Morningstar Indexes

# Construction Rules for the Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 Index

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## Overview

The Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 Index, is designed to achieve the minimum standards laid out in the European Union-delegated acts. The index supports investors seeking to reduce their exposure to carbon risk and pursue opportunities arising from the transition to a low-carbon economy, while targeting a concentrated portfolio of 50 stocks. The index makes use of carbon emissions, carbon rating, product involvement, and ESG controversy data provided by Sustainalytics, a Morningstar company that provides sustainability research. For further information on ESG data used in the index, please see the Morningstar ESG Index Glossary.

### Index Inception and Performance Start Date

The index inception date is December 19, 2014, and the performance start date, when the first back-tested index value was calculated, is February 18, 2022.

## Index Construction

### Methodology Summary

| Starting Universe | Eligibility | Portfolio Construction | |
|---|---|---|---|
| • Morningstar Eurozone Large-Mid Cap Index. | • Apply baseline exclusions.<br>• Apply activity-based exclusions.<br>• 3-month ADTV ≥ EUR 15 million. | • Target 50 constituents.<br>• Cumulative weight of High Climate Impact Sectors cannot be less than 1.05x that in the Parent Index.<br>• Index is equal Weighted. | Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 Index |

### Starting Universe

At each reconstitution, constituents of the Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 Index are derived from the Morningstar Eurozone Large-Mid Cap Index (benchmark). For more details on benchmark construction, refer to the construction rules for the Morningstar Global Markets Indexes.

### Eligibility

To be eligible for index inclusion, all constituents must meet the following criteria:

- Baseline Exclusions:
  - The company must not have any revenue involvement in controversial weapons, essential or nonessential.
  - The company must be compliant with the principles of the United Nations Global Compact
  - The company must not have a null or severe controversy rating (or a level of 5).
- Activity-Based Exclusions (Applies only to Paris-Aligned Indexes)
  - The company must not have any revenue involvement in thermal coal extraction, thermal coal supporting products/services and tobacco production/cultivation.
  - The company must not have 10% or more of its revenue from oil & gas production and oil & gas supporting products/services.
  - The company must not have 50% or more of its combined revenue from oil and gas generation and coal power generation.
- Liquidity Filter
  - The security must have a three-month average daily traded volume, or ADTV, of at least EUR 15 million.

### Portfolio Construction

At each reconstitution, the index is constructed using an equal-weighting methodology that aims to achieve the decarbonization requirement laid out by the European Union delegated acts.

| Parameter | Paris-Aligned Benchmark Select 50 Index |
|---|---|
| Minimum reduction in greenhouse gas intensity (scope 1 + 2 + 3) relative to region specific Parent Index | 50% |
| Minimum average reduction (annualized with geometric compounding) in greenhouse gas intensity relative to greenhouse gas intensity of the index at the base date | 7% |
| Minimum active weight in high climate sector relative to Parent Index as defined in Appendix 3 | 5% of the cumulative weight of the High Impact Sector Group in the Parent Index |

The above objectives are achieved by using an iterative approach as mentioned below:

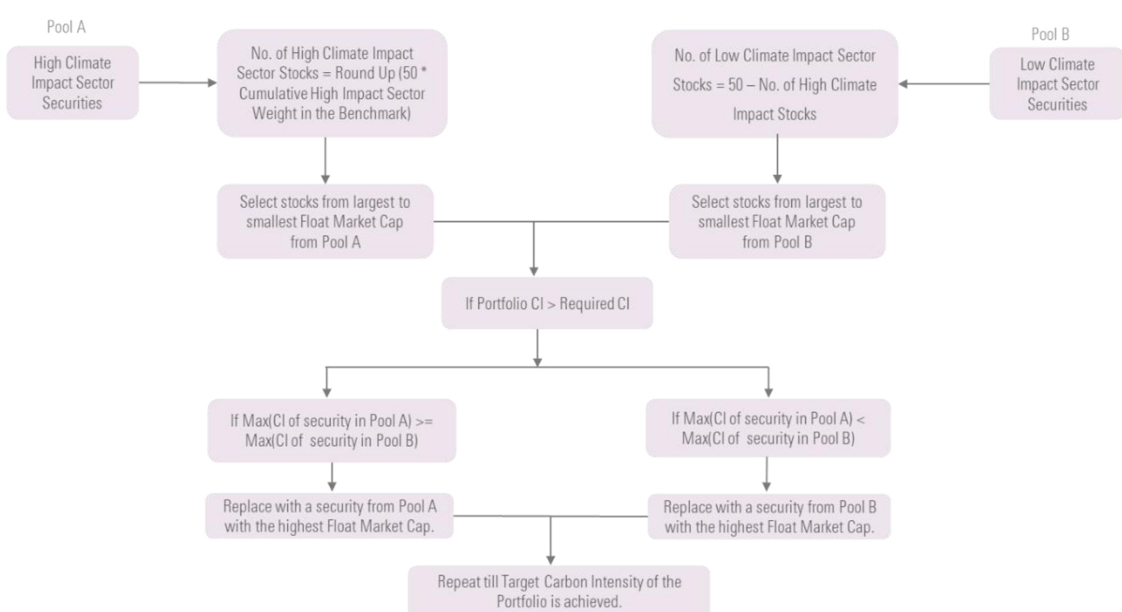
**The Process**

**Step 1:** Number of securities from High Climate Impact Sectors = Round Up (50 * Cumulative Weight of the High Climate Impact Sectors

**Step 2:** Number of securities from the Low Climate Impact Sectors = 50 – Number of securities from the High Climate Impact Sectors.

**Step 3:** Sort the securities in descending order of Float market capitalization, then select highest 50 ranked securities from the High Climate and Low Climate Impact Sectors.

**Step 4:** An iterative approach is followed where the security with the maximum carbon intensity from the set of 50 securities selected is replaced with a security with the highest float market capitalization from the remaining universe till the target portfolio carbon intensity is achieved.



*Number of Stocks*

The index targets 50 stocks based on a transparent ranking system subject to the application of eligibility criteria at reconstitution. However, if fewer than the targeted number of securities from the starting universe meet eligibility criteria, or if securities are added or deleted as a result of corporate actions after reconstitution, the constituent count may deviate from the targeted number. During reconstitution, if the number of eligible securities is less than the targeted constituent count, all eligible securities are selected. The reconstitution schedule is provided in the "Index Maintenance and Calculation" section.

*Index Weighting*

The index is equal weighted. For more details, refer to the Morningstar Indexes Calculation Methodology rulebook.

## Index Maintenance and Calculation

### Reconstitution and Rebalancing

The index is reconstituted, where the membership is reset, semi-annually on the third Friday of June and December. Adjustments are implemented after Friday's market close and reflected the following Monday. If Monday is an index holiday, reconstitution is reflected the next business day. The market data used for reconstitution is as of the last trading day of May and November.

The index is rebalanced quarterly on the third Friday of March, June, September, and December. Adjustments are implemented after Friday's market close and reflected the following Monday. If Monday is an index holiday, the rebalance is reflected the next business day. During quarterly reviews, constituents with a controversy rating of 5 are deleted from the index. Parent index eligibility is maintained during the quarterly reviews.

Index files are published according to the global calendar schedule. For more information, please refer to the Morningstar Indexes Holiday Calendar.

### Corporate Actions

The treatment of corporate actions will be as per the alternatively-weighted indexes corporate action methodology. For more details, please refer to the Morningstar Indexes Corporate Actions Methodology rulebook.

### Index Calculation and Price Data

Details about index calculations and price data can be found in their respective rulebooks: Morningstar Indexes Calculation Methodology and Equity Closing Prices Used for Index Calculation.

## Methodology Review and Index Decommissioning Policy

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews consider corporate action treatment, selection, and maintenance procedures. Subscribers to the index will be notified before any methodology changes are made. For more details, refer to the Morningstar Index Methodology Change Policy.

Morningstar Indexes notifies all subscribers and stakeholders of the index that circumstances might arise that require a material change to, or a possible cessation of, the index. These circumstances are generally not within Morningstar's control and may include significant changes to the underlying market structure, inadequate access to necessary data, geo-political events, and regulatory changes. In addition, factors such as low usage or methodology convergence may result in the cessation of an index.

Because the cessation of the index or benchmark index could disrupt subscriber products that reference this index, all subscribers are encouraged to have robust fallback procedures if an index is terminated. For more details, refer to the Morningstar Index Decommissioning Policy.

## Data Correction and Precision

### Intraday Index Data Corrections

Commercially reasonable efforts are made to ensure the accuracy of data used in real-time index calculations. If incorrect price or corporate action data affects index calculations, corrections are applied prospectively.

### Index-Related Data and Divisor Corrections

Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection. In addition, an incorrect divisor of an index, if discovered within two days of its occurrence will be fixed retroactively on the day it is discovered to prevent an error from being carried forward. Commercially reasonable efforts are made to correct an older error subject to its significance and feasibility.

For more details, refer to the Recalculation Guidelines.

## Exceptions

While Morningstar will seek to apply the methodology as described within this document, the market environment, supervisory, legal, financial, or tax reasons may require an alternative approach to be adopted. A decision to take an alternative approach will be made by the Morningstar Index Methodology Committee, and in all instances, the application of a nonstandard process will be reported to the Morningstar Index Oversight Committee.

## Appendixes

### Appendix 1: Modifications to the Rulebook

| Section | Description of Change | Update Date |
|---|---|---|
| Product involvement based exclusions | Added the following screens:<br>• Thermal Coal Supporting Products / Services<br>• Oil & Gas Supporting Products / Services<br>• Thermal Coal Power Generation Revenue<br>• Oil & Gas Power Generation Revenue | Dec 19, 2022 |
| Decarbonization Trajectory | Minimum average reduction (annualized with geometric compounding) in greenhouse gas intensity is set at 7% relative to greenhouse gas intensity of the Paris-Aligned Index instead of the Parent Index at the base date | Dec 19, 2022 |
| Calculation of average decarbonization | The portfolio carbon intensity (MT CO2/Mn USD (EVIC)) for Dec 14 has been updated to 80.08 | Dec 19, 2022 |
| Active Sector Constraint | The minimum active weight of the cumulative High Climate Impact Sector group has been set at 0.05% of their corresponding weight in the Parent Index instead of an absolute value of 0% | Dec 19, 2022 |
| Entire rulebook | Moved to new template | May 2024 |
| Corporate Action | Moved all the indexes to the standard Morningstar Corporate Action Methodology | July 2024 |
| Data Correction and Precision | Computational and Reporting Precision Section removed | June 2025 |
| Calculation of Carbon, or Greenhouse Gas, Intensity | Clarified exceptions handling language | January 2026 |
| Appendix 5: Climate Impact Sectors | Updated high-climate-impact NACE section references from Section L to Section M for real estate activities and added clarification regarding historical NACE classification treatment. | August 2026 |

### Appendix 2: Glossary

| Term | Description |
|---|---|
| Reconstitution | During each reconstitution, the steps mentioned in the index construction process are performed, resulting in membership reset. |
| Rebalance | During each rebalance, the weights are adjusted for updated free-float and shares outstanding data. |

### Appendix 3: Construction of Target Metrics

**Calculation of Carbon, or Greenhouse Gas, Intensity**

The total emission of a security is defined as the sum of scope 1, scope 2, and scope 3 emissions. Enterprise value including cash (or EVIC) is the sum, at fiscal year-end, of the market capitalization of ordinary shares, the market capitalization of preferred shares, and the book value of total debt and noncontrolling interests, without the deduction of cash or cash equivalents. The carbon intensity of a security is defined as the ratio of the total emissions (in metric tons) adjusted for the inflation in EVIC and the EVIC of the company (in millions of U.S. dollars).

