

MSCI SRI Low Carbon Select Indexes Methodology

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Contents

1	Introduction	4
2	Constructing the Indexes	5
2.1	Eligible Universe	5
2.1.1	Selection Based on ESG Criteria	5
2.1.1.1	ESG Ratings Eligibility	6
2.1.1.2	ESG Controversy score eligibility	6
2.1.1.3	Business Involvement and Climate Change Based Exclusions	6
2.1.2	Defining the Carbon Exposure of Each Security in the Underlying Universe	7
2.1.2.1	Greenhouse Gas Emissions	7
2.1.2.2	Potential Emissions from Fossil Fuels	8
2.1.3	Selecting Companies with Low Carbon Exposure	8
2.1.3.1	Carbon Emission Selection Rules	8
2.1.3.2	Potential Carbon Emission Selection Rules	8
2.1.4	Security Selection	8
2.1.4.1	Defining Groups for Security Selection	8
2.1.4.2	Ranking and Selection of Securities	9
2.1.4.3	Applying The Iterative Process	9
2.2	Treatment of Unrated Companies	10
3	MSCI Extended SRI Low Carbon Select Indexes.....	11
4	Maintaining the Indexes	12
4.1	Annual Index Reviews	12
4.1.1	Updating The Eligible Universe	12
4.1.2	Ranking Of Eligible Securities	12
4.1.3	Selection Of Eligible Securities	13
4.2	Quarterly Index Reviews.....	13
4.3	Monthly Review of Controversies	14
4.4	Ongoing Event Related Changes.....	14
5	MSCI ESG Research	16
5.1	MSCI ESG Ratings	16
5.2	MSCI ESG Controversies	16

5.3 MSCI ESG Business Involvement Screening Research 16

5.4 MSCI Climate Change Metrics 16

Appendix I: Values and Climate Change Based Screening Criteria 18

Appendix II: Guidelines on Achieving the Target Coverage of 25% 22

Appendix III: Guidelines on Achieving the Target Coverage of 50% 23

Appendix V: Methodology Set 25

Appendix VI: Changes to the Document 26

1 Introduction

The MSCI SRI Low Carbon Select Indexes (the “Indexes”)¹² are designed to represent the performance of companies which meet the following criteria:

- Exclusion of companies associated with civilian, controversial, conventional and nuclear weapons as well as adult entertainment, tobacco, alcohol, gambling, genetically modified organisms and nuclear power.
- Exclusion of companies that derive revenue from fossil fuel extraction, fossil fuel power generation and fossil fuel reserves.
- Lower carbon exposure than the market capitalization weighted indexes (the “Parent Indexes”).
- High Environmental, Social and Governance (ESG) ratings relative to their sector peers by targeting 25% free float-adjusted market capitalization coverage of each Global Industry Classification Standard (GICS®)³ sector by selecting constituents based on ESG rating, the trend in that rating and the company’s industry adjusted ESG Score.

The Index also achieves diversification and avoids concentration risk by capping securities to a maximum security weight of 5%.

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 IV for more details.

² Please refer to Section 2 for the list of Indexes covered by this methodology book.

³ GICS, the global industry classification standard jointly developed by MSCI Inc. and S&P Global Market Intelligence.

2 Constructing the Indexes

The Indexes use company ratings and research provided by MSCI ESG Research⁴ to determine eligibility for index inclusion.

The Indexes and their respective Parent Indexes are listed in the table below.

Index Name	Parent Index
MSCI ACWI SRI Low Carbon Select 5% Issuer Capped Index	MSCI ACWI Index
MSCI USA SRI Low Carbon Select 5% Issuer Capped Index	MSCI USA Index
MSCI World SRI Low Carbon Select 5% Issuer Capped Index	MSCI World Index
MSCI EMU SRI Low Carbon Select 5% Issuer Capped Index	MSCI EMU Index
MSCI Emerging Markets SRI Low Carbon Select 5% Issuer Capped Index	MSCI EM Index
MSCI Japan SRI Low Carbon Select 5% Issuer Capped Index	MSCI Japan Index
MSCI Pacific SRI Low Carbon Select 5% Issuer Capped Index	MSCI Pacific Index
MSCI Europe SRI Low Carbon Select 5% Issuer Capped Index	MSCI Europe Index
MSCI World Small Cap SRI Low Carbon Select 5% Issuer Capped Index	MSCI World Small Cap Index
MSCI Emerging Markets ex China SRI Low Carbon Select 5% Issuer Capped Index ⁵	MSCI Emerging Markets ex China Index

2.1 Eligible Universe

The Eligible Universe is defined by applying exclusions based on ESG criteria and carbon exposure on constituents of the Parent Index. Both sets of exclusions are applied independently and securities that pass the criteria are eligible for selection in the Indexes.

