

MSCI High Dividend Yield Indexes Methodology

April 2025

Contents

1. Introduction	3
2. MSCI High Dividend Yield Index Construction	4
2.1 Defining the Eligible Universe	4
2.2 Dividend Sustainability and Persistence Screening	4
2.2.1 Applying the Dividend Sustainability Screening	5
2.2.2 Applying the Dividend Persistence Screening	5
2.3 Quality Screening	5
2.4 Price Performance Screening	5
2.5 High Dividend Yield Security Selection	5
2.6 Constituent Weighting	6
3. Maintenance of the Indexes	7
3.1 Index Reviews	7
3.2 Ongoing Event Related Changes	7
Appendix I: Variable Definitions and Computations	9
Appendix II: Calculation of Market Mean	11
Appendix III: Constructing MSCI Dividend Tilt Indexes	12
Appendix IV: Transition Of Existing MSCI IMI HDY Indexes	13
Appendix V: Methodology Set	14
Appendix VI: Changes to this Document	15

1. Introduction

The MSCI High Dividend Yield Indexes (the “Indexes”)¹ are designed to focus on dividend yield and to represent the opportunity set of securities with high Dividend Income and Quality Characteristics. The Indexes aim to depict the high dividend yield opportunity set within MSCI equity indexes.

The Indexes:

- Are derived from country, regional, or composite level MSCI Equity indexes (herein, “Parent Indexes”).
- Include only securities that offer a higher than average dividend yield relative to their respective Parent Index and pass dividend sustainability screens
- Securities entering the index must have a dividend yield which is at least 30% higher than the respective Parent Index yield
- Target securities with reasonable payout and a non-negative 5Y Dividends per share (DPS) growth rate² for inclusion in the High Dividend Yield Index.
- Offer reasonably broad market coverage
- Are designed to have moderate turnover due to the use of a market cap weighted scheme and appropriate buffer rules and
- Are free float market capitalization weighted to allow replicability in institutional and retail portfolios of reasonable size.

This Methodology book describes a generic methodology that can be applied to create the Indexes from any of the existing MSCI global or domestic equity indexes.

MSCI also calculates MSCI Dividend Tilt Indexes with an aim to represent the performance of a high dividend yield strategy with high investment capacity. Please refer to Appendix III for further details on the methodology of MSCI Dividend Tilt Indexes.

¹ The Indexes are governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document. Please refer to Appendix V for more details.

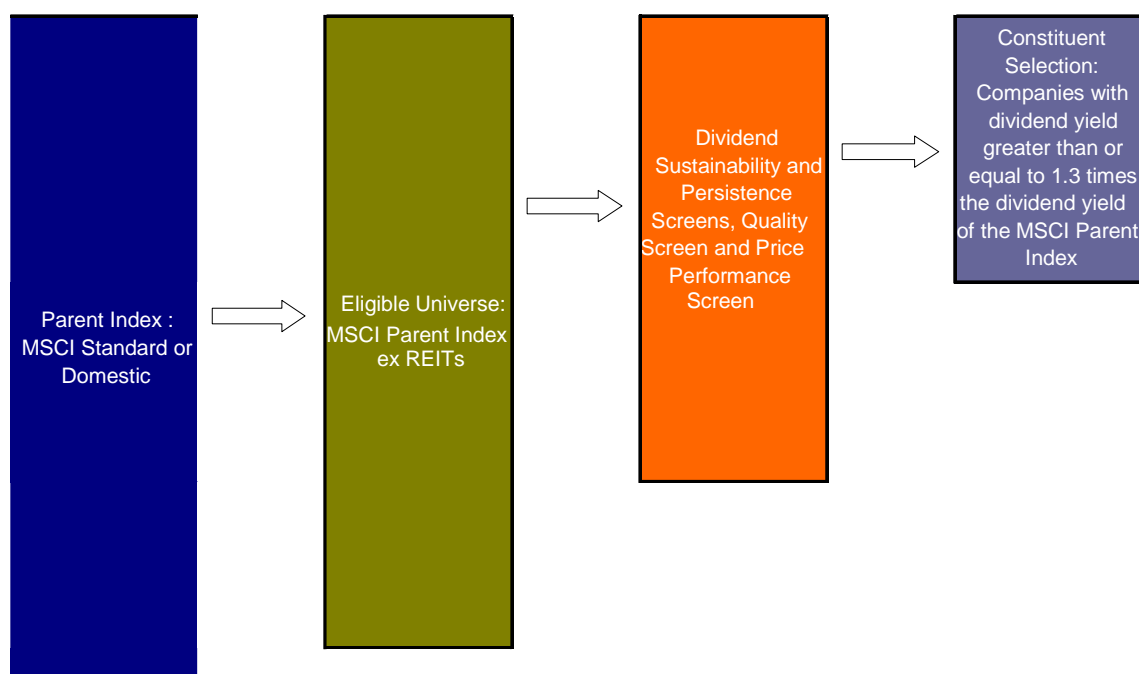
² See Appendix I for definition of 5Y DPS growth rate and its calculation.