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 Morningstar Global Target Market Exposure Large Mid Index in the same NACE section in which the constituent belongs is used. Securities with null NACE section are additionally excluded. A valid carbon intensity value can only be calculated if both the emissions and EVIC values are available for the company.

$$Total\ Emissions = (Scope\ 1 + Scope\ 2 + Scope\ 3)\ Emissions$$

$$Security\ Level\ Carbon\ Intensity = \frac{Total\ Emissions\ (1 + EVIAF)}{Enterprise\ Value\ Including\ Cash\ (in\ Mn\ USD)}$$

$$^{*}Enterprise\ Value\ Inflation\ Factor\ (EVIAF) = \frac{Average\ Enterprise\ Value\ Including\ Cash}{Previous\ Average\ Enterprise\ Value\ Including\ Cash} - 1$$

$$Enterprise\ Value\ Including\ Cash\ (EVIC) = MktCapOrdinary_{Shares} + MktCap_{PreferredShares} + BV_{Debt} + NCI$$

$$Weighted\ Average\ Carbon\ (GHG)\ Intensity = \sum (Index\ Weight * Security\ Level\ GHG\ Intensity)$$

* The inflation adjustment factor is calculated at the parent index level.
* Carbon intensity of securities is adjusted by the EVIAF factor only during those reconstitutions when we observe an increase in the average EVIC value as compared to the previous reconstitution. In case of a decrease, the EVIAF is set to 1.

Where a company's total reported emissions show a material deviation from the previous reconstitution, and this deviation is assessed through Morningstar Indexes' quality-assurance review to be driven by reporting timing issues or partial reporting (for example, delayed disclosure of Scope 3 financed emissions), the emissions value from the prior reconstitution may be carried forward for up to two subsequent reconstitution periods. This rule applies only to ongoing index maintenance and does not affect simulated index history.

**Calculation of Target High Impact Sector Group Weight**

The target weight of the High Impact Sector Group is set at 1.05x its cumulative weight in the Parent index.

**Calculation of Average Decarbonization**

The climate transition and Paris-aligned indexes follow a 7% decarbonization trajectory since the base date. The weighted average greenhouse gas intensity of the portfolio at the base date is used to compute the target weighted average greenhouse gas intensity at any given semi-annual index review, according to the following formula.

$$CI_T = CI_0 * (0.93)^{\left(t-\frac{1}{2}\right)}$$

Where *t* is the number of semi-annual index reviews since the base date. The base date is set at June 21, 2021. $CI_0$ is the achieved carbon intensity of the portfolio on the base date.

We also aim to achieve a min 50% reduction in greenhouse gas intensity with respect to the custom benchmark index on each reconstitution date. The minimum of these two intensity targets is set as the target portfolio intensity.

| Parent Index | Base Date | Benchmark intensity (MT $CO_2$/Mn USD EVIC)) | Portfolio intensity (MT $CO_2$/Mn USD EVIC)) |
|---|---|---|---|
| Morningstar Eurozone Large-Mid | Dec 22, 2014 | 168.78 | 80.08 |

### Appendix 4: Product Involvement Based Exclusions

| Detailed Criteria | Revenue Threshold for Paris-Aligned Indexes |
|---|---|
| Controversial Weapons Tailor Made & Essential | 0% |
| Controversial Weapons Non-Tailor Made or Nonessential | 0% |
| Tobacco Production | 0% |
| Thermal Coal Production | 0% |
| Thermal Coal Supporting Products & Services | 0% |
| Oil & Gas Production | < 10% |
| Oil & Gas Supporting Products & Services | < 10% |
| Thermal Coal Power Generation | a%* |
| Oil & Gas Power Generation | b%* |

* (a+b)% < 50%

* The null values for the below-mentioned data points have been backfilled in history for all Climate-Transition and Paris-Aligned Benchmark Indexes - Tobacco Production, Thermal Coal Production, Thermal Coal Supporting Products & Services, Oil & Gas Production, Oil & Gas Supporting Products & Services, Thermal Coal Power Generation, Oil & Gas Power Generation.

