# MSCI ESG ENHANCED FOCUS CTB INDEXES METHODOLOGY

**February 2022**

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# 1 Introduction

The MSCI ESG Enhanced Focus CTB Indexes (the 'Index') are designed to maximize exposure to positive environmental, social and governance (ESG) factors while maintaining risk and return characteristics similar to those of their respective underlying market capitalization weighted indexes (the 'Parent Index').

The Indexes are constructed by selecting constituents of a market capitalization weighted index (the 'Parent Index') through an optimization process that aims to maximize exposure to ESG factors for a target tracking error budget and exceed the minimum standards of the EU Climate Transition Benchmark (CTB).

The MSCI ESG Enhanced Focus CTB Indexes are constructed from their corresponding Parent Indexes following an *optimization-based* approach and aim to:

- Exceed the minimum technical requirements laid out for EU Climate Transition Benchmarks in the EU Delegated Acts[1]
- Reduce the weighted average greenhouse gas intensity by 30% (compared to the underlying investment universe.
- Reduce the weighted average greenhouse gas (GHG) intensity by 7% on an annualized basis
- Reduce the weighted average potential emissions intensity by 30% (compared to the underlying investment universe).
- Have at least equivalent ratio of weighted average "Green Revenues" to weighted average "Fossil Fuels-based Revenues" as that of the underlying investment universe.
- Increase the weight of companies with credible carbon reduction targets through the weighting scheme
- Be sector-diversified and target companies with high ESG ratings in each sector.

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1816&from=EN

# 2 MSCI ESG Research

The MSCI Europe ESG Leaders Select Top 50 Dividend Index use company ratings and research provided by MSCI ESG Research. The indexes use 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, 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

## 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 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

## 2.5 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.

For more details on the MSCI ESG Sustainable Impact Metrics, please refer to https://www.msci.com/esg-sustainable-impact-metrics

# 3 Constructing the MSCI ESG Enhanced Focus CTB Indexes

Constructing the MSCI ESG Enhanced Focus CTB Indexes involve the following steps:

- Defining the Parent Index
- Defining the exclusion criteria
- Defining the optimization constraints
- Determining the optimized portfolio

The steps mentioned above are defined in detail in the subsequent sections.

## 3.1 DEFINING THE PARENT INDEX

| MSCI ESG Enhanced Focus CTB Index | Parent Index |
|---|---|
| MSCI World ESG Enhanced Focus CTB Index | MSCI World Index |
| MSCI EM ESG Enhanced Focus CTB Index | MSCI EM (Emerging Markets) Index |
| MSCI Europe ESG Enhanced Focus CTB Index | MSCI Europe Index |
| MSCI EMU ESG Enhanced Focus CTB Index | MSCI EMU Index |
| MSCI USA ESG Enhanced Focus CTB Index | MSCI USA Index |
| MSCI Japan ESG Enhanced Focus CTB Index | MSCI Japan Index |
| MSCI World Small Cap ESG Enhanced Focus CTB Index | MSCI World Small Cap Index |
| MSCI USA Small Cap ESG Enhanced Focus CTB Index | MSCI USA Small Cap Index |

## 3.2 DEFINING THE EXCLUSION CRITERIA

Securities of companies involved in Very Severe business controversies as defined by the MSCI ESG Controversies Methodology are not eligible for inclusion in the

MSCI ESG Enhanced Focus CTB Indexes. This is implemented by excluding constituents of the Parent Index with ESG Controversy Score = 0 ('Red Flag' companies).

In addition, starting from the November 2022 Semi-Annual Index Review, companies with an Environment Controversy Score of 0 or 1 will also be excluded from the Index.

### 3.2.1 BUSINESS EXCLUSION CRITERIA

Companies that are involved in specific businesses which have high potential for negative social and/or environmental impact are ineligible for inclusion in the index.

- Controversial Weapons
- Nuclear Weapons
- Civilian Firearms
- Tobacco
- Thermal Coal
- Conventional Weapons
- Unconventional Oil and Gas

In addition to the above, companies that fail to comply with the United Nations Global Compact Principles are also excluded from the MSCI ESG Enhanced Focus CTB Indexes.

