

METHODOLOGY BOOK FOR:
**- MSCI WORLD ESG LEADERS
SELECT TOP 100 INDEX**
**- MSCI EMU ESG LEADERS SELECT
TOP 50 INDEX**
**- MSCI WORLD ESG LEADERS
SELECT TOP 100 DECREMENT
INDEXES**
**- MSCI EMU ESG LEADERS SELECT
TOP 50 DECREMENT INDEXES**

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1 Introduction

The MSCI World ESG Leaders Select Top 100 Index aims to represent the performance of an equal weighted index of 100 stocks that have a robust ESG profile. The stock selection for this index is diversified with sector and region constraints.

The MSCI EMU ESG Leaders Select Top 50 Index aims to represent the performance of an equal weighted index of 50 stocks from the European Economic and Monetary Union region that have a robust ESG profile. The stock selection for this index is diversified with sector constraints.

The MSCI World ESG Leaders Select Top 100 3% Decrement Index and MSCI World ESG Leaders Select Top 100 5% Decrement Index aim to represent the net performance of the MSCI World ESG Leaders Select Top 100 Index, while applying a constant markdown ('synthetic dividend') of 3% and 5% respectively, on an annual basis, expressed as a percentage of performance.

The MSCI EMU ESG Leaders Select Top 50 3% Decrement Index, MSCI EMU ESG Leaders Select Top 50 4% Decrement Index and MSCI EMU ESG Leaders Select Top 50 5% Decrement Index aim to represent the net performance of the MSCI EMU ESG Leaders Select Top 50 Index, while applying a constant markdown ('synthetic dividend') of 3%, 4% and 5% respectively, on an annual basis, expressed as a percentage of performance.

2 ESG Research Framework

The MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index use company ratings and research provided by MSCI ESG Research LLC. 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-investing>

2.1 MSCI ESG RATINGS

MSCI ESG Ratings provides research, data, 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, as well as underlying data and metrics used to compile the scores and ratings.

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.

2.4 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics provides climate data & tools to support investors integrating climate risk & opportunities into their investment strategy and processes. It supports investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, align with temperature pathways and factoring climate change research into their risk management processes, in particular through climate scenario analysis for both transition and physical risks.

The dataset spans across the four dimensions of a climate strategy: transition risks, green opportunities, physical risks and 1.5° alignment.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/climate-solutions>.

3 Constructing the Index

The MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index are constructed from their respective parent indexes, as shown in the table below (each a “Parent Index”):

Index Name	Parent Index
MSCI World ESG Leaders Select Top 100 Index	MSCI World ESG Leaders Index ¹
MSCI EMU ESG Leaders Select Top 50 Index	MSCI EMU ESG Leaders Index ²

The following steps are applied at initial construction as well as subsequent Quarterly and Semi-Annual Index Reviews of the MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index

- Eligible Universe Screening
- ESG Eligibility Criteria
- Security Selection
- Security Weighting

After the above steps, the following additional step is applied to construct the MSCI World ESG Leaders Select Top 100 Decrement Indexes and MSCI EMU ESG Leaders Select Top 50 Decrement Indexes

- Applying the MSCI Decrement Indexes Methodology

3.1 MSCI WORLD ESG LEADERS SELECT TOP 100 INDEX

3.1.1 ELIGIBLE UNIVERSE SCREENING

3.1.1.1 LIQUIDITY CRITERIA

Securities with 3-month ADTV greater than or equal to USD 5 Million are eligible for inclusion in the MSCI World ESG Leaders Select Top 100 Index.

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

¹ MSCI World ESG Leaders Index Methodology at <https://www.msci.com/index-methodology>

² MSCI EMU ESG Leaders Index Methodology at <https://www.msci.com/index-methodology>

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

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

To avoid multiple securities of the same company in the final index, only the most liquid security for each issuer per its 3-month ADTV is eligible for inclusion in the Index. For any issuer, should two securities have the same 3-month ADTV, the one with the higher free float-adjusted market capitalization is included.

3.1.1.2 CONTROVERSIAL BUSINESS INVOLVEMENT CRITERIA

The MSCI World ESG Leaders Select Top 100 Index uses MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the below values- and climate change-based criteria are excluded from the Eligible Universe. Please refer to Appendix 1 for details on these criteria.

- Compliance with all the UN Global Compact Principles
- Controversial Weapons
- Nuclear Weapons
- Thermal Coal
- Conventional Weapons
- Tobacco
- Oil Sands

3.1.2 SECURITY SELECTION

From the securities remaining post screenings, the following steps are followed to select 100 securities such that the exposure to any region and sector is broadly in line with the corresponding region or sector weight in the Parent Index.

