MORNINGSTAR Indexes

Construction Rules for the Morningstar Optimized Fixed Count Indexes

June 2025

Overview

The Morningstar Optimized Fixed Count Indexes aim to minimize tracking error with respect to their parent indexes, Morningstar US Large and Small-Mid Cap Indexes, while limiting the number of constituents to a specified fixed count.

To forecast tracking error of the index portfolios with respect to their parent indexes, Morningstar uses Morningstar Global Industry Standard Risk Model (the risk model). For more information on the risk model, refer to Morningstar Risk Model Methodology. For the list of available parent index variants, refer to Appendix 3.

The indexes do not incorporate environmental, social, or governance criteria.

Index Inception and Performance Start Date

The index inception date is March 31, 2022, and the performance start date, when the first back-tested index values were calculated, is December 21, 2007.

Index Construction

Methodology Summary

Starting Universe	Eligibility	Portfolio Construction	
• Parent index members: ○ Morningstar US Large Cap ○ Morningstar US Small-Mid Cap	• All companies covered by the risk model with available specific risk forecast are eligible	• Select and weight stocks based on the objective and constraints below through an optimization process	Morningstar Optimized Fixed Count Indexes

Starting Universe

At each reconstitution, securities eligible for each Morningstar Optimized Fixed Count Index are derived from its respective parent from the Morningstar US Market Indexes (benchmark). For further details on benchmark construction, refer to the Construction Rules for the Morningstar US Market Indexes.

Eligibility

To be eligible for index inclusion, securities must be covered by the risk model and have sufficient return history for estimation of specific risk as determined by the risk model parameters.

Portfolio Construction

Optimization Parameters

At every reconstitution, the Morningstar Optimized Fixed Count index portfolios are created using an optimizer to minimize the objective and meet the constraints as follows:

- Minimize the forecast tracking error of the portfolio
- No short positions are allowed
- Number of holdings is equal to the target count (shown in Appendix 3)
- The maximum one-way turnover is less than 3% plus mandatory turnover, defined as the turnover resulting from the exclusion of current holdings that were dropped from the parent benchmark

For more details on optimized construction, please refer to Appendix 4.

Number of Stocks

The number of stocks in the indexes is fixed at reconstitution based on the target counts outlined in Appendix 3. The number of stocks included in the portfolio may be greater or less than the target counts due to corporate actions.

Index Weighting

The company weights of index constituents are determined through an optimization process subject to the objective function and weight constraints described in the "Optimization Parameters" section above. For more details, please refer to Appendix 4.

Index Maintenance and Calculation

Scheduled Maintenance

The index is reconstituted, where the membership is reset, and 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, reconstitution is reflected the next business day. The market data used for reconstitution is as of the last trading day of February, May, August, and November.

The Morningstar Industry Standard Risk Model used in index reconstitution is constructed as of last Friday of the month preceding the month of reconstitution.

Refer to Appendix 2 for details on reconstitution and rebalancing.

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. 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 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
Entire Rulebook	Moved to new rulebook template	June 2023
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
Appendix 3	Updated legal names	June 2025

Appendix 2: Glossary

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

Appendix 3: Index Variants and Inception Dates

Index Name	Parent Index	Target Holding Count	Risk Model Currency	Performance Start Date	Inception Date
Morningstar US Large Cap Focus 70 Index	Morningstar US Large Cap Index	70	USD	12/21/2007	03/31/2022
Morningstar US Small-Mid Cap Focus 250 Index	Morningstar US Small-Mid Cap Index	150	USD	12/21/2007	03/31/2022

Appendix 4: Optimization Methodology

Objective Function - Ex-Ante Tracking Error

$$minimize\ (w_p^T - w_b^T)\,(X^T F X + \lambda D)\,(w_p - w_b)$$

Where:
w_p = vector of portfolio weights, unknown
w_b = vector of benchmark weights
X = matrix of asset factor exposures
F= factor covariance matrix
D = specific (idiosyncratic, residual) risk block of covariance matrix
$X^T FX$ = systematic (factor-driven) risk block of covariance matrix from the risk model
λ = 1, specific risk aversion parameter; λ=1 results in a specific risk-neutral volatility forecast; λ>1 would impose greater penalty for asset-specific risk not modelled by systematic risk factor exposures

Handling of Infeasible Optimizations

Constraints will be relaxed if a feasible solution is not obtained. The relaxation happens in the following order:

- One-way turnover constraint is relaxed up to 30% in the increments of 5%
  If a feasible solution is not found after the above constraint relaxation, the index will not be reconstituted for that semi-annual review, and Index Committee review of the constraint methodology will be conducted and completed by the next semi-annual reconstitution date.

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 U.K. and EU benchmark regulations, or 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 U.K. and European BMR, providing independent oversight of all aspects of the governance of benchmark administration as required by the relevant 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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