MSCI World Climate Paris Aligned Ex Select Business Involvement Screens Index Methodology

August 2021
1 Introduction

The MSCI World Climate Paris Aligned Ex Select Business Involvement Screens Index (the ‘Index’) is designed to support investors seeking to reduce their exposure to transition and physical climate risks and who wish to pursue opportunities arising from the transition to a lower-carbon economy while aligning with the Paris Agreement requirements. The Index is designed to exceed the minimum standards of the EU Paris-Aligned Benchmark. Additionally, the Index applies certain values-based exclusion criteria. The Index is constructed from the MSCI World Index (‘Parent Index’) following an optimization-based approach and aim to:

- Exceed the minimum technical requirements laid out in the EU Delegated Act\(^1\)
- Align with a 1.5°C climate scenario using the MSCI Climate Value-at-Risk and a “self-decarbonization” rate of 10% year on year
- Reduce the Index’s exposure to physical risk arising from extreme weather events by at least 50%
- Increase the weight of companies which are exposed to climate transition opportunities and reduce the weight of companies which are exposed to climate transition risks
- Increase the weight of companies with credible carbon reduction targets through the weighting scheme
- Achieve a modest tracking error compared to the Parent Index and low turnover

\(^{1}\) [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1816&from=EN]
2 MSCI ESG Research

MSCI ESG Research provides in-depth research, ratings and analysis of the environmental, social and governance-related business practices of thousands of companies worldwide. It consists of an integrated suite of tools and products to efficiently manage research, analysis and compliance tasks across the spectrum of ESG factors.

The Index uses company ratings and research provided by MSCI ESG Research. In particular, this index uses the following MSCI ESG Research products: MSCI Climate Change Metrics, MSCI Climate Value-at-Risk, MSCI ESG Sustainable Impact Metrics, MSCI ESG Controversies and MSCI ESG Business Involvement Screening Research.

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

2.1 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 such as Low Carbon Transition scores and categories.

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

2.2 MSCI CLIMATE VALUE-AT-RISK

Climate Value-at-Risk (Climate VaR) is designed to provide a forward-looking and return-based valuation assessment to measure climate related risks and opportunities in an investment portfolio. The fully quantitative model offers deep insights into how climate change could affect company valuations.

For more details on MSCI Climate Value-At-Risk, please refer to https://www.msci.com/climate-data-and-metrics.

2.3 MSCI ESG SUSTAINABLE IMPACT METRICS

MSCI ESG Research’s Sustainable Impact Metrics is designed to identify companies that currently offer products or services that address at least one of the major social and environmental challenges as defined by the UN Sustainable Development Goals.
Designed as a positive screen, it is designed to highlight companies that are deriving sales from products or services that may have a positive impact on society and the environment.


2.4 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

2.5 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 **Index Construction Methodology**

3.1 **APPLICABLE UNIVERSE**

The Applicable Universe includes all the existing constituents of the Parent Index. This approach aims to provide an opportunity set with sufficient liquidity and investment capacity.

3.2 **ELIGIBLE UNIVERSE**

The Eligible Universe is constructed from the Applicable Universe by excluding securities of companies based on the exclusion criteria below:

1. **Controversial Weapons**: All companies involved in Controversial Weapons as defined by the methodology of the MSCI Ex-Controversial Weapons Indexes.

2. **ESG Controversies**: All companies having faced very severe controversies pertaining to ESG issues – Defined as companies with an ESG Controversy Score of 0.

3. **Tobacco**: All companies with involvement in Tobacco as defined by the methodology of the MSCI Global ex Tobacco Involvement Indexes.

4. **Environmental Harm**: All companies having faced very severe and severe controversies pertaining to Environmental issues – as described in section 3.2 of the MSCI Climate Paris Aligned Indexes methodology\(^2\).

5. **Thermal Coal Mining**: as described in section 3.2 of the MSCI Climate Paris Aligned Indexes methodology.

6. **Oil & Gas**: as described in section 3.2 of the MSCI Climate Paris Aligned Indexes methodology.

7. **Power Generation**: as described in section 3.2 of the MSCI Climate Paris Aligned Indexes methodology

Further, companies based on the following values-based exclusion criteria as described in MSCI ESG Leaders Indexes Methodology are also excluded from the Applicable Universe:

- Nuclear Weapons

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\(^2\) For more details, please refer to the index methodology document on [MSCI Climate Paris Aligned Indexes Methodology](https://www.msci.com/)

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• Civilian Firearms
• Alcohol
• Conventional Weapons
• Gambling
• Nuclear Power
• Fossil Fuel Extraction
• Thermal Coal Power

Please refer to Appendix I for more details.

