

# **MSCI ESG SELECT INDEX METHODOLOGY**

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# 1 INTRODUCTION

The MSCI ESG Select Index (the ‘Index’) is designed to maximize its exposure to positive environmental, social and governance (ESG) factors while exhibiting risk and return characteristics similar to those of the underlying market capitalization weighted index. The index is constructed by selecting constituents of a market capitalization weighted index (the ‘Parent Index’) through an optimization process that aims to maximize exposure to ESG factors for a target tracking error budget under certain constraints.

The Index is sector-diversified and targets companies with high ESG ratings in each sector. Tobacco and Controversial Weapons companies are not eligible for inclusion in the Index.

## 2 ESG RESEARCH FRAMEWORK

MSCI ESG Research products and services are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research Inc. are also used in the construction of the MSCI ESG Indexes.

### 2.1 MSCI ESG RATINGS

MSCI ESG Ratings provide research, analysis and ratings of how well companies manage their environmental, social and governance risks and opportunities.

For more details on MSCI ESG IVA, please refer to [http://www.msci.com/resources/factsheets/MSCI ESG IVA.pdf](http://www.msci.com/resources/factsheets/MSCI_ESG_IVA.pdf)

### 2.2 MSCI ESG CONTROVERSIES

MSCI ESG Controversies assess controversies concerning the 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.

For more details on MSCI ESG Controversies, please refer to [http://www.msci.com/resources/factsheets/MSCI\\_ESG\\_Impact\\_Monitor.pdf](http://www.msci.com/resources/factsheets/MSCI_ESG_Impact_Monitor.pdf)

### 3 CONSTRUCTING THE MSCI ESG SELECT INDEX

Constructing the MSCI ESG Select Index involves the following steps:

- Defining the underlying Parent Index;
- Defining the exclusion criteria;
- Defining the optimization constraints; and
- Determining the optimized portfolio

#### 3.1 DEFINING THE PARENT INDEX

Securities of companies involved in following businesses are excluded from the Parent Index

| ESG Select Index                            | Parent Index                    | Exclusions                                  |
|---|---------------------------------|---|
| MSCI EAFE ESG Select Index                  | MSCI EAFE Index                 | Tobacco and Controversial Weapons Companies |
| MSCI EM (EMERGING MARKETS) ESG Select Index | MSCI EM (EMERGING MARKET) Index | Tobacco and Controversial Weapons Companies |

Please refer to Appendix 1 for more details on exclusions.

#### 3.2 DEFINING THE EXCLUSION CRITERIA

Securities of companies involved in very severe business controversies are not eligible for inclusion in the MSCI ESG Select Index. This is implemented by excluding constituents of Parent Index with ESG Controversy Score = 0 ('Red Flag' companies).

##### 3.2.1 OTHER EXCLUSION CRITERIA

- Missing Controversy Score – Companies not assessed by MSCI ESG Research on Impact Monitor Controversy Scores are excluded from the Parent Index.
- Missing IVA Rating or ESG Score – Companies which are not rated by MSCI ESG Research on IVA assessment.

#### 3.3 DEFINING THE OPTIMIZATION CONSTRAINTS

Constituents are selected to maximize exposure to higher ESG IVA scores, subject to maintaining risk and return characteristics similar to the Parent Index. ESG IVA scores are normalized and factored into the optimization process. Optimization maximizes Index's

exposure to ESG IVA scores for a predicted tracking error. Following predicted tracking errors are used for the construction of MSCI ESG Select Indexes –

| No. | ESG Select Index                            | Predicted Tracking Error |
|-----|---|--------------------------|
| 1   | MSCI EAFE ESG Select Index                  | 0.5%                     |
| 2   | MSCI EM (EMERGING MARKETS) ESG Select Index | 1.0%                     |

Optimization is a quantitative process that considers the market capitalization weights from the Parent Index, ESG scores and additional optimization constraints to select and weight the constituents in the Index.

Normalization of the ESG scores allows the optimization to assess each score in the context of the overall distribution of the ESG scores.

Please refer to Appendix 3 for the Optimization constraints.

### 3.4 DETERMINING THE OPTIMIZED PORTFOLIO

The Index is constructed using the most recent release of the Barra Open Optimizer in combination with the relevant Barra Equity Model. The optimization uses universe of eligible securities and the specified optimization objective and constraints to determine the constituents of the MSCI ESG Select Index.

