

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

August 2020

Contents

- 1 Introduction 3
- 2 MSCI ESG Research 4
 - 2.1 MSCI ESG Controversies 4
 - 2.2 MSCI ESG Business Involvement Screening Research 4
 - 2.3 MSCI Climate Change Metrics 4
- 3 Screening Criteria 5
 - 3.1 ESG Controversies Score Eligibility 5
 - 3.2 ESG Exclusions 5
- 4 Constructing the MSCI Custom ESG Indexes 6
 - 4.1 Underlying Universe 6
 - 4.2 Exclusion Criteria 6
- 5 Maintaining the MSCI Custom ESG Indexes 7
 - 5.1 Index Reviews 7
 - 5.2 Ongoing Event-Related Changes 7
- Appendix 1 – Screening Criteria 9
 - Compliance with UN Global Compact Principles 9
 - Tobacco 10
 - Nuclear Weapons 10
 - Controversial Weapons 11
 - Civilian Firearms 11
 - Conventional Weapons 11
 - Governance 11
 - Thermal Coal 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, 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. 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.

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 ¹
MSCI Pacific Custom ESG Index	MSCI Pacific Index	Yes	No

¹ Only applicable to companies in the EM region within the MSCI AC Asia ex Japan Index

2 MSCI ESG Research

The Index uses company research provided by MSCI ESG Research. In particular, this index uses the MSCI Business Involvement Screening Research and MSCI Climate Change Metrics products.

For details on MSCI ESG Research’s full suite of ESG products, please refer to: http://www.msci.com/products/esg/about_msci_esg_research.html

2.1 MSCI ESG CONTROVERSIES

MSCI ESG Controversies provides assessments of controversies concerning the negative environmental, social and 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.

For more details on MSCI ESG Controversies Score, please refer to <https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>.

2.2 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

2.3 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics is designed to support investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, and factoring climate change research into their risk management processes. It provides Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies.

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

3 Screening Criteria

3.1 ESG CONTROVERSIES 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 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.

3.2 ESG 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 exclusion criteria are deemed ineligible for inclusion.

- Compliance with UN Global Compact Principles
- Tobacco
- Nuclear Weapons
- Controversial Weapons
- Civilian Firearms
- Conventional Weapons
- Thermal Coal

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.

4 Constructing the MSCI Custom ESG Indexes

4.1 UNDERLYING UNIVERSE

The selection universe for the MSCI Custom ESG Indexes is the respective MSCI Parent Index, as shown in the table in section 1.

4.2 EXCLUSION CRITERIA

Companies that are involved in activities that violate the customized ESG screening criteria described in Section 2 are excluded from the MSCI Custom ESG Indexes.

5 Maintaining the MSCI Custom ESG Indexes

5.1 INDEX REVIEWS

The MSCI Custom ESG 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 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 data 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 MSCI Custom ESG Indexes.

At the index reviews, all companies in the underlying universe are reviewed and eligible companies are added to the MSCI Custom ESG Indexes. Existing constituents are deleted from the MSCI Custom ESG Index if they have been added to the exclusion list. In addition, any constituent that is deleted from the underlying index as a result of an index review is also deleted from the MSCI Custom ESG Index.

5.2 ONGOING EVENT-RELATED CHANGES

The MSCI Corporate Events Methodology is applied for the maintenance of the MSCI Custom ESG Indexes between index reviews.

Companies deleted from the underlying index between index reviews are simultaneously deleted from the MSCI Custom ESG Indexes.

There will be no additions to the Index in between Index Reviews, except the cases noted below:

- Any new security added to the parent index (such as IPO and other early inclusions) will be added to the index, if it meets the eligibility criteria.
- Any security 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.
- 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 details relating to the handling of specific corporate event types can be found in the MSCI Corporate Events Methodology book available at: <https://www.msci.com/index-methodology>.

Appendix 1 – Screening Criteria

MSCI ESG Research creates the list of excluded securities for the MSCI Custom ESG Indexes by identifying companies within its coverage universe based on the following sets of ratings criteria: Compliance with UN Global Compact Principles, Tobacco, and Controversial Weapons; and Governance in case of MSCI EM Custom ESG Index and the Emerging Markets region within the MSCI AC Asia ex Japan Custom ESG Index.

COMPLIANCE WITH UN GLOBAL COMPACT PRINCIPLES

Definition: Companies that are involved in controversies classified as “very severe” in the areas of Environment, Human Rights & Community, Labor Rights & Supply Chain, or Governance will be excluded. The following areas are evaluated as part of this screen:

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 derive any revenue from the production of tobacco, or 5% or more revenue from the distribution of, supply of key products for, or retail of tobacco, as further defined below, will be excluded.

TOBACCO PRODUCERS

Companies that manufacture tobacco products, such as cigars, blunts, cigarettes, beedis, kreteks, smokeless tobacco, snuff, snus, and chewing tobacco. This also includes companies that grow or process raw tobacco leaves.

TOBACCO DISTRIBUTORS

Companies that derive 5% or more of total annual revenues from the independent wholesale of tobacco products to retailers and other distributors.

TOBACCO RETAILERS

Companies that derive 5% or more of total annual revenues from the retail of tobacco products.

TOBACCO SUPPLIERS

Companies that derive 5% or more of total annual revenues from the manufacture and supply of key products necessary for the production of tobacco products, such as tobacco flavoring, cigarette filters (acetate tow), tobacco roll paper, cigarette manufacturing machines, and tobacco packaging - specifically cigarette cartons, films, and aluminum foil.

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>.

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

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 countries² 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 thermal coal based power generation, as further defined below, will be excluded.

THERMAL COAL MINING AND EXTRACTION

Companies which meet the following Thermal Coal Criteria are excluded from the indexes:

- 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 excludes: revenues from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically

² As defined by MSCI’s Country of Classification framework.

integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading.

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 are excluded from the indexes.

The following sections have been modified since 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 since September 2015:

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

The following sections have been modified since December 2015:

Appendix 1

Governance section – clarification for the exclusions description

The following sections have been modified since 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 since May 2017:

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

The following sections have been modified since 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 since November 2017:

Appendix 1: Updated the controversial business screening criteria pertaining to Controversial Weapons.

The following sections have been modified since 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 since 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 since 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 since 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 since 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.

Contact us

clientservice@msci.com

AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

* = toll free

ABOUT MSCI

MSCI is a leader provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investable assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

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