

METHODOLOGY BOOK FOR:

- **MSCI WORLD EX SELECT
CONTROVERSIES INDEX METHODOLOGY**
- **MSCI NORTH AMERICA EX SELECT
CONTROVERSIES INDEX METHODOLOGY**
- **MSCI EUROPE EX SELECT
CONTROVERSIES INDEX METHODOLOGY**
- **MSCI PACIFIC EX SELECT
CONTROVERSIES INDEX METHODOLOGY**

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1 Introduction

The MSCI World ex Select Controversies Index, MSCI North America Ex Select Controversies Index, MSCI Europe ex Select Controversies Index and MSCI Pacific ex Select Controversies Index (herein, “MSCI Global ex Select Controversies Indexes”) aim to represent the performance of a free float adjusted market capitalization weighted investment strategy that excludes companies associated with controversial, civilian and nuclear weapons. The indexes also exclude companies associated with tobacco as well as those that derive revenue from thermal coal.

2 MSCI ESG Research

The MSCI Global ex Select Controversies Indexes use company research provided by MSCI ESG Research. In particular, the indexes use the following two MSCI ESG Research products: MSCI ESG Controversies and MSCI Business Involvement Screening Research.

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 Constructing the MSCI Global ex Select Controversies Index

3.1 ELIGIBLE UNIVERSE

The eligible universe for MSCI Global ex Select Controversies Indexes include all the constituents of their respective MSCI parent index (the “Parent Index”), as shown in the table below:

Index Name	Parent Index
MSCI World ex Select Controversies Index	MSCI World Index
MSCI North America ex Select Controversies Index	MSCI North America Index
MSCI Europe ex Select Controversies Index	MSCI Europe Index
MSCI Pacific ex Select Controversies Index	MSCI Pacific Index

3.2 ESG CONTROVERSIES SCORE ELIGIBILITY

The MSCI Global ex Select Controversies 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 MSCI Global ex Select Controversies Indexes.

3.3 ESG EXCLUSIONS

The MSCI Global ex Select Controversies 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 excluded from the MSCI Global ex Select Controversies Indexes.

- Controversial Weapons
- Nuclear Weapons
- Civilian Firearms
- Tobacco
- Thermal Coal

Please refer to Appendix 1 for details on these criteria.

3.4 WEIGHTING SCHEME

The remaining securities, after the exclusions based on the above sections, are weighted in proportion of their free float-adjusted market capitalization.

4 Maintaining the MSCI Global Ex Select Controversies Index

4.1 QUARTERLY INDEX REVIEWS

The MSCI Global ex Select Controversies 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.

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 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 indexes.

The pro forma Index is, in general, announced nine business days before the effective date.

4.2 ONGOING EVENT-RELATED CHANGES

The general treatment of corporate events in the MSCI Global ex Select Controversies 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 ex Select Controversies Indexes.

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

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.

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>.

Appendix 1 – ESG Exclusion Criteria

MSCI ESG Research has developed a framework designed to define significant involvement in controversial activities. According to this framework, there are three tolerance levels: Zero Tolerance, Minimal Tolerance and Low Tolerance.

Each controversial activity screened by the MSCI ex Select Controversies Indexes (except Thermal Coal) is assigned to one of these tolerance levels:

Activities classified under “Zero Tolerance”

- **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>.

Activities classified under “Minimal Tolerance”

- **Nuclear Weapons**
 - 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 nuclear weapons, including nuclear warheads, intercontinental ballistic missiles, and ballistic missile submarines, which are capable of the delivery of nuclear warheads.
 - All companies that own 20% or more of a company with nuclear weapons involvement.
 - All companies that are owned 50% or more by a company with nuclear weapons involvement.
- **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 revenue or \$20 million or more revenue from the distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.

- **Tobacco**

- All companies classified as a “Producer”.
- All companies deriving 15% or more aggregate revenue from the production, distribution, retail and supply of tobacco-related products.

Activities not classified under any specific tolerance level

- **Thermal Coal**

All companies deriving 30% or more 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.

The following sections have been modified since September 2018:

Update to include the index construction parameters for the MSCI North America Ex Select Controversies Index, the MSCI Europe ex Select Controversies Index and the MSCI Pacific ex Select Controversies Indexes.

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