

MSCI Global Environment Index Methodology

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1 Introduction

The MSCI Global Environment Index (the 'Index') is a free float-adjusted market capitalization weighted index designed to maximize its exposure to environmental impact themes. The Index is comprised of companies that focus on offering products or services that contribute to a more environmentally sustainable economy by making a more efficient use of limited global natural resources.

The Index aims to include companies with exposure to one or more of the following categories of the MSCI Sustainable Impact Metrics:

- Alternative Energy
- Energy Efficiency
- Green Building
- Sustainable Water
- Pollution Prevention and Control
- Sustainable Agriculture

MSCI also constructs the following indexes designed to include companies with exposure to individual themes:

- MSCI Alternative Energy Index
- MSCI Energy Efficiency Index
- MSCI Sustainable Water Index
- MSCI Green Building Index
- MSCI Pollution Prevention Index¹

¹ The Indexes are governed by a set of methodology and policy documents ("Methodology Set"), including the present index methodology document. The Methodology Set for the Indexes can be accessed from MSCI's webpage <https://www.msci.com/index-methodology> in the section 'Search Methodology by Index Name or Index Code'.

The Methodology Set includes a document 'ESG Factors in Methodology' that contains the list of environmental, social, and governance factors considered, and how they are applied in the methodology (e.g., selection, weighting or exclusion)

2 Constructing the MSCI Global Environment Index

The Index uses company ratings and research provided by MSCI ESG Research² for the Index construction.

The Index is constructed using the following steps:

- Defining the Parent Index
- Defining the Eligible Universe
- Security Selection

2.1 DEFINING THE PARENT INDEX

The parent index serves as the selection universe of securities for the Index. The parent index for the Index is the MSCI ACWI IMI Investable Market Index (IMI).

2.2 ELIGIBLE UNIVERSE

The eligible universe is constructed by starting from the parent index then excluding securities based on the following criteria:

2.2.1 COMPANIES INVOLVED IN RED FLAG ESG CONTROVERSIES

Companies assessed as having involvement in ESG controversies that are classified as Red Flags (MSCI ESG Controversy Score of 0) are excluded from the Index. A Red Flag indicates an ongoing Very Severe ESG controversy implicating a company directly through its actions, products, or operations.

2.2.2 COMPANIES INVOLVED IN CONTROVERSIAL WEAPONS BUSINESSES

Companies involved in Controversial Weapons, as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes, are excluded from the Index. For more details on the controversial weapons exclusion, please refer to the MSCI Global ex Controversial Weapons Indexes Methodology at:

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

2.3 SECURITY SELECTION

Companies remaining in the eligible universe which derives 50% or more of their revenue cumulatively from the six Environmental Impact themes are eligible to be

² See section 4 for further information regarding ESG and climate data used in the Indexes that MSCI Limited sources from MSCI ESG Research LLC, a separate subsidiary of MSCI Inc. MSCI ESG Research is solely responsible for the creation, determination and management of such data. MSCI Limited is the benchmark administrator for the MSCI indexes.

included in the index. Companies are then evaluated for the level of involvement in and strategic commitment to six Environmental Impact themes which are as follows:

- Alternative Energy
- Energy Efficiency
- Green Building
- Sustainable Water
- Pollution Prevention and Control
- Sustainable Agriculture

The individual thematic indexes are constructed by selecting securities based on their revenue exposure to the relevant Environmental Impact theme. For example, the MSCI Alternative Energy Index is constructed by selecting securities from the eligible universe, as defined in section 2.2, which derive 50% or more of their revenue from the Alternative Energy theme.

Since the Index is constructed by selecting securities which derive 50% or more of their revenue from the Environmental Impact themes on a *cumulative basis*, and the individual thematic indexes are constructed by selecting securities which have 50% or more revenue from a specific theme, the Index is not an aggregated version of all the individual thematic indexes.

3 Maintaining the MSCI Global Environment Index

3.1 QUARTERLY INDEX REVIEWS

The Index and the individual thematic indexes are reviewed on a quarterly basis in February, May, August and November to coincide with the regular Index Reviews of the MSCI Global Investable Market Indexes. The changes are implemented as of the close of the last business day of February, May, August and November.

The pro forma indexes are announced nine business days before the effective date.

At the Quarterly Index Reviews, all companies in the underlying universe are reviewed and eligible companies are added to the Index and the individual thematic indexes. Existing constituents may be deleted from the Index and the individual thematic indexes due to declining exposure to the Environmental Impact themes, subject to buffer rules as described below. Any constituent that is deleted from the underlying parent index as a result of the Quarterly Index Review is also deleted from the Index and the individual thematic indexes.

In general, MSCI uses MSCI ESG Research data³ (including MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research and MSCI Sustainable Impact Metrics) as of the end of the month preceding the Index Reviews. For some securities, such data may not be published by MSCI ESG Research by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available.