2. MSCI High Dividend Yield Index Construction

The MSCI High Dividend Yield Index construction is based on a six -step process:

- Defining the eligible universe
- Applying dividend sustainability and persistence screening
- Applying quality screening
- Applying price performance screening
- Including high yielding securities
- Weighting the securities in an index

MSCI High Dividend Yield Index Construction



2.1 Defining the Eligible Universe

All securities belonging to the underlying Parent Index are eligible for inclusion in the Indexes, with the exception of Real Estate Investment Trusts (REITs). REITs have structurally very high dividend yield and, if included, would represent a disproportionate constituency in the Indexes. Also, typically, regulatory constraints restrict the inclusion of REITs in meaningful proportions in many institutional portfolios.

2.2 Dividend Sustainability and Persistence Screening

Dividend yield strategies typically target not only high dividend yield but also companies where that dividend is sustainable and/or persistent. Therefore, the Indexes consider the following dividend

sustainability and persistence screens in order to achieve a better representation of the opportunity set of high dividend yield strategies:

- Dividend sustainability screening: Securities whose dividend payout is extremely high or negative, and therefore, where future dividend payments might be in jeopardy are not considered for inclusion
- Dividend persistence screening: Securities without a historical track record of consistent dividend payment are also not considered for inclusion

2.2.1 Applying the Dividend Sustainability Screening

Securities with zero or negative payout ratios are not considered for inclusion in the Indexes as they either do not pay dividends or have negative earnings which may put their future dividend payments at risk.

Additionally, securities with an extremely high payout ratio, which occurs when earnings are low relative to dividends and may also indicate that the dividend payment might not be sustainable in the future, are also not considered for inclusion in the Indexes. Under this screen, securities with extremely high payout ratios, defined to be the top 5% of securities by number within the universe of securities with positive payout, are not considered eligible for inclusion in the index. The use of a relative payout ratio screen aims to ensure that the companies at most relative risk of dividend cuts are excluded irrespective of the absolute level of the payout.

2.2.2 Applying the Dividend Persistence Screening

Securities with a negative 5Y DPS growth are also excluded from the Indexes as this is an indicator of shrinking dividend growth which could be a precursor to lower dividends. Securities which have insufficient data to calculate a 5Y DPS growth rate are not excluded from the Indexes.

2.3 Quality Screening

Securities with negative Quality Z-score are not considered for inclusion in the Indexes.

The Quality Z-scores are calculated using fundamental variables such as Return on Equity, Earnings Variability and Debt to Equity. For the details on computation of the Quality Z-score, please refer to the section 2.2.3 of MSCI Quality Indexes Methodology, available at: (<https://www.msci.com/index-methodology>)

2.4 Price Performance Screening

Securities ranked in the bottom 5% of the universe of securities with negative 1-year Price Performance are excluded from the Indexes.

2.5 High Dividend Yield Security Selection

Securities that have passed the above screens are then considered for inclusion in the Indexes. Only securities with a dividend yield³ greater than or equal to 1.3 times the dividend yield of the Parent Index are included in the Index. For example, MSCI compares the yield of a European security to the

³ The dividend yield is adjusted at the time of rebalancing to reflect movement in the securities' price.

yield of the MSCI Europe Index to determine if it is eligible for inclusion in the MSCI Europe High Dividend Yield Index. By contrast, MSCI compares the yield of the same security to the yield of the MSCI World Index to determine if it is eligible for inclusion in the MSCI World High Dividend Yield Index.

2.6 Constituent Weighting

The constituents of the Indexes are first weighted based on their free float market capitalization, and are then capped at the issuer level in order to mitigate concentration risk. The excess weight of such issuers is distributed among the remaining constituents in proportion to their free float market capitalization. The issuer level capping is applied only at Semi-Annual Index Reviews.

