is not readily available to the administrator, and
- provide the input data for the purpose of a benchmark determination.

USE OF INDEXES AND BENCHMARKS UNDER THE REGULATION

CERTAIN USES OF AN INDEX QUALIFY IT AS A BENCHMARK

Under the BMR, only indexes used in certain ways qualify as regulated benchmarks. This definition is relatively narrow, especially within the direct property and unlisted real estate fund space where it is basically limited to use in determining performance fees or asset allocation. ESMA recently clarified in its [*Questions and Answers On the Benchmarks Regulation \(BMR\)*](#) that an index used solely to compare the performance of the investment fund, as is often done in fund marketing, is not included in the scope of the BMR.

In the BMR, 'benchmark' means:

1. any index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined, or
2. an index that is used to measure the performance of an investment fund with the purpose
 - of tracking the return of such index, or
 - of defining the asset allocation of a portfolio, or
 - of computing the performance fees.

For the purposes of the BMR, an investment fund is defined as an alternative investment fund (**AIF**) as defined in AIFMD Directive (2011/61/EU), or a **UCITS** as defined in the UCITS IV Directive (2009/65/EC).

QUALIFYING USES FOR REAL ESTATE INVESTMENT FUNDS

On February 5, 2018, ESMA published in its Q&A some clarifications with respect to two uses that qualify an index as a benchmark regulated under the BMR, as well as highlighted a use that is not in scope of the BMR:

USE		ESMA Guidance
✓	Tracking the return of an index.	<p>ESMA considers that investment funds using indices to measure their performance with the purpose of tracking the return of such indices include:</p> <ol style="list-style-type: none"> 1. investment funds the strategy of which is to replicate or track the performances of an index or indices e.g. through synthetic or physical replication; and 2. structured investment funds that provide investors with algorithm-based payoffs that are linked to the performance, or to the realisation of price changes or other conditions, of indices. <p>(Neither of these seem to be relevant to direct property fund management)</p>
✓	Computing performance fees	No additional guidance.
✓	Defining asset allocation	<p>ESMA considers that an index is used to measure the performance of an investment fund with the purpose of defining its asset allocation when the documentation, and in particular its investment policy or investment strategy, define constraints on the asset allocation of the portfolio in relation to an index. For example the investment policy or strategy may require the investment fund to invest a percentage or the whole portfolio in securities that are constituents of an index. Investment funds using indices to measure their performance with the purpose of defining the asset allocation thus may include investment funds that are actively managed (where the manager has discretion over the composition of its portfolio subject to the investment objectives and strategies as opposed to a fund that tracks the return of the index).</p>
✗	Comparing performance (not a BMR use)	<p>ESMA considers that indices referenced in the documentation of an investment fund solely to compare the performance of the investment fund should not be included in the scope of the BMR, where no investment constraint on the asset allocation of the portfolio is established in relation to the index.</p> <p>For example, reference to an index in marketing materials should not automatically make the user subject to the BMR.</p>

MSCI'S UNDERSTANDING OF REGULATED USES OF MSCI REAL ESTATE INDEXES UNDER THE BMR

In its preparation for complying with the BMR, in the fall of 2017 MSCI conducted a survey of its European clients to get a better understanding of their BMR regulated uses of MSCI real estate indexes. Based on the received responses (less than 50% of those surveyed), approximately 70 AIFs that use MSCI real estate indexes for performance measurement, asset allocation or performances fees were identified.

In the February 5, 2018 update to its [Questions and Answers On the Benchmarks Regulation \(BMR\)](#), ESMA clarified that an index used solely to compare the performance of the investment fund should not be included in the scope of the BMR. In light of that guidance, MSCI reviewed the survey results and found fewer than 10 instances of potential BMR use.

Through this consultation, MSCI hopes to gain, among other things, a better understanding of the uses of its real estate indexes in the context of the BMR, in order to inform its ultimate decision about seeking authorization as a benchmark administrator.

Note, this analysis in no way constitutes legal advice and we recommend that you discuss the BMR with your own lawyers, compliance teams and advisers to determine if you are using an MSCI real estate index for BMR purposes.