2.1.1 Selection Based on ESG Criteria

The ESG criteria for eligibility for inclusion to the Indexes is based on:

- ESG Ratings
- ESG Controversy Score
- Business Involvement and Climate-based screening

⁴ See section 5 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.

⁵ The MSCI Emerging Markets ex China SRI Low Carbon Select 5% Issuer Capped Index applies iterative capping since index inception. The iterative capping is described in Section 2.1.4.3.

2.1.1.1 ESG Ratings Eligibility

The Indexes use MSCI ESG Ratings to identify companies that have demonstrated an ability to manage their ESG risks and opportunities. Companies are required to have an MSCI ESG Rating of 'A' or above to be eligible for inclusion in the MSCI SRI Low Carbon Select Indexes with the exception as mentioned below:

Companies are required to have an MSCI ESG Rating of 'BBB' or above to be eligible for inclusion in the MSCI World Small Cap SRI Low Carbon Select 5% Issuer Capped Index.

2.1.1.2 ESG CONTROVERSY SCORE ELIGIBILITY

The Indexes use MSCI ESG Controversies Scores to identify those companies that are involved in very serious controversies involving the environmental, social, or governance impact of their operations and/or products and services. Companies are required to have an MSCI ESG Controversies Score of 4 or above to be eligible for inclusion in the MSCI SRI Low Carbon Select Indexes with the exception as mentioned below:

Companies are required to have an MSCI ESG Controversies Score of 1 or above to be eligible for inclusion in the MSCI World Small Cap SRI Low Carbon Select 5% Issuer Capped Index.

2.1.1.3 Business Involvement and Climate Change Based Exclusions

The Indexes use MSCI ESG Business Involvement Screening Research to identify companies that are involved in the following business activities. Companies that meet the business involvement criteria or climate change criterion are excluded from the Indexes.

Values Based Exclusions:

- Controversial Weapons
- Civilian Firearms
- Nuclear Weapons
- Tobacco
- Alcohol
- Adult Entertainment
- Conventional Weapons
- Gambling
- Genetically Modified Organisms
- Nuclear Power

Climate Change Based Exclusions

- Extraction & Production
 - Thermal Coal Mining
 - Unconventional Oil & Gas Extraction

- Conventional Oil & Gas Extraction
- Power Generation
 - Thermal Coal-based Power Generation
 - Oil & Gas-based Power Generation
- Fossil Fuel Reserves Ownership

Please refer to Appendix 1 for more details on the screening criteria applied to the Indexes.

2.1.2 Defining the Carbon Exposure of Each Security in the Underlying Universe

The Carbon Exposure of a security is measured in terms of its greenhouse gas (GHG) emissions and its potential emissions from fossil fuel reserves.

2.1.2.1 GREENHOUSE GAS EMISSIONS

MSCI ESG Research collects company-specific direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions data from company public documents and/or the Carbon Disclosure Project. If a company does not report GHG emissions, then MSCI ESG Research estimates Scope 1 and Scope 2 GHG emissions. The data is updated on an annual basis. Since the current carbon emissions of a company are directly influenced by its current business activity, MSCI normalizes for size by dividing the annual carbon emissions of the company by the annual sales of the company.

Estimation of missing Carbon Intensity data

For a security, if Scope 1+2 carbon emissions are not available but Sales are available, MSCI estimates emissions by multiplying the Sales of the security with the average Sales intensity (i.e., Scope 1+2 emissions / Sales) of all constituents of MSCI ACWI in the same GICS Industry Group that have both Scope 1+2 Emissions and Sales available.

If Sales are not available for a security but Scope 1+2 emissions are available, MSCI estimates Sales by dividing the security's Scope 1+2 emissions by the average Sales intensity (i.e., Scope 1+2 emissions / Sales) of all constituents of MSCI ACWI in the same GICS Industry group that have both Scope 1+2 emissions and Sales available.