Please refer to Appendix 1 for more details on these criteria.

#### OTHER EXCLUSION CRITERIA

- Missing Controversy Score – Companies not assessed by MSCI ESG Research's MSCI ESG Controversy Scores are excluded from the index.
- Missing ESG Rating or ESG Score – Companies which are not rated by MSCI ESG Research for an MSCI ESG Rating are excluded from the index.

## 3.3 OPTIMIZATION CONSTRAINTS

The Optimization process aims to maximize the Index's exposure to ESG scores for a given tracking error budget. ESG scores are normalized and used in the optimization process. The following ex-ante tracking error targets are used for the construction of MSCI ESG Enhanced Focus CTB Indexes –

| No. | MSCI ESG Enhanced Focus CTB Index | Ex-Ante Tracking Error |
|---|---|---|
| 1 | MSCI World ESG Enhanced Focus CTB Index | 0.75% |
| 2 | MSCI EM ESG Enhanced Focus CTB Index | 1.0% |
| 3 | MSCI Europe ESG Enhanced Focus CTB Index | 0.75% |
| 4 | MSCI EMU ESG Enhanced Focus CTB Index | 0.75% |
| 5 | MSCI USA ESG Enhanced Focus CTB Index | 0.75% |
| 6 | MSCI Japan ESG Enhanced Focus CTB Index | 0.75% |
| 7 | MSCI World Small Cap ESG Enhanced Focus CTB Index | 0.75% |
| 8 | MSCI USA ESG Enhanced Focus CTB Index | 0.75% |

Normalization of the ESG scores is designed to allow the optimization process to assess each score in the context of the overall distribution of the ESG scores.

Please refer to Appendix 2 for the Optimization constraints. The definitions of the target metrics for the optimization are detailed in Appendix 4.

## 3.4 DETERMINING THE OPTIMIZED INDEX

The Index is constructed using the Barra Open Optimizer[2] 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.

[2] Please refer to Appendix V and VI for more details.

# Maintaining the MSCI Enhanced Focus Indexes

## 3.5 QUARTERLY INDEX REVIEWS

The Index is rebalanced on a quarterly basis to coincide with the regular Index Reviews (Semi-Annual Index Reviews in May and November and Quarterly Index Reviews in February and August) of the MSCI Global Investable Market Indexes. Changes are implemented at the end of February, May, August and November. The pro forma indexes are in general announced nine business days before the effective date.

ESG scores used for the Quarterly Index Reviews will be taken as of the end of the month preceding the Index Review, i.e., January, April, July, and October.

At each Index Review, the optimization process outlined in Section 3 is implemented.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores, MSCI Business Involvement Screening Research, MSCI Climate Change Metrics, and MSCI ESG Sustainable Impact Metrics) as of the end of the month preceding the Index Reviews. 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.

## 3.6 ONGOING EVENT-RELATED MAINTENANCE

The general treatment of corporate events in the MSCI ESG Enhanced Focus CTB Indexes 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.

The following section briefly describes the treatment of common corporate events within the MSCI ESG Enhanced Focus CTB Indexes.

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 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.<br><br>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: Business Exclusion Criteria

MSCI ESG Research has developed a framework designed to define significant involvement in controversial activities. According to this framework, there are three tolerance levels: Zero Tolerance, Minimal Tolerance and Low Tolerance.

Each controversial activity screened by the MSCI ESG Enhanced Focus CTB Indexes (except Thermal Coal, Oil Sands and Global Norms) is assigned to one of these tolerance levels:

**Activities classified under "Zero Tolerance"**

- **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), as defined by the methodology of the MSCI Ex-Controversial Weapons Indexes available at https://www.msci.com/index-methodology.

**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.

- **Civilian Firearms**
  - All companies classified as "Producer" of firearms and small arms ammunitions for civilian markets. It does not include companies that cater to the military, government, and law enforcement markets.
  - All companies deriving 5% or more revenue from the distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use.
- **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.

