

Methodology book for:

- MSCI World Low Carbon SRI Leaders Index
- MSCI USA Low Carbon SRI Leaders Index
- MSCI Europe Low Carbon SRI Leaders Index
- MSCI Japan Low Carbon SRI Leaders Index
- MSCI EM Low Carbon SRI Leaders Index
- MSCI EMU Low Carbon SRI Leaders Index
- MSCI China Low Carbon SRI Leaders Index
- MSCI AC Asia ex Japan Low Carbon SRI Leaders Index
- MSCI EM EMEA Low Carbon SRI Leaders Index
- MSCI EM LATAM Low Carbon SRI Leaders Index

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1 Introduction

The MSCI World Low Carbon SRI Leaders Index, MSCI USA Low Carbon SRI Leaders Index, MSCI Europe Low Carbon SRI Leaders Index, MSCI Japan Low Carbon SRI Leaders Index, MSCI EM Low Carbon SRI Leaders Index, MSCI EMU Low Carbon SRI Leaders Index, MSCI China Low Carbon SRI Leaders Index (herein, "MSCI Low Carbon SRI Leaders Indexes") are designed to represent the performance of companies that have low carbon transition risk¹ than that of the broad market and have high Environmental, Social and Governance (ESG) performance. The Indexes are free floatadjusted market capitalization weighted.

¹ For details on the Low Carbon Transition Risk, please refer to Appendix 3.



2 Constructing the MSCI Low Carbon SRI Leaders Indexes

2.1 APPLICABLE UNIVERSE

The applicable universe for MSCI Low Carbon SRI Leaders Indexes includes all the constituents of their respective MSCI parent index (the "Parent Index"), as shown in the table below.

Index Name	Parent Index
MSCI World Low Carbon SRI Leaders Index	MSCI World Index
MSCI USA Low Carbon SRI Leaders Index	MSCI USA Index
MSCI Europe Low Carbon SRI Leaders Index	MSCI Europe Index
MSCI Japan Low Carbon SRI Leaders Index	MSCI Japan Index
MSCI EM Low Carbon SRI Leaders Index	MSCI EM Index
MSCI EMU Low Carbon SRI Leaders Index	MSCI EMU Index
MSCI China Low Carbon SRI Leaders Index	MSCI China Index

2.2 ELIGIBLE UNIVERSE

The eligible securities for the Index are selected from the Applicable Universe by excluding securities of companies based on the exclusion criteria below:

Controversial Business Involvement Screens: Companies that meet the business involvement criteria as defined in section 3.2.1 (Controversial Business Involvement Criteria) of the MSCI SRI Indexes Methodology². In addition to the Controversial Business Involvement Criteria defined in section 3.2.1 of the MSCI SRI Indexes Methodology, the MSCI Low Carbon SRI Leaders Indexes use MSCI ESG Business

² Please refer to the MSCI SRI Indexes methodology at <u>www.msci.com/index-methodology</u>



Involvement Screening Research to identify companies that are involved in the controversial business activities as detailed in Appendix 2.

<u>Low Carbon Transition (LCT) category³:</u> All companies with Low Carbon transition (LCT) category of Asset Stranding are excluded.

Low Carbon Transition (LCT) score⁴: All companies in bottom 25% of the Parent Index⁵ by LCT score are excluded such that cumulative weight of securities remaining in each sector is at least 50% of the weight of the sector in the Parent Index.

2.3 SECURITY SELECTION

Apply MSCI ESG Leaders Indexes Methodology on the eligible universe with the following exceptions:

- Companies are required to have an MSCI ESG Rating of 'BBB' or above to be eligible for selection.
- Companies should not have faced severe controversies pertaining to Environmental issues.
- Exclusions based on Controversial Business Involvement Criteria as defined in section 3.2.3 of the MSCI ESG Leaders Indexes Methodology⁶ are not applied.

After applying MSCI ESG Leaders Indexes methodology, if the Scope 1+2+3 Carbon Emissions Intensity⁷ of the index is greater than or equal to 50% of the Scope 1+2+3 Carbon Emissions Intensity of the Parent Index, then the security with the highest Scope 1+2+3 Carbon Emissions Intensity is removed from the portfolio. This step is repeated till the Scope 1+2+3 Carbon Emissions Intensity of the index is less than 50% of the Scope 1+2+3 Carbon Emissions Intensity of the Parent Index.

³ For more details on LCT Category, please refer to Appendix 3.

⁴ While applying the LCT score screen, no security with LCT Category of Neutral or Solutions is removed even if these are in the bottom 25% by LCT score. Also, if the sector weight is already less than 50% of the sector weight in the parent index due to earlier screens, then no security will be removed from that sector.

⁵ Since, the MSCI ESG Leaders methodology is applied at a regional level, the parent index used in LCT score screen for Europe, EMU, Japan and China is same as the parent index used while applying ESG Leaders Methodology.