3.3 OPTIMIZATION CONSTRAINTS

At each Semi-Annual Index Review, the index is constructed using an optimization process that aims to achieve replicability and investability as well as minimize ex-ante tracking error relative to the Parent Index subject to the following constraints:

1. Transition and physical risk objectives – constraints detailed in Table 1
2. Transition opportunities objectives – constraints detailed in Table 2
3. Diversification objectives – constraints detailed in Table 3

Table 1: Constraints imposed to meet transition and physical risk objectives

<table>
<thead>
<tr>
<th>No.</th>
<th>Transition and Physical Risk Objective</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Minimum reduction in Greenhouse Gas (GHG) Intensity (Scope 1+2+3) relative to Parent Index</td>
<td>50%</td>
</tr>
<tr>
<td>2.</td>
<td>Minimum average reduction (per annum) in GHG Intensity relative to GHG Intensity at the Base Date</td>
<td>10%</td>
</tr>
<tr>
<td>3.</td>
<td>Minimum active weight in High Climate Impact Sector relative to Parent Index</td>
<td>0%</td>
</tr>
<tr>
<td>4.</td>
<td>Aggregate Climate Value-At-Risk under 1.5 degree scenario</td>
<td>&gt;= Max(0, Aggregate)</td>
</tr>
</tbody>
</table>

3 Prior to the May 2020 Semi-Annual Index Review (SAIR) of the Indexes, the Weighted Average Carbon Emissions Intensity has been calculated based on Scope 1+2 Emissions.

4 Prior to the May 2020 Semi-Annual Index Review (SAIR) of the Indexes, the average reduction in WACI has been calculated using Scope 1+2 Emissions since Inception.

5 For more details on Climate value-At-Risk, please refer to Appendix II of the MSCI Climate Paris Aligned Indexes methodology document
## Transition and Physical Risk Objective

<table>
<thead>
<tr>
<th>No.</th>
<th>Objective</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Minimum increase in aggregate weight in companies setting targets relative to the aggregate weight of such companies in the Parent Index</td>
<td>20%</td>
</tr>
<tr>
<td>6.</td>
<td>Minimum reduction in Weighted Average Potential Emissions Intensity relative to Parent Index</td>
<td>50%</td>
</tr>
<tr>
<td>7.</td>
<td>Minimum increase in weighted average Low Carbon Transition (LCT) Score relative to Parent Index Please see more detail on LCT Score in Appendix I</td>
<td>10%</td>
</tr>
<tr>
<td>8.</td>
<td>Minimum reduction in Weighted Average Extreme Weather Climate Value-At-Risk (Aggressive Scenario) relative to Parent Index</td>
<td>50%&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

### Table 2: Constraints imposed in order to meet transition opportunity objectives

<table>
<thead>
<tr>
<th>No.</th>
<th>Objective</th>
<th>Target Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Minimum increase in weighted average LCT Score relative to Parent Index&lt;sup&gt;7&lt;/sup&gt;</td>
<td>10%</td>
</tr>
<tr>
<td>9.</td>
<td>Minimum ratio of Weighted Average Green Revenue/ Weighted Average Fossil fuels-based Revenue relative to Parent Index</td>
<td>4 times</td>
</tr>
<tr>
<td>10.</td>
<td>Minimum increase in Weighted Average Green Revenue relative to the Parent Index</td>
<td>100%</td>
</tr>
</tbody>
</table>

<sup>6</sup> In case the Parent Index has a positive Weighted Average Extreme Weather Climate VaR, the floor will be applied at the level of the Weighted Average Extreme Weather Climate VaR of the Parent Index.

<sup>7</sup> The constraint on increase in LCT Score is designed to underweight companies with a low LCT Score (assessed as companies facing risks from a low carbon transition) and overweight companies with a high LCT Score (assessed as companies which may have opportunities from a low carbon transition). Thus, the constraint has been repeated in Table 2 to illustrate how the constraint meets both the objectives.
Table 3: Constraints imposed to meet diversification objectives

<table>
<thead>
<tr>
<th>No.</th>
<th>Diversification Objective</th>
<th>MSCI World Climate Paris Aligned Ex Select Business Involvement Screens Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Constituent Active Weight</td>
<td>+/- 2%</td>
</tr>
<tr>
<td>12.</td>
<td>Minimum constituent weight</td>
<td>0.01%</td>
</tr>
<tr>
<td>13.</td>
<td>Security Weight as a multiple of its weight in the Parent Index</td>
<td>20x</td>
</tr>
<tr>
<td>14.</td>
<td>Active Sector Weights (the Energy GICS Sector is not constrained)</td>
<td>+/- 5%</td>
</tr>
<tr>
<td>15.</td>
<td>Active Country Weights^8</td>
<td>+/- 5%</td>
</tr>
<tr>
<td>16.</td>
<td>One Way Turnover</td>
<td>5%</td>
</tr>
<tr>
<td>17.</td>
<td>Common Factor Risk Aversion</td>
<td>0.0075</td>
</tr>
<tr>
<td>18.</td>
<td>Specific Risk Aversion</td>
<td>0.075</td>
</tr>
</tbody>
</table>

The definitions of the target metrics for the optimization are detailed in Appendix III of the MSCI Climate Paris Aligned Indexes methodology.

The Weighted Average GHG Intensity on the base date and the base dates for the respective indexes are described in Appendix I.

During the Semi-Annual Index Review, in the event that there is no optimal solution that satisfies all the optimization constraints, the following constraints will be relaxed, until an optimal solution is found:

- Relax the one-way index turnover constraint in steps of 1% up to 20%
- Relax the active sector weight constraint in steps of 1% up to +/-20%
- The one-way index turnover constraint and the active sector weight constraint are alternately relaxed until a feasible solution is achieved.

^8In case there are countries in the Parent Index which weigh less than 2.5% in the Parent Index then for such countries the active country upper bound of +5% is not applicable. When a country weighs less than 2.5% in Parent Index then the upper bound of country weight in the Index is set at three times of the country’s weight in Parent Index.
In the event that no optimal solution is found after the above constraint relaxations are exhausted, the relevant Index will not be rebalanced for that Semi-Annual Index Review.

3.4 DETERMINING THE OPTIMIZED INDEX

The Index is constructed using the Barra Open Optimizer\(^9\) in combination with the relevant Barra Equity Model. The optimization uses universe of eligible securities and the specified optimization objectives and constraints to determine the constituents of the Indexes.

\(^9\) Please refer to Appendix V and VI of the MSCI Climate Paris Aligned Indexes methodology document for more details.
4 Index Maintenance

4.1 SEMI-ANNUAL INDEX REVIEWS

The Index is rebalanced on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Review of the MSCI Global Investable Market Indexes. The pro forma Indexes are in general announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI Climate Change Metrics, MSCI Climate Value-at-Risk, MSCI ESG Sustainable Impact Metrics, MSCI ESG Controversies and MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews for the rebalancing of the Indexes.

4.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the Indexes 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 Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the Index.

The treatment of the common corporate events in the indexes follow the corporate events treatments as described in section 4.2 of the MSCI Climate Paris Aligned Indexes methodology.
Appendix I: Additional ESG Exclusions Criteria

ACTIVITIES CLASSIFIED UNDER "MINIMAL TOLERANCE"

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.

ACTIVITIES CLASSIFIED UNDER "MODERATELY RESTRICTIVE"

CIVILIAN FIREARMS

- All companies deriving 5% or more revenue from the distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.
- All companies deriving 15% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.
ACTIVITIES CLASSIFIED UNDER “LEAST RESTRICTIVE”

ALCOHOL

- All companies deriving 10% or more revenue from the production of alcohol-related products

CONVENTIONAL WEAPONS

- All companies deriving 10% or more revenue from the production of conventional weapons and components

GAMBLING

- All companies deriving 10% or more revenue from ownership of operation of gambling-related business activities

NUCLEAR POWER

- All companies deriving 10% or more revenue from the ownership or operation of nuclear power plants

ACTIVITIES NOT CLASSIFIED UNDER ANY SPECIFIC TOLERANCE LEVEL

FOSSIL FUEL EXTRACTION

- All companies deriving 5% or more aggregate revenue (either reported or estimated) from thermal coal mining and unconventional oil and gas extraction.

  **Thermal Coal Mining:** Revenue from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It does not cover 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:** Revenue from oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane. It does not cover all types of conventional oil and gas production including Arctic onshore/offshore, deep water, shallow water and other onshore/offshore.
THERMAL COAL POWER:

- All companies deriving 5% or more revenue (either reported or estimated) from thermal coal-based power generation.
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