3.2 BUFFER RULES

To reduce index turnover and enhance index stability, buffer rules are applied for securities which have a relevant exposure to the Environmental Impact themes between 40% and 50%. Existing constituents of the Index are retained in the index as long as they meet eligibility criteria mentioned in section 2.2 and their cumulative exposure to the Environmental Impact themes does not fall below 40%. For individual thematic indexes, the existing constituents are retained in the index as long as they meet the eligibility criteria and their exposure to the relevant Environmental Impact theme does not fall below 40%.

However, if an existing constituent remains in the buffer zone for two consecutive years, the security would be deleted at the subsequent Index Review.

³ See section 4 for details of data sourced from MSCI ESG Research used in the Indexes.

3.3 ONGOING EVENT-RELATED MAINTENANCE

The following section briefly describes the treatment of common corporate events within the Index and the individual thematic indexes.

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
New additions to the Parent Index	New securities added to the Parent Index (such as IPOs, other early inclusions and migrations from a different size-segment) will not be added to the Index at the time of event implementation. Such securities will be considered for addition in the Index at the subsequent Index Review.
Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will not be added to the Index at the time of event implementation. Reevaluation for addition in the Index will occur at the subsequent Index Review.
Merger/Acquisition	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 not be added to the Index.
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 this Index can be found in the MSCI Corporate Events Methodology book.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>

4 MSCI ESG Research

The Index is a product of MSCI Inc. that utilizes information such as company ratings and research produced and provided by MSCI ESG Research LLC (MSCI ESG Research), a subsidiary of MSCI Inc. In particular, the Index uses the following MSCI ESG Research products: MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research and MSCI Sustainable Impact Metrics. MSCI Indexes are administered by MSCI Limited.

4.1 MSCI ESG CONTROVERSIES

MSCI ESG Controversies provide assessments of controversies concerning the potential negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with “0” being the most severe controversy.

The MSCI ESG Controversies methodology can be found at:
<https://www.msci.com/esg-and-climate-methodologies>.

4.2 MSCI ESG BUSINESS INVOLVEMENT SCREENING RESEARCH

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (ESG) standards and restrictions reliably and efficiently.

For more details on MSCI ESG Business Involvement Screening Research, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf

4.3 MSCI SUSTAINABLE IMPACT METRICS

MSCI Sustainable Impact Metrics is designed to identify companies that derive revenue from products or services with positive impact on society and the environment. The Sustainable Impact Metrics are comprised of six Environmental Impact categories and seven Social Impact categories arranged by theme.

MSCI Sustainable Impact Metrics Taxonomy

Pillar	Themes	Categories
Environmental Impact	Climate Change	<ol style="list-style-type: none"> 1. Alternative energy 2. Energy efficiency 3. Green building
	Natural Capital	<ol style="list-style-type: none"> 4. Sustainable water 5. Pollution prevention and control 6. Sustainable agriculture
Social Impact	Basic needs	<ol style="list-style-type: none"> 7. Nutrition 8. Major disease treatments 9. Sanitation 10. Affordable real estate
	Empowerment	<ol style="list-style-type: none"> 11. SME finance 12. Education 13. Connectivity - Digital divide

Under each of the actionable social and environmental impact themes, MSCI ESG Research has identified specific categories of products and services that it has determined companies can offer as potential solutions to environmental and social challenges.

More detailed taxonomy for each category can be found in Section 2.4 of the MSCI ACWI Sustainable Impact Index Methodology available at <https://www.msci.com/index-methodology>

Appendix I: Methodology Transition

Prior to the May 2017 Index Review, the Index (GEI) was based on the methodology described below:

https://www.msci.com/eqb/methodology/meth_docs/MSCI_Global_Environment_Indices_November2013.pdf

The Index transitioned to the current methodology from the May 2017 Index Review over two index reviews (May 2017 Index Review and the August 2017 Index Review).

Appendix II: Regional/Country MSCI Environment Indexes

MSCI also constructs regional/country MSCI Environment Indexes by applying the index construction and maintenance rules on any regional/country subset of ACWI IMI. For example, the MSCI China IMI Environment Index is constructed by applying these rules on the MSCI China IMI.

Appendix III: Changes to this Document

The following sections have been modified as of May 2017:

Methodology transitioned to the current enhanced methodology from the May 2017 Semi-Annual Index Review onwards

The following sections have been modified as of July 2017:

Addition of Appendix II to include details on regional/country MSCI Environment Indexes

The following sections have been modified as of May 2018:

Update to the definition of the Controversial Weapons

The following sections have been modified as of February 2020:

Addition of 'Sustainable Agriculture' as a new Environmental Impact category

The following sections have been modified as of May 2020:

Update in Section 1

The following sections have been modified as of February 2021:

Removed Appendix I: "Environmental Impact Themes"

The following sections have been modified as of May 2023:

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."

Clarified the exclusion criteria for companies involved in ESG Controversies in section 2.2.1

MSCI ESG Research. Moved that section after the Section 3. Updated the descriptions of MSCI ESG Research products.

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