⁶ Please refer to the MSCI ESG Leaders Indexes methodology at <u>www.msci.com/index-methodology.</u>

⁷ For more details on Carbon Emissions Intensity, please refer to Appendix 5.



2.4 WEIGHTING SCHEME

The MSCI Low Carbon SRI Leaders Indexes are constructed by weighting the eligible constituents in proportion of their free float adjusted market capitalization.

The maximum overweight of any issuer in the MSCI Low Carbon SRI Leaders Indexes is capped at 5%. The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the index. After applying issuer capping, if the Scope 1+2+3 Carbon Emissions Intensity of the index is greater than or equal to 50% of the Scope 1+2+3 Carbon Emissions Intensity of the Parent Index, then the security with the highest Scope 1+2+3 Carbon Emissions Intensity is removed from the portfolio. This step is repeated till the maximum overweight of any issuer is capped at 5% and the Scope 1+2+3 Carbon Emissions Intensity of the index is less than 50% of the Scope 1+2+3 Carbon Emissions Intensity of the index is less than 50% of the Scope 1+2+3 Carbon Emissions Intensity of the Parent Index.



3 Maintaining the MSCI Low Carbon SRI Leaders Indexes

3.1 INDEX REVIEWS

The MSCI Low Carbon SRI Leaders Indexes are reviewed on a quarterly basis to coincide with the regular Semi-Annual and Quarterly Index Reviews of the MSCI Global Investable Market Indexes. The changes are generally implemented as of the close of the last business day of February, May, August, and November. The pro forma Index is in general announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores and MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews for the rebalancing of the MSCI ESG Leaders Indexes. 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, for the rebalancing of the MSCI ESG Leaders Indexes.

3.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the MSCI Low Carbon SRI Leaders 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 MSCI Low Carbon SRI Leaders 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.

EVENT TYPE	EVENT DETAILS
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 not be added to the index at the time of event implementation.

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.

For Mergers and Acquisitions, if an existing index constituent is acquired by a non-index constituent, the existing constituent will be deleted from the index and the acquiring nonconstituent will not be added to the index.

Changes in Security Characteristics

Merger/Acquisition

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



Appendix 1: MSCI China Low Carbon SRI Leaders Capped Index

The MSCI China Low Carbon SRI Leaders Capped Index is created on top of the MSCI China Low Carbon SRI Leaders Index by capping the maximum weight of any issuer in the MSCI China Low Carbon SRI Leaders Index at 18% in accordance with the MSCI Capped Indexes methodology⁸. The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the index.

⁸ Please refer to the MSCI Capped Indexes methodology at <u>www.msci.com/index-methodology</u>.



Appendix 2: Controversial Business Involvement Criteria

In addition to the Controversial Business Involvement Criteria defined in section 3.2.1 of the MSCI SRI Indexes Methodology, the MSCI Low Carbon SRI Leaders Indexes use MSCI ESG Business Involvement Screening Research to identify companies that are involved in the controversial business activities detailed below:

- 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.
- 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 deriving 10% or more aggregate revenue from the production, distribution, retail, supply and licensing of tobacco-related products



• Thermal Coal

- All companies deriving 10% or more revenue (either reported or estimated) from thermal coal mining.
- All companies generating 10% or more power from thermal coal
- All companies with 10% or more installed capacity for thermal coal
- All companies deriving 10% or more revenue from thermal coal-based power generation
- Nuclear Power
 - All companies generating 30% or more of their total electricity from nuclear power in a given year
 - All companies that have 30% or more of their installed capacity attributed to nuclear sources in a given year
 - All companies deriving 30% or more revenue (either reported or estimated) from the ownership or operation of nuclear power plants
- Oil and Gas
 - All companies deriving any revenue from unconventional oil and gas (including revenue from arctic oil and gas).
 - All companies deriving 5% or more revenue from oil and gas related activities, including pipelines and transportation, refining and equipment and services.
- Weapons
 - All companies deriving 5% or more revenue from weapons systems, components, and support systems and services
- Conventional Oil & Gas Extraction
 - All companies deriving any 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
- Oil & Gas-based Power Generation



- All companies generating more than 30% of their total electricity from liquid fuel and natural gas in a given year
- All companies that have more than 30% of installed capacity attributed to liquid fuel and natural gas in a given year
- All companies deriving more than 30% revenue (either reported or estimated) from liquid fuel- and natural gas-based power generation
- Fossil Fuel and Nuclear Energy based Power Generation⁹
 - All companies deriving any revenue from Fossil Fuel based or Nuclear energy based Power Generation.
 - All companies deriving 50% or more revenue from nuclear power activities.
- United Nations Global Compact Principles:
 - All companies which are unrated on United Nations Global Compact Principles compliance.

