



INDEX METHODOLOGY

## **NASDAQ VICTORY VALUE MOMENTUM INDEX FAMILY**

### **VMULC, VMUSM, VMILM, VMELM**

#### **INDEX DESCRIPTION**

Each Index in the Nasdaq Value Momentum Index Family is comprised of securities selected based on value and momentum factors. The Index Family consists of the following Indexes.

#### **Nasdaq Victory US Value Momentum Index (VMULC)**

Consists of a selection of securities in the Nasdaq US 500 Large Cap Index (NQUS500LC) with strong value and momentum characteristics

#### **Nasdaq Victory US Small Mid Cap Value Momentum Index (VMUSM)**

Consists of a selection of securities in the Nasdaq US 600 Mid Cap Index (NQUS600MC) and Nasdaq US 700 Small Cap Index (NQUS700SC) with strong value and momentum characteristics

#### **Nasdaq Victory International Value Momentum Index (VMILM)**

Consists of a selection of securities in the Nasdaq DM Ex United States Large Mid Cap Index (NQDMXUSLM) with strong value and momentum characteristics

#### **Nasdaq Victory Emerging Market Value Momentum Index (VMELM)**

Consists of a selection of securities in the Nasdaq Emerging Large Mid Cap Index (NQEMLMC) with strong value and momentum characteristics

## SECURITY ELIGIBILITY CRITERIA

### Security universe index

#### Nasdaq Victory US Value Momentum Index (VMULC)

A security must be included in the Nasdaq US 500 Large Cap Index (NQUS500LC) as of the reconstitution effective date.

#### Nasdaq Victory US Small Mid Cap Value Momentum Index (VMUSM)

A security must be included in the Nasdaq US 600 Mid Cap Index (NQUS600MC) or the Nasdaq US 700 Small Cap Index (NQUS700SC) as of the reconstitution effective date.

#### Nasdaq Victory International Value Momentum Index (VMILM)

A security must be included in the Nasdaq DM Ex United States Large Mid Cap Index (NQDMXUSLM) as of the reconstitution effective date.

#### Nasdaq Victory Emerging Market Value Momentum Index (VMELM)

A security must be included in the Nasdaq Emerging Large Mid Cap Index (NQEMLMC) as of the reconstitution effective date.

### Multiple securities per issuer

One security per issuer is permitted. If an issuer has multiple otherwise-eligible securities, only the security with the greatest twelve-month average daily traded value may be eligible.

### Liquidity

#### Nasdaq Victory US Small Mid Cap Value Momentum Index (VMUSM)

A security must have a twelve-month average daily traded value greater than that of at least ten percent of the set of securities included in the Nasdaq US 600 Mid Cap Index (NQUS600MC) or the Nasdaq US 700 Small Cