Construction Rules for the Morningstar® Exponential Technologies Index℠

Morningstar Indexes
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Contents

Overview

The Morningstar® Exponential Technologies Index℠ provides exposure to the top 200 companies identified by Morningstar's Equity Research team as positioned to experience meaningful economic benefits as a user or producer of promising technologies.
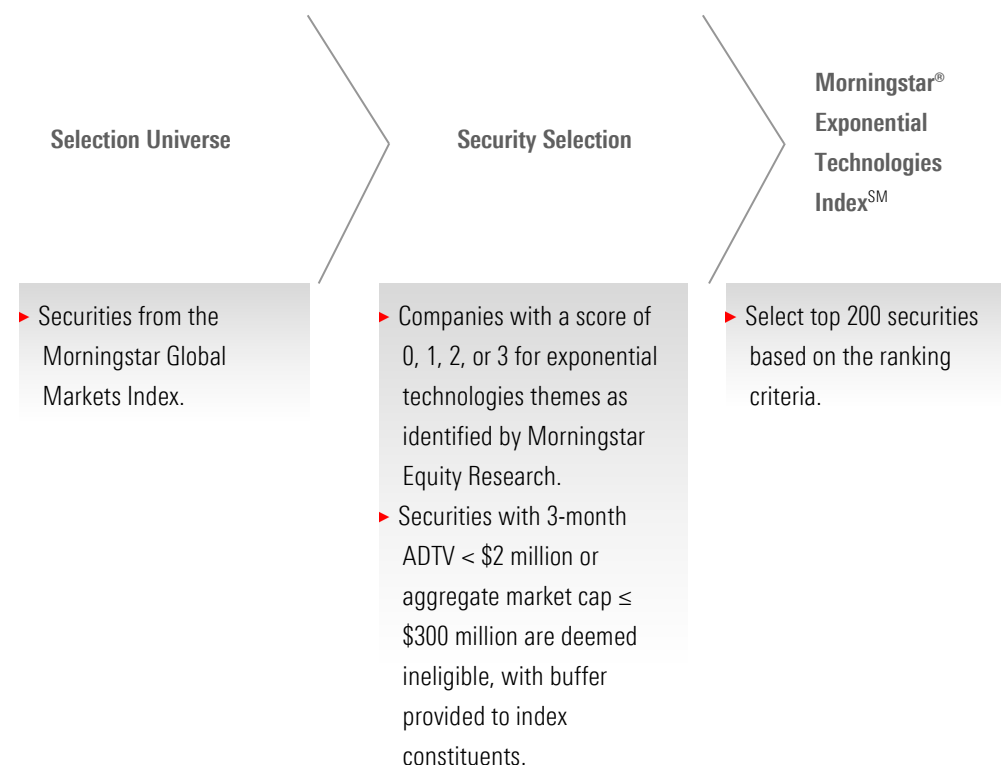
This index does not incorporate Environmental, Social, or Governance (ESG) criteria.

Index Inception Date and Performance Inception Date

The inception date of the index is December 1, 2014, and the performance inception date of the index is December 20, 2013, when the first back-tested index value was calculated.

Index Construction

Exhibit 1 Morningstar Exponential Technologies Index Construction Process

Selection Universe	Security Selection	Morningstar® Exponential Technologies Index℠
▶ Securities from the Morningstar Global Markets Index.	▶ Companies with a score of 0, 1, 2, or 3 for exponential technologies themes as identified by Morningstar Equity Research. ▶ Securities with 3-month ADTV < $2 million or aggregate market cap ≤ $300 million are deemed ineligible, with buffer provided to index constituents.	▶ Select top 200 securities based on the ranking criteria.

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 Exponential Technologies Index are derived from the Morningstar Global Markets Index (benchmark). For more details on benchmark construction, refer to the construction rules of the Morningstar Global Markets Index.

Security Selection

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

▶ Companies with average three-month trailing daily trading volume less than $2 million or aggregate free-float market capitalizations of $300 million or less are deemed ineligible for the index. Current index constituents are eliminated if they have average three-month trading volume less than $1.5 million or aggregate free-float market capitalization of $200 million or less.

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- ► If a company has more than one eligible share class:
    - ► Select the one that is a current index constituent.
    - ► Otherwise, select the most liquid share class determined by Morningstar Indexes.

- ► Qualifying potential constituents are ranked in the order that emphasizes exposure to exponential technology themes. The ranking criteria are given below by descending order of absolute preference:
    - ► Number of themes in which a constituent is a leader (scores 3).
    - ► Number of themes in which a constituent scores 2.
    - ► Number of themes in which a constituent scores 1.
    - ► Current index constituents are given preference.
    - ► Market capitalization, preferring smaller over larger.

Companies ranked in the top 200 are selected for the index.