⁹ Such companies, where the total revenue derived from any of the six environmental impact themes including alternative energy, energy efficiency, green building, pollution prevention, sustainable water, or sustainable agriculture is greater than or equal to 50, are exempted from this screen. Similarly, companies with one or more active carbon emissions reduction target/s approved by the Science Based Targets initiative (SBTi) are exempted from this screen.



Appendix 3: MSCI Low Carbon Transition Risk Assessment

MSCI ESG Research's Low Carbon Transition Risk assessment¹⁰ is designed to identify potential leaders and laggards by holistically measuring companies' exposure to and management of risks and opportunities related to the low carbon transition.

The final output of this assessment is two company-level factors as described below:

- (1) **Low Carbon Transition Category**: This factor groups companies in five categories that highlight the predominant risks and opportunities they are most likely to face in the transition (Exhibit 1).
- (2) Low Carbon Transition Score: This score is based on a multi-dimensional risks and opportunities assessment and considers both predominant and secondary risks a company faces. It is industry agnostic and represents an absolute assessment of a company's position vis-à-vis the transition.

LOW CARBON TRANSITION SCORE	LOW CARBON TRANSITION CATEGORY		LOW CARBON TRANSITION RISK / OPPORTUNITY	
Score = 0	ASSET STRANDING		Potential to experience "stranding" of physical / natural assets due to regulatory, market, or technological forces arising from low carbon transition.	Coal mining & coal based power generation; Oil sands exploration/production
	TRANSITION	PRODUCT	Reduced demand for carbon-intensive products and services. Leaders and laggards are defined by the ability to shift product portfolio to low-carbon products.	Oil & gas exploration & production; Petrol/diesel based automobile manufacturers, thermal power plant turbine manufacturers etc.
	INANOMON	OPERATIONAL	Increased operational and/or capital cost due to carbon taxes and/or investment in carbon emission mitigation measures leading to lower profitability of the companies.	Fossil fuel based power generation, cement, steel etc.
	NEUTRAL		Limited exposure to low carbon transition carbon risk. Though companies in this category could have exposure to physical risk and/or indirect exposure to low carbon transition risk via lending, investment etc.	Consumer staples, healthcare, etc.
Score = 10	SOLUTIONS Score = 10		Potential to benefit through the growth of low-carbon products and services.	Renewable electricity, electric vehicles, solar cell manufacturers etc.

Exhibit 1: Low Carbon Transition Categories and Scores

¹⁰ For more details on MSCI Climate Change Metrics, please refer to <u>https://www.msci.com/climate-change-solutions</u>



Appendix 4: MSCI Low Carbon SRI Leaders Capped Indexes

The MSCI AC Asia ex Japan Low Carbon SRI Leaders Capped Index, MSCI EM LATAM Low Carbon SRI Leaders Capped Index, and MSCI EM EMEA Low Carbon SRI Leaders Capped Index (herein, "MSCI Low Carbon SRI Leaders Capped Indexes") are designed to represent the performance of companies that have low carbon exposure than that of the broad market and have high Environmental, Social and Governance (ESG) performance. The Indexes are free float-adjusted market capitalization weighted.

ELIGIBLE UNIVERSE

The eligible universe for MSCI Low Carbon SRI Leaders Capped Indexes includes all the constituents of their respective MSCI parent index (the "Parent Index"), as shown in the table below.

Index Name	Parent Index
MSCI AC Asia ex Japan Low Carbon SRI Leaders Index	MSCI AC Asia ex Japan Index
MSCI EM LATAM Low Carbon SRI Leaders Index	MSCI EM LATAM Index
MSCI EM EMEA Low Carbon SRI Leaders Index	MSCI EM EMEA Index

SELECTING COMPANIES WITH THE LOWEST CARBON EXPOSURE AND HIGHEST ESG PERFORMANCE

The two rules described below are applied independently, and securities selected by both rules are eligible for inclusion in the index.

LOWEST CARBON EXPOSURE SELECTION RULES

From the securities in the eligible universe, companies with low exposure to carbon risk, identified as companies with low carbon emission intensity and low potential emissions per dollar of market capitalization, are selected for inclusion in the index. The selection is completed in accordance with sections 3.3.1 and 3.3.2 of the MSCI Global Low Carbon Leaders Indexes methodology¹¹.

¹¹ Please refer to the MSCI Global Low Carbon Leaders Indexes methodology at <u>www.msci.com/index-methodology</u>



HIGHEST ESG PERFORMANCE SELECTION RULES

The MSCI ESG Leaders Indexes Methodology ¹², using the Controversial Business Involvement Criteria, as defined in section 3.2.1 (Controversial Business Involvement Criteria) of the MSCI SRI Indexes Methodology¹³, instead of the Controversial Business Involvement Criteria used in the MSCI ESG Leaders Indexes Methodology, is applied on the eligible universe to select the securities with the highest ESG Performance.

