

Construction Rules for the Morningstar® US Market IndexSM

Morningstar Indexes

January 2019

Contents

1 Overview

2 Index Construction

2.1 Assigning Stocks to the Index

2.2 Index Weighting

3 Index Maintenance and Calculation

3.1 Index Maintenance and Corporate Action Treatment

3.2 Index Calculation and Price Data

4 Methodology Review and Index Cessation Policy

5 Data Correction and Precision

5.1 Intraday Index Data Corrections

5.2 Index-Related Data and Divisor Corrections

5.3 Computational and Reporting Precision

6 Appendixes

6.1 Glossary

6.2 Modification to Rulebook

7 About Morningstar

Overview

The Morningstar® US Market IndexSM is designed to provide investors with an accurate benchmark for performance measurement and to offer a discrete building block for portfolio construction. The index provides an accurate, comprehensive depiction of the performance characteristics of U.S. equity markets.

The Morningstar US index family is designed with the following key objectives in mind:

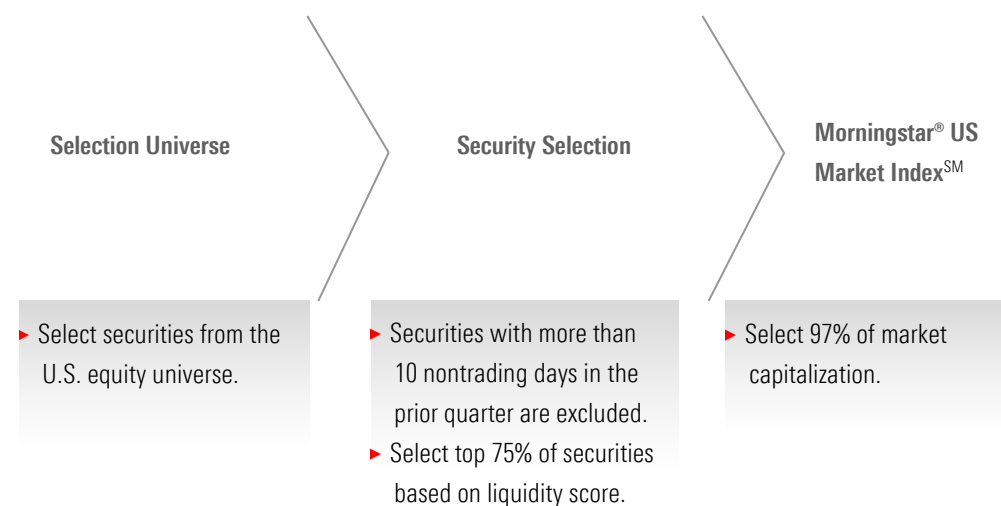
- ▶ Transparent and objective rules: Construction of indexes should be governed by a clear and transparent set of well-documented rules for security selection and exclusion, reconstitution, and adjustments for corporate actions.
- ▶ The right balance between comprehensive market coverage and full investability: Indexes should reflect the actual investment opportunities available to active and passive managers. At the same time, they should reflect the overall economic importance of the company — the larger and more liquid the security, the more weight it deserves in the index. The goal is to find the right balance between completeness and investability.
- ▶ Nonoverlapping and hierarchical: Indexes should include all qualified stocks in the broad market index. There should be no “sampling” or other process whereby some stocks are ignored or their influence reduced. Each stock in the broad market index is included in one and only one of the subcomponents at each level.
- ▶ Minimize index turnover: Indexes incur turnover as they are rebalanced in line with their stated methodology, which results in high management costs and difficulty in tracking. We designed the Morningstar indexes to limit unnecessary turnover.

Index Inception Date and Performance Inception Date

The inception date of the index is July 3, 2002, and the performance inception date of the index is December 31, 1991, when the first back-tested index value was calculated.

Index Construction

Exhibit 1 Morningstar US Market Index Construction Process



For additional details, refer to the "Assigning Stocks to the Morningstar US Index" section.

Assigning Stocks to the Morningstar US Market Index

Selection Universe

At each reconstitution, securities for the Morningstar US Market Index are derived from the U.S. equity universe described below:

- ▶ Security must be a common stock, REIT, or tracking stocks.
- ▶ Security must trade on one of the three major U.S. exchanges: The New York Stock Exchange, Nasdaq, or the NYSE Market LLC.
 - ▶ A company is classified in the U.S. universe if its primary stock market activities are carried out in the U.S. and any of the following conditions are met: It is incorporated in the U.S. or the following U.S. territories: Guam, Puerto Rico, or U.S. Virgin Islands.
 - ▶ It is incorporated in any other country but files a Form 10-K/10-Q or equivalents, and its primary business activities as measured by the geographic distribution of revenue and assets are conducted in the U.S. For cases where the distribution of revenue and assets do not indicate towards U.S., the decision of the Morningstar Index committee is deemed final. Companies that remain unclassified at the end of the exercise are ineligible for the index.