Number of Stocks

The index contains 200 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 200 securities. During reconstitution, if the number of securities is less than the target, 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 equal weighted. For more details, refer to the Morningstar Indexes Calculation Methodology rulebook.

Index Maintenance and Calculation

Scheduled Maintenance

The index is reconstituted and rebalanced annually and implemented after the close of business on the third Friday of December and is effective the following Monday. If Monday is a holiday, it is effective on the immediate following business day. The market data used for reconstitution and rebalance is as of the last trading day of October.

Because the reconstitution of the Morningstar Exponential Technologies Index is less frequent than the parent index, the securities excluded from the parent index at the reconstitution effective date are also deleted from Morningstar Exponential Technologies Index.

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.

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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.

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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: Morningstar's Global Equity Research Technology Theme Identification

▶ Step 1

Managers from Morningstar's Global Equity Research team identify technology themes with the potential to have significant economic benefits to producers and users. As of Sep. 29, 2017, nine themes have been identified:

- ▶ **Big Data and analytics:** Capabilities with data sets too large and complex to manipulate or interrogate with standard methods or tools. Related subthemes include the Internet of Things, machine learning, and artificial intelligence.
- ▶ **Nanotechnology:** The branch of technology that deals with dimensions and tolerances of less than 100 nanometers, especially the manipulation of individual atoms and molecules. There is a range of potential applications spanning medicine, computing, manufacturing, and travel.
- ▶ **Medicine and neuroscience:** Any or all of the sciences, such as neurochemistry and experimental psychology, that deals with the structure or function of the nervous system and brain
- ▶ **Networks and computer systems:** A telecommunications network that allows computers to exchange data. In computer networks, networked computing devices pass data to each other along data connections.
- ▶ **Energy and environmental systems:** Exposure to alternate, renewable energy—solar, wind, water, battery (positive or negative), and development or benefit of an environmental management system.
- ▶ **Robotics:** The branch of technology that deals with the design, construction, operation, and application of robots.
- ▶ **3-D printing:** A process for making a physical object from a three-dimensional digital model, typically by laying down many successive thin layers of material. Applications of this technology span from industrial manufacturing and medicine to consumer products and retail
- ▶ **Bioinformatics:** The science of collecting and analyzing complex biological data.
- ▶ **Financial-services innovation:** Search for and acknowledgement of nontraditional emerging funding sources, platforms, currency, and stored and transferred value. Not only opportunities to efficiently expand production are thought about, but also the underlying

currencies used (including cryptocurrencies), as well as structural shifts in technology and payment delivery methods are considered

► Step 2

Morningstar's Equity Research managers train analysts on the themes and scoring framework. Analysts make forward-looking assessments rather than relying on single point-in-time metrics such as percent of current revenues. Typically, they use models to project growth over five, ten, and twenty years. The analysts then score the companies in Morningstar's global coverage from 0-2 on each theme.

  ► No or little exposure: 0
  ► Moderate exposure: 1
  ► Significant exposure: 2

The Technology Steering Committee then reviews the scores for each company, checking for thematic, sector, geographic, or individual calibration biases. During this step, the committee members offer feedback to the analysts and directors as part of a process to test the rationale behind the results.

► Step 3

Managers in the Equity Research team calibrate scores across individual analysts, sectors, and themes. In order to justify a score of 1 or 2, companies must have a commercialized product or be expected to have a commercialized offering with a high degree of certainty related to that specific theme. Managers review the scores of 2 across each theme and collectively select "leaders" (whose scores are increased to 3 from 2). Leaders are defined as firms expected to have significantly more exposure and capture disproportionate economic benefits compared to other firms that scored 2. Each theme may have between one and five leaders.

Some of the leadership factors considered include:

  ► Beneficiaries of the network effect (present when the value of a service grows as more people use a network).
  ► Gatekeeper companies (those with extraordinary influence because of how they define processes and/or control resources).
  ► Cost advantages (allows firms to sell at the same price as competition and gather excess profit and/or have the option to undercut competition).
  ► Brands and intangibles (brands, patents, and regulatory licenses that block competition and/or allow companies to charge more).

► Step 4

Exponential technology scores and theme leaders are reviewed annually by the Equity Research team before each reconstitution of the index.

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 Product Committee

The Morningstar Index Product Committee is comprised of members who possess a wide array of knowledge in relation to Indexes. The Product Committee is responsible for the governance over the creation and maintenance of all Morningstar branded Indexes, ensuring the highest standards are continuously met. Any matters arising from exceptional or undocumented events will be resolved at the discretion of the Morningstar Index Product Committee.

Morningstar Index Oversight Committee

The Morningstar Index Oversight Committee is comprised of informed and qualified professionals who are responsible for the process governance of Morningstar branded Indexes. The Oversight Committee assesses and where appropriate challenges the decisions of Morningstar Indexes with regards to benchmark decisions.

For More Information

For any queries, reach out to us via our communication page.

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