- 1) Categorize the securities in the Eligible Universe into 4 regions⁴
- 2) Select securities with the highest industry-adjusted ESG Score from each GICS® Sector within each region as described above. The number of

³ MSCI Index Calculation Methodology at <https://www.msci.com/index-methodology>

MSCI Global Investable Market Indexes Methodology at <https://www.msci.com/index-methodology>

⁴ Please Refer to Appendix 4

securities to be selected for each sector in each region is calculated as follows:

$$Sec(j) = RoundUp((WtSec_{BM}(j)) * 100)$$

Where:

$WtSec_{BM}(j)$ = Weight of all the securities from Sector j within each region in the Parent Index

- 3) Combine all the securities selected based on the above formula to arrive at the Final Eligible Universe.
- 4) From Final Eligible Universe, select the largest 100 securities based on their free-float adjusted market capitalization for inclusion in the MSCI World ESG Leaders Select Top 100 Index. Should there be two securities with the same free float adjusted market capitalization, the one with higher liquidity as per its 3-month Average traded value is selected.

3.1.3 SECURITY WEIGHTING

The securities selected for inclusion in the Index are assigned equal weights.

3.1.4 APPLYING THE MSCI DECREMENT INDEXES METHODOLOGY

The MSCI Decrement Indexes Methodology⁵ is applied on the MSCI World ESG Leaders Select Top 100 Index to construct the MSCI World ESG Leaders Select Top 100 3% Decrement Index and the MSCI World ESG Leaders Select Top 100 5% Decrement Index.

The parameters for the application of the decrement methodology in the above indexes are noted in Appendix 2.

3.2 MSCI EMU ESG LEADERS SELECT TOP 50 INDEX

3.2.1 ELIGIBLE UNIVERSE SCREENING

3.2.1.1 LIQUIDITY CRITERIA

Securities with 3-month ADTV greater than or equal to USD 5 Million are eligible for inclusion in the MSCI EMU ESG Leaders Select Top 50 Index.

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

⁵Please refer to the MSCI Decrement Indexes methodology at www.msci.com/index-methodology

$$ADTV_{3M} = \frac{ATV_{3M}^6}{252}$$

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

To avoid multiple securities of the same company in the final index, only the most liquid security for each issuer per its 3-month ADTV is eligible for inclusion in the Index. For any issuer, should two securities have the same 3-month ADTV, the one with the higher free float-adjusted market capitalization is included.

3.2.1.2 CONTROVERSIAL BUSINESS INVOLVEMENT CRITERIA

The MSCI EMU ESG Leaders Select Top 50 Index uses MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the below values- and climate change-based criteria are excluded from the Eligible Universe. Please refer to Appendix 1 for details on these criteria.

- Compliance with all the UN Global Compact Principles
- Controversial Weapons
- Nuclear Weapons
- Thermal Coal
- Conventional Weapons
- Tobacco
- Oil Sands

3.2.2 SECURITY SELECTION

From the securities remaining post screenings, the following steps are followed to select 50 securities such that the exposure to any sector is broadly in line with the corresponding sector weight in the Parent Index.

- 1) Select securities with the highest industry-adjusted ESG Score from each GICS® Sector. The number of securities to be selected for each sector is calculated as follows:

$$Sec(j) = RoundUp((WtSec_{BM}(j)) * 50)$$

⁶ MSCI Index Calculation Methodology at <https://www.msci.com/index-methodology>

MSCI Global Investable Market Indexes Methodology at <https://www.msci.com/index-methodology>

Where:

$WtSec_{BM}(j)$ = Weight of all the securities from Sector j in the Parent Index

- 2) Combine all the securities selected based on the above formula to arrive at the Final Eligible Universe.
- 3) From Final Eligible Universe, select the largest 50 securities based on their free-float adjusted market capitalization for inclusion in the MSCI EMU ESG Leaders Select Top 50 Index. Should there be two securities with the same free float adjusted market capitalization, the one with higher liquidity as per its 3-month Average traded value is selected.

3.2.3 SECURITY WEIGHTING

The securities selected for inclusion in the Index are assigned equal weights.

3.2.4 APPLYING THE MSCI DECREMENT INDEXES METHODOLOGY

The MSCI Decrement Indexes Methodology⁷ is applied on the MSCI EMU ESG Leaders Select Top 50 Index to construct the MSCI EMU ESG Leaders Select Top 50 3% Decrement Index, the MSCI EMU ESG Leaders Select Top 50 4% Decrement Index and the MSCI EMU ESG Leaders Select Top 50 5% Decrement Index.

The parameters for the application of the decrement methodology in the above indexes are noted in Appendix 3.