INPUT DATA UNDER THE REGULATION

INPUT DATA

The BMR defines “input data” as *“data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by an administrator to determine a benchmark.”*

The BMR defines “contribution of input data” as “providing any input data not readily available to an administrator, or to another person for the purposes of passing to an administrator, that is required in connection with the determination of a benchmark and is provided for that purpose.” Unfortunately the BMR does not define “readily available”, which creates an ambiguity.

Based on these definitions, MSCI interprets “input data” for the MSCI real estate indexes to be:

1. valuations and transacted prices for MSCI asset-based real estate indexes, and
2. net asset values or returns based on net asset values for MSCI fund-based real estate indexes.

Additionally, MSCI believes that for both the MSCI asset-based and fund-based real estate indexes, this input data is “readily available” because it is not created for the purpose of determining an index and is used by fund managers in many of the integral stages of their investment process, independent of the benchmark determination, including in communications with investors and submissions to auditors.

While MSCI has been seeking and continues to seek clarity on the interpretation of “contribution of input data” and “readily available” data with market participants, ESMA and various national competent authorities, it is possible that guidance may not be issued.

SUPERVISED CONTRIBUTORS

OBLIGATIONS OF SUPERVISED CONTRIBUTORS

To ensure the integrity and reliability of contributed input data, the BMR requires that a supervised contributor puts in place governance and control measures including measures to protect against conflicts of interest, controls around who may submit input data, training for submitters and record keeping arrangements. A supervised contributor must fully cooperate with the relevant competent authority on matters related to benchmarks to which they contribute. These obligations are described in Article 16 of the BMR.

Supervised contributors are subject to administrative sanctions and measures for non-compliance.

In the March 22, 2018 update *to Questions and Answers On the Benchmarks Regulation (BMR)*, ESMA clarified that supervised contributors are already (as of 1/1/18) subject to the requirements of Article 16 of the regulation. However, the ambiguity with respect to the definition of readily available data, particularly as it relates to real estate data, leaves supervised entities that provide data to MSCI real estate indexes in an uncertain position.

MSCI is concerned that some data providers may choose not to take on potential additional regulatory exposure and may stop providing data to MSCI, at least for indexes that are used in ways subjecting them to regulation under the BMR. The concern is compounded by the uncertainty in the market around the interpretation of definitions in the regulation.

(See the appendix for full list of Article 16 requirements)

MSCI'S PROPOSAL AND ITS IMPLICATIONS

MSCI'S PROPOSAL AND ITS IMPLICATIONS

As:

- there is continued uncertainty in the investment community around key provisions of the EU benchmark regulation (BMR) ;
- the BMR may affect data providers and index users differently and, depending on the interpretation of “input data”, the interests of these two groups may not be fully aligned;
- there may be few cases where MSCI real estate indexes would be used for BMR purposes:

MSCI proposes not to seek authorization in the EU as a benchmark administrator for the MSCI asset-based and fund-based real estate indexes at this time, and to restrict usage of these indexes and benchmarks to non-regulated uses.

As a result:

- Anyone with the need for a BMR regulated benchmark, including certain AIFs, UCITS and financial instruments/contracts, would not be able to employ MSCI asset-based or fund-based real estate indexes for those BMR uses. If an AIF or UCITS fund believes it has such a use, e.g., for fees or asset allocation, they would have to find an alternative by 1/1/2020.
- Supervised entities would not be classified as “supervised contributors” as a result of their relationship with, and data provision to, MSCI. MSCI would therefore expect that the market coverage of the MSCI real estate indexes would be maintained.

DISCUSSION POINTS

This consultation may or may not lead to the implementation of the proposal.

Consultation feedback will remain confidential. MSCI may publicly disclose the feedback of a participant if so requested by the participant. In that case, the relevant feedback would be published at the same time as the final results of the consultation.

