



MSCI Property Benchmark Family - Benchmark Statement

Benchmark Statement

June 2022



Contents

Benchmark Statement: BMR Benchmarks in the MSCI Property Benchmark Family..... 3

1 Objective of the Benchmarks in the Family..... 4

2 Methodology and Index Design Guidelines and Reviews 5

3 Index Content Governance..... 6

4 Input Data and Index Calculation..... 7

5 Judgment and Discretion..... 8

6 Corrections..... 9

7 Methodology and Index Consultations 10

8 Index Terminations..... 12

9 Index Usage..... 13

10 ESG Disclosures 14

11 Additional Information..... 14

Appendix I – Key Terms..... 15

Appendix II – ESG Factors in the Benchmark Statement of BMR Benchmarks in the MSCI Property Benchmark Family..... 17

Appendix III – Versioning Table 19



Benchmark Statement: BMR Benchmarks in the MSCI Property Benchmark Family

The BMR benchmarks in the MSCI property benchmark family consists of those MSCI Property Indexes for which MSCI Limited (the benchmark administrator for this family) has provided written permission in each instance to its client to be used for use under Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indexes used as benchmarks (“BMR”). The process to request BMR regulated use can be found on the index regulation page of MSCI’s website at www.msci.com/index-regulation. MSCI Property Indexes that have been permitted for use are referred to as “BMR Benchmarks”.

Currently, with respect to the BMR Benchmarks in the MSCI property benchmark family, MSCI will only consider client requests for BMR regulated use for the following ‘Standard’¹ MSCI Property Indexes or indexes calculated from such a Standard Index using pre-configured specifications:

- MSCI UK Annual Property Index
- MSCI UK Quarterly Property Index

All BMR Benchmarks must have frozen history.

Please note, BMR Benchmarks are a subset of the MSCI Property Indexes which are a subset of the MSCI Private Real Estate Indexes.

¹ “Standard Indexes” are the MSCI Private Real Estate Index for a country or region with the broadest market coverage, for a specific index methodology, and for a specific reporting frequency. For example, UK Standard Indexes include, among others, the MSCI UK Quarterly Property Index, MSCI UK Annual Property Index, and MSCI/AREF UK Quarterly Property Fund Index.



1 Objective of the Benchmarks in the Family

- 1.1 BMR Benchmarks in the MSCI property benchmark family aim to accurately and objectively measure the performance of direct private real estate investments. The constituents of the benchmarks are restricted to real estate investments that are held in professionally managed portfolios. They therefore may include properties held in insurance and pension funds, sovereign wealth funds, listed property companies including REITs, unlisted pooled funds, charitable trusts and traditional landed estates, and by other large private property owners.
- 1.2 Benchmarks in this family include UK properties.
- 1.3 Each MSCI Private Real Estate Index is governed by a number of methodology documents ("Methodology Set"). The Methodology Set for BMR benchmarks in the MSCI property benchmark family includes the following documents, all of which are published on www.msci.com:
 - Global Methodology Standards for Real Estate Investments
 - MSCI Real Estate – Index Policies
 - MSCI Property Indexes Methodology
 - MSCI Standards for Real Estate Valuations
 - MSCI Real Estate – BMR Benchmarks Methodology Specifications
- 1.4 This family contains only 'Non-Significant' benchmarks as defined by the BMR.



2 Methodology and Index Design Guidelines and Reviews

- 2.1 MSCI Private Real Estate Indexes aim to accurately and objectively measure the performance of a private real estate investment market, market segment or strategy as represented by private real estate investment data available to MSCI. This data is primarily provided on a voluntary basis by or on behalf of institutional private real estate investors and managers. These investments are illiquid and heterogeneous, and data related to these investments are not widely available and there are no substitutes.
- This objective is clearly stated in the specific methodology documentation.
- 2.2 MSCI Private Real Estate Indexes are constructed with the following goals in mind:
- Representativeness
 - Data quality
 - Timeliness
- 2.3 Index methodologies are rules-based and aim to find the right balance between representativeness of the underlying market, market segment or strategy, as well as the quality of available data and the timeliness of reporting the results to the market.
- 2.4 The rationale for adopting each specific methodology is based on a thorough review of the market, market segment or strategy the indexes are intended to represent.
- 2.5 MSCI Private Real Estate Indexes are updated monthly, quarterly, bi-annually or annually as applicable to the relevant index. BMR Benchmarks are updated at the frequency of the Standard Index to which they are associated.
- 2.6 The MSCI Property Index methodology is the primary methodology for benchmarks in this family and is formally reviewed at least annually. The objective of the review is to ensure the methodology continues to reflect its stated objective and complies with the index design guidelines. Specifications for BMR Benchmarks are also reviewed annually.



