



INDEX METHODOLOGY

NASDAQ US LARGE CAP SELECT DISRUPTORS™ INDEX NLCSD™

INDEX DESCRIPTION

The Nasdaq US Large Cap Select Disruptors Index is designed to track the performance of large-cap, U.S.-listed companies, with high Disruption Scores. Companies are assigned a Disruption Score using a multifactor scoring model, which is based on multiple fundamental metrics such as Patent Value, Revenue Growth, R&D Expenses, and Gross Margins.

SECURITY ELIGIBILITY CRITERIA

To qualify for index inclusion, securities must meet the following Security Eligibility Criteria, which are applied as of the Reconstitution reference date.

Security Universe

The index universe consists of all issuers from the Nasdaq US 500 Large Cap™ Index (NQUS500LC™). Please refer to that methodology for further information.

Security types

A security must be classified as a security type that is eligible for the NASDAQ US Benchmark™ Index (NQUSB™). Please refer to that methodology for more information.

Other eligibility

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, or other events as described in Section 3 of **Corporate Actions and Events Manual – Equities**.

CONSTITUENT SELECTION

All eligible securities are selected based on a multi-factor ranking process that scores securities based on 6 unique fundamental metrics to derive an aggregate *Disruptor Score*.

The metrics that are used to create the *Disruptor Score* are:

- **Patent Value as a % of Full Market Cap** – measured as the ratio of a firm’s patent value (as determined by IPR Strategies) to the security’s full market capitalization.
- **R&D Expenses as a % of Annual Sales** – measured as the ratio of annual R&D expenses (over the last twelve months) relative to annual sales over the same period.
- **Revenue Growth** – measured as the % change of annual sales (over the last twelve months) between the most recently completed period and three years ago. Securities must have positive revenue three years ago (the base period) for inclusion.
- **Gross Margin Growth** – measured as the % change of the average gross margin over the last twelve months between the most recently completed quarter and three years ago. Securities must have positive last twelve months gross margin three years ago (the base period) for inclusion.
- **Average Gross Margin** – measured as the average quarterly gross margin over the trailing thirteen quarters leading up to the Index Reconstitution Reference Date.
- **Gross Margin Sharpe** - measured as the ratio of a firm's average quarterly gross margin to the standard deviation of a firm's quarterly gross margin over the trailing thirteen quarters leading up to the Index Reconstitution Reference Date.

All fundamental metrics input data are applied as of the Fundamental data reference date except for market capitalization, which is applied as of the Reconstitution reference date.

Reference Dates Example:

- June 2023 Reconstitution: Uses fundamental data from the last trading day of December 2019 through the last trading day of December 2022.
- December 2022 Reconstitution: Uses fundamental data from the last trading day of June 2019 through the last trading day of June 2022.

Ranking Process

Each security is ranked according to each individual metric in an ascending order. Security ranks are then normalized using a standard Z-score formula, measured as:

$$\text{Normalized Rank} = \frac{\text{Security Rank} - \text{Mean}(\text{Security Rank})}{\text{Standard Deviation}(\text{Security Rank})}$$

The final *Disruptor Score* is computed by summing the individual, normalized ranks across securities:

$$\text{Disruptor Score} = \sum_{i=1}^6 \text{Normalized Rank}_i$$

Securities are then sorted by their *Disruptor Score*, and the top 50 securities are selected for inclusion in the Index. In the event of a tie in the *Disruptor Score*, the security with the highest free float market capitalization is selected.

CONSTITUENT WEIGHTING

Constituent weighting scheme

The Index is a modified free-float market capitalization-weighted index.

Constituent weighting process

The weighting process uses security-level weights, which are derived using the free-float market capitalization of each security, as of the Rebalance reference date.

Weight Calculation

Each Index Security's initial weight is determined by dividing its Free Float Market Value by the aggregate Free Float Market Value of all Index Securities.

Initial weights are then adjusted to determine final weights.

Weight Adjustment

Initial Index weights are adjusted to reduce excessive concentration. The weight adjustment is described below:

- Step 1: Raise each Index Security's initial index weight to the power, P , where P is a value between 0 and 1 (*Adjusted Initial Weight*). Please see **Weight Constraints** below.
- Step 2: Divide the *Adjusted Initial Weight* from Step 1 by the aggregate *Adjusted Initial Weight* of all Index Securities.

Final weights are those determined from Step 2 above.

Weight Constraints

The exact power, P , is determined through an iterative process where weights are re-evaluated by reducing P in increments of 0.0001. The power, P , is incrementally reduced until the following weighting constraints have been met:

- No single security may exceed 10%
- Aggregate weights of securities greater than 4.75% does not exceed 50%.

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

INDEX CALENDAR

Reconstitution & Rebalancing schedule

Reconstitution Frequency	Semi-Annually
Rebalance Frequency	Quarterly
Fundamental Data Reference Dates	Last trading day in the month of the previous Reconstitution
Reconstitution Reference Dates	Last trading day of May and November, respectively
Reconstitution Announcement Dates	After the close on the second Friday in June and December
Reconstitution Effective Dates	At market open on the first trading day following the third Friday in June and December
Rebalance Reference Dates	Last trading day of February, May, August and November, respectively
Rebalance Announcement Dates	After the close on the second Friday in March, June, September, and December
Rebalance Effective Dates	At market open on the first trading day following the third Friday in March, June, September, and December

Holiday schedules

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

Index calculation and dissemination schedule

The Index Value is calculated five (5) days a week, Monday through Friday, once per second from the start of the trading day in Tokyo (09:00:01 Japan Standard Time) until the close of the trading day in New York (17:16:00 Eastern Time).

INDEX MAINTENANCE

Deletion policy

If, at any time other than an Index Reconstitution, Nasdaq determines that an Index Security has or will undergo a fundamental alteration that would make it ineligible for Index inclusion, the Index Security is removed as soon as practicable. Such alternations may include a merger, acquisition or other major corporate event that would otherwise adversely affect the integrity of the Index. Refer to the **Nasdaq Corporate Actions and Events Manual – Equities** for further information.

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 and rebalancing events, individual Index securities may be the subject to a variety of corporate actions and events that require maintenance and adjustments to the Index. With the exception(s) noted below, 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 “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**.

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 **Nasdaq Index Policies & Procedures: Calculation Manual – Equities & 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**.

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

All Nasdaq Indexes are managed by the governance committee structure and have transparent governance, oversight, and accountability procedures for the index determination process. For further details on the Index Methodology and Governance overlay, refer to the **Nasdaq Index Methodology Guide**.

GLOSSARY OF TERMS AS USED IN THIS DOCUMENT

For the glossary of key terms, 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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