AREAS FOR DISCUSSION

The discussion questions are organized into 4 areas:

1. Provision of Data: How will the BMR impact you as a provider of data to the MSCI real estate indexes?
2. Uses: How do you use MSCI real estate indexes in the context of the BMR?
3. Implications of MSCI seeking or not seeking authorization in the EU as a benchmark administrator
4. IOSCO

1. DISCUSSION POINTS – DATA PROVISION

1. Do you provide MSCI with real estate fund level data, asset level data or both?
2. Are you currently supervised (regulated) in the EU for other parts of your business which would make you a supervised entity under the BMR?
3. If MSCI were to become authorized, you may be considered to be a “supervised contributor” under the BMR. If so,
 - a) Would you continue your contribution of data to MSCI despite increased regulatory obligations?
 - b) Would you continue contributing data to MSCI if MSCI agreed to restrict use of your data to only non-regulated indexes?
 - c) Would you stop contributing data to MSCI to avoid all risk of becoming a “supervised contributor”?
 - d) Would you make a distinction between asset level data provision or fund level data provision in your answers to the questions above?
4. Are you concerned with the recent ESMA guidance regarding the immediate application of “supervised contributor” status (refer to slide 17)?
5. Do you agree with MSCI ‘s interpretation that input data for fund-based real estate indexes is NAVs or returns and that input data for asset-based indexes is valuations and transactions and that this data is “readily available”? If yes, would you be willing to make this case to your regulator?
6. Do you have other concerns or observations with respect to being a data provider under BMR?

2. DISCUSSION POINTS - USE

1. How many real estate funds do you have? How many are AIFs or UCITs and could therefore potentially fall under the BMR?
2. Do you believe you have AIF or UCITs funds that currently use or may need to use an MSCI real estate index as a benchmark **as defined by the BMR and as clarified by ESMA**?
3. If yes, which BMR uses do you have:
 - Tracking the return of an index (replication)?
 - Computing performance fees?
 - Defining asset allocation?
4. Of these cases, which MSCI fund-based real estate indexes and which MSCI asset-based real estate indexes are used? Are these indexes referenced in your investment fund documentation?
5. With respect to both MSCI Asset-based and Fund Level Real Estate Indexes, do you anticipate that in the future you will have increasing need to use MSCI real estate indexes for the EU BMR purposes listed above?

2. DISCUSSION POINTS – USE - CONTINUED

6. If MSCI was unable to provide regulated asset-based or fund-based real estate benchmarks:
 - a) What concerns would you have?
 - b) Have you considered what you would do to replace the benchmark if you have a use as defined by the BMR?
 - c) Would you continue to provide data to MSCI ?
7. If the market coverage of the MSCI real estate indexes you use was reduced, possibly significantly, due to fewer funds providing data (or restricting data from certain uses), what would you do?

3. DISCUSSION POINTS - IMPLICATIONS OF MSCI SEEKING OR NOT SEEKING AUTHORIZATION AS AN ADMINISTRATOR

1. Would your continued relationship with MSCI be impacted if MSCI decides not to pursue authorization as an EU benchmark administrator for the MSCI asset-based and fund-based real estate indexes?
2. Would your continued relationship with MSCI be impacted if MSCI decides to pursue authorization as an EU benchmark administrator for the MSCI asset-based and fund-based real estate indexes?
3. If you had to make a choice, would you rather be a “supervised contributor” with the related obligations to facilitate regulated benchmarks or have only unregulated benchmarks?

4. DISCUSSION POINTS - IOSCO

MSCI follows the IOSCO Principles for Financial Benchmarks for select MSCI asset-based and fund-based real estate indexes.

1. Are you familiar with the IOSCO Principles for Financial Benchmarks?
2. Is it important to you that MSCI adheres to the voluntary IOSCO Principles for Financial Benchmarks?
3. Which aspects of IOSCO are important to you?

APPENDIX

KEY DATA USED FOR ASSET-BASED PROPERTY INDEXES

Data Category	Examples of data used for calculating index returns
Valuation data	Externally sourced professional/independent estimates of the open market capital values of each asset held as at the valuation date
Transaction data	Full and partial purchase expenditure, full and partial sale receipts, with corresponding dates and trading costs
Revenue flows	Income (including rents and other asset level income), and irrecoverable operating expenditure (including maintenance and property management costs)
Capital flows	Capital expenditure (incl. expenditure related to developments), and capital receipts
Currency	Exchange rates (used for cross-border composites)
Market size estimates	Estimate of the size of the professionally managed real estate investment market (used for cross-border composites)



“Input Data”