**<u>Activities not classified under any specific tolerance level</u>**

- **Thermal Coal**
  - All companies deriving 5% or more 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.
  - All companies deriving 5% or more revenue (either reported or estimated) from the thermal coal based power generation.
- **Conventional Weapons**
  - All companies deriving 5% or more revenue from the production of conventional weapons
  - All companies deriving 10% or more aggregate revenue from weapons systems, components and support systems and services

- **Unconventional Oil and Gas**
    - All companies deriving 5% or more revenues from oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal-seam gas, coal-bed methane as well as Arctic onshore/offshore reserves.
- **Global Norms – United Nations Global Compact Compliance**
    - All companies that fail to comply with the United Nations Global Compact principles.

# Appendix 2: Optimization Constraints

At each Quarterly Index Review, the following optimization constraints along with the ex-ante tracking error targets defined in Section 3.4 are used to ensure replicability and investability.

**Screened Parent**

The Screened Parent is constructed by excluding securities from the Parent Index based on the exclusion criteria as defined in Section 3.3. The security weights are then normalized to 100%.

**Constraints imposed to meet transition and physical risk objectives**

| No. | Transition and Physical Risk Objective | MSCI ESG Enhanced Focus CTB Indexes |
|---|---|---|
| 1^ | Minimum reduction in Greenhouse Gas (GHG) Intensity (Scope 1+2+3) | 30% |
| 2 | Minimum average reduction (per annum) in GHG Intensity relative to GHG Intensity at the Base Date | 7% |
| 3^ | Minimum active weight in High Climate Impact Sector as defined in Appendix 4 | 0% |
| 4^ | Minimum Increase in aggregate weight in companies setting targets relative to the aggregate weight of such companies in the Parent Index. Companies Setting Targets are defined in Appendix 4 | 10% |
| 5^ | Minimum reduction in Weighted Average Potential Emissions Intensity | 30% |
| 6^ | Minimum ratio of Weighted Average Green Revenue/ Weighted Average Fossil fuels-based Revenue | At least equal |

**Diversification Constraints**

| No. | Parameter | Values |
|---|---|---|
| 1 | Minimum Constituent Weight | Minimum constituent weight in the Screened Parent |
| 2^ | Asset Lower Bound | Maximum (Minimum constituent weight in the Screened Parent, 0.25 * Security Weight in the Screened Parent) |
| 3^ | Asset Upper Bound | Minimum (5 * Security Weight in the Screened Parent, Security Weight in the Screened Parent +2%) |
| 4^ | Active Sector Weights | +/-5% |
| 5^ | Active Country Weights* | +/-5% |
| 6^ | One Way Turnover during May and November Index Review | 10% |
| 7^ | One Way Turnover during Feb and Aug Index Review | 5% |
| 8 | Specific Risk Aversion | 0.075 |
| 9 | Common Factor Risk Aversion | 0.0075 |

* Active Country Weights – In 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 the Parent Index then the upper bound of country weight in the MSCI ESG Enhanced Focus CTB Index is set at three times of the country's weight in the Parent Index.

^ The Optimization Constraints are applied relative to the Parent Index.

**Infeasible Solution** –

During the Semi-Annual or Quarterly 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:

- The turnover constraint will be relaxed up to a maximum of 5 times of the original turnover budget in steps of 5%
- The ex-ante tracking error is relaxed up to a maximum of 5 times of the original ex-ante tracking error in steps on 0.1%.
- The one-way index turnover constraint and the ex-ante tracking error constraint are alternately relaxed until a feasible solution is achieved.

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 Index Review.

## Appendix 3: 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 4: Calculation of Target Metrics

### Calculation of GHG Intensity

For Parent Index constituents where the Scope 1+2+3 Emissions Intensity is not available, the average Scope 1+2+3 Emissions Intensity of all the constituents of the MSCI ACWI in the same GICS Industry Group in which the constituent belongs is used.