- ▶ The following security types do not qualify:
 - ▶ American depository shares
 - ▶ Fixed-dividend shares
 - ▶ Convertible notes, warrants, and rights
 - ▶ Limited partnership/master limited partnership and limited liability companies
 - ▶ Business development companies
 - ▶ Pooled investment vehicles
 - ▶ Royalty and statutory trust

American Depository Receipts (ADR) are eligible for inclusion in the index if no equity listing is available for the company

Security Selection

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

- ▶ Securities that have more than 10 nontrading days in the prior quarter are excluded.
- ▶ A security must be among the top 75% of the companies in the investable universe based on its liquidity score, which is the average of its rank on each of the following measures:
 - ▶ The average monthly trading volume in U.S. dollars during the six calendar months immediately before reconstitution or, in the case of corporate entities younger than six months, since the security was first issued (partial month periods are prorated by number of trading days in the month).
 - ▶ The lowest two months' total trading volume during the six calendar months immediately before reconstitution (the months need not be sequential).

Liquidity criterion is waived for corporate takeovers, spin-offs, or other corporate actions where the successor entity issues one or more securities that meet the following criteria:

- ▶ The new entity is in either the mid- or large-cap band.
- ▶ The new entity's float value is greater than or equal to the smallest float in the mid-cap band,

The resultant universe is now referred to as the investable universe.

Companies with Multiple Share Classes

For companies with multiple share classes of equity securities, the following general rules apply:

- ▶ All trading classes that meet the general eligibility criteria are considered for inclusion.
- ▶ The market capitalization of a company is determined by aggregating all listed share classes. This aggregate market capitalization is used to assign companies to market-capitalization bands, which is described in detail in the following section.
- ▶ The weight contribution of a given share class in an index is based on the free-float market capitalization of that share class.

Morningstar US Market Index

Each security of the investable universe is considered for inclusion in the US Market Index covering top 97% market capitalization (as presented below) by categorizing the stocks in one of three market-capitalization bands: large, mid, small.

Assigning Large-Cap Band Constituents

- ▶ The stocks in the investable universe that meet eligibility criteria are ordered by market-cap size in descending order.
- ▶ Selecting by size in descending order, the stocks that, in aggregate, account for 69% of the total market capitalization of the investable universe are assigned to the large-cap band.
- ▶ Among the stocks that fall between 69% and 70% of the capitalization of the investable universe (the upper end of the large-cap/mid-cap buffer zone), those that were classified as mid-cap or small cap and ranked below 70% of the capitalization of the investable universe at the previous reconstitution date are assigned to the mid-cap band. The rest are assigned to the large-cap band.

Assigning Mid-Cap Band Constituents

- ▶ Among the stocks that fall between 70% and 71% of the investable universe (the lower end of the large-cap/mid-cap buffer zone), those that were classified as large cap and ranked within the top 70% of the capitalization of the U.S. equity market at the previous reconstitution date are reassigned to the large-cap band. The rest are assigned to the mid-cap band.
- ▶ Selecting from the remaining stocks by size in descending order, the stocks that fall between 71% and 89.5% of the investable universe are assigned to the mid-cap band.
- ▶ Among the stocks that fall between 89.5% and 90% of the capitalization of the investable universe (the upper end of the mid-cap/small-cap buffer zone), those that were classified as small cap and ranked below 90% of the capitalization of the investable universe at the previous reconstitution date are reassigned to the small-cap band. The rest are assigned to the mid-cap band.

Assigning Small-Cap Band Constituents

- ▶ Among the stocks that fall between 90% and 90.5% of the investable universe (the lower end of the mid-cap/small-cap buffer zone), those that were classified as mid-cap or large cap and were ranked within the top 90% of the capitalization of the U.S. equity market at the previous reconstitution date are assigned to the mid-cap band. The rest are assigned to the small-cap band.
- ▶ Selecting from the remaining stocks by size in descending order, the stocks that fall between 90.5% and 96.75% of the capitalization of the investable universe are assigned to the small-cap band.
- ▶ Among the stocks that fall between 96.75% and 97% of the capitalization of the investable universe (the upper end of the small-cap/micro-cap buffer zone), those that were classified as small cap and ranked below 97% of the capitalization of the investable universe at the previous reconstitution date are reassigned to the small-cap band. The rest are excluded from the index.
- ▶ Among the stocks that fall between 97% and 97.25% of the investable universe (the lower end of the small-cap/micro-cap buffer zone), those that were classified as small cap, mid-cap, or large cap and were

ranked within the top 97% of the capitalization of the U.S. equity market at the previous reconstitution date are assigned to the small-cap band. The rest are excluded from the index.

Number of Stocks

The number of stocks in the index is subject to the selection and eligibility criteria at the time of reconstitution.

Index Weighting

The index is float market capitalization weighted. For more details, refer to the [Morningstar Indexes Calculation Methodology rulebook](#).

Index Maintenance and Calculation

Scheduled Maintenance

The index is reconstituted semiannually and implemented after the close of business on the third Friday of June and December and is effective the following Monday. If Monday is a holiday, reconstitution is effective on the immediate following business day. The market data used for reconstitution is as of the last trading day of May and November.