3 Index Content Governance

- 3.1 The Real Estate Index Committee (“REIC”) presides over content matters relating to its indexes, such as the development and interpretation of MSCI Private Real Estate index methodologies.
- 3.2 The REIC is primarily responsible for supervising the design, development, approval and interpretation of index methodologies. Additionally, the REIC governs the data validation and verification processes applied to input data. REIC discussions may be informed by feedback from the investment community. Nonetheless, all decisions taken by the committees are the sole responsibility of its members.
- 3.3 MSCI’S Index Policy Committee (“IPC”) serves as an escalation point for the REIC on complex matters.
- 3.4 All of the committees are staffed solely by MSCI employees with extensive relevant experience. All committees have explicit terms of reference and all decisions are appropriately documented and archived.



4 Input Data and Index Calculation

- 4.1 The input data for the BMR Benchmarks in the MSCI property benchmark family is property valuations, and where available, property transacted prices, available to MSCI by MSCI's data providers. There are no substitutes for this data, and no other hierarchy of use.
- 4.2 Private real estate is an illiquid and heterogeneous investment asset class, and therefore market performance based on transaction prices alone does not effectively represent market movements or opportunities.
- 4.3 Based on MSCI's current understanding and assumptions, property valuations are "contribution of input data" under the BMR.
- 4.4 Input data is provided on a voluntary basis by or on behalf of institutional private real estate investors ("data providers") for the determination of the MSCI Private Real Estate Indexes. All such data providers are subject to the MSCI Real Estate Data Provider Code of Conduct.
- 4.5 The MSCI Real Estate Data Provider Code of Conduct specifies the responsibilities, requirements, and expectations of data providers with respect to the data they provide to MSCI for the determination of the MSCI Private Real Estate Indexes. Non-compliance may result in exclusion from the MSCI Private Real Estate Indexes.
- 4.6 The rules for index construction, maintenance and calculation are contained in publically available methodology documents and complemented with internal guidelines and operating procedures. Each process is conducted by well-trained personnel according to documented rules and operating procedures.
- 4.7 BMR Benchmarks are calculated in currencies that are specified in the benchmark name.



5 Judgment and Discretion

- 5.1 MSCI has a rules-based approach for data validation and verification. Outliers identified as part of this process require explanations and the decisions to exclude or include a property or fund from or in an index based on explanations requires judgment and is therefore subject to a hierarchy of MSCI review. Cases where there is no consensus amongst MSCI reviewers or that are complex are escalated to the REIC for final decision on inclusion or exclusion.
- 5.2 MSCI's rules-based index methodologies and operating procedures are designed to ensure that discretion is not used in other aspects of the production of the indexes except in unusual cases not effectively addressed by the methodologies or operating procedures. These include, but may not be limited to:
- Temporary or permanent unavailability of data,
 - Structural changes to the underlying markets,
 - Geo-political events and regulatory changes,
 - Events beyond human control.
- 5.3 Where there is a need to take an action that is not prescribed in the methodologies or operating procedures, a proposal is developed with the goal of remaining consistent with the objectives of the methodology and ensuring timely calculation and distribution of the indexes. This proposal is then reviewed and, if appropriate, approved by the REIC.
- 5.4 In cases which are deemed material and where time permits, MSCI may consult with clients on the proposed approach. MSCI announces the decided action on the MSCI website.
- 5.5 Typically, MSCI does not perform explicit ex-post analysis of decisions, but always welcomes feedback from market participants on decisions made.
- 5.6 The framework described above aims to prevent the exercise of judgment or discretion by any one individual and ensure that any interpretation of data validity or methodology is managed through a hierarchy of MSCI review or escalation to the REIC, if necessary.



