

**METHODOLOGY BOOK FOR**

- MSCI EUROPE SELECT HIGH DIVIDEND LOW VOLATILITY ECO-EVOLUTION INDEX**
- MSCI EUROPE SELECT HIGH DIVIDEND LOW VOLATILITY ECO-EVOLUTION 5% DECREMENT INDEX**

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## 1 Introduction

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index aims to represent the performance of a quarterly rebalanced portfolio of 50 stocks which are rated at BB or above by MSCI ESG Research and exhibit high dividend yield and low volatility characteristics. The index aims to achieve diversification with sector constraints.

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution 5% Decrement Index aims to represent the net performance of the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index, while applying a constant markdown ('synthetic dividend') of 5% on an annual basis, expressed as a percentage of performance.

## 2 MSCI ESG RESEARCH

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index uses company ratings and research provided by MSCI ESG Research. The index uses the following MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research, and MSCI Climate Change Metrics.

For details on MSCI ESG Research's full suite of ESG products, please refer to: <https://www.msci.com/esg-integration>

### 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 (formerly known as MSCI Impact Monitor) provides assessments of 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. MSCI ESG Controversies Score falls on a 0-10 scale, with "0" being the most severe controversy.

For more details on MSCI ESG Controversies, 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](http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf)

## 2.4 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 Index Construction**

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index is constructed from the MSCI Europe Index (the “Parent Index”).

#### **3.1 ESG ELIGIBILITY CRITERIA**

##### **3.1.1 VALUES AND CLIMATE CHANGE-BASED EXCLUSIONS**

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index uses MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research, and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the values- and climate change-based criteria below are excluded from the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index. Please refer to Appendix 1 for details on these criteria.

- Adult Entertainment
- Gambling
- Tobacco
- Controversial Weapons
- Nuclear Weapons
- Conventional Weapons
- Thermal Coal Mining
- Unconventional Oil & Gas Extraction
- Conventional Oil & Gas Extraction
- Thermal Coal-based Power Generation
- Oil & Gas-based Power Generation

##### **3.1.2 ESG CONTROVERSIES SCORE ELIGIBILITY**

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index uses MSCI ESG Controversies Scores to identify companies that are involved in very serious controversies involving the environmental, social, or governance impact of their operations and/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 Europe Select High Dividend Low Volatility Eco-Evolution Index.

### 3.1.3 ESG RATINGS ELIGIBILITY

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index uses MSCI ESG Ratings to rate companies based on the environmental, social, or governance impact of their operations and/or products and services. Companies are required to have an MSCI ESG Ratings of BB or above to be eligible for inclusion in the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index

## 3.2 ADDITIONAL SCREENS

### 3.2.1 LIQUIDITY SCREEN

The remaining securities from above are subsequently screened for 3-month ADTV to be greater than USD 5 Million.

ADTV is defined as Average Daily Traded Volume and is calculated as:

$$ADTV_{3M} = \frac{ATV_{3M}}{252}^1$$

Where  $ATV_{3M}$  is annualized 3-month Average Traded Volume of the security.

## 3.3 SECURITY SELECTION

The securities from the eligible universe are subsequently filtered to include a single security per issuer. For issuers having multiple securities which are part of the eligible universe, the security with the highest 3-month ADTV is selected. From the securities remaining post screenings, the selection is done using the optimization process described under 3.4 and 3.5 wherein we target to select 50 securities.

## 3.4 WEIGHTING SCHEME

The weights of the securities are an outcome of the optimization process. The optimization relies on factor exposures for all the securities in the remaining universe and the factor covariance matrix of the relevant Barra Equity Model<sup>2</sup>. The

<sup>1</sup> MSCI Index Calculation Methodology at

<https://www.msci.com/index-methodology>

MSCI Global Investable Market Indexes Methodology at

<https://www.msci.com/index-methodology>

<sup>2</sup> Please Refer to Appendix II

optimization is performed using EUR as base currency. The optimization objective is to maximize risk adjusted portfolio alpha score (representative of the exposure to dividend yield factor) where the portfolio alpha score equals to the weighted average of stock level alpha scores under various optimization constraints.

### CALCULATION OF THE ALPHA SCORE

$$\alpha_{Port} = \sum w(i) * \alpha(i)$$

Where,

$\alpha_{Port}$  = Portfolio alpha score

$w(i)$  = Weight of security  $i$  in the portfolio

$\alpha(i)$  = Factor exposure of each security  $i$  to the target Barra Equity Model<sup>3</sup> Dividend Yield factor

### 3.5 OPTIMIZATION CONSTRAINTS

The Index is constructed using the Barra Open Optimizer in combination with the relevant Barra Equity Model. The optimization uses the above selected securities as the universe of eligible securities and the specified optimization objective and constraints to determine the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index.