In case both Scope 1+2 emissions and Sales are not available for a security:

- The Sales are estimated by dividing the security's Issuer market capitalization by the average Issuer market capitalization to Sales ratio of all constituents of MSCI ACWI in the same GICS Industry Group that have Sales available.
- The emissions are estimated by multiplying the estimated Sales of the security by the average Sales intensity (i.e., Scope 1+2 emissions / Sales) of all constituents of MSCI ACWI in the same GICS Industry group that have both Scope 1+2 emissions and Sales available.

In case there are no securities in the GICS Industry Group with relevant data available for the estimation, then the estimation is applied at the level of the corresponding GICS Sector.

2.1.2.2 POTENTIAL EMISSIONS FROM FOSSIL FUELS

MSCI ESG Research collects fossil fuel reserves data where relevant for companies which have reserves, typically in the Oil & Gas, Coal Mining and Electric Utilities industries⁶. Fossil fuel reserves can be used for several applications including energy or industrial purposes (e.g. coking coal used for steel production). For the construction of the MSCI Global Low Carbon Leaders Core Indexes, only fossil fuel reserves used for energy purposes are taken into account. The data is updated on an annual basis based on information disclosed by companies. Sources include company publications, other public records, and third-party data providers. For newly added companies to the index where data is not available yet, MSCI uses zero fossil fuel reserves. MSCI normalizes for the company's size by dividing the potential carbon emissions of the company by its market capitalization. To convert reserves data to potential carbon emissions, MSCI ESG Research applies a formula from the Potsdam Institute for Climate Impact Research⁷.

2.1.3 Selecting Companies with Low Carbon Exposure

The Indexes select companies with low exposure to carbon risk, identified as companies with low carbon emission intensity and low potential emissions per dollar of market capitalization. The rules for carbon emissions and potential emissions are applied independently.

2.1.3.1 Carbon Emission Selection Rules

To select companies with low exposure to carbon emissions, the Parent Index constituents are ranked by the carbon emission intensity, and the top 10% of securities, by number, are excluded from the Indexes. The cumulative weight of securities excluded from any sector is less than 30% of the weight of the sector in the Parent Index. In case this limit is reached for any sector, no further securities from that sector are excluded.

2.1.3.2 Potential Carbon Emission Selection Rules

To select companies with low exposure to fossil fuel reserves, the Parent Index constituents are ranked in descending order of the potential carbon emissions per dollar of the market capitalization of the company. Securities are excluded until the cumulative potential carbon emission of the excluded securities reaches 50% of the sum of the potential carbon emission of the constituents of the Parent Index.

2.1.4 Security Selection

2.1.4.1 Defining Groups for Security Selection

The following "regions" are defined for the construction of the Indexes:

- Developed Asia Pacific

⁶ For more information on MSCI Climate Change Metrics, please refer to <https://www.msci.com/climate-change-solutions>

⁷ Malte Meinshausen, Nicolai Meinshausen, William Hare, Sarah C. B. Raper, Katja Frieler, Reto Knutti, David J. Frame & Myles R. Allen. *Greenhouse-gas emission Target for limiting global warming to 2 °C*. *Nature* 458, 1158-1162 (30 April 2009) | doi:10.1038/nature08017; Received 25 September 2008; Accepted 25 March 2009. Supplementary Information, p. 7

- Developed Europe & Middle East
- Canada
- USA
- Emerging Asia
- Emerging Europe, Middle East & Africa
- Emerging Latin America

Securities in the Parent Indexes are assigned “Selection Groups” based on their regions as defined above and their Global Industry Classification Standard (GICS®) sector.

2.1.4.2 Ranking and Selection of Securities

The Indexes target 25% (“target”) of the free float-adjusted market capitalization within each Selection Group as defined in the section above. Please see Appendix 2 for further details on the ranking and selection rules.

2.1.4.3 Applying The Iterative Process

The final step is a capping of 5% (“cap”) on security weights by applying the iterative process described below:

1. Calculate “cap_p” as the defined below –

$$cap_p = target * cap$$
2. Define a “Capped Universe” based on securities selected in each Selection Group. The securities in the Capped Universe are assigned weights as per the below formula –

$$Weight\ in\ Capped\ Universe = MIN (cap_p, Weight\ in\ Parent\ Index)$$

The excess weight available due to the capping of securities is not distributed among the remaining securities in the Capped Universe. Thus, the total weight of securities in the Capped Universe may be below 100%.

3. Within each Selection Group, aim to select securities that form a 25% cumulative weight of the Parent Index, using cumulative security weights as defined in the Capped Universe.
4. Define a “Selection Universe” which comprises of the selected securities in Step 3. The weights of securities in the Selection Universe are derived from their corresponding weights in the Capped Universe. The cumulative weight of securities in the “Selection Universe” is calculated as “W_{SEL}”. The weight of securities in the Selection Universe is then renormalized to 100%.

The steps 1-4 above are repeated over 20 iterations and the iteration in which the maximum security weight in the Selection Universe is closest to 5% in terms of an absolute difference is selected. If none of the stocks which are assigned a weight of cap_p in Step 2 are selected in the Selection Universe, the iterative process stops and the Selection Universe in that iteration is selected.

2.2 Treatment of Unrated Companies

Companies not assessed by MSCI ESG Research on data for any of the following MSCI ESG Research products are not eligible for inclusion in the Indexes.

- MSCI ESG Ratings
- MSCI ESG Controversies

3 MSCI Extended SRI Low Carbon Select Indexes

The MSCI Extended SRI Low Carbon Select Indexes are designed to provide a broader representation of the underlying investment universe. The three Indexes which apply the MSCI Extended SRI Low Carbon Select methodology are in the table below:

Index Name	Parent Index
MSCI Switzerland IMI Extended SRI Low Carbon Select 5% Issuer Capped	MSCI Switzerland IMI
MSCI UK IMI Extended SRI Low Carbon Select 5% Issuer Capped	MSCI UK IMI
MSCI Pacific ex Japan IMI Extended SRI Low Carbon Select 5% Issuer Capped Index	MSCI Pacific exJapan Index

The methodology is a variant on the MSCI SRI Low Carbon Select Indexes methodology with differences in the ESG screening criteria and the selection of securities, as highlighted below:

- Companies with an ESG Rating of 'BB' or lower or with a MSCI ESG Controversy Score of 0 are not eligible for inclusion.
- The target coverage is 50% of the free float-adjusted market capitalization of each Selection Group as defined in Section 2.2.3.1. Please see Appendix 3 for further details on the ranking and selection rules.

The MSCI Extended SRI Low Carbon Select Indexes apply the same business involvement and climate exclusion criteria and have the same index review cycle and corporate events treatment as the MSCI SRI Low Carbon Select Indexes. The review cycle and the corporate events treatment are described in Section 4.

4 Maintaining the Indexes

4.1 Annual Index Reviews

The MSCI SRI Low Carbon Select Indexes and the MSCI Extended SRI Low Carbon Select Indexes are reviewed on an annual basis in May to coincide with the May Index Review of the Parent Index. The changes are implemented at the end of May. The pro forma Indexes are generally announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores, MSCI Business Involvement Screening Research and ESG Climate Change Metrics⁸) as of the end of the month preceding the Index Reviews for the rebalancing of the MSCI SRI Low Carbon Select Indexes. For some securities, such data may not be published by MSCI ESG Research LLC 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, for the rebalancing of MSCI SRI Low Carbon Select Indexes.

At each Annual Index Review, the eligible universe is updated, and the composition of the index is reassessed to target 25% free float-adjusted cumulative market capitalization of each Selection Group of the Parent Index.

4.1.1 Updating The Eligible Universe

The Eligible Universe is updated during each Annual Index Review.

Companies that are not existing constituents of the Indexes are evaluated using the same eligibility criteria described in Section 2.1.

Existing constituents of the MSCI SRI Low Carbon Select Indexes are maintained in the Eligible Universe if they meet all the following conditions:

- MSCI ESG Rating of 'BB'⁹ or above.
- MSCI ESG Controversies Score of 1 or above.
- Not screened by the business involvement criteria described in Section 2.1.1.

4.1.2 Ranking Of Eligible Securities

For each Selection Group, eligible securities of the Parent Index are ranked based on the following criteria:

- ESG Rating

⁸ Emissions data, whenever available, will be taken as of the same calendar year as sales data. Depending on availability, such data may be based on values reported at least two years prior.

⁹ MSCI ESG Rating of 'BBB' or above for the MSCI World Small Cap SRI Low Carbon Select 5% Issuer Capped Index

- ESG Trend¹⁰ (positive ESG Trend preferred to neutral ESG Trend and neutral ESG Trend preferred to negative ESG Trend)
- Current index membership (existing constituents above non-constituents)
- Industry adjusted ESG scores
- Decreasing free float-adjusted market capitalization.