## 4 MAINTAINING THE MSCI ESG SELECT INDEX

### 4.1 QUARTERLY INDEX REVIEWS

The Index is rebalanced on a quarterly basis to coincide with the regular Index Reviews (Semi-Annual Index Reviews in May and November and Quarterly Index Reviews in February and August) of the MSCI Global Investable Market Indexes. The changes are implemented at the end of February, May, August and November. The pro forma indexes are in general announced nine business days before the effective date.

ESG scores used for the Quarterly Index Reviews will be taken as of the end of the month preceding the Index Review, i.e., January, April, July and October.

At each Index Review, the optimization process outlined in Section 3 is implemented. Companies can only be added to the Index only at regular Index Reviews.

### 4.2 ONGOING EVENT-RELATED MAINTENANCE

In general, the MSCI ESG Select Index follows the event maintenance of the Parent Index.

New additions to the Parent Index due to corporate events will not be added simultaneously to the Index, but will be considered for inclusion at the following Index Review. Companies deleted from the Parent Index between Index Reviews due to corporate events maintenance are also deleted at the same time from the Index.

The technical details relating to the handling of specific corporate event types can be found in the MSCI Corporate Events Methodology book available at:

<http://www.msci.com/products/indexes/size/standard/methodology.html>

## APPENDIX 1: TOBACCO AND CONTROVERSIAL WAEAPONS EXCLUSION CRITERIA

- Tobacco Involvement

Companies which meet the following Tobacco involvement criteria are excluded from the Index

- All companies classified as “Producer” or “Licensor”
- All companies classified as “Distributor”, “Retailer”, or “Supplier” that earn 15% or more of revenues from tobacco products
- All companies classified as “Ownership by a Tobacco Company” or “Ownership of a Tobacco Company”

- Controversial Weapons Involvement

Companies which meet the following Controversial Weapons criteria are excluded from the Index

- Cluster Bombs  
MSCI ESG Research’s cluster bomb research identifies public companies that are involved in the production of cluster bombs and munitions, or the essential components of these products.
- Landmines  
MSCI ESG Research’s landmines research identifies public companies that are involved in the production of anti-personnel landmines, anti-vehicle landmines, or the essential components of these products.
- Depleted Uranium Weapons  
MSCI ESG Research’s depleted uranium weapons research identifies public companies involved in the production of depleted uranium weapons and armor.
- Chemical and Biological Weapons  
MSCI ESG Research’s chemical and biological weapons research identifies public companies that are involved in the production of chemical and biological weapons, or the essential components of these products.

Involvement criteria:

- Producers of the weapons



- Producers of key components of the weapons
- Ownership of 20% or more of a weapons or components producer

The minimum limit is raised to 50% for financial companies having an ownership in a company that manufactures controversial weapons or key components of controversial weapons

- Owned 50% or more by a company involved in weapons or components production

Revenue limits:

- Any identifiable revenues, i.e., zero tolerance

For details please refer to MSCI Global ex Controversial Weapons Indexes Methodology at <https://www.msci.com/index-methodology>.

## APPENDIX 2: OPTIMIZATION CONSTRAINTS

At each Quarterly Index Review, the following optimization constraints are used to ensure replicability and investability:

| Optimization Constraints |   |        |        |
|--------------------------|---|--------|--------|
| No.                      | Parameter   | EAFE   | EM     |
| 1                        | Predicted Tracking Error  | 0.5%   | 1.0%   |
| 2                        | Min Constituent Weight  | 0.1%   | 0.1%   |
| 3                        | Constituent Active Weight                                       | +/-2%  | +/-2%  |
| 4                        | Security Weight as a Multiple of its weight in the Parent Index | 20     | 20     |
| 5                        | Active Sector Weights   | +/-5%  | +/-5%  |
| 6                        | Active Country Weights  | +/-5%  | +/-5%  |
| 7                        | One Way Turnover during May and November Index Review           | 10%    | 10%    |
| 8                        | One Way Turnover during Feb and Aug Index Review                | 5%     | 5%     |
| 9                        | Specific Risk Aversion  | 0.075  | 0.075  |
| 10                       | Common Factor Risk Aversion                                     | 0.0075 | 0.0075 |

**Infeasible Solution** - During the Quarterly and Semi-Annual Index Reviews, in the event that there is no optimal solution that satisfies all the optimization constraints, first the turnover constraint will be relaxed up to a maximum turnover of 30% in steps of 1% until an optimal solution is found. If a feasible solution is not found at turnover of 30%, the predicted tracking error is relaxed up to a maximum of 5 times of the original predicted tracking error in steps on 0.1%. In the event that feasible solution is not found for maximum predicted error, the Index will not be rebalanced for that index review.

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