6 Corrections

- 6.1 MSCI applies a 36-month correction period for index errors with a material impact on a Standard MSCI Private Real Estate Index.
- 6.2 A 'material impact' for an MSCI Property Index is: a change of greater than 50 bps to the total return, 50 bps to capital growth, or 25 bps to the income return.
- 6.3 In these cases, history for the relevant Standard and related indexes will be restated as soon as practicable and no later than the next index update.
- 6.4 Errors discovered that are older than 36 months are generally not corrected.
- 6.5 There may be certain circumstances not defined by this policy, where MSCI may also correct and restate history, subject to REIC review and approval.
- 6.6 Restatements of a Standard Index history as the result of a correction will be published in an announcement on the MSCI website with an explanation of the corrections made.
- 6.7 BMR Benchmarks will be restated if the associated Standard Index is restated.



7 Methodology and Index Consultations

- 7.1 Material methodology changes to the MSCI Private Real Estate Index methodologies are infrequent. When faced with a situation that may result in a material methodology change to an MSCI Private Real Estate Index methodology, to inform its decision process, MSCI seeks to understand the differing perspectives through its consultation process. Consultations provide essential feedback for increasing transparency, providing access to information, fueling innovation and improvement, and ensuring the on-going relevance of the indexes. After considering the feedback from the consultation process, the decision remains the responsibility of MSCI solely, through the REIC.
- 7.2 Consultation papers and discussions with market participants are an ideal channel to share the reasoning and the motivation behind MSCI proposals. Structured dialogues enable market participants to share their views and public consultations give them the lead time they need to fully evaluate potential index changes and implications.
- 7.3 MSCI commences a consultation when the REIC supports a proposal that could result in a material methodology change typically resulting from either market-related developments or regular methodology or index reviews.
- 7.4 Once the decision to open a consultation has been taken by the REIC, a consultation document is created which describes the consultation topic and, in some cases, presents either the initial thinking on the matter or a draft proposal. This document is approved by the REIC before it is made available publicly, including the date by which feedback must be provided to MSCI.
- 7.5 A consultation begins in general with a communication giving the highlights of the MSCI proposal(s) and the location of the consultation document on MSCI's website. MSCI will accept consultation feedback electronically or gather feedback through phone calls and meetings.
- 7.6 Once MSCI has gathered all required feedback, MSCI will analyze the views and formulate an informed recommendation that will be presented, discussed and debated at the REIC. The REIC will take the final decision on the proposal.
- 7.7 The final decision, including the rationale that has led to it, and the timeframe for the implementation of the change, if any, is made publicly available. Most consultation participants request that their feedback remains confidential. MSCI may nevertheless publicly disclose feedback if specifically requested by respective market participants. In that case, the relevant feedback would be published together with the final results of the consultation.



- 7.8 If the final decision is to change the methodology, MSCI updates the relevant methodology documentation subsequently.
- 7.9 The length of a consultation and lead time provided for implementation varies depending on the complexity of the topic, breadth of client impact as well as impact on the index and is clearly communicated as part of the consultation process. The length of a consultation needs to be sufficient for market participants to meaningfully review what is proposed and respond.
- 7.10 Changes to specifications to BMR Benchmarks are addressed directly with the relevant permissioned clients.



8 Index Terminations

- 8.1 MSCI Private Real Estate Indexes may need to be terminated under certain circumstances where the methodology no longer achieves its objective and cannot be effectively adapted. These circumstances are generally not fully within MSCI's control and may include significant reduction in the availability of data which is provided voluntarily, changes in the structure of the underlying market, geo-political events, and regulatory changes. Additionally, factors such as low usage of an index may result in MSCI's proposal to terminate the index.
- 8.2 If a Standard Index termination is proposed or required, MSCI would proceed as follows:
- MSCI would investigate any opportunities to remedy the situation, including making efforts to increase the index coverage and improve data quality.
 - The REIC would review the impact and approve appropriateness of a potential termination.
 - MSCI may perform a consultation including a discussion of possible alternatives, if any.
 - MSCI would publicly announce any termination of the index in advance.
 - If practicable, MSCI would continue to calculate the index for an announced period of time to give users the opportunity to transition to another index or otherwise prepare for the termination of the MSCI index.
 - In the event that an appropriate alternative index is established, the details of the methodology governing this index as well as the timing of the transition would be publicly communicated in advance of implementation.
- 8.3 Indexes that are created from Standard Indexes will also be terminated if the Standard Index is terminated.
- 8.4 Any index may be discontinued or suspended, without notice, if fewer than the required minimum number of properties or funds/portfolios are eligible and available for inclusion, or if a one portfolio or fund dominates the composition, when applying a given methodology to a market. MSCI may resume calculation of such indexes if over time enough properties/funds become eligible and available.
- 8.5 The potential termination of a BMR Benchmark would be addressed directly with relevant permissioned clients.



9 Index Usage

- 9.1 MSCI Private Real Estate Indexes may be used for a variety of purposes, ranging from research to portfolio analysis to performance reporting. They are used by a variety of market participants including asset owners, portfolio managers and researchers. Not all MSCI Private Real Estate Indexes are appropriate for all potential uses. Market participants and data users use their judgment when selecting an index for a particular purpose.
- 9.2 MSCI Private Real Estate Indexes and the effectiveness of methodologies can be affected by a large number of factors, most of which are beyond MSCI's control. These factors may include structural changes in the underlying market, loss of voluntary data provision, geo-political events and regulatory changes. These circumstances may result in a material change to the index and MSCI may change the methodology as a result. In rare cases, these circumstances will result in the termination of an index. MSCI Private Real Estate Index users should consider this possibility including the need to terminate or modify the terms of a fund or financial product as a result of the termination of a calculation of an index.
- 9.3 MSCI assumes no responsibility for any potential use of its indexes by clients for a particular purpose. The effective representation of a market, market segment or strategy is the primary aim for MSCI.
- 9.4 BMR regulated use of any MSCI Private Real Assets Indexes, including MSCI Private Real Estate Indexes, requires a specific written permission letter from MSCI, pursuant to the process described on the index regulation section of www.msci.com. Only MSCI Private Real Estate Index clients are eligible to apply for such permission. BMR regulated use of any MSCI Private Real Assets Indexes, including the MSCI Private Real Estate Indexes, without such specific written permission is strictly prohibited.



10 ESG Disclosures

ESG disclosures are provided as per Commission Delegated Regulation (EU) 2020/1816 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council, as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018, as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

Commission Delegated Regulation (EU) 2020/1816 includes the following sections:

- Section 1 – Consideration of ESG factors
- Section 2 – Additional disclosure requirements for EU Climate Transition and EU Paris-Aligned benchmarks
- Section 3 – Disclosure of the alignment with the objectives of the Paris agreement

Refer to Appendix II for the details on disclosure pertaining to consideration of ESG factors for the BMR Benchmarks in MSCI Property Benchmark family. Sections 2 is not reported as there are no, EU Climate Transition or EU Paris-Aligned benchmarks in the MSCI Property Benchmark Family as of the date of this report.

11 Additional Information

Detailed methodology and policy documents can be found on www.msci.com. Currently, no MSCI Private Real Estate Indexes, including BMR Benchmarks, have ISINs assigned.

Date of publication: June 27, 2022

Date of last update: December 23, 2021



Appendix I – Key Terms

Key term	Definition
BMR Benchmark	BMR Benchmark is an MSCI Private Real Estate Index for which MSCI Limited has provided written permission in each instance to its client to be used for a BMR regulated use. A BMR Benchmark may be a Standard Index or an index calculated from a Standard Index using pre-configured specifications
Filter	A filter is being used to create any index subset to become a “named” sub-index of any Standard Index through the application of attribute filters (also known as a screen) to the Standard Index
Frozen Index History	The case where all historical results are fixed. The addition of new data into the relevant index with frozen history will not affect the results stated for earlier periods.
Headline Measures	Headline measures are Total Return, Capital Growth and Income Return for the MSCI Property Indexes and the Total Return for the MSCI Property Fund Indexes.
Income Return (also known as direct return)	The net income receivable for a property expressed as a percentage of the capital employed.
Index Policy Committee (IPC)	The Index Policy Committee (IPC) is an escalation point for the REIC.
(Market) Capital Value	Capital value of the property net of assumed purchasers' costs as defined by the International Valuation Standards Committee, being “the estimated amount for which a property should exchange on the date of valuation, between a willing seller and a willing buyer in an arm’s-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.”
Measure	A measure is the index series name to indicate the index calculation methodology and specifically reference a pre-defined performance measure.
Methodology	Methodology refers to rules and guidelines for determining indexes, measures or filters
Methodology Set	The set of methodology and policy documents that describe the methodology used to determine MSCI Private Real Estate Indexes, including BMR Benchmarks