4.1.3 Selection Of Eligible Securities

For each Selection Group, eligible securities of the Parent Index are then selected from the Ranked Universe in the following order until the target 25% of the cumulative weight of the Parent Index is reached:

- Securities in the top 17.5% of the cumulative weight in the Parent Index of the ranked universe, using weights as per the Capped Universe
- 'AAA' and 'AA' rated securities in the top 25% of the cumulative weight in the Parent Index of the Ranked Universe, using weights as per the Capped Universe
- Current index constituents in the top 32.5% of the cumulative weight in the Parent Index of the ranked universe, using weights as per the Capped Universe
- Remaining eligible securities in the Ranked Universe

Please see Appendix 2 for additional details on the ranking and selection rules.

4.2 Quarterly Index Reviews

The MSCI SRI Low Carbon Select Indexes and the MSCI Extended SRI Low Carbon Select Indexes are also reviewed on a quarterly basis to coincide with the regular Index Reviews of the Parent Indexes. The changes are implemented at the end of February, August and November. The pro forma Indexes are generally announced nine business days before the effective date.

For the Quarterly Index Reviews, MSCI ESG Ratings, MSCI ESG Controversies Score assessments, MSCI BISR data and MSCI ESG Climate Change Metrics data are taken as of the end of the month preceding the Index Reviews¹¹, i.e., January, July and October. For some securities, this data may not be published by MSCI ESG Research LLC 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, for the rebalancing of the MSCI SRI Low Carbon Select Indexes.

At the Quarterly Index Reviews, existing constituents are deleted from the MSCI SRI Low Carbon Select Indexes if they do not meet the eligibility criteria described in Section 4.1.1. Existing constituents that meet the eligibility criteria are retained in the index.

Additions, from the eligible securities as per Section 4.2, are made only to those Selection Groups, where the cumulative weight in the Capped Universe is less than 22.5% of the cumulative weight of

¹⁰ ESG Trend is defined as the latest change in ESG Rating over the previous 12 months. A security without any change in ESG Rating over the previous 12 months will have a neutral ESG Trend.

¹¹ Emissions data, whenever available, will be taken as of the same calendar year as sales data. Depending on availability, such data may be based on values reported at least two years prior.

the Selection Group in the Parent Index. Eligible securities are added until the target 25% cumulative weight of the Selection Group in the Parent Index is achieved, using the cumulative weights in the Capped Universe.

Market price movements may cause small deviations in the selection group coverage between two Index Reviews. Therefore, to minimize turnover, a buffer of 10% is used on the target coverage of 25% to define under-representation.

4.3 Monthly Review of Controversies

Index constituents are reviewed on a monthly basis for the involvement in ESG controversies¹². Existing constituents will be deleted if they are assessed as having involvement in ESG controversies that are classified as Red Flags (MSCI ESG Controversies Score of 0). A Red Flag indicates an ongoing, Very Severe ESG controversy implicating a company directly through its actions, products, or operations

MSCI uses MSCI ESG Controversies data as of the end of the month preceding the review (e.g., end of June data for the July monthly review). For some securities, such data may not be published by MSCI ESG Research by the end of the month preceding the review. For such securities, MSCI will use ESG data published after the end of month, when available, for the monthly review of the Index.

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

4.4 Ongoing Event Related Changes

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

No new securities will be added (except where noted below) to the Index between Index Reviews. For cases where additions are noted below, securities will be added to the index only if added to the Parent Index.

Parent Index deletions will be reflected simultaneously.

There are no deletions from the MSCI SRI Low Carbon Select Indexes between Index Reviews because of a security becoming ineligible because of MSCI ESG Rating downgrade and/or decrease in MSCI ESG Controversies Score and/or change in business involvement.

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 be added to the index on the date of security inclusion only if they meet the eligibility criteria described in Section 3 and the market capitalization coverage of the selection group to which the security belongs is less than 22.5%¹³.

¹² The monthly review of ESG Controversies was applied from July 2023 onwards.

¹³ Prior to September 01, 2020 – New securities added to the Parent Index (such as IPOs, other early inclusions and migrations from a different size-segment) are not added to the index on the date of security inclusion.

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 inclusion in the Indexes 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>.