Other Key Data

KEY DATA USED FOR FUND-BASED INDEXES

Data Category	Examples of data used for calculating index returns
Net Asset Value	A fund's NAV is its Gross Asset Value (gross value of all property and any other assets held) less all liabilities as per open market valuation principles
Returns	Fund total returns both before and after fees, as an alternative to NAVs
Units	Number of units issued and/or weighted average equity
Dividend	Dividend details and/or distributions made
Fund Capital flows	Capital invested, capital returned, fees
Currency	Exchange rates(used for cross-border composites)



“Input Data”



Other Key Data

BMR ARTICLE 16 – GOVERNANCE AND CONTROL REQUIREMENTS FOR SUPERVISED CONTRIBUTORS

Article 16 of the BMR details the following obligations for supervised contributors:

1. The following governance and control requirements shall apply to a supervised contributor:
 - a) the supervised contributor shall ensure that the provision of input data is not affected by any existing or potential conflict of interest and that, where any discretion is required, it is independently and honestly exercised based on relevant information in accordance with the code of conduct referred to in Article 15;
 - b) the supervised contributor shall have in place a control framework that ensures the integrity, accuracy and reliability of input data and that input data is provided in accordance with this Regulation and the code of conduct referred to in Article 15.

BMR ARTICLE 16 – GOVERNANCE AND CONTROL REQUIREMENTS FOR SUPERVISED CONTRIBUTORS - CONTINUED

2. A supervised contributor shall have in place effective systems and controls to ensure the integrity and reliability of all contributions of input data to the administrator, including:
 - a) controls regarding who may submit input data to an administrator including, where proportionate, a process for sign-off by a natural person holding a position senior to that of the submitter;
 - b) appropriate training for submitters, covering at least this Regulation and Regulation (EU) No 596/2014;
 - c) measures for the management of conflicts of interest, including organisational separation of employees where appropriate and consideration of how to remove incentives, created by remuneration policies, to manipulate a benchmark;
 - d) record-keeping, for an appropriate period of time, of communications in relation to provision of input data, of all information used to enable the contributor to make each submission, and of all existing or potential conflicts of interest including, but not limited to, the contributor's exposure to financial instruments which use a benchmark as a reference;
 - e) record-keeping of internal and external audits.

BMR ARTICLE 16 – GOVERNANCE AND CONTROL REQUIREMENTS FOR SUPERVISED CONTRIBUTORS - CONTINUED

3. Where input data relies on expert judgement, supervised contributors shall establish, in addition to the systems and controls referred to in paragraph 2, policies guiding any use of judgement or exercise of discretion and shall retain records of the rationale for any such judgement or discretion. Where proportionate, supervised contributors shall take into account the nature of the benchmark and its input data.
4. A supervised contributor shall fully cooperate with the administrator and the relevant competent authority in the auditing and supervision of the provision of a benchmark and make available the information and records kept in accordance with paragraphs 2 and 3.

ABOUT MSCI

For more than 40 years, MSCI's research-based indexes and analytics have helped the world's leading investors build and manage better portfolios. Clients rely on our offerings for deeper insights into the drivers of performance and risk in their portfolios, broad asset class coverage and innovative research.

Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

MSCI serves 99 of the top 100 largest money managers, according to the most recent P&I ranking.

For more information, visit us at www.msci.com.

CONTACT US

AMERICAS

Canada + 1 416 687 6284

US + 1 212 804 3900

EUROPE, MIDDLE EAST & AFRICA

UK + 44 20 7336 9200

France + 44 20 7336 4783

Germany + 49 691 3385 900

Italy + 44 20 7336 9684

Netherlands + 31 88 328 22 00

Spain + 34 93 467 7403

South Africa + 27 11 656 2115

Sweden + 46 8 400 252 30

ASIA PACIFIC

Australia + 61 2 9033 9300

Hong Kong +852 2844 9333

Singapore + 65 6826 9339

Japan + 81 3 5211 1455

msci.com

realestate@msci.com

+ 44 20 7336 4783

NOTICE AND DISCLAIMER

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the “Information”) is the property of MSCI Inc. or its subsidiaries (collectively, “MSCI”), or MSCI’s licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the “Information Providers”) and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE PERFORMANCE (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not be by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, “Index Linked Investments”). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.’s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.’s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI’s products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD, FEA, InvestorForce, and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor’s. “Global Industry Classification Standard (GICS)” is a service mark of MSCI and Standard & Poor’s.