- Issuers in the Indexes based on Broad Parent MSCI Indexes (e.g. MSCI World Index, MSCI Emerging Markets Index etc.) will be capped at 5%
- Issuers in the Indexes based on Narrow Parent MSCI Indexes will be capped at the maximum weight in the Parent Index.

MSCI defines Narrow Parent Indexes as those indexes where the largest capitalization weight in the index is more than 10%.

Note that the capping of the issuer weight is done for the pro forma index as of the effective date, based on the closing prices as of the Index Review announcement date. In cases where an issuer weight breaches the cap as a result of market price movements or corporate events between the announcement date and the effective date, the capping is not applied again. Similarly, even if any issuer weight breaches the cap as a result of market price movements or corporate events between two Index Reviews, no capping is applied.

3. Maintenance of the Indexes

3.1 Index Reviews

The Indexes are rebalanced semi-annually. Changes are implemented as of the close of the last business day of May and November, to coincide with the Index Reviews of their Parent Indexes. The pro forma Indexes are in general announced nine business days before the effective date.

The fundamental data used to determine the Indexes is maintained monthly. For the May and November Index Reviews, the fundamental data as of the end of April and the end of October is used, respectively.

During each Index Review, the constituents of the underlying Parent Index are screened for potential inclusion in the Indexes according to the screening process described in Section 2.

Existing constituents of the current High Dividend Yield Index will also be evaluated for continued inclusion using the following screening process:

- If a security is already an Index constituent, it will remain in the Index until it reaches the top 2% by increasing order of dividend payout. If it is within the top 2% limit, it will be excluded from the Index.
- If a security is already an Index constituent but its 5Y DPS growth rate turns negative, it will still be allowed to remain in the Index, provided that the 1Y DPS growth rate⁴ of that security is non-negative. This allows current Index constituents that suffer only a temporary decline in the 5Y DPS growth rate to remain in the index and thus avoid excessive index turnover. Securities which do not have sufficient data to calculate a 5Y DPS growth rate or 1Y DPS growth rate would still be eligible to remain in the index.
- If a security is already an Index constituent, it will remain in the index as long as its Quality Z-score is higher than or equal to -0.5.
- If a security is already an Index constituent, it will remain in the index as long as its dividend yield is higher than or equal to the Parent Index yield.

3.2 Ongoing Event Related Changes

The general treatment of corporate events in the Indexes aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved.

The following section briefly describes the treatment of common corporate events within the Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

EVENT TYPE

EVENT DETAILS

⁴ See Appendix I for definition of 1Y DPS growth and its calculation.

New additions to the Parent Index

A new security added to the parent index (such as IPO and other early inclusions) will not be added to the index.

Spin-Offs

All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Merger/Acquisition

For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index.

If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will be added to the Index. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Changes in Security Characteristics

A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.) Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to these Indexes can be found in the MSCI Corporate Events Methodology book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at:

<https://www.msci.com/index/methodology/latest/CE>.

Appendix I: Variable Definitions and Computations

This appendix provides details on the definitions and computations of the variables used to screen the securities for index construction and maintenance.

Dividend Yield (D / P)

$$D/P = \text{Current Annualized Dividend per Share/Price of Security}$$

The current annualized dividend per share is the trailing 12-month dividend per share derived from the current fiscal year end dividend per share plus the difference between the interim dividend per share of the current fiscal year and the previous fiscal year. For the USA and Canada, the current annualized dividend per share is calculated by annualizing the latest published quarterly dividend.

Yields are gross, before withholding tax, and take into account special tax credits when applicable.

Payout Ratio (PO)

The payout ratio is calculated as follows:

$$PO = \text{Dividends per share/Earnings per share}$$

The most recently reported earnings value is used to for earnings per share while the current annualized dividend per share is used for dividends.

5Y DPS Growth

For the calculation of the 5Y DPS Growth, first a regression (ordinary least squares method) is applied to the last 5 yearly DPS.

$$DPSt = a \times t + b$$

Where:

- a , the slope coefficient,
- b , the intercept,
- t , the year expressed in number of months.

Then, an average DPS is estimated:

$$\tilde{\tilde{\tilde{DPS}}} = \frac{\sum_{i=1}^n DPS_i}{n}$$

The growth trend is finally obtained as follows:

$$5Y\ DPS = \frac{aDPS}{\tilde{\tilde{\tilde{DPS}}}}$$

In order to compute a meaningful long-term historical growth trend for the DPS, 5 years of comparable data are generally required. In the event that comparable restated pro forma data are unavailable, MSCI may restate the data using adjustments. A minimum of the last four DPS values are required for calculating the growth and growth trends for securities without sufficient DPS values are considered to be missing (except in the case of IPOs where it will be on a case-by-case basis.).