5 MSCI ESG Research

The Indexes are products 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 / Indexes use > the following MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, MSCI Climate Change Metrics, MSCI Impact Solutions, MSCI ESG Ratings, and MSCI ESG Governance Metrics. MSCI Indexes are administered by MSCI Limited:

5.1 MSCI ESG Ratings

MSCI ESG Ratings aim to measure entities' management of environmental, social and governance risks and opportunities. MSCI ESG Ratings use a weighted average key issue calculation that is normalized by industry to arrive at an industry-adjusted ESG score (0-10), which is then translated to a seven-point scale from 'AAA' to 'CCC', indicating how an entity manages relevant key issues relative to industry peers.

The MSCI ESG Ratings methodology can be found : <https://www.msci.com/esg-ratings>.

5.2 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>.

5.3 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.

5.4 MSCI Climate Change Metrics

MSCI Climate Change Metrics provides climate data & tools to support institutional investors seeking to integrate climate risk & opportunities into their investment strategy and processes. This includes investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, alignment with temperature pathways and factoring climate change research into their risk management processes, in particular through climate scenario analysis for both transition and physical risks.



The dataset spans across the four dimensions of a climate strategy: transition risks, green opportunities, physical risks and 1.5° alignment.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/our-solutions/esg-investing/climate-solutions>.

Appendix I: Values and Climate Change Based Screening Criteria

Companies whose activities meet the following values and climate change-based criteria, as evaluated by MSCI ESG Research LLC, are excluded from the MSCI SRI Low Carbon Select Indexes.

Values Based Exclusions:

- **Controversial Weapons**
 - All companies with any tie to Controversial Weapons (cluster munitions, landmines, depleted uranium weapons, biological/chemical weapons, blinding lasers, non-detectable fragments and incendiary weapons), as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes available at <https://www.msci.com/index-methodology>
- **Civilian Firearms**
 - All companies classified as “Producer” of firearms and small arms ammunitions for civilian markets. It does not include companies that cater to the military, government, and law enforcement markets
 - All companies deriving 5% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use
- **Nuclear Weapons**
 - All companies that manufacture nuclear warheads and/or whole nuclear missiles
 - All companies that manufacture components that were developed or are significantly modified for exclusive use in nuclear weapons (warheads and missiles)
 - All companies that manufacture or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons
 - All companies that provide auxiliary services related to nuclear weapons
 - All companies that manufacture components that were not developed or not significantly modified for exclusive use in nuclear weapons (warheads and missiles) but can be used in nuclear weapons
 - All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons but have the capability to deliver nuclear weapons
 - All companies that manufacture components for nuclear-exclusive delivery platforms

- **Tobacco**
 - All companies classified as a “Producer”
 - All companies deriving 5% or more aggregate revenue from the production, distribution, retail, supply and licensing of tobacco-related products
- **Alcohol**
 - All companies deriving 5% or more revenue from the production of alcohol related products
 - All companies deriving 15% or more aggregate revenue from the production, distribution, retail and supply of alcohol-related products
- **Adult Entertainment**
 - All companies deriving 5% or more revenue from the production of adult entertainment materials
 - All companies deriving 15% or more aggregate revenue from the production, distribution and retail of adult entertainment materials
- **Conventional Weapons**
 - All companies deriving 5% or more revenue from the production of conventional weapons and components
 - All companies deriving 10% or more aggregate revenue from the production of nuclear, biological, chemical, and conventional weapons and weapons systems, components, and support systems and services
- **Gambling**
 - All companies deriving 5% or more revenue from ownership of operation of gambling-related business activities
 - All companies deriving 15% or more aggregate revenue from gambling related business activities
- **Genetically Modified Organisms (GMO)**

- All companies deriving 5% or more revenue from activities like genetically modifying plants, such as seeds and crops, and other organisms intended for agricultural use or human consumption

- **Thermal Coal**
 - All companies deriving more than 0% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading
 - All companies deriving more than 0% revenue (either reported or estimated) from the thermal coal based power generation
 - All companies generating more than 0% of their total electricity from thermal coal in a given year
 - All companies that have more than 0% of installed capacity attributed to thermal coal in a given year

- **Unconventional Oil & Gas Extraction**
 - All companies deriving more than 0% revenue (either reported or estimated) from unconventional oil and gas production. It includes revenue from the production of oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane, as well as revenue from onshore or offshore oil and gas production in the Arctic region. It excludes revenue from conventional oil and gas production including deepwater, shallow water, and other onshore/offshore oil and gas.