Security Level GHG Intensity =

$$\frac{Scope\ 1+2+3\ Carbon\ Emissions * \ (1+EVIAF)}{Enterprise\ Value + Cash(in\ M\$)}$$

Enterprise Value Inflation Adjustment Factor (EVIAF) =

$$EVIAF = \left(\frac{Average(Enterprise\ Value + Cash)}{Previous\ (Average(Enterprise\ Value + Cash))}\right) - 1$$

Weighted Average GHG Intensity of Parent Index =

$$\sum(Weight\ in\ Parent\ Index * \ Security\ Level\ GHG\ Intensity)$$

Weighted Average GHG Intensity of Derived Index =

$$\sum(Index\ Weight * \ Security\ Level\ GHG\ Intensity)$$

### Calculation of Potential Carbon Emissions Intensity

For newly added companies to the index where data is not available yet, MSCI uses zero fossil fuel reserves.

Security Level Potential Carbon Emissions (PCE) Intensity =

$$\frac{Absolute\ Potential\ Emissions * \ (1+EVIAF)}{Enterprise\ Value + Cash(in\ M\$)}$$

Weighted Average Potential Emissions Intensity of Parent Index =

$$\sum(Weight\ in\ Parent\ Index * \ Security\ Level\ PCE\ Intensity)$$

Weighted Average Potential Emissions Intensity of Derived Index =

$$\sum(Index\ Weight * \ Security\ Level\ PCE\ Intensity)$$

**Calculation of Average Decarbonization**

On average, the Indexes follow a 7% decarbonization trajectory since the Base Date. The Weighted Average GHG Intensity at the Base Date ($W_1$) is used to compute the target Weighted Average GHG Intensity at any given Quarterly Index Review ($W_t$) as per the below formula.

$$W_t = W_1 * \ 0.93^{\frac{(t-1)}{4}}$$

Where '*t*' is the number of Quarterly Index Reviews since the Base Date.

Thus, for the 5th Quarterly Index Review since the Base Date (t=5), the target Weighted Average GHG Intensity will be $W_1$*0.93.

**Companies Setting Targets**

Relative to their corresponding Parent Indexes, the Indexes require a minimum 20% increase in the aggregate weight of companies setting emissions reduction targets

- companies publishing emissions reduction targets
- companies publishing their annual emissions and
- Companies reducing their GHG intensity by 7% over each of the last 3 years

**Calculation of Green Revenue to Fossil fuels-based Revenue Multiple**

**Green Revenue**

For each constituent in the Parent Index, the Green Revenue% is calculated as the cumulative revenue (%) from the six Clean Tech themes which are as follows:

- Alternative Energy – products and services that support the transmission, distribution and generation of renewable energy and alternative fuels to reduce carbon and pollutant emissions in supporting affordable and clean energy to combat climate change.

- Energy Efficiency – products, and services that support the maximization of productivity in labor, transportation, power and domestic applications with minimal energy consumption to ensure universal access to affordable, reliable and modern energy services.
- Sustainable Water – products, services, infrastructure projects and technologies that resolve water scarcity and water quality issues, through minimizing and monitoring current water demand, improving the quality and availability of water supply to improve resource management in both domestic and industrial use.
- Green Building – design, construction, redevelopment, retrofitting, or acquisition of green-certified properties to promote mechanisms for raising capacity for effective climate change mitigation and adaptation.
- Pollution Prevention – products, services, infrastructure projects and technologies that reduces volume of waste materials through recycling, minimizes introduction of toxic substances, and offers remediation of existing contaminants such as heavy metals and organic pollutants in various environmental media to significantly address pollution in all levels and its negative effects
- Sustainable Agriculture - revenues from forest and agricultural products that meet environmental and organic certification requirements to address significantly biodiversity loss, pollution, land disturbance, and water overuse

The Weighted Average Green Revenue% is calculated as:

$$= \sum (Weight\ in\ Index * \ Green\ Revenue\%)$$

**Fossil fuels-based Revenue**

For each constituent in the Parent Index, the Fossil fuels-based Revenue% is calculated as the cumulative revenue (%) from the following sources:

- 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 (either reported or estimated)
- Revenue% from the extraction, production and refining of Conventional and Unconventional Oil & Gas. Conventional Oil and Gas includes Arctic onshore/offshore, deep water, shallow water and other onshore/offshore.