1Y DPS Growth

The 1Y DPS growth rate is the difference between the current and previous annual DPS.

$$1Y\ DPS\ G = \frac{DPS_t - DPS_{t-12}}{DPS_{t-12}}$$

Where:

- t is the year expressed in number of months.

The 1Y DPS growth is used for assessing the continued eligibility of existing constituents whose 5Y DPS growth has turned negative.

Appendix II: Calculation of Market Mean

This appendix explains the calculation of the market mean used in the determination of the market average dividend yield.

The market mean is the market capitalization weighted average of the variable and is computed as follows:

$$\frac{\sum_{i=1}^n (\text{Current security price} \times \text{Total current security shares outstanding} \times \frac{1}{\text{Exchange Rate}} \times \text{Inclusion Factor})}{\sum_{i=1}^n (\text{Security level per share figure} \times \text{Total current security shares outstanding} \times \frac{1}{\text{Exchange Rate}} \times \text{Inclusion Factor})}$$

Where,

- n =number of securities included in the calculation.

If any per share figure is not available for a particular security, the security is not included in the calculation for that particular ratio.

Only securities with non-missing variables are included in the market mean and standard deviation.

Appendix III: Constructing MSCI Dividend Tilt Indexes

The MSCI Dividend Tilt Indexes aim to reflect the performance of a high dividend yield strategy with high investment capacity. The MSCI Dividend Tilt Indexes are created by including all the dividend-paying constituents in the Parent Index that passed the screens as described in Section 2.1 to 2.4, and tilting the market capitalization weights of these securities based on their Dividend Yield Score. Dividend Yield Scores are calculated for all the securities eligible for inclusion in the Dividend Tilt Index and as described below.

$$z = \frac{(x - \mu)}{\sigma}$$

Where:

- Z is the Dividend Yield Z-score
- x is the Dividend Yield for a given security included in the Dividend Tilt Index
- μ is the equal weighted mean of the Dividend Yield of all the securities included in the Dividend Tilt Index
- σ is the equal weighted standard deviation of the Dividend Yield of all the securities included in the Dividend Tilt Index

Z scores are then winsorized at +/-3 i.e. the Z-scores above 3 are capped at 3 and Z-scores below -3 are capped at -3.

The Dividend Yield Score is then computed from the Dividend Yield Z-Score as follows:

$$\text{Dividend Yield Score} = \begin{cases} (1 + Z) & , \quad Z > 0 \\ (1 - Z)^{-1} & , \quad Z < 0 \end{cases}$$

All the securities included in the MSCI Dividend Tilt Indexes are weighted by the product of their market capitalization weight in the Parent Index and the dividend yield score.

Dividend Tilt Index Weight = Dividend Yield Score * Market Capitalization Weight in the Parent Index.

The above weights are then normalized to 100%. Constituent weights are capped at an issuer level in a similar way to the MSCI High Dividend Yield Indexes as described in section 2.6.

The MSCI Dividend Tilt Indexes follow the same rebalancing schedule and corporate events treatment as the MSCI High Dividend Yield Indexes as described in section 3.

Appendix IV: Transition Of Existing MSCI IMI HDY Indexes

Existing High Dividend Yield Indexes based on Parent Indexes containing small cap securities, which were launched before the enhancement announced in August 2015, will be transitioned to the new methodology at the November 2015 Index Review. Specifically, the following screen would be applied to all the Indexes, irrespective of whether they contain small cap securities or not.

- Dividend Persistence Screening
- Quality Screening

Appendix V: Methodology Set

The Indexes are governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document as mentioned below:

- Description of methodology set – <https://www.msci.com/index/methodology/latest/ReadMe>
- MSCI Corporate Events Methodology – <https://www.msci.com/index/methodology/latest/CE>
- MSCI Fundamental Data Methodology – <https://www.msci.com/index/methodology/latest/FundData>
- MSCI Index Calculation Methodology – <https://www.msci.com/index/methodology/latest/IndexCalc>
- MSCI Index Glossary of Terms – <https://www.msci.com/index/methodology/latest/IndexGlossary>
- MSCI Index Policies – <https://www.msci.com/index/methodology/latest/IndexPolicy>
- MSCI Global Industry Classification Standard (GICS) Methodology – <https://www.msci.com/index/methodology/latest/GICS>
- MSCI Global Investable Market Indexes Methodology – <https://www.msci.com/index/methodology/latest/GIMI>
- MSCI Quality Indexes Methodology - <https://www.msci.com/index/methodology/latest/Quality>

The Methodology Set for the Indexes can also be accessed from MSCI’s webpage <https://www.msci.com/index-methodology> in the section ‘Search Methodology by Index Name or Index Code’.

Appendix VI: Changes to this Document

The following sections have been modified since February 2013:

1. Introduction

- Update of the introduction of the MSCI High Dividend Yield Indexes

2. MSCI High Dividend Yield Index Construction

- Added Quality Screen and Price Performance Screen in the process list

2.6 Free Float-Adjusted Constituent Weights

- Clarification of constituent weighting and issuer level capping

The following sections have been modified since May 2014:

3.2 Quarterly Index Reviews

- Clarification on treatment of FIF/NOS changes at the Quarterly Index Review

The following sections have been modified since October 2014:

1. Introduction

- Update of the introduction of the MSCI High Dividend Yield Indexes

Appendix III. Constructing MSCI Dividend Tilt Indexes

- Addition of Appendix III containing methodology details of MSCI Dividend Tilt Indexes

The following sections have been modified since November 2014:

1. Introduction

- Dividend Persistence screening is now applied on all Parent Indexes

2.3 Quality Screening

- Quality screening is now applied on all Parent Indexes

Appendix IV

- Addition of Appendix IV describing the transition of existing High Dividend Yield Indexes based on Parent Indexes containing small cap securities

Modification of several sections to enhance clarity

The following sections have been modified since August 2015:

Section 2.3: Quality Screening

- Updated link to the MSCI Quality Index Methodology

Section 3: Maintenance of the MSCI High Dividend Yield Indexes Methodology

- Merged Section 3.2 and 3.3 for clarity

The following sections have been modified since April 2025:

- Methodology book was updated to reflect the transition of the MSCI Global Investable Market Indexes (GIMI) to Quarterly Comprehensive Index Reviews.
- All references to “Semi-Annual Index Reviews” and “Quarterly Index Reviews” of the MSCI GIMI were replaced with “Index Reviews”.

Section 1: Introduction

- Added footnote on Methodology Set.

Section 2.5: High Dividend Yield Security Selection

- Clarified the Security Selection Criteria by Dividend Yield

Appendix V: Methodology Set

- Added details on the Methodology Set for the Indexes.

Contact us

[msci.com/contact-us](https://www.msci.com/contact-us)

AMERICAS

United States	+ 1 888 588 4567 *
Canada	+ 1 416 687 6270
Brazil	+ 55 11 4040 7830
Mexico	+ 52 81 1253 4020

EUROPE, MIDDLE EAST & AFRICA

South Africa	+ 27 21 673 0103
Germany	+ 49 69 133 859 00
Switzerland	+ 41 22 817 9777
United Kingdom	+ 44 20 7618 2222
Italy	+ 39 02 5849 0415
France	+ 33 17 6769 810

ASIA PACIFIC

China	+ 86 21 61326611
Hong Kong	+ 852 2844 9333
India	+ 91 22 6784 9160
Malaysia	1800818185 *
South Korea	+ 82 70 4769 4231
Singapore	+ 65 67011177
Australia	+ 612 9033 9333
Taiwan	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Japan	+ 81 3 4579 0333

* toll-free

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 is research for informational purposes only and is intended for institutional professionals with the analytical resources and tools necessary to interpret any performance information. Nothing herein is intended to promote or recommend any product, tool or service.

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 disseminated 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 may include "Signals," defined as quantitative attributes or the product of methods or formulas that describe or are derived from calculations using historical data. Neither these Signals nor any description of historical data are intended to provide investment advice or a recommendation to make (or refrain from making) any investment decision or asset allocation and should not be relied upon as such. Signals are inherently backward-looking because of their use of historical data, and they are not intended to predict the future. The relevance, correlations and accuracy of Signals frequently will change materially. 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. The calculation of indexes and index returns may deviate from the stated methodology. 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 msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. 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 a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, provided that applicable products or services from MSCI ESG Research may constitute investment advice. 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. MSCI ESG and climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK) and MSCI Deutschland GmbH.

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI Inc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI clients pay fees based in whole or part on the assets they manage. MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at <https://adviserinfo.sec.gov/firm/summary/169222>.

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 S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.

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.

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