⁷Please refer to the MSCI Decrement Indexes methodology at www.msci.com/index-methodology

4 Maintenance of the MSCI World ESG Leaders Select Top 100 Index

4.1 QUARTERLY INDEX REVIEWS

The MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index are reviewed on a quarterly basis, coinciding with the May and November Semi-Annual Index Reviews and the February and August Quarterly Index Reviews of the Parent Index.

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

4.2 DAILY DECREMENT CALCULATION

The performance of the MSCI World ESG Leaders Select Top 100 3% Decrement Index and MSCI World ESG Leaders Select Top 100 5% Decrement Index is computed by reducing the performance of the MSCI World ESG Leaders Select Top 100 Index, by a fixed percentage, on a daily basis using parameters detailed in Appendix 2.

The performance of the MSCI EMU ESG Leaders Select Top 50 3% Decrement Index, the MSCI EMU ESG Leaders Select Top 50 4% Decrement Index and the MSCI EMU ESG Leaders Select Top 50 5% Decrement Index are computed by reducing the performance of the MSCI EMU ESG Leaders Select Top 50 Index, by a fixed percentage, on a daily basis using parameters detailed in Appendix 3.

4.3 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index aim 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 Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the Index.

The following section briefly describes the treatment of common corporate events. No new securities will be added (except where noted below) to the Index between Index Reviews. 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	<p>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.</p> <p>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.</p>
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: Values- and Climate Change-Based Exclusion Criteria

The MSCI World ESG Leaders Select Top 100 Index and the MSCI EMU ESG Leaders Select Top 50 Index is constructed with an aim to reflect the performance of companies that are consistent with specific values- and climate change-based criteria.

Compliance with all the UN Global Compact Principles

- All companies that fail to comply with the United Nations Global Compact principles are excluded. In this filter, activities are not classified under any specific tolerance level.

Values-based Exclusions Criteria

- **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) according to MSCI Ex-Controversial Weapons Indexes are excluded.

- **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).
- All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons.



- All companies that manufacture components for nuclear-exclusive delivery platforms.
- **Conventional Weapons**
 - All companies that manufacture conventional weapons components or conventional weapons and weapons systems and earn 5% or more in revenue from these activities.
- **Tobacco**
 - All companies classified as a “Producer”.
 - All companies deriving any revenue from the production, distribution, retail and supply of tobacco-related products.
- **Oil Sands**
 - All companies deriving any revenue from oil sands extraction are excluded.

Climate Change-based Exclusions Criteria

- **Thermal Coal Mining**
 - All companies deriving 15% or more revenue from the mining of thermal coal are excluded

Appendix 2: Parameters used for MSCI World ESG Leaders Select Top 100 Decrement Indexes

- The following parameters are used for the calculation of MSCI World ESG Leaders Select Top 100 3% Decrement Index

	MSCI Decrement Indexes Methodology Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI World ESG Leaders Select Top 100 Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	3%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

- The following parameters are used for the calculation of MSCI World ESG Leaders Select Top 100 5% Decrement Index

	MSCI Decrement Indexes Methodology Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI World ESG Leaders Select Top 100 Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	5%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

Appendix 3: Parameters used for MSCI EMU ESG Leaders Select Top 50 Decrement Indexes

- The following parameters are used for the calculation of MSCI EMU ESG Leaders Select Top 50 3% Decrement Index

	MSCI Decrement Indexes Methodology Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI EMU ESG Leaders Select Top 50 Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	3%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

- The following parameters are used for the calculation of MSCI EMU ESG Leaders Select Top 50 4% Decrement Index

	MSCI Decrement Indexes Methodology Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI EMU ESG Leaders Select Top 50 Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	4%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

- The following parameters are used for the calculation of MSCI EMU ESG Leaders Select Top 50 5% Decrement Index

	MSCI Decrement Indexes Methodology Parameters	Parameters
1	Currency of Calculation	EUR
2	Return Variant of the MSCI EMU ESG Leaders Select Top 50 Index	Daily Net Total Return
3	Decrement Type	Fixed Percentage
4	Decrement Application	Geometric
5	Decrement Value	5%
6	Day-count Convention	Actual / 365
7	Index Floor	0
8	Decrement Frequency	Daily

Appendix 4: Definition of Regions

- For the MSCI World ESG Leaders Select Top 100 Index, we define the following 4 regions:

No.	Region	Countries
1	USA	USA
2	Europe and Middle East	All countries that belong to MSCI Europe & Middle East Index ⁸
3	Canada	Canada
4	Pacific	All countries that belong to MSCI Pacific Index ⁹

⁸ MSCI Europe & Middle East Index Methodology at <https://www.msci.com/index-methodology>

⁹ MSCI Pacific Index Methodology at <https://www.msci.com/index-methodology>

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www.msci.com/index-regulation

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