The Barra Open Optimizer determines the optimal solution, to achieve relatively high exposure to dividend yield factor by maximizing the exposure to the dividend yield factor less a penalty for the common factor and stock-specific risk characteristics of each potential constituent.

At each quarterly rebalance, the following optimization constraints are applied which aim to ensure investability while achieving relatively higher dividend yield and lower volatility:

No.	Parameter	Constraint
1	Number of Constituents	50
2	Maximum weight of a single security	5%

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<sup>3</sup> Please Refer to Appendix II

3	Security Weight as a Multiple of its weight in the Parent Index	10000
4	Maximum Weight to a GICS sector	25%
5	One Way Turnover	100%
6	The portfolio risk currency	EUR
7	Specific Risk Aversion	0.010176
8	Common Factor Risk Aversion	0.010176

### 3.6 APPLYING THE MSCI DECREMENT INDEXES METHODOLOGY

The MSCI Decrement Indexes Methodology<sup>4</sup> is applied on the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index to construct the MSCI Europe Select High Dividend Low Volatility Eco-Evolution 5% Decrement Index. The parameters for the application of the decrement methodology in the above index is noted in Appendix IV.

## 4 Maintenance of the Index

### 4.1 QUARTERLY INDEX REVIEWS

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index is reviewed on a quarterly basis.

### 4.2 DAILY DECREMENT CALCULATION

The performance of the MSCI Europe Select High Dividend Low Volatility Eco-Evolution 5% Decrement Index is computed by reducing the net performance of the MSCI Europe Select High Dividend Low Volatility Index by a fixed percentage, on a daily basis using parameters detailed in Appendix IV.

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<sup>4</sup>Please refer to the MSCI Decrement Indexes methodology at [www.msci.com/index-methodology](http://www.msci.com/index-methodology)

#### **4.3 ONGOING EVENT RELATED CHANGES**

The following section briefly describes the treatment of common corporate events within the MSCI Europe Select High Dividend Low Volatility Eco-Evolution 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
<b>New additions to the Parent Index</b>	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.
<b>Spin-Offs</b>	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.
<b>Merger/Acquisition</b>	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.
<b>Changes in Security Characteristics</b>	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 I: Values and Climate Change-Based Exclusion Criteria**

The MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index is constructed with an aim to reflect the performance of companies that are consistent with specific values- and climate change-based criteria.

### **Values-based Exclusions Criteria**

- **Adult Entertainment**
  - All companies that have an industry tie to adult entertainment, including the producer, distributor, retailer, or ownership categories. In particular, the screen excludes companies that produce, direct, publish, retail, or distribute adult entertainment materials, as well as have ownership ties.
- **Gambling**
  - All companies that have an industry tie to gambling through the operation, support, licensing, or ownership categories. In particular, the screen excludes companies that own or operate gambling facilities, provide key products or services fundamental to gambling operations, license their company name or brand name to gambling products, or have ownership ties.
- **Tobacco**
  - All companies classified as a “Producer”
  - All companies deriving 5% or more aggregate revenue from the production, distribution, retail and supply of tobacco-related products
- **Controversial Weapons**
  - All companies that manufacture cluster munitions, essential components of these products, and delivery platforms capable of carrying and deploying cluster munitions.
  - All companies that manufacture anti-personnel landmines, anti-vehicle landmines, and essential components of anti-personnel landmines.
  - All companies that manufacture weapons, ammunition, and armor made with depleted uranium (DU) and DU alloys.
  - All companies that manufacture biological or chemical weapons, and essential components of these products.

- All companies that manufacture weapons utilizing laser technology to cause permanent blindness.
  - All companies that manufacture weapons using non-detectable fragments to inflict injury.
  - All companies that manufacture weapons using white phosphorus.
  - All companies with ownership of 20% or more of a weapons, components, or delivery platforms producer for the above-mentioned controversial weapons. The minimum limit is raised to 50% for financial companies having an ownership in a company that manufactures controversial weapons, key components, or delivery platforms of controversial weapons
  - All companies owned 50% or more by a company involved in weapons, components, or delivery platforms production for the above-mentioned controversial weapons.
- **Nuclear Weapons**
    - All companies that manufacture nuclear warheads and/or whole nuclear missiles
    - 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 or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons
    - All companies that provide auxiliary services related to nuclear weapons
    - All companies that manufacture components that were not developed or not significantly modified for exclusive use in nuclear weapons (warheads and missiles) but can be used in nuclear weapons
    - All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons but have the capability to deliver nuclear weapons
    - All companies that manufacture components for nuclear-exclusive delivery platforms

