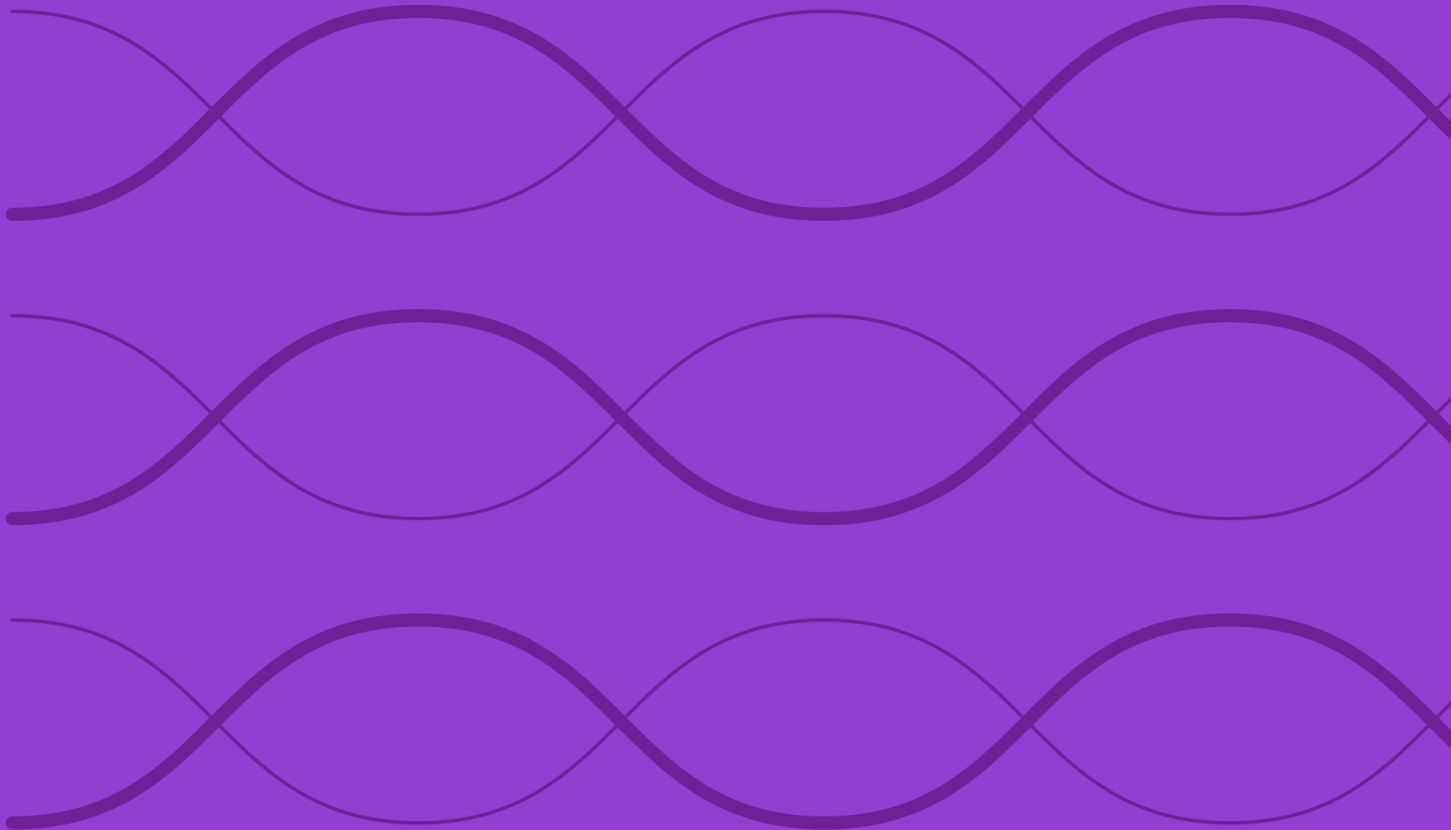


Construction Rules for the Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index



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Overview

The Morningstar Developed Markets Paris Aligned Benchmark Select 100 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. The index also seeks to reward companies that have credible carbon-reduction targets while achieving a modest tracking error with respect to the parent index. 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. The index follows the Intergovernmental Panel on Climate Change's (IPCC) 1.5°C with no or limited overshoot temperature scenario.

Index Inception and Performance Start Date

The index inception date and the performance start date, when the first back-tested index value was calculated, are listed in Appendix 9.