The index is rebalanced quarterly and implemented after the close of business on the third Friday of March, June, September, and December and is effective the following Monday. If Monday is a holiday, rebalance is effective on the immediate following business day. The market data used for rebalance is as of the last trading day of February, May, August, and November.

Refer to Appendix 1 for details on reconstitution and rebalancing.

Corporate Action

The treatment of corporate actions can be found in 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 take into account 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 Process](#).

Morningstar also notifies all subscribers and stakeholders of the index that circumstances might arise that require a material change to the index, or possible cessation. Circumstances that could lead to an index cessation include, but are not limited to, market structure change, product definition change,

inadequate supply of data, insufficient revenue associated with the index, insufficient number of clients using the index, and/or other external factors beyond the control of the Morningstar Index Committee.

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 affect index daily highs or lows, they are corrected retroactively as soon as is feasible.

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 five days of its occurrence, will always 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](#).

Computational and Reporting Precision

For reporting purposes, index values are rounded to two decimal places and divisors are rounded to appropriate decimal places.

Appendixes

Appendix 1: Glossary

Terms	Description
Reconstitution	<p>Each reconstitution involves the following:</p> <ul style="list-style-type: none"> • Updating the global market's investable equity universe. • Reviewing the economic segment- and country-level size segment breakpoints. • Assigning companies to capitalization bands taking into account the buffer zones. • Changes in index shares (free float, total shares outstanding, index-specific adjustment factor) of each constituent.
Rebalance	<p>Each rebalancing involves the following:</p> <ul style="list-style-type: none"> • Changes in index shares (free float, total shares outstanding, index-specific adjustment factor) of each constituent. • Addition of U.S. spin-offs/IPOs to the global markets index
Free Float	<p>Free float is defined as a security's outstanding shares adjusted by block ownership to reflect only truly tradable and investable shares. A security's outstanding shares are adjusted if an entity owns 5% or more of the security through one of the following types of block ownership:</p> <ul style="list-style-type: none"> • Cross ownership — shares that are owned by other companies (including banks and life insurance companies). • Government ownership — shares that are owned by governments (central or municipal) or their agencies. • Private ownership — shares that are owned by individuals or families. • Restricted shares — shares that cannot be traded during a certain time period. <p>However, a security's outstanding shares are not adjusted for institutional investors' holdings, which include, but are not limited to, the following categories:</p> <ul style="list-style-type: none"> • Custodian nominees • Trustee companies • Mutual funds • Investment companies • Pension fund holdings

Appendix 2: Modification to Rulebook

Section	Description	Update Date
Multiple Share Class	All eligible trading classes are considered for the index from the December 2015 reconstitution.	Dec 2015
Selection Universe	ADR may be considered for the inclusion in the index if no equity listing is available for the company	Dec 2018

About Morningstar, Inc.

Morningstar, Inc. is a leading provider of independent investment research in North America, Europe, Australia, and Asia. Morningstar offers an extensive line of products and services for individual investors, financial advisors, asset managers, and retirement plan providers and sponsors. Morningstar provides data on approximately 510,000 investment offerings, including stocks, mutual funds, and similar vehicles, along with real-time global market data on more than 17 million equities, indexes, futures, options, commodities, and precious metals, in addition to foreign exchange and Treasury markets. Morningstar also offers investment management services through its investment advisory subsidiaries.

About Morningstar Indexes

Morningstar® Indexes combine the science and art of indexing to give investors a clearer view into the world's financial markets. Our indexes are based on transparent, rules-based methodologies that are thoroughly back-tested and supported by original research. Covering all major asset classes, our indexes originate from the Morningstar Investment Research Ecosystem — our network of accomplished analysts and researchers working to interpret and improve the investment landscape. Clients such as exchange-traded fund providers and other asset management firms work with our team of experts to create distinct, investor-focused products based on our indexes. Morningstar Indexes also serve as a precise benchmarking resource.

Morningstar Index Committee

The [Morningstar Index Committee](#) is currently comprised of senior officials who possess the appropriate levels of knowledge in relation to Indexes. A wide array of business groups are represented to allow for a broad voice to be heard and for a wider view to be expressed in evaluating all subjects brought up during Committee meetings. The Committee seeks to create indexes of the highest quality that meet the recognized qualities of a good benchmark.

For More Information

For any queries, reach out to us via our [communication page](#).



22 West Washington Street
Chicago, IL 60602 USA

©2016 Morningstar. All Rights Reserved.

Any matter arising from undocumented events will be resolved at the discretion of Morningstar Index Committee. The information in this document is the property of Morningstar, Inc. Reproduction or transcription by any means, in whole or part, without the prior written consent of Morningstar, Inc., is prohibited. While data contained in this report are gathered from reliable sources, accuracy and completeness cannot be guaranteed. All data, information, and opinions are subject to change without notice. This document may contain back-tested or simulated performances and the subsequent results achieved by the investment strategy may be materially different.