In addition to the Controversial Business Involvement Criteria defined in section 3.2.1 of the MSCI SRI Indexes Methodology, the MSCI Low Carbon SRI Leaders Indexes use MSCI ESG Business Involvement Screening Research to identify companies that are involved in the controversial business activities as detailed below:

- Weapons
 - All companies deriving 10% or more revenue from weapons systems, components, and support systems and services
- Conventional Oil & Gas Extraction
 - All companies deriving any 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
- Oil & Gas-based Power Generation
 - All companies generating more than 30% of their total electricity from liquid fuel and natural gas in a given year
 - All companies that have more than 30% of installed capacity attributed to liquid fuel and natural gas in a given year
 - All companies deriving more than 30% revenue (either reported or estimated) from liquid fuel- and natural gas-based power generation
- United Nations Global Compact Principles:
 - All companies which are unrated on United Nations Global Compact Principles compliance.

¹² Please refer to the MSCI ESG Leaders Indexes methodology at <u>www.msci.com/index-methodology</u>.

¹³ Please refer to the MSCI SRI Indexes methodology at <u>www.msci.com/index-methodology</u>



WEIGHTING SCHEME

The MSCI Low Carbon SRI Leaders Capped Indexes are constructed by weighting the eligible constituents in proportion of their free-float adjusted market capitalization.

The maximum weight of any issuer in the MSCI Low Carbon SRI Leaders Capped Index is capped at a predetermined level in accordance with the MSCI Capped Indexes methodology¹⁴. The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the index.

Index Name	Issuer Level Capping
MSCI AC Asia ex Japan Low Carbon SRI Leaders Capped Index	10%
MSCI EM EMEA Low Carbon SRI Leaders Capped Index	18%
MSCI EM LATAM Low Carbon SRI Leaders Capped Index	18%

¹⁴ Please refer to the MSCI Capped Indexes methodology at <u>www.msci.com/index-methodology.</u>



Appendix 5: Calculation of Carbon Emissions Intensity

For Parent Index constituents where the Scope 1+2+3 Emissions Intensity is not available, the average Scope 1+2+3 Emissions Intensity of all the constituents of the MSCI ACWI in the same GICS Industry Group in which the constituent belongs is used.

Security Level Carbon Emissions Intensity =

Scope 1 + 2 + 3 Carbon Emissions Enterprise Value + Cash(in M\$)

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The following sections have been modified since January 2018:

Update to include the index construction parameters for the MSCI EM Low Carbon SRI Leaders Index

The following sections have been modified since March 2018:

Update to include the index construction parameters for MSCI AC Asia ex Japan Low Carbon SRI Leaders Index and the MSCI AC Asia ex Japan Low Carbon SRI Leaders 10% Capped Index.

The following sections have been modified since January 2019:

Update to include:

- The enhanced value business exclusions from the MSCI SRI Indexes methodology
- The updated index names from the MSCI ESG Leaders Low Carbon ex Tobacco Involvement 5% Indexes to the MSCI Low Carbon SRI Indexes

The following sections have been modified since May 2020:

Update to include the index construction parameters for the MSCI EMU Low Carbon SRI Leaders Index

The following sections have been modified since June 2020:

Update to include the index construction parameters for the MSCI China Low Carbon SRI Leaders Index and the MSCI China Low Carbon SRI Leaders 18% Issuer Capped Index

The following sections have been modified since August 2020:

Update to include the index construction parameters for the MSCI EM EMEA Low Carbon SRI Leaders Index, MSCI EM LATAM Low Carbon SRI Leaders Index, MSCI EM EMEA Low Carbon SRI Leaders 18% Issuer Capped Index and MSCI EM LATAM Low Carbon SRI Leaders 18% Issuer Capped Index



The following sections have been modified since December 2020:

• Section 2.2.2

Updated to reflect additional Controversial Business Involvement Criteria

Appendix 1

Updated to reflect new branding of the MSCI Low Carbon SRI Leaders Capped Indexes

• Appendix 2

Updated to reflect detailed description of the additional Controversial Business Involvement Criteria

The following sections have been modified since December 2020:

• Section 2.2.2

Updated to reflect additional Controversial Business Involvement Criteria

Appendix 1

Updated to reflect new branding of the MSCI Low Carbon SRI Leaders Capped Indexes

• Appendix 2

Updated to reflect detailed description of the additional Controversial Business Involvement Criteria

The following sections have been modified since May 2022:

- Section 2.1, 2.2, 2.3 and 2.4 to incorporate changes in methodology
- Appendix 2 to include additional screening criteria
- Appendix 3 to include MSCI Low Carbon Transition Assessment
- Appendix 4 to include the methodology of MSCI Low Carbon SRI Leaders Capped Indexes.



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