Index Construction

Methodology Summary

Starting Universe

- Select all Large-Mid US, Developed Europe, and Developed Asia Pacific securities as classified under the Morningstar Global Markets Indexes.
- Reweight these securities to create a custom benchmark: US makes up 50%, Developed Europe makes up 35%, and Developed Asia Pacific makes up the remaining 15% of the portfolio.

Eligibility

- Apply baseline exclusions.
- Apply activity-based exclusions.
- 3-month ADTV $\geq$ EUR 10 million.

Portfolio Construction

- Select the top 100 securities based on the highest custom float market capitalization in the ratio of 50% US, 35% Developed Europe, and 15% Developed APAC.
- Apply a region constraint of 50% US, 35% Developed Europe, and 15% Developed APAC respectively.
- Apply the active sector constraint region-wise where the overall high impact sector cannot be underweight w.r.t the custom benchmark.
- Apply a security capping of 5%
- Apply a minimum security weight of 1 basis point.

Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index

Starting Universe

At each reconstitution, constituents of the Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index are derived from a custom Morningstar US, Developed Europe, and Developed Asia Pacific Benchmark Index which is a 50/35/15 split by weight among US, Developed Europe, and Developed Asia Pacific, respectively. 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 not be noncompliant 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, tobacco production/cultivation and thermal coal supporting products / services.

- The company must not have 10% or more of its revenue involvement from, oil and gas production and oil & gas related products / services.
- The company must not have 50% or more of its combined revenue from thermal coal and oil & gas power generation.
- Liquidity Filter
 - The security must have a three-month average daily traded volume, or ADTV, of at least EUR 10 million.
- The climate sector impact groups are divided within high impact and low impact. The target number of securities within individual sectors are calculated as follows:
 - Target number of securities from the high impact sector group = Round Up (Total benchmark weight of securities belonging to the high impact sector group * 100)
 - Target number of securities from the low impact sector group = 100 – Number of securities from the high impact sector group.
 - The target number of securities within each group are selected based on the custom benchmark float market capitalization in descending order with US representing 50%, Developed Europe representing 35% and Developed Asia Pacific representing the remaining 15%.
- More details are available in Appendix 6.

Portfolio Construction

At each reconstitution, the indexes are constructed using a tilt-weighting methodology that aims to achieve replicability and investability while keeping the tracking error with respect to the parent index low subject to the following conditions and constraints.

Parameter	PAB
Minimum reduction in greenhouse gas intensity (scope 1 + 2 + 3) relative to parent index	50%
Minimum average reduction (per year) in greenhouse gas intensity relative to the greenhouse gas intensity of the PAB portfolio at base date	7%
Sector Constraint	Cumulative weight of the High Impact sectors should not be less than 1.05 times their weight in the benchmark
Region Constraint	US: 50% by weight Developed Europe: 35% by weight Developed APAC: 15% by weight
Security Capping	5%
Minimum security weight	1 basis point

The objectives are achieved using a tilt-weighting approach as mentioned below:

$$W_{PORT} = W_P * SCI^{\alpha} * F_{RC} * F_{SC} * F_{CP}$$

- W_{PORT} : Weight of the security in the PAB index
- W_P : Weight of the security in the parent index
- SCI: Carbon Intensity Standard Score (refer to Step1 of process below)
- F_{RC} : Region constraint control factor
- F_{SC} : Sector constraint control factor
- F_{CP} : Security constraint control (refer to the parameter table above)
- α : Exponential tilt powers determined at each index rebalance to achieve the design objectives. The power has a sensitivity of 0.01.

The Process:

- Step 1: The carbon intensity standard scores for the 100 securities selected are determined by first calculating the respective Z scores over the entire universe and then using a cumulative distribution function to determine the S scores. To reflect the inverse correlation of carbon intensity with portfolio weights, the S scores are changed to 1 – S scores.
- Step 2: The parent index weights are tilted by the carbon intensity S score, subject to the exponential power α . The minimum tilt weight for a security is set to 1 basis point. The α is set to 0.01 for the first iteration.
- Step 3: Calculate the tilt weight for all securities.
- Step 4: The region tilt factors are applied to achieve the region constraints.
- Step 5: Within each region, the sector tilt factors are applied to achieve the sector constraints.
- Step 6: The individual security capping of 5% and the minimum security weight of 1 basis point is applied without distorting the region and sector constraints.

At the end of Step 6, we check whether all constraints are being satisfied or not. If they are not, then we move on to the next iteration, increase the α by 0.01 and repeat steps 4-6.

Index Weighting

The index is float-adjusted market capitalization-weighted. The weights are then drifted using the tilt methodology described above to satisfy the portfolio constraints. For more details, refer to the [Morningstar Indexes Calculation Methodology rulebook](#).