*In the backtest of this index, treatment of *null* values is as follows:

- Thermal Coal Production, Oil & Gas Production, Oil & Gas Supporting Products & Services, Tobacco Production, Controversial Weapons Tailor Made & Essential, Controversial Weapons Non-Tailor Made or Non-Essential, GCC Status – null values prior to Dec'19 have been retained whereas, null values from Dec'19 have been removed from the universe.
- Thermal Coal Supporting Products & Services - null values prior to March'22 have been retained whereas, null values from Dec'19 have been removed from the universe.
- Oil & Gas Power Generation and Thermal Coal Generation - null values have been treated as 0% revenue involvement throughout the backtest history.

* From Dec'22 onwards, any security with missing values for the above-mentioned data points (Controversy score and GCC Status included) will be removed from the universe.

### Appendix 5: Climate Impact Sectors

NACE is the European Union's classification of economic activities. According to EU regulation, the NACE sections A, B, C, D, E, F, G, H, and M are deemed high climate impact sectors that cannot be underweight relative to their respective weights in the parent index. For this index, instead of not underweighting NACE Sections A, B, C, D, E, F, G, H and M individually, we ensure that the cumulative weight of these NACE Sections is not less than 1.05x their weight in the benchmark. The other sections are left unconstrained as a part of the tilt weighting methodology. Every company in the parent index is mapped to a particular NACE section and further aggregated to form the respective sector constraint cohorts. In the backtest, for companies that had a missing NACE section in their history, the NACE data has been back-propagated as NACE is a slowchanging data. Companies for which we did not have a valid NACE section even after back-propagating have been removed from the eligible universe. The references to NACE Sections A, B, C, D, E, F, G, H, and M in this methodology reflect amendments to the NACE classification under Commission Delegated Regulation (EU) 2023/137, under which real estate activities are represented under Section M. Prior to that date, real estate activities were represented under Section L for purposes of the high-climate-impact sector treatment. Historical backtested periods continue to use the NACE section data and classifications applied at the relevant time and are not restated to reflect the reassignment of real estate activities from Section L to Section M. The treatment of missing NACE section data remains unchanged.

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

**Appendix 6: Morningstar Sector and Industry Decrement Indexes**

| Index Name | Underlying Index | Base Value | Base Date | Performance Inception Date | Inception Date |
|---|---|---|---|---|---|
| Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 | Morningstar Eurozone Large-Mid | 900 | Dec 19, 2014 | Dec 19, 2014 | Feb 19, 2022 |
| Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 | Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 NR EUR | 900 | Dec 19, 2014 | Dec 19, 2014 | Feb 19, 2022 |
| Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 | Morningstar Eurozone Large-Mid Paris Aligned Benchmark Select 50 GR EUR | 810 | Dec 19, 2014 | Dec 19, 2014 | Feb 19, 2022 |

**Appendix 7: Decrement Levels**

| Return Variant of the Base Index | Base Currency | Decrement Type | Decrement Frequency | Decrement Application | Decrement Value | Day Count Convention |
|---|---|---|---|---|---|---|
| Net Total Return<br>Gross Total Return | EUR | Fixed percentage decrement of fixed-point decrement based on the index version | Daily | Geometric application for both decrement types | 5% decrement based on the Net Return<br>50-point decrement based on Gross Total Return | *ACT/365 |

* ACT is the number of calendar days between two calculation days.