Key term	Definition
Real Estate Index Committee (REIC)	The Real Estate Index Committee (REIC) is primarily responsible for the supervision of the design, development, approval and interpretation of the Private Real Estate Index methodologies. Decisions taken by the REIC are the sole responsibility of its members. The committee is staffed strictly by MSCI employees.
Real Estate Market Size Report	Annual survey by MSCI of the the size of the professionally managed global real estate investment market at a national level. Market coverage of Standard Indexes are estimated based on this survey.
Standard Index	A Standard Indexes is the MSCI Private Real Estate Index for a country or region with the broadest market coverage, for a specific index methodology, and for a specific reporting frequency. For example, UK Standard Indexes include, among others, the MSCI UK Quarterly Property Index, MSCI UK Annual Property Index, and MSCI/AREF UK Quarterly Property Fund Index.
Total Return	The most important measure of overall investment performance used to compare different assets across time periods. It incorporates both capital and income elements, and is calculated as the percentage value change plus net income accrual, relative to the capital employed.
Unfrozen Index History	Indexes with unfrozen history incorporate all available data, including the addition of new data providers with history, and historical data corrections regardless of the time of occurrence or threshold, at each index update.



Appendix II – ESG Factors in the Benchmark Statement of BMR Benchmarks in the MSCI Property Benchmark Family

Explanation of How ESG Factors are Reflected in the Benchmark Statement of BMR Benchmarks in the MSCI Property Benchmark Family	
Section 1 – Consideration of ESG Factors	
Item 1. Name of the benchmark administrator	MSCI Limited
Item 2. Type of benchmark or family of benchmarks	Private Real Estate
Item 3. Name of the benchmark or family of benchmarks	MSCI Property Benchmark Family
Item 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	Yes
Item 5. Does the benchmark or family of benchmarks pursue ESG objectives?	No
Date on which information has last been updated and reason for the update:	The information in this report was last updated on December 23, 2021 as a part of the 2021 annual review of the document.



Explanation of How ESG Factors are Reflected in the Benchmark Statement of BMR Benchmarks in the MSCI Property Benchmark Family

Section 3 – Disclosure of the alignment with the objectives of the Paris Agreement

a. Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement	No
b. Temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement	The index methodology for this index family does not use any temperature scenario for the alignment with the target of reducing GHG emissions or attaining the objectives of the Paris Agreement.
c. Name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement	The index methodology for this index family does not use any temperature scenario for the alignment with the target of reducing GHG emissions or attaining the objectives of the Paris Agreement.
d. Methodology used for the measurement of the alignment with the temperature scenario	The index methodology for this index family does not use any temperature scenario for the alignment with the target of reducing GHG emissions or attaining the objectives of the Paris Agreement.
e. Hyperlink to the website of the temperature scenario used	The index methodology for this index family does not use any temperature scenario for the alignment with the target of reducing GHG emissions or attaining the objectives of the Paris Agreement.
Date on which information has last been updated and reason for the update:	The information in this report was last updated on December 23, 2021 as a part of the 2021 annual review of the document.



Appendix III – Versioning Table

Publication Date	Key Changes
13 June 2019	First release of the document that outlines the methodology documentation of the Benchmark Statements of the BMR Benchmarks in the MSCI Property Benchmark Family
12 June 2020	Included Section 10 on ESG Disclosures and Appendix II on ESG Factors in the Benchmark Statement of the BMR Benchmarks in the MSCI Property Benchmark Family
23 December 2020	Updated Section 10 on ESG Disclosures and Appendix II on ESG Factors in the Benchmark Statement of the BMR Benchmarks in the MSCI Property Benchmark Family in order to align with the Commission Delegated Regulation (EU) 2020/1816
23 December 2021	Inclusion Section 3 in Appendix II regarding the disclosure of the alignment with the objectives of this Paris Alignment in order to align with the Commission Delegated Regulation (EU) 2020/1816
27 Jun 2022	<p>Clarifications to section on ESG Disclosures to reference the European Union (Withdrawal) Act 2018.</p> <p>Clarification to the text in table headers of Appendix II for explicit reference to the BMR benchmark family.</p>



Contact us

realestate@msci.com

+ 44 20 7336 4783

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
 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

ABOUT MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

The process for submitting a formal index complaint can be found on the index regulation page of MSCI's website at: <https://www.msci.com/index-regulation>.



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. All rights in the Information are reserved by MSCI and/or its Information Providers.

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 INFORMATION (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 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 investable 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 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.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.