



INDEX METHODOLOGY

NASDAQ ALPHADDEX® US MULTI-CAP GROWTH INDEX

NQDXUSMLTCG-

INDEX DESCRIPTION

The Nasdaq AlphaDEX® US Multi-Cap Growth Index employs the AlphaDEX® security selection methodology to select and weight securities from the Nasdaq US 500 Large Cap Growth Index (NQUS500LCG), Nasdaq US 600 Mid Cap Growth Index (NQUS600MCG) and the Nasdaq US 700 Small Cap Index Growth (NQUS700SCG). The NASDAQ AlphaDEX® Multi-Cap Growth Index is constructed by ranking the securities in the Indexes mentioned above separately on growth and value factors.

SECURITY ELIGIBILITY CRITERIA

Security universe

A security must be included in either the Nasdaq US 500 Large Cap Growth Index (NQUS500LCG), the Nasdaq US 600 Mid Cap Growth Index (NQUS600MCG) or the Nasdaq US 700 Small Cap Growth Index (NQUS700SCG) as of the Reconstitution Reference Date. Please refer to those methodologies for further information.

Multiple classes of securities

One security per issuer is permitted. If an issuer has multiple listed security classes, the security with the highest median liquidity generally is considered for possible inclusion in the Index.

Liquidity eligibility

A security must have a trailing five-day average daily traded value of at least \$500,000 (USD) for each of the 60 trading days leading up to and including the Reconstitution Reference Date.

Other eligibility criteria

If, at reconstitution, Nasdaq becomes aware that an issuer or security will soon undergo a fundamental change that makes it ineligible, Nasdaq will remove the security from consideration. This includes

entering into a definitive merger or acquisition agreement or other pending arrangement that would make it ineligible for Index inclusion, or a filing of bankruptcy or similar protection from creditors.

INDEX CALENDAR

Reconstitution schedule

The Index Reconstitution is conducted quarterly in January, April, July and October.

Reconstitution reference dates

Unless otherwise specified, the Security Eligibility Criteria and Constituent Selection and Weighting Process are applied using data as of the end of December, March, June and September, respectively.

Reconstitution announcement dates

Index Reconstitution changes are announced on the second (2nd) business day of the Reconstitution month after market close.

Reconstitution effective dates

Index Reconstitution changes become effective at market open on the sixth (6th) business day of the Reconstitution month.

Rebalance schedule

Index rebalances occur in conjunction with reconstitutions and follow the same schedule.

CONSTITUENT SELECTION

Constituent selection factors

The growth factors used for ranking eligible securities are:

- 3-, 6- and 12-month price appreciation
- sales to price ratio
- 1-year sales growth

The value factors used for ranking eligible securities are:

- book value to price ratio
- cash flow to price ratio
- return on assets

Constituent selection and weighting process

I. Securities in each size-segment of the Nasdaq US Select Size Growth Indexes [NQUS500LCG, NQUS600MCG, NQUS700SCG] are ranked on the sums of ranks for both growth and value factors. A security must have data available for all growth factors to receive a growth rank and all value factors to receive a value rank.

II. Nasdaq classifies each security as either a value security or growth security. Securities classified as value securities are assigned their value ranks and securities classified as growth securities are assigned their growth ranks as their “Selection Scores.”

III. Based on the Selection Score, the top-scoring growth securities, as defined below, comprise the “Selected Securities” universe.

- Top 187 securities from the Nasdaq US 500 Large Cap Growth Index
- Top 225 securities from the Nasdaq US 600 Medium Cap Growth Index
- Top 262 securities from the Nasdaq US 700 Small Cap Growth Index

IV. Each size-segment of the Selected Securities universe is then split into quintiles of equal size based on Selection Scores. The top scoring quintile receives 5/15 (33.3%) of the universe weight and successive quintiles receive 4/15 (26.7%), 3/15 (20.0%), 2/15 (13.3%) and 1/15 (6.7%), respectively. Securities are equally weighted within each quintile.

V. Using the quintile weights for each size segment determined in Step 4, security weights are re-scaled such that the sum of large-cap security weights is 50%, the sum of medium-cap security weights is 30%, and the sum of small-cap security weights is 20%.

Constituent weighting scheme

Nasdaq AlphaDEX® Indexes are modified equal-weighted indexes.

For additional information about index weighting, see **Nasdaq Index Weight Calculations**.

INDEX MAINTENANCE

Deletion policy

If, at any time during the year other than the Index Reconstitution(s), an Index Security no longer meets the Eligibility Criteria, or is otherwise determined to have become ineligible for inclusion in the Index, it is removed from the Index. This includes circumstances where an Index Security is determined to be ineligible for continued inclusion in the Index due to bankruptcy, delisting, or a definitive agreement that would likely result in the security no longer being Index eligible. Please refer to **Nasdaq’s Corporate Actions and Events Manual – Equities** for detailed handling of the aforementioned event types.