Index Maintenance and Calculation

Reconstitution and Rebalancing

The indexes are 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 and parent index eligibility is maintained. The weights of the remaining stocks are readjusted in proportion to their existing weights so that they sum up to 1.

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

Refer to Appendix 2 for details on reconstitution and rebalancing.

Corporate Actions

The treatment of corporate actions will be as per the float-adjusted market capitalization-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 Cessation Policy

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews consider corporate action treatment, eligibility requirements, 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 Cessation Process](#).

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 generally 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 method described above, 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 relevant Morningstar Indexes Methodology Committee, and in all instances, the application of a nonstandard process will be reported to the Morningstar Indexes Oversight Committee.

Appendixes

Appendix 1: Modifications to the Rulebook

Section	Description of Change	Update Date
Product involvement-based exclusions	Added the following screens: • Thermal Coal Supporting Products / Services • Oil & Gas Supporting Products / Services • Thermal Coal Power Generation Revenue • Oil & Gas Power Generation Revenue Removed the following screens: • Arctic Oil & Gas Extraction • Oil Sands Extraction • Thermal Coal Power Generation • Oil & Gas Power Generation	December 2022
Calculation of average decarbonization	The portfolio carbon intensity (MT CO ₂ /Mn USD (EVIC)) for June 21 has been updated from 138.9 to 138	December 2022
Entire rulebook	Moved to new template	May 2024
Corporate Action	Transitioned Indexes to the standard Morningstar Corporate Action Methodology	July 2024
Data Correction and Precision	Computational and Reporting Precision Section Removed	May 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: Calculation 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.

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

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

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

$$\text{Enterprise Value Including Cash (EVIC)} = \text{MktCap}_{\text{OrdinaryShares}} + \text{MktCap}_{\text{PreferredShares}} + \text{BV}_{\text{Debt}} + \text{NCI}$$

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

* 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 NACE Section Weights

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.

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

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)
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Morningstar Developed Markets US Europe and Asia Pacific 50/35/15 Index	June 21, 2021	278.7	138
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Appendix 4: Product Involvement-Based Exclusions

Detailed Criteria	Revenue Threshold for Paris-Aligned Indexes
Thermal Coal Extraction	0%
Thermal Coal Supporting Products / Services	0%
Oil & Gas Production	<10%
Oil & Gas Supporting Products / Services	<10%
Controversial Weapons Tailor Made & Essential	0%
Controversial Weapons Non-Tailor Made or Nonessential	0%
Tobacco Production	0%
Thermal Coal Power Generation Revenue	a%
Oil & Gas Power Generation Revenue	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 Indexes listed in this methodology book, null values post backfilling for activity-based screens have been removed from the universe with the exception of Oil & Gas Power Generation and Thermal Coal Generation, where null values have been treated as 0% revenue involvement.

*The null values for Controversial Weapons Tailor Made & Essential and Controversial Weapons Non-Tailor Made or Non-Essential have been retained in the universe throughout history.

* From Dec'22 onwards, any security with missing values for the above-mentioned data points (Controversy score and GCC Status) 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. However, for the Morningstar Developed Markets Paris Aligned Benchmark Select 100 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 slow-changing 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

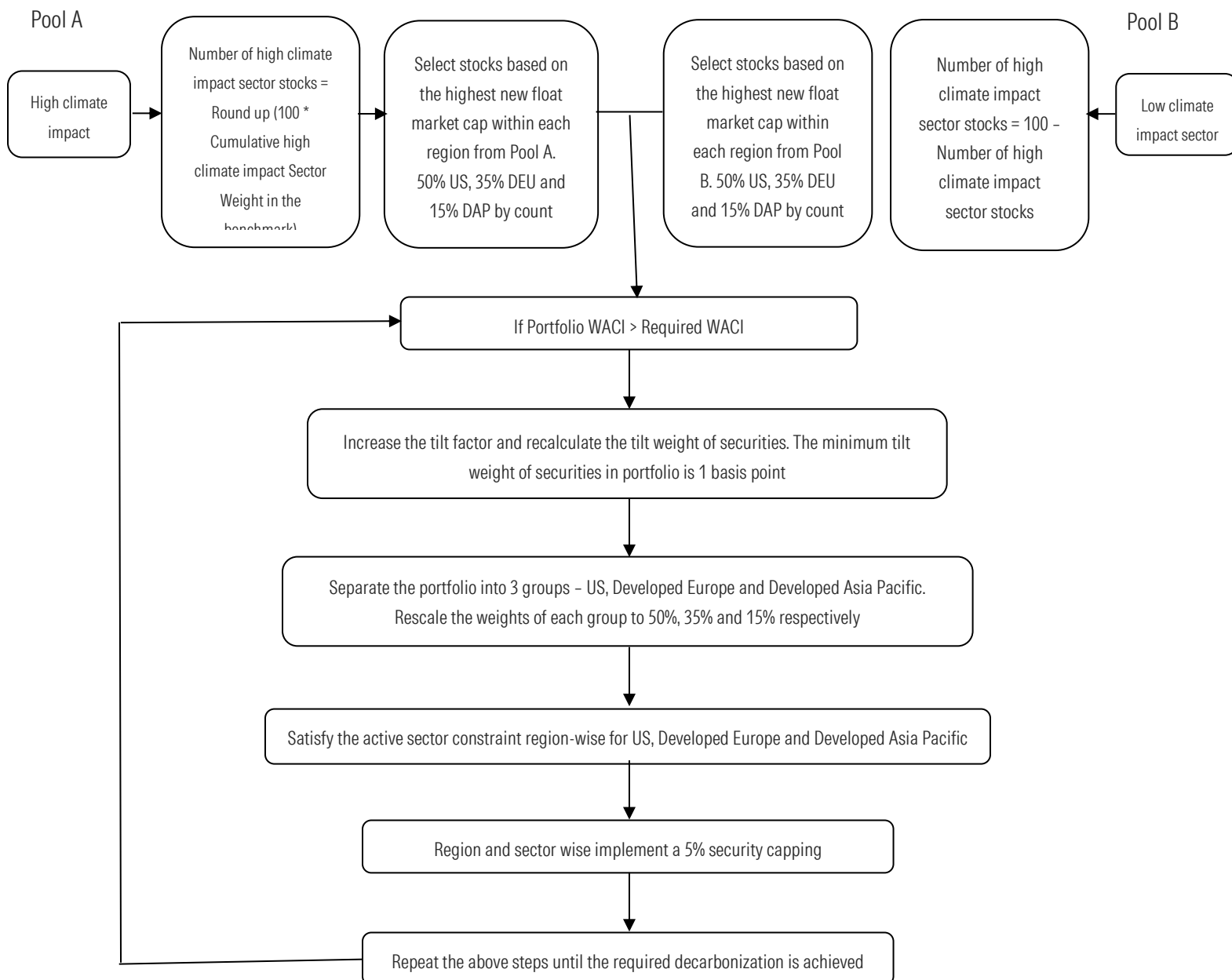
the reassignment of real estate activities from Section L to Section M. The treatment of missing NACE section data remains unchanged

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

Appendix 6: 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, the 5% security capping in the index will be relaxed. If we still are unable to meet the requirement, then we will relax the region constraints implemented as a part of the methodology. If this too is not sufficient, then we will relax the active sector constraint from being 5% of the benchmark weight for the High Impact NACE sections to 0%. This is in compliance with the EU Regulations, and we have implemented a stricter approach in our methodology.

Appendix 7: Security Selection



Appendix 8: Decrement Index Calculation

For the fixed-point decrement index, the index levels are adjusted by deducting a predetermined value of index points from the base index levels. For the fixed percentage decrement index, the index levels are adjusted by deducting a fixed percentage point from the base index returns. These constant markdowns are applied to the underlying index daily.

Return Variant of the Base Index	Base Currency	Decrement Type	Decrement Frequency	Decrement Application	Decrement Value	Day Count Convention
As in the index name	EUR	Fixed percentage decrement or fixed-point decrement based on the index version	Daily	Geometric application for both decrement types	5% decrement of 50-point decrement based on the index version	*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

c =

DayCount = 365

Appendix 9: Index and Decrement Indexes Inception and Performance Start Dates

Index Name	Parent Index	Base Value	Base Date	Performance Start Date	Inception Date
Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index PR/GR/NR	Morningstar Developed Markets US Europe and Asia Pacific 50/35/15 Index PR/GR/NR	1,000	Jan 03, 2022	Dec 19, 2014	Oct 21, 2022
Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index 5% NR EUR	Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index NR EUR	1,000	Jan 03, 2022	Dec 19, 2014	Oct 21, 2022
Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index 4% NR EUR	Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index NR EUR	1,000	Jan 03, 2022	Dec 19, 2014	Oct 21, 2022
Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index 50 Point GR EUR	Morningstar Developed Markets Paris Aligned Benchmark Select 100 Index GR EUR	900	Feb 01, 2023	Dec 19, 2014	Feb 06, 2023

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 Indexes Methodology Committee

The Morningstar Indexes 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 Indexes 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 Indexes 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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