**Formula for Fixed Point Decrement**

Geometric Decrement Calculation:

$$IV_t = \left[IV_{t-1} * \frac{U_t}{U_{t-1}}\right] - \left[D * \frac{Act_{t-1,t}}{DayCount}\right]$$

Where:

| | | |
|---|---|---|
| $IV_t$ | = | The value of the of the decrement index for calculation day t |
| $IV_{t-1}$ | = | The value of the decrement index for the day immediately preceding calculation day t |
| $U_t$ | = | The value of the underlying index for calculation day t |
| $U_{t-1}$ | = | The value of the underlying index for calculation day t-1 |
| $Act_{t-1,t}$ | = | Number of calendar days between calculation day t-1 and calculation day t |
| D | = | The decrement amount expressed in Index points |
| DayCount | = | 365 |

**Formula for Fixed Percentage Decrement**

Geometric Decrement Calculation:

$$IV_t = IV_{t-1} - \left[\frac{U_t}{U_{t-1}} - (c * \frac{Act_{t-1,t}}{DayCount}\right]$$

Where:

| | | |
|---|---|---|
| $IV_t$ | = | The value of the of the decrement index for calculation day t |
| $IV_{t-1}$ | = | The value of the decrement index for the day immediately preceding calculation day t |
| $U_t$ | = | The value of the underlying index for calculation day t |
| $U_{t-1}$ | = | The value of the underlying index for calculation day t-1 |
| $Act_{t-1,t}$ | = | Number of calendar days between calculation day t-1 and calculation day t |
| DayCount | = | 365 |

## Appendix 8: Index Treatment in Case of Inability to Meet Required Decarbonization Target

In the off chance that the Index is unable to achieve the target decarbonization in a particular year, then we will relax the active sector constraint from being 5% of the benchmark weight for the High Impact Sector Group to incrementally lower numbers greater than or equal to 0% till the target is met. We will still be in compliance with the EU Regulations which requires the cumulative weight of the High Impact Sector group to not be less than that in the benchmark. We have implemented a stricter approach in our methodology. If the required decarbonization target is still not being achieved, the equal weighting scheme of the index will be relaxed, and we will switch to an approach that will achieve the required decarbonization trajectory while simultaneously try to keep the weights of the securities as close to equal-weighted as possible.

## About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers, and advisors in navigating investment opportunities across major asset classes, styles, and strategies. From traditional benchmarks and unique IP-driven indexes to index design, calculation, and distribution services, our solutions span an investment landscape as diverse as investors themselves.

## Morningstar Index Methodology Committee

The Morningstar Index Methodology Committee oversees all new index development, index methodology changes, and cessation of indexes for any indexes where Morningstar owns the intellectual property. This committee is also charged with ensuring that indexes align with Morningstar Research principles and values. The group comprises members of the index team with index research, product development, product management, client service, index implementation, and operation expertise who provide the first layer of governance over index design and methodology.

## Morningstar Index Operations Committee

The Morningstar Index Operations Committee governs the processes, systems, and exception handling of the day-to-day management of all live indexes, including index rebalancing and reconstitution, restatements, market classification, and contingency management. The committee oversees the annual review of index methodology, as required by the European Benchmarks Regulation ("BMR"), ensuring that methodologies remain fit for purpose and continue to achieve their stated investment objectives. The group comprises members of the index team with data, operations, corporate actions, product development, index launch, client service, and index management experience who provide the first layer of governance over index operations.

## Morningstar Index Oversight Committee

The Morningstar Index Oversight Committee is responsible for the index oversight function as per the requirements of the European Benchmarks Regulation ("BMR"), providing independent oversight of all aspects of the governance of benchmark administration as required by the BMR. Its remit extends to all calculation and administration-related business activities of Morningstar Indexes, including administration of Morningstar-owned benchmarks as well as client-owned benchmarks and index calculation. The oversight function is part of the organizational structure of Morningstar but is separate and independent from the index business, index management, and the other index committees.

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## Contact Us

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