Replacement policy

Index Securities deleted at any time during the year other than the Index Reconstitution(s) are not replaced.

Corporate actions

In the interim periods between scheduled Index reconstitution events, individual Index Securities may be subject to a variety of corporate actions and events that require maintenance and adjustments to the Index. Specific treatment of each type of corporate action or event is described in **Nasdaq Corporate Actions and Events Manual – Equities**, which is incorporated herein by reference.

In certain cases, corporate actions and events are handled according to the weighting scheme or other index construction techniques employed. Wherever alternate methods are described, the Index will follow the “Non-Market Cap Corporate Action Method.”

Index share adjustments

Other than as a direct result of corporate actions, the Index does not normally experience share adjustments between scheduled index Rebalance and Reconstitution events.

ADDITIONAL INFORMATION

Announcements

Nasdaq announces Index-related information via the Nasdaq Global Index Watch (GIW) website at <http://indexes.nasdaqomx.com>.

For more information on the general Index Announcement procedures, please refer to the **Nasdaq Index Methodology Guide**.

Holiday schedules

The Index is calculated Monday through Friday, except on days when the Nasdaq US exchange is closed.

Unexpected market closures

For information on Unexpected Market Closures, please refer to the **Nasdaq Index Methodology Guide**.

Calculation types

For information on the Index calculation types as well as the mathematical approach used to calculate the Index(es), please refer to the **Calculation Manual – Equities and Commodities**.

Recalculation and restatement policy

For information on the Recalculation and Restatement Policy, please refer to the **Nasdaq Index Recalculation Policy**.

Data sources

For information on data sources and the classification of dividends and associated tax rates, please refer to the **Nasdaq Index Methodology Guide**.

Contact information

For any questions regarding an Index, please contact the Nasdaq Index Client Services team at indexservices@nasdaq.com.

Index dissemination

Index values and weightings information are available through Nasdaq Global Index Watch (GIW) website at <https://indexes.nasdaqomx.com/> as well as the Nasdaq Global Index FlexFile Delivery Service (GIFFD) and Global Index Dissemination Services (GIDS). Similar to the GIDS offerings, Genium Consolidated Feed (GCF) provides real-time Index values and weightings for the Nordic Indexes.

For more detailed information regarding Index Dissemination, see the **Nasdaq Index Methodology Guide**.

Index calculation and dissemination schedule

The Index is calculated during the trading day and is disseminated once per second from 09:30:01 to 16:00:00 ET. The closing value of the indexes may change after market hours due to corrections to the Last Sale Price of the Index Securities.

Website

For further information, please refer to Nasdaq GIW website at <https://indexes.nasdaqomx.com/>.

FTP and dissemination service

Index values and weightings are available via FTP on the Nasdaq Global Indexes FlexFile Delivery Service (GIFFD). Index values are available via Nasdaq's Global Index Dissemination Services (GIDS).

GOVERNANCE

Index governance

All Nasdaq Indexes follow the same governance structure. For a detailed list of this information, please see the **Nasdaq Index Methodology Guide**.

Nasdaq Index Management Committee

The Nasdaq Index Management Committee approves all new Index Methodologies. This committee is comprised of full-time professional members of Nasdaq. The committee meets regularly, and reviews items including, but not limited to, pending corporate actions that may affect Index constituents, statistics comparing the composition of the indexes to the market, companies that are being considered as candidates for addition to an Index, and any significant market events.

For a detailed overview of the Index Management Committee, please see the **Nasdaq Index Methodology Guide**.

Internal reviews of methodology

For a detailed description on internal reviews of the Methodology, please see the **Nasdaq Index Methodology Guide**.

Communication with stakeholders and consultations

For a detailed description on Consultations and Communications with Stakeholders, please see the **Nasdaq Index Methodology Guide**.

Index cessation

Nasdaq has a documented procedure that is followed for Index Cessation that includes termination/retirement of an Index or Index Family.

For more information, please refer to the **Nasdaq Index Cessation Policy**.

Discretionary adjustment

This Index Methodology was created by Nasdaq to achieve the aforementioned objective of measuring the underlying purpose of each Index governed by this methodology document. Any deviations from this methodology are made in the sole judgment and discretion of Nasdaq so that the Index continues to achieve its objective.

For more information on potential adjustments including Calculation and Pricing Disruptions, Expert Judgment, and Unexpected Reconstitution/Rebalances, please refer to the **Nasdaq Index Methodology Guide**.

GLOSSARY OF TERMS AS USED IN THIS DOCUMENT

For the glossary of key terms, please refer to the **Nasdaq Index Methodology Guide**.

DISCLAIMER

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity, including but not limited to, quantitative inclusion criteria. Nasdaq may also, due to special circumstances, if deemed essential, apply discretionary adjustments to ensure and maintain the high quality of the index construction and calculation. Nasdaq does not guarantee that any Index accurately reflects future market performance.

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