Unconventional Oil and Gas includes oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane.

- Revenue% from thermal coal based power generation, liquid fuel based power generation and natural gas based power generation.

The Weighted Average Fossil fuels-based Revenue% is calculated as:

$$= \sum (Weight\ in\ Index * \ Fossil\ fuels - based\ Revenue\%)$$

The Green Revenues to Fossil fuels-based Revenues multiple for either the Parent Index or the Index is calculated as a ratio of the Weighted Average Green Revenue to the Weighted Average Fossil fuels-based Revenue as per the formula below:

$$= \frac{Weighted\ Average\ Green\ Revenue\%}{Weighted\ Average\ Fossil\ fuels - basedRevenue\%}$$

**Climate Impact Sectors**

NACE[3] is the European Union's classification of economic activities. As per the draft DA, stocks in the NACE Section codes A, B, C, D, E, F, G, H, L are classified as "High Climate Impact" sector and other stocks are classified 'Low Climate Impact' sector. The GICS[4] Sub-Industry code for each security is mapped to the corresponding "Climate Impact Sector" using a mapping. This mapping is constructed in the following steps:

1. MSCI has published a mapping[5] between the NACE classes and GICS Sub-Industry.
2. For each GICS Sub-Industry, the number of NACE classes which fall under the High Climate Impact Sector (say the number of classes is $N_H$) and Low Climate Impact Sector (say the number of classes is $N_L$) is identified
3. If all the NACE classes for a given GICS Sub-Industry are identified in the High Climate Impact Sector ($N_L = 0$), then the GICS Sub-Industry is mapped to the High Climate Impact Sector. Conversely, if all the NACE classes for a given

[3] For further details regarding NACE, please refer to https://ec.europa.eu/eurostat/statistics-explained/index.php?title=NACE_background

[4] For further information regarding GICS, please refer to https://www.msci.com/gics

[5] This mapping is available in the Handbook of Climate Transition Benchmarks, Paris-Aligned Benchmark and Benchmarks' ESG Disclosures

GICS Sub-Industry are identified in the Low Climate Impact Sector ($N_H = 0$) then the GICS Sub-Industry is mapped to the Low Climate Impact Sector

4. In case a GICS Sub-Industry is mapped to some NACE classes in the High Climate Impact Sector and the others in the Low Climate Impact Sector, the GICS Industry is mapped to the Climate Impact Sector in the following manner:

   **a.** **$N_H >= N_L$**: If the number of NACE classes in the High Climate Impact Sector is at least equivalent to the number of NACE classes in the Low Climate Impact Sector, the GICS Sub-Industry is mapped to the High Climate Impact Sector

   **b.** **$N_H < N_L$**: If the number of NACE classes in the High Climate Impact Sector is less than the number of NACE classes in the Low Climate Impact Sector, the GICS Sub-Industry is mapped to the Low Climate Impact Sector

Using the GICS Sub-Industry to Climate Impact Sector mapping created in Step 4, and the security-level GICS Sub-Industry, each security in the Parent Index is classified in either High Climate Impact Sector or Low Climate Impact Sector

**The following sections have been modified as of August 2021:**

- Update to include the index construction parameters for the MSCI World Small Cap ESG Enhanced Focus Index

**The following sections have been modified as of December 01, 2021:**

- Section 3.2: Addition of screening criteria on Environmental Controversies.
- Appendix 1: Addition of screening criteria on Conventional Weapons and Unconventional Oil & Gas. The screening on Oil Sands will no longer be applied in the methodology.
- Appendix 2: Optimization constraints updated to align with the minimum requirements of the EU Climate Transition Benchmarks.
- Appendix 4: Additional details on calculation of metrics used in optimization.

**The following sections have been modified effective February 28, 2022:**

- Update to include the index construction parameters for the MSCI USA Small Cap ESG Enhanced Focus Index
- Appendix 2: Added clarification that the relaxation parameters are also applicable for Quarterly Index Reviews

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