- **Conventional Oil & Gas Extraction**
 - All companies deriving more than 0% revenue (either reported or estimated) from conventional oil and gas production. It includes revenue from the production of deepwater, shallow water, and other onshore/offshore oil and gas. It excludes revenue from unconventional oil and gas production (oil sands, shale oil, shale gas) and onshore/offshore oil and gas production in the Arctic region

Only companies deriving 40% or less revenue from products, services, or infrastructure projects supporting the development or delivery of renewable energy and alternative fuels are excluded due to Conventional Oil & Gas Extraction screen.

- **Oil & Gas-based Power Generation**

- All companies generating more than 0% of their total electricity from liquid fuel and natural gas in a given year
- All companies that have more than 0% of installed capacity attributed to liquid fuel and natural gas in a given year
- All companies deriving more than 0% revenue (either reported or estimated) from liquid fuel- and natural gas-based power generation

- **Nuclear Power-based Power Generation**

- All companies generating more than 0% of their total electricity from nuclear power in a given year
- All companies that have more than 0% of installed capacity attributed to nuclear sources in a given fiscal year
- All companies deriving more than 0% revenue (either reported or estimated) from ownership or operation of nuclear power plants
- All companies deriving 15% or more revenue from nuclear power activities.

- **Fossil Fuel Reserves**

- All companies, regardless of their industries, with evidence of owning fossil fuel reserves used most likely for energy applications.

Appendix II: Guidelines on Achieving the Target Coverage of 25%

The Indexes target 25% of the cumulative weight of each Selection Group of the Parent Index (“target weight”). The underlying principle in the construction of the indexes is to achieve cumulative weight closest to the target weight, while aiming to maintain index stability.

The following guidelines are used in achieving the target weight:

- For each Selection Group, the eligible companies of the regional Parent Index are first ranked based on the company level ESG Rating.
- If two companies have the same ESG Rating, the company with better ESG Trend is given priority (positive ESG Trend preferred to neutral ESG Trend and neutral ESG Trend preferred to negative ESG Trend).
- In case of two companies with the same ESG Rating and the same ESG Trend, an existing index constituent is given priority to maintain index stability. Between two existing constituents with the same ESG Rating and the same ESG Trend, the company with the higher industry adjusted ESG Score is given priority. For two existing index constituents with the same industry adjusted ESG score, the security with the largest free float-adjusted market capitalization is given priority.
- The cumulative weight at each rank is calculated using weights in the Capped Universe.
- In each Selection Group, companies are selected as per the rules mentioned in Section 4.1.3 until the cumulative weight crosses the target weight or there are no eligible securities left to be selected.
- MSCI defines the company that increases the cumulative weight above the target weight as the “marginal company”.
 - If the marginal company is a current index constituent, then it is always selected.
 - If the marginal company is not a current index constituent, then it is selected only if the cumulative weight with the marginal company is closer to the target weight compared to the cumulative weight without the marginal company.
- The minimum cumulative weight is set to 22.5% of the cumulative weight of the selection group in the Parent Index.
 - The marginal company is always selected if this is required to achieve the minimum cumulative weight.
- Securities which are ineligible as per Section 4 will not be selected even if the cumulative weight after selection of all eligible securities is below the target weight.

Appendix III: Guidelines on Achieving the Target Coverage of 50%

The MSCI Extended SRI Low Carbon Select Indexes target 50% of the cumulative weight of each Selection Group of the Parent Index (“target weight”). The underlying principle in the construction of the indexes is to achieve cumulative weight closest to the target weight, while aiming to maintain index stability.

- Securities in the top 35% of the cumulative weight in the Parent Index of the ranked universe, using weights as per the Capped Universe
- ‘AAA’ and ‘AA’ rated securities in the top 50% of the cumulative weight in the Parent Index of the ranked universe, using weights as per the Capped Universe
- Current index constituents in the top 65% of the cumulative weight in the Parent Index of the ranked universe, using weights as per the Capped Universe
- Remaining eligible securities in the ranked universe

The following guidelines are used in achieving the target weight:

- For each Selection Group, the eligible companies of the regional Parent Index are first ranked based on the company level ESG Rating.
- If two companies have the same ESG Rating, the company with better ESG Trend is given priority (positive ESG Trend preferred to neutral ESG Trend and neutral ESG Trend preferred to negative ESG Trend).
- In case of two companies with the same ESG Rating and the same ESG Trend, an existing index constituent is given priority to maintain index stability. Between two existing constituents with the same ESG Rating and the same ESG Trend, the company with the higher industry adjusted ESG Score is given priority. For two existing index constituents with the same industry adjusted ESG score, the security with the largest free float-adjusted market capitalization is given priority.
- The cumulative weight at each rank is calculated using weights in the Capped Universe.
- In each Selection Group, companies are selected as per the rules mentioned in Section 4.1.3 until the cumulative weight crosses the target weight or there are no eligible securities left to be selected.
- MSCI defines the company that increases the cumulative weight above the target weight as the “marginal company”.
 - If the marginal company is a current index constituent, then it is always selected.
 - If the marginal company is not a current index constituent, then it is selected only if the cumulative weight with the marginal company is closer to the target weight compared to the cumulative weight without the marginal company.
- The minimum cumulative weight is set to 45% of the cumulative weight of the selection group in the Parent Index.

- The marginal company is always selected if this is required to achieve the minimum cumulative weight.
- Securities which are ineligible as per Section 4 will not be selected even if the cumulative weight after selection of all eligible securities is below the target weight.

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>
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- 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 Global ex Controversial Weapons Indexes Methodology – <https://www.msci.com/index/methodology/latest/XCW>
- MSCI Capped Indexes Methodology – <https://www.msci.com/index/methodology/latest/Capped>
- ESG Factors In Methodology*

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’.

* ‘ESG Factors in Methodology’ contains the list of environmental, social, and governance factors considered, and how they are applied in the methodology (e.g., selection, weighting or exclusion). It can be accessed in the Methodology Set as described above.

Appendix VI: Changes to the Document

The following sections have been modified as of November 2020:

- Update to include the index construction parameters for the MSCI World Small Cap SRI Low Carbon Select 5% Issuer Capped Index

The following sections have been modified as of December 2021:

Effective December 01, 2021, the security selection rules have been updated to apply security weight capping during the security selection process. To reflect this change, the following sections have been modified:

- Section 2.2.2 inserted to reflect that the exclusion of companies with high carbon intensity is now applied during the security selection process
- Section 2.2.3 "Security Selection"
- Section 4 "Constructing the MSCI Extended SRI Low Carbon Select Indexes"
- Section 5 "Maintaining the MSCI SRI Low Carbon Select Indexes"
- Appendix II "Guidelines on Achieving the Target Coverage of 25%"
- Appendix III "Guidelines on Achieving the Target Coverage of 50%"

The following sections have been modified effective March 2022:

- Section 2.1: The following Index has been added with its corresponding Parent Index – MSCI Pacific ex Japan SRI Low Carbon Select 5% Issuer Capped Index

The following sections have been modified as of July 2022:

- Appendix I – Updated to reflect the change in the Conventional Weapon Aggregate Revenue Screen threshold from 15% to 10% which was effective March 1, 2022.

The following sections have been modified effective February 2023

- Section 1: Added the MSCI Pacific ex Japan IMI Extended SRI Low Carbon Select 5% Issuer Capped Index to the Introduction section.
- Section 4: Added the MSCI Pacific ex Japan IMI Extended SRI Low Carbon Select 5% Issuer Capped Index to the MSCI Extended SRI Low Carbon Select Indexes section.

The following sections have been modified as of July 2023

- Section 4: The monthly review of ESG controversies is applied within the Index effective July 3, 2023 and is not applicable historically prior to that date.
- Section 5: The ESG Research Product descriptions were updated and moved from section 2 to section 5.

The following sections have been modified as of September 2023

- Section 2.2.2.3: Clarified the exclusion criteria for companies involved in ESG Controversies.
- Appendix I: The screening criteria for Nuclear Power was clarified in this document to reflect the aggregate nuclear power screen applied to the Indexes.

The following sections have been modified as of December 1, 2023:

- Section 1: The MSCI Emerging Markets ex China SRI Low Carbon Select Index was added to the methodology.
- Section 2.1: The MSCI Emerging Markets ex China SRI Low Carbon Select Index and its respective Parent Index was added to the table which lists all indexes and their respective Parent Indexes.
- Section 2.2: New section detailing the treatment of companies with rating and research not available from MSCI ESG Research

The following sections have been modified as of February 2024:

- Section 2.1.2.1: Added introduction with treatment of missing data of GHG Intensity.
- Section 2.1.2.2: Added introduction of Potential Emissions Intensity.
- Appendix IV: Added details on the Methodology Set for the Indexes.

The following sections have been modified as of March 2024:

- Section 2: Added a methodology enhancement for the MSCI Emerging Markets ex China SRI Low Carbon Select 5% Issuer Capped Index.

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