

MSCI WORLD ESG YIELD SELECT VARIANCE INDEX METHODOLOGY

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1 INTRODUCTION

The MSCI World ESG Yield Select Variance Index is a custom index constructed by applying an optimization process with no constraints on number of constituents, active sector weight, active country weight, and active Barra risk factor exposure, designed to achieve total risk minimization for a set of companies with high Environmental, Social and Governance (ESG) performance, which also have relatively higher dividend yield and lower price variance within the Parent Index.

This methodology book provides a description of the rules and guidelines followed by MSCI for the construction and maintenance of the MSCI World ESG Yield Select Variance Index.



2 CONSTRUCTING THE MSCI WORLD ESG YIELD SELECT VARIANCE INDEX

The MSCI World ESG Yield Select Variance Index (the "Index") is constructed from the MSCI World Index (the "Parent Index"). The following steps are applied at initial construction of the Index and subsequent Quarterly Index Reviews.

- Using the MSCI ESG Leaders Indexes methodology
- Applying Dividend Yield Screen and Variance Screen
- Applying the MSCI Global Minimum Volatility Indexes methodology

2.1 USING THE MSCI ESG LEADERS INDEXES METHODOLOGY

The MSCI ESG Leaders Indexes methodology¹ is applied on the Parent Index.

2.2 APPLYING DIVIDEND YIELD SCREEN AND VARIANCE SCREEN

The following dividend yield and variance screens are applied sequentially on the resulting set of constituents in the earlier step.

2.2.1 DIVIDEND YIELD SCREEN

In the dividend yield screen, all constituents selected after the application of step 2.1 are ranked in descending order of their dividend yield² and the top 20% by number of securities are selected.

2.2.2 VARIANCE SCREEN

The resulting set of constituents selected after the application of the dividend yield screen are reweighted by their security level risk weights calculated in accordance with the MSCI Risk Weighted Indexes methodology³.

The security level risk weight is computed as the ratio of the inverse of the security variance to the sum of the inverse of security variance of all constituent securities. A variant of the MSCI Risk Weighted Indexes methodology that uses security level variance data computed using weekly returns over one year period prior to the rebalancing date is utilized for calculation of the security level risk weights.

¹ MSCI ESG Leaders Indexes methodology book available at https://www.msci.com/index-methodology

² MSCI Fundamental Data Methodology book available at https://www.msci.com/index-methodology

³ MSCI Risk Weighted Indexes Methodology book available at: https://www.msci.com/index-methodology



In the application of the variance screen, all constituents are ranked in descending order of their security level risk weights and the top 50% by number of securities are included.

2.3 APPLYING THE MSCI GLOBAL MINIMUM VOLATILITY INDEXES METHODOLOGY

The final Index is constructed by using an optimization process to target the lowest total risk on the set of securities included from the previous step by applying an unconstrained variant of the MSCI Global Minimum Volatility Indexes Methodology⁴.

The following constraints are used as part of the optimization.

- The maximum weight of an index constituent is restricted to the lower of 5% or 20 times the weight of the security in the index after the application of "Variance Screen" step of the methodology
- The minimum weight of an index constituent is 0.25%
- No constraints on number of constituents are applied
- The optimization currency for the Index is the Euro
- No active sector weight constraints are applied
- No active country weight constraints are applied
- No active Barra risk index constraints are applied
- The one way turnover of the Index is not constrained at the Quarterly Index Review

Please refer to Appendix 1 for details relating to handling of infeasible optimizations during the Quarterly Index Reviews of the MSCI World ESG Yield Select Variance Index.

⁴ MSCI Global Minimum Volatility Indexes Methodology book available at: https://www.msci.com/index-methodology



3 MAINTAINING THE MSCI WORLD ESG YIELD SELECT VARIANCE INDEX

3.1 QUARTERLY INDEX REVIEWS

The Index is reviewed on a quarterly basis as described in section 2, coinciding with the May and November Semi-Annual Index Reviews and the February and August Quarterly Index Reviews of the Parent Index.

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 MSCI World ESG Yield Select Variance 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 MSCI World ESG Yield Select Variance Index.

The pro forma Index is typically announced nine business days before the effective date.

3.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the MSCI World ESG Yield Select Variance 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.

Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the MSCI World ESG Yield Select Variance Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the MSCI World ESG Yield Select Variance Index.

The following section briefly describes the treatment of common corporate events within the MSCI World ESG Yield Select Variance Index.

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 IndexA 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 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.

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 be removed from the Index

if there are changes in its characteristics (country, sector, size segment, etc.)
Reevaluation for 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 I: HANDLING INFEASIBLE OPTIMIZATIONS

During the Quarterly Index Review, in the event that there is no optimal solution that satisfies all the optimization constraints, the announcement of the pro forma index nine business days before the effective date of the Quarterly Index Review will be postponed. MSCI will announce the pro forma index at a later date which will be before the effective date of the Quarterly Index Review.

In order to achieve a feasible solution for the MSCI World ESG Yield Select Variance Index, the number of securities with the highest dividend yield selected during the application of the "Dividend Yield Screen" step will be increased from 20% in steps of 10%, until a percentage is reached which will result in at least 20 securities.

The MSCI Equity Index Policies⁵ describe processes that MSCI follows when faced with a situation that may result in a significant change to MSCI equity index methodology or its implementation.

⁵ MSCI Equity Index Policies available at https://www.msci.com/index-methodology



The following sections have been updated since March 2017:

Section 3: Maintaining the MSCI World ESG Yield Select Variance Index

• 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 updated since May 2017:

 Methodology book updated to reflect change in name of MSCI Global Sustainability Indexes to MSCI ESG Leaders Indexes.

The following sections have been updated since June 2017:

• The details on the Corporate Events treatment are now included in Section 3.2.



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