- **Conventional Weapons**
    - All companies deriving 5% or more revenue from the production of conventional weapons and components
    - All companies deriving 15% or more aggregate revenue from weapons systems, components, and support systems and services
- Climate Change-based Exclusions Criteria**
- **Thermal Coal Mining**
    - All companies deriving more than 10% 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
  - **Unconventional Oil & Gas Extraction**
    - All companies deriving more than 10% revenue (either reported or estimated) from unconventional oil and gas production. It includes revenue from the production of oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane, as well as revenue from onshore or offshore oil and gas production in the Arctic region. It excludes revenue from conventional oil and gas production including deepwater, shallow water, and other onshore/offshore oil and gas.
  - **Conventional Oil & Gas Extraction**
    - All companies deriving more than 0% revenue (either reported or estimated) from conventional oil and gas production. It includes revenue from the production of deepwater shallow water, and other onshore/offshore oil and gas. It excludes revenue from unconventional oil and gas production (oil sands, shale oil, shale gas) and onshore/offshore oil and gas production in the Arctic region.
  - **Thermal Coal-based Power Generation**
    - All companies generating more than 10% of their total electricity from thermal coal in a given year
    - All companies that have more than 10% of installed capacity attributed to thermal coal in a given year

- All companies deriving more than 10% revenue (either reported or estimated) from thermal coal-based power generation

- **Oil & Gas-based Power Generation**

- All companies generating more than 30% of their total electricity from liquid fuel and natural gas in a given year
- All companies that have more than 30% of installed capacity attributed to liquid fuel and natural gas in a given year
- All companies deriving more than 30% revenue (either reported or estimated) from liquid fuel- and natural gas-based power generation

- **Nuclear Power-based Power Generation**

- All companies generating more than 30% of their total electricity from nuclear power in a given year
- All companies that have more than 30% of installed capacity attributed to nuclear sources in a given fiscal year
- All companies deriving more than 30% revenue (either reported or estimated) from ownership or operation of nuclear power plants

### **TIMELINE OF SCREEN ADJUSTMENT**

Some criteria from the above-mentioned screens for the MSCI Europe Select High Dividend Low Volatility Eco-Evolution Index, including Tobacco, Thermal Coal Mining, Thermal Coal-based Power Generation, and Unconventional Oil & Gas Extraction, will be adjusted between 2020 and 2025 to reflect the adoption of stricter thresholds over time. The changes will be implemented at the November Index Review of the preceding year, so that the index reflects the thresholds for the relevant calendar year.

#### **Screens that will be modified**

- **Tobacco**

<b>2019 to 2024</b>	<b>2025 onwards</b>
All companies classified as a "Producer";	All companies that have an industry tie to tobacco products through the

All companies deriving 5% or more aggregate revenue from the production, distribution, retail and supply of tobacco-related products	distributor, licensor, retailer, supplier, or ownership categories.
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- **Thermal Coal Mining**

2019 to 2021	2022 to 2024	2025 onwards
All companies deriving more than 10% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.	All companies deriving more than 5% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.	All companies deriving more than 0% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.

- **Thermal Coal-based Power Generation**

2019 to 2024	2025 onwards
All companies generating more than 10% of their total electricity from thermal coal in a given year; All companies that have more than 10% of installed capacity attributed to thermal coal in a given year; All companies deriving more than 10% revenue (either reported or estimated) from thermal coal-based power generation	All companies generating more than 0% of their total electricity from thermal coal in a given year; All companies that have more than 0% of installed capacity attributed to thermal coal in a given year; All companies deriving more than 0% revenue (either reported or estimated) from thermal coal-based power generation

- **Unconventional Oil & Gas Extraction**

2019 to 2021	2022 to 2024	2025 onwards
All companies deriving more than 10% revenue (either reported or estimated) from unconventional oil and gas production.	All companies deriving more than 5% revenue (either reported or estimated) from unconventional oil and gas production.	All companies deriving more than 0% revenue (either reported or estimated) from unconventional oil and gas production.

## **Appendix II: New Release of BARRA® EQUITY MODEL or BARRA® OPTIMIZER**

The methodology presently uses MSCI Barra Global Equity Model for Long-Term Investors ("GEMLTL") for the optimization. A new release of the relevant Barra Equity Model or Barra Optimizer may replace the former version within a suitable timeframe.

## **APPENDIX III: HANDLING INFEASIBLE OPTIMIZATIONS**

During the quarterly index review, in the event that there is no optimal solution that satisfies all the optimization constraints defined in Section 3.5 the Index will not be rebalanced for that index review.

## APPENDIX IV: PARAMETERS USED FOR THE MSCI EUROPE SELECT HIGH DIVIDEND LOW VOLATILITY ECO-EVOLUTION 5% DECREMENT INDEX

	<b>MSCI Decrement Indexes Methodology Parameters</b>	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the Parent Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	5%
6	Day-count Convention	Actual / 360
7	Index Floor	0
8	Decrement Frequency	Daily

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