
Construction Rules for the Morningstar® Global Upstream Natural Resources IndexSM

Morningstar Indexes

November 2017

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Overview

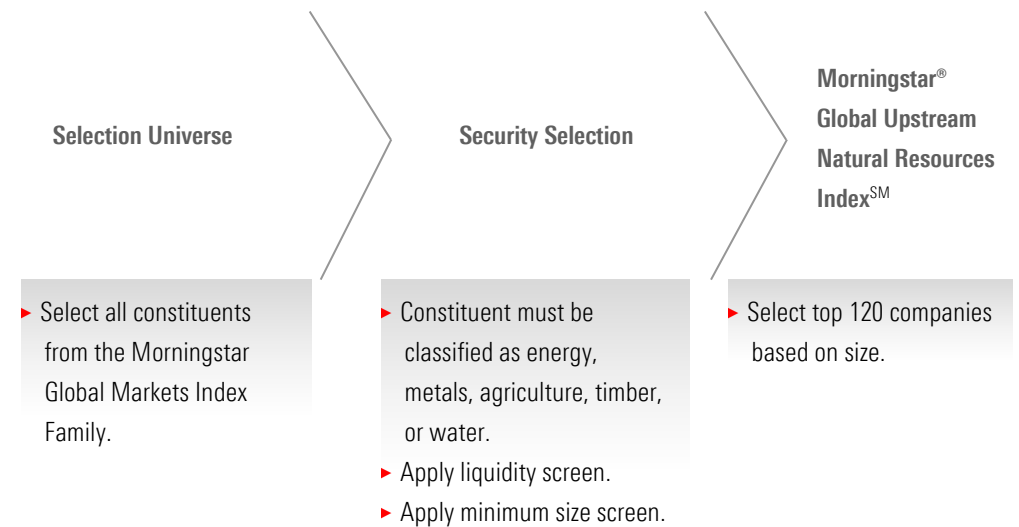
The Morningstar® Global Upstream Natural Resources IndexSM provides exposure to companies that have significant business operations in the ownership, management or production of natural resources in energy, agriculture, precious or industrial metals, timber, and water resources categories as indicated by Morningstar's Global Equity Classification Structure.

Index Inception Date and Performance Inception Date

The inception date of the index is June 29, 2011, and the performance inception date of the index is December 15, 2000, when the first back-tested index value was calculated.

Index Construction

Exhibit 1 Morningstar Global Upstream Natural Resources Index Construction Process



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

Assigning Stocks to the Index

Selection Universe

At each reconstitution, securities for the Morningstar Global Upstream Natural Resources Index are derived from the Morningstar Global Markets Index (benchmark). For more details on benchmark construction, refer to the [Morningstar Global Markets Index](#).

Security Selection

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

- ▶ Company must be engaged in upstream industries of at least one of the following natural resources categories: energy, metals, agriculture, timber, or water. The Morningstar industry determines membership in the appropriate category.
- ▶ Security must have an average daily traded value (three-month) of at least \$1 million.
- ▶ Securities in energy, metals, or agriculture must have a minimum full market capitalization of \$1 billion, and in timber or water must have a minimum full market capitalization of \$500 million.
- ▶ For dual-listed entities, the company with the highest float market capitalization is considered eligible.

Portfolio Selection

Index Stock Assignment			
Category	Stock Limit	Industry	Priority
Energy	30	Oil & Gas Integrated	1
		Oil & Gas Exploration & Production	1
		Oil & Gas Refining and Marketing	2
		Coal	2
Metals	30	Industrial Metals & Minerals	1
		Copper	1
		Aluminum	1
		Gold	1
		Silver	1
		Steel	2
Agriculture	30	Agricultural Inputs	1
		Farm Products	1
		Farm & Construction Equipment	2
		Chemicals	2
		Specialty Chemicals	2
Timber	15	Lumber & Wood Production	1
		Paper & Paper Products	2
		REIT- Diversified	3
Water	15	Utilities - Regulated Water	1
		Waste Management	2
		Utilities - Diversified	3

► Energy

The 30 largest companies by float-adjusted market capitalization in the investable universe that operate in the following industries:

