

METHODOLOGY BOOK FOR:

- **MSCI WORLD CUSTOM ESG INDEX***
- **MSCI EMERGING MARKETS CUSTOM ESG INDEX***
- **MSCI EUROPE CUSTOM ESG INDEX***
- **MSCI NORTH AMERICA CUSTOM ESG INDEX***
- **MSCI AC ASIA EX JAPAN CUSTOM ESG INDEX***
- **MSCI PACIFIC CUSTOM ESG INDEX***

* a custom index calculated by MSCI based on ESG criteria selected by Northern Trust

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Contents

1	Introduction	3
2	Constructing the MSCI Custom ESG Indexes	4
2.1	Underlying Universe	4
2.2	Eligibility Criteria	4
2.2.1	ESG Controversies Score Eligibility	4
2.2.2	Controversial Business Involvement Criteria	4
3	Maintaining the MSCI Custom ESG Indexes	5
3.1	Index Reviews	5
3.2	Ongoing Event-Related Maintenance	5
4	MSCI ESG Research	7
4.1	MSCI ESG Controversies	7
4.2	MSCI ESG Business Involvement Screening Research	7
4.3	MSCI Climate Change Metrics	7
	Appendix 1: Controversial Business Involvement Criteria	8
	Compliance with UN Global Compact Principles	8
	Tobacco	8
	Nuclear Weapons	9
	Controversial Weapons	9
	Civilian Firearms	9
	Conventional Weapons	9
	Governance	9
	Thermal Coal	10
	Appendix 2: Changes to this Document	12

1 Introduction

The MSCI World Custom ESG Index, MSCI Emerging Markets (EM) Custom ESG Index, MSCI Europe Custom ESG Index, MSCI North America Custom ESG Index, MSCI AC Asia ex Japan Custom ESG Index and MSCI Pacific Custom ESG Index (the “Indexes”) are custom indexes based on customized ESG screening criteria selected by Northern Trust. These Indexes aim to exclude companies that do not comply with UN Global Compact Principles, are involved in the production or sale of tobacco products, are involved in for profit prisons or are involved in the production of controversial weapons. The Indexes also exclude companies that are involved in the mining and extraction of Thermal Coal or Thermal Coal based power generation or are involved in unconventional oil and gas and Arctic oil. Additionally, companies that are part of the Emerging Markets region of the MSCI AC Asia ex Japan Index and the MSCI EM Index are also screened to exclude majority held companies with a controversial board composition. The Indexes are free float-adjusted market capitalization weighted.¹

Index	Parent Index	ESG Criteria Applied	Governance Screen Applied
MSCI World Custom ESG Index	MSCI World Index	Yes	No
MSCI Emerging Markets Custom ESG Index	MSCI Emerging Markets Index	Yes	Yes
MSCI Europe Custom ESG Index	MSCI Europe Index	Yes	No
MSCI North America Custom ESG Index	MSCI North America Index	Yes	No
MSCI AC Asia ex Japan Custom ESG Index	MSCI AC Asia ex Japan Index	Yes	Yes ²
MSCI Pacific Custom ESG Index	MSCI Pacific Index	Yes	No

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 Only applicable to companies in the EM region within the MSCI AC Asia ex Japan Index.

2 Constructing the MSCI Custom ESG Indexes

2.1 Underlying Universe

The Underlying Universe for the Indexes is defined by the constituents of the respective MSCI Parent Index, as shown in the table in section 1.

2.2 Eligibility Criteria

The Indexes use company ratings and research provided by MSCI ESG Research³ to determine eligibility for index inclusion.

2.2.1 ESG Controversies Score Eligibility

The Indexes use MSCI ESG Controversies Scores to identify companies that are involved in very serious environmental, social or governance controversies related to their operations and/or products and services. Companies are required to have an MSCI ESG Controversies Score of 1 or above to be eligible for inclusion in the Indexes.

Companies not assessed by MSCI ESG Research on MSCI ESG Controversies are not eligible for inclusion in the Index.

2.2.2 Controversial Business Involvement Criteria

The Indexes use MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the business involvement criteria are excluded from the Indexes.

- Compliance with UN Global Compact Principles
- Tobacco
- Nuclear Weapons
- Controversial Weapons
- Civilian Firearms
- Conventional Weapons
- Thermal Coal
- Unconventional Oil and Gas and Arctic Oil
- For Profit Prisons

Companies are also evaluated on customized governance criteria for the MSCI EM Custom ESG Index and the Emerging Markets region within the MSCI AC Asia ex Japan Custom ESG Index.

Please refer to Appendix 1 for more details on the implementation of these criteria.

³ 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.

3 Maintaining the MSCI Custom ESG Indexes

3.1 Index Reviews

The Indexes are reviewed on a quarterly basis to coincide with the 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 list of companies to be excluded based on the selected ESG criteria is produced based on MSCI ESG Research data⁴ as of the end of January, April, July and October, respectively. 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 Indexes.

At the index reviews, all companies in the Underlying Universe are reviewed and eligible companies are added to the Indexes. Existing constituents are deleted from the Indexes if they do not meet the eligibility criteria described in Section 2.2. In addition, any constituent that is deleted from a Parent Index as a result of an Index Review is also deleted from the respective Index.

3.2 Ongoing Event-Related Maintenance

The following section briefly describes the treatment of common corporate events within the 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 be added to the Index at an estimated full market capitalization adjustment factor on the date of security inclusion.

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.

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

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.

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

4 MSCI ESG Research

The Indexes are products of MSCI Inc. that utilize 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 Indexes use the following MSCI ESG Research products: MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research and MSCI Climate Change 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 Climate Change Metrics

MSCI Climate Change Metrics provide 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/climate-solutions>.

Appendix 1: Controversial Business Involvement Criteria

COMPLIANCE WITH UN GLOBAL COMPACT PRINCIPLES

Definition: Companies that are involved in very serious environmental, social, or governance controversies related to their operations and/or products and services. Companies are excluded based on the following criteria:

- Environment Controversies (MSCI Environment Controversy Score of 0)
- Governance Controversies (MSCI Governance Controversy Score of 0)
- Human Rights Controversies (MSCI Human Rights Controversy Score of 0)
- Labor Rights Controversies (MSCI Labor Rights Controversy Score of 0)

A Score of zero is a 'red flag' controversy, defined as an ongoing, Very Severe ESG controversy implicating a company directly through its actions, products, or operations.

Environment

Controversies related to a firm's impact on the environment. Factors affecting this evaluation include whether a company is involved in controversies related to land use and biodiversity, toxic spills and releases, energy and climate change, water management, operational non-hazardous waste, environmental impact of products and services, and management of supply chain environmental impact.

Human Rights & Community

Controversies related to a firm's impact on the communities in which it does business. Factors affecting this evaluation include whether a company is involved in controversies related to support for controversial regimes, freedom of expression and censorship, and other human rights abuses and adverse impact on a community.

Labor Rights & Supply Chain

Controversies related to a firm's employee relations and supply chain. Factors affecting this evaluation include whether a company is involved in controversies related to labor-management relations, employee health & safety, collective bargaining & unions, discrimination and workforce diversity, and management of supply chain employee relations standards.

Governance

Controversies related to a firm's governance practices. Factors affecting this evaluation include whether a company is involved in controversies related to bribery, fraud and governance structures.

TOBACCO

Definition: Companies that are involved in tobacco, as further defined below, will be excluded.

Tobacco Producers

Companies that manufacture tobacco products which include cigars, blunts, cigarettes, e-cigarettes, inhalers, kreteks, smokeless tobacco, snuff, snus, dissolvable and chewing tobacco. This also includes companies that grow or process raw tobacco leaves.

Tobacco Distributors

Companies that derive 5% or more revenue from the distribution of tobacco products.

Tobacco Retailers

Companies that derive 5% or more revenue from the retail sales of tobacco products.

Tobacco Suppliers

Companies that derive 5% or more revenue from supplying products essential to the tobacco industry.

NUCLEAR WEAPONS

Definition: Companies that manufacture nuclear weapons or their related components, as further defined below, will be excluded.

Nuclear Weapons Systems Manufacturers

Companies that manufacture nuclear weapons, including nuclear warheads, intercontinental ballistic missiles, and ballistic missile submarines, which are capable of the delivery of nuclear warheads.

Nuclear Weapons Components Manufacturers

Companies that manufacture critical components for nuclear weapons or nuclear weapons delivery systems.

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 Ex-Controversial Weapons Indexes available at <https://www.msci.com/index/methodology/latest/XCW>.

CIVILIAN FIREARMS

Companies that derive 5% or more of their total annual revenues from the manufacture and retail of civilian firearms and ammunition will be excluded from the index.

CONVENTIONAL WEAPONS

Companies that derive 5% or more of their total annual revenues from weapons systems, components, and support systems and services will be excluded from the index.

GOVERNANCE

The Governance screen is only applied for the MSCI EM Custom ESG Index and for the Emerging Markets region within the MSCI AC Asia ex Japan Custom ESG Index.

Companies are evaluated based on three distinct rules. A company failing in any one of these rules is ineligible for inclusion in the Indexes.

Rule 1 - Companies will be excluded from the index if they meet all of the following four criteria:

- Companies with individual holdings of 30% or more of the voting rights
- Companies with less than half of independence on the board
- Companies which do not have an audit committee or have less than half of independence on their audit committee
- Companies which do not have a remuneration committee or have less than half of independence on their remuneration committee

Rule 2 - Companies without an Unqualified auditors' opinion will be excluded from the index.

Rule 3 - Companies that are state owned entities, with either 85% or more of the voting rights are held by the largest shareholder, or have a MSCI Human Rights Controversy Score of less than 5, and belong to countries⁵ that meet all of the following four criteria, are excluded from the index.

