

MSCI EM SELECT COUNTRIES ESG LEADERS YIELD LOW VOLATILITY INDEX METHODOLOGY

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1 INTRODUCTION

The MSCI EM Select Countries ESG Leaders Yield Low Volatility aims to represent the performance of a strategy that seeks exposure to stocks with high Dividend Yield, liquidity and Low Volatility, from a selection of companies in the Emerging Markets having high ESG performance.

2 MSCI ESG RESEARCH

The MSCI EM Select Countries ESG Leaders Yield Low Volatility Index uses company ratings and research provided by MSCI ESG Research. In particular, the index uses the following MSCI ESG Research products: MSCI ESG Ratings, 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 RATINGS

MSCI ESG Ratings provides research, analysis and ratings of how well companies manage environmental, social and governance risks and opportunities. MSCI ESG Ratings provides an overall company ESG rating - a seven-point scale from ‘AAA’ to ‘CCC’. In addition, the product provides scores and percentiles indicating how well a company manages each key issue relative to industry peers. For more details on MSCI ESG Ratings, please refer to: <https://www.msci.com/esg-ratings>

2.2 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>.

2.3 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.

3 CONSTRUCTING THE MSCI EM SELECT COUNTRIES ESG LEADERS YIELD LOW VOLATILITY INDEX

The MSCI EM Select Countries ESG Leaders Yield Low Volatility Index is constructed by applying the following steps to the MSCI Emerging Markets Index (herein, the “Parent Index”) at initial construction and subsequent Index Reviews:

- Defining the Eligible Universe
- Applying the MSCI ESG Leaders Indexes Methodology
- Applying the Liquidity Screening
- Optimizing the Eligible Universe
 - Identifying Constituents
 - Applying the Weighting Scheme

3.1 DEFINING THE ELIGIBLE UNIVERSE

The Eligible Universe consists of all constituents of the Parent Index that belong to the following countries based on their MSCI country of classification.

China	Korea	Taiwan	Brazil
South Africa	Russia	Mexico	Malaysia
Thailand	Indonesia	Poland	Czech Republic
Qatar	Hungary	UAE	

3.2 APPLYING THE MSCI ESG LEADERS INDEXES METHODOLOGY

The MSCI ESG Leaders Indexes methodology is applied on the eligible universe¹.

3.3 APPLYING THE LIQUIDITY SCREEN

From the securities selected after the application of the above methodology, only those that have a 6 month Annualized Traded Value² greater than or equal to \$1.25 billion are eligible for inclusion in the Index. These securities form the Screened Universe.

¹ Please refer to the MSCI ESG Leaders Indexes methodology at www.msci.com/index-methodology

² Please refer to the MSCI Index Calculation methodology at www.msci.com/index-methodology

3.4 OPTIMIZING THE ELGIBLE UNIVERSE

The constituent selection for the MSCI EM Select Countries ESG Leaders Yield Volatility Index is performed by the process of optimization on the Screened Universe.

The optimization objective of the MSCI EM Select Countries ESG Leaders Yield Volatility Index is to maximize the alpha score (representative of the exposures to the set of target factors)

3.4.1 CALCULATION OF THE ALPHA SCORE

The alpha score of the Index is defined as follows:

$$\alpha_i = 0.5 * F_{1,i} + 0.5 * F_{2,i}$$

Where,

$F_{j,i}$ = Factor exposure of each security i for each target factor j.

The factor exposures for the target factors are sourced as follows:

1. Dividend Yield (F1): Factor exposure for each security taken from the relevant Barra Equity Model³.
2. Low Volatility (F2): Factor exposure for each security taken from the relevant Barra Equity Model.

Please refer to Appendix 3 for factor definitions of the above factors.

3.4.2 OPTIMIZATION CONSTRAINTS

At each Quarterly Index Review (QIR), the following optimization constraints are employed:

- The one-way turnover of the Index is constrained to a maximum of 40% at each Index Review.
- The minimum number of stocks is restricted to 30.
- The sector weights of the Index will not deviate more than -5% to +10% from the sector weights of the Screened Universe.
- The country weights of the Index will not deviate more than +/-10% from the country weights of the Screened Universe.
- The maximum weight of an index constituent will be restricted to the lower of 10% or 10 times the weight of the security in the Screened Universe.

³ Please refer to Appendix 2 for further information on Barra Equity Models

- The minimum weight of an index constituent will be restricted to 0.25%.

3.4.3 DETERMINING THE OPTIMIZED INDEX

The MSCI EM Select Countries ESG Leaders Yield Volatility Index is constructed using the Barra Open Optimizer in combination with the relevant Barra Equity Model. The optimization uses the securities selected after the Liquidity Screening step as the universe of eligible securities and the specified optimization objective and constraints to determine the Index. The Barra Open Optimizer determines the Index constituent weight, i.e. the set of securities with the highest possible alpha score.

4 MAINTAINING THE MSCI EM SELECT COUNTRIES ESG LEADERS YIELD VOLATILITY INDEX

4.1 QUARTERLY INDEX REVIEWS

The MSCI EM Select Countries ESG Leaders Yield Volatility Index is 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 Index. 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 Index.

Barra Equity Model data as of the end of January, April, July and October are used respectively. This approach aims to capture timely updates to the risk characteristics of the companies and coincide with the rebalancing frequency of the relevant Parent Index.

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 EM Select Countries ESG Leaders Yield Volatility Index 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. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent. There will be no additions to the Index in between Index Reviews.

The following section briefly describes the treatment of common corporate events within the MSCI EM Select Countries ESG Leaders Yield Volatility Index.

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 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.

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 under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

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

APPENDIX 1: HANDLING INFEASIBLE OPTIMIZATION

In the event that no optimal solution is found that satisfies all the optimization constraints defined in Section 3.5.2, the Index will not be rebalanced for that Quarterly Index Review.

APPENDIX 2: NEW RELEASE OF BARRA[®] EQUITY MODEL OR BARRA[®] OPTIMIZER

A major new release of the relevant Barra Equity Model or Barra Optimizer may replace the former version within a suitable timeframe. At launch, the MSCI EM Select Countries ESG Leaders Yield Volatility Index would use the Barra GEMLT Equity model for optimization.

APPENDIX 3: TARGET FACTOR DEFINITION SUMMARY

The style factor groups targeted in the MSCI EM Select Countries ESG Leaders Yield Volatility Index are Yield and Low Volatility. These factor groups are described using individual factor scores from the current release of the MSCI Barra Global Equity Model for Long-Term Investors (GEMTL). The precise choice of component factors used to represent each broad factor group is governed by the current model used for the optimization, which may change with a new release of the Barra Equity Model.

Yield: The yield score for each security is same as the Dividend Yield factor score taken from the relevant Barra Equity Model.

Low Volatility: The low volatility score for each security is calculated by combining in equal proportion the security-level exposures to two factors - Beta and Residual Volatility - from the relevant Barra Equity Model.

$$Volatility_i = (-1) * (0.5) * Beta_i + (-1) * (0.5) * Residual Volatility_i$$

The following sections have been modified since September 2018

Section 3.1 Defining the Eligible Universe

- Deletion of Israel from the list of eligible countries

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