- Oil & Gas Integrated
- Oil & Gas Exploration & Production
- Oil & Gas Refining & Marketing
- Coal

► Metals

The 30 largest companies by float-adjusted market capitalization in the investable universe that operate in the following industries:

- Industrial Metals & Minerals
- Copper
- Aluminum
- Gold
- Silver
- Steel

▶ Agriculture

The 30 largest companies by float-adjusted market capitalization in the investable universe that operate in the following industries:

- ▶ Agricultural Inputs
- ▶ Farm Products
- ▶ Chemicals
- ▶ Specialty Chemicals

▶ Timber

The 15 largest companies by float-adjusted market capitalization in the investable universe that operate in the following industries:

- ▶ Lumber & Wood Production
- ▶ REIT – Diversified
- ▶ Paper & Paper Products

▶ Water

The 15 largest companies by float-adjusted market capitalization in the investable universe that operate in the following industries:

- ▶ Utilities – Diversified
- ▶ Utilities – Regulated Water
- ▶ Waste Management

For more details, refer to the [Global Equity Classification Structure](#).

As illustrated, for selection purposes, a priority is assigned to each Morningstar industry within a given category. All priority 1 industry stocks within a category are ranked by float-adjusted market capitalization and selected in descending order until the stock count limit is reached for that category. If the stock count limit is not reached after including all stocks with priority 1 for a given category, priority 2 stocks are similarly ranked and selected until the stock count limit for that category is reached.

Number of Stocks

The index contains 120 stocks based on a transparent ranking system subject to selection and eligibility criteria at reconstitution. However, if securities fall short of the selection and eligibility criteria, or if securities are added or deleted as a result of corporate actions after reconstitution, the index can have more or fewer than 120 securities. During reconstitution, if the number of securities is less than the target count, the weight of the constituents will be determined based on the index weighting scheme. The schedule for reconstitution and corporate actions is available in the "Index Maintenance and Calculation" section.

Index Weighting

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

Constituent Weighting

The weighting methodology employs float-adjusted market capitalization within each category to achieve proportional exposure to the group of underlying securities.

Constituent Weight Restriction	
Category	Weight Limit (%)
Energy	30
Metals	30
Agriculture	30
Timber	5
Water	5
Region	Weight Limit (%)
Emerging Market	20
United States	40
Other	Weight Limit (%)
Individual Security	5

Weighting Algorithm

Given the various weighting constraints above, Morningstar employs the following iterative algorithm to assign weights to each constituent such that all constraints are satisfied.

- ▶ Step 1: Assign weights to each constituent proportional to its float-adjusted market capitalization.
- ▶ Step 2: Adjust the weights of the constituents within each category so that all category weighting constraints are satisfied.
- ▶ Step 3: If the aggregate weight of all U.S. constituents exceeds 40% of the index, adjust the weights so that the aggregate weight is 36% of the index.
- ▶ Step 4: If the aggregate weight of all emerging-market constituents exceeds 20% of the index, adjust the weights so that the aggregate weight is 18% of the index.
- ▶ Step 5: If any adjustments were made in steps 3 or 4, return to Step 2 to ensure that the category constraints are still satisfied.
- ▶ Step 6: If the weight of any single constituent exceeds 5% of the index, adjust its weight down to 5% and redistribute the excess weight proportionally among the other constituents within the same category.
- ▶ Step 7: If any adjustments were made in Step 6, return to Step 3 to ensure that the domicile and regional constraints are still satisfied.
- ▶ Step 8: If all constraints are satisfied, the process is complete.

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.

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 a possible cessation of the index. 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	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 2: Modification to Rulebook

Section	Description	Update Date
Selection Universe	Treatment for dual-listed companies was introduced.	January 2016
Selection Universe	The following industry type was deleted with corresponding priorities Diversified Industrials - Priority 2	January 2016
Selection Universe	The following industry types were added with corresponding priorities Copper - Priority 1 Silver - Priority 1 Steel - Priority 2 Waste Management - Priority 2	January 2016
Scheduled Maintenance	Reconstitution and Rebalance frequency was changed from annual to semiannual reconstitution and quarterly rebalancing	November 2017

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](#).



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