- Countries identified by Freedom House as having weak civil liberties in its Freedom in the World report.
- Countries identified by Freedom House as having weak political rights in its Freedom in the World report.
- Countries identified by Freedom House as Not Free in its Freedom of the Press Index.
- Countries on the U.S. Commission on International Religious Freedom's list of Tier 1 Countries of Particular Concern.

THERMAL COAL

Companies that are involved in the mining and extraction of thermal coal or in thermal coal based power generation, as further defined below, will be excluded.

Thermal Coal Mining and Extraction

- Companies that derive 5% or more of their total annual revenues from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It does not screen out: revenues 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.

⁵ As defined by MSCI's Country of Classification framework.

Thermal Coal based Power Generation

- Companies that derive 30% or more of their total annual revenues (either reported or estimated) from thermal coal based power generation; or
- Companies that derive 5% or more of their total annual revenues (either reported or estimated) from thermal coal based power generation and:
 - have a score of 4 or less in low carbon transition management
 - or a score of 3 or 4 in low carbon transition management score quartile.

Unconventional Oil and Gas and Arctic Oil

- Companies that derive 5% or more of their total annual revenues (either reported or estimated) from unconventional oil and gas; or
- Companies that derive 1% or more of their total annual revenues (either reported or estimated) from arctic oil and;
 - have a score of 4 or less in low carbon transition management
 - or a score of 3 or 4 in low carbon transition management score quartile.

For Profit Prisons

- Companies that derive 5% or more of their total annual revenues (either reported or estimated) from activities related to For Profit Prisons.

Appendix 2: Changes to this Document

The following sections have been modified as of July 2014:

1. Introduction and 2. Screening Criteria

Update to include the index construction parameters for MSCI World Custom ESG Index and MSCI Europe Custom ESG Index

Appendix 1

Governance section – update to the description

The following sections have been modified as of September 2015:

Update to include the index construction parameters for MSCI North America Custom ESG Index

The following sections have been modified as of December 2015:

Appendix 1

Governance section – clarification for the exclusions description

The following sections have been modified as of May 2017:

Section 4: Maintaining the MSCI Custom ESG Indexes

- Clarification on use of ESG data for securities whose data would be available after the end of the month preceding Index Review.

The following sections have been modified as of May 2017:

Update to include the index construction parameters for MSCI AC Asia ex Japan Custom ESG Index

The following sections have been modified as of June 2017

Section 4: Maintaining the MSCI Custom ESG Indexes

Update to the frequency of application of the Governance Screening Criteria from annual to quarterly. Update to the corporate events treatment rules for the custom indexes.

Appendix 1

Governance section – update of existing screens as well as inclusion of a new screen based on auditor reports.

The following sections have been modified as of November 2017:

Appendix I: Updated the controversial business screening criteria pertaining to Controversial Weapons.

The following sections have been modified as of May 2018:

Section 4.2: Ongoing Event-Related Maintenance

Update to modify the treatment of new additions (due to IPO and other early inclusions) to the parent index in between two index reviews.

The following sections have been modified as of September 2018:

Introduction

Update to include the MSCI Pacific Custom ESG Index which would also be governed by this methodology.

The following sections have been modified as of January 2019:

Screening Criteria

Update to include screens for Civilian Firearms and Conventional Weapons.

Appendix 1: Update to include the definitions of the screens used for Civilian Firearms and Conventional Weapons.

The following sections have been modified as of February 2019:

Section 2: Added description of MSCI ESG Research used in the Index construction

Section 3: Screening Criteria

Update to include screen for Thermal Coal

Appendix 1: Update to include the definitions of the screens used for Thermal Coal Mining and Extraction and Thermal Coal based Power Generation.

The following sections have been modified as of August 2019:

Section 2: Added description of MSCI ESG Controversies used in the Index construction

Section 3: Added section 3.1, ESG Controversies Score Eligibility criteria.

Appendix 1: Update to include the definitions of the enhancements in the screens used for Governance.

The following sections have been modified as of December 2021:

Section 1: Introduction updated to reflect the new controversial business criteria.

Section 3.2: Updated to include the enhancements to the controversial business involvement screening criteria

Appendix 1: Update to include the definitions of the enhancements in the controversial business involvement screens.

The following sections have been modified as of June 2022:

Appendix 1: Update to reflect enhanced screening criteria for Unconventional Oil and Gas and Arctic Oil.

The following sections have been modified as of August 2023:

The 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 3: Clarified the Ongoing Event-Related Maintenance section.

Section 2.2.1: Clarified the exclusion criteria for companies involved in ESG Controversies.

Section 4 (MSCI ESG Research): Moved section after the Section 3. Updated the descriptions of MSCI ESG Research products.

Appendix 1: Clarified the exclusion criteria for the following screens: ‘Compliance with UN Global Compact Principles’, ‘Tobacco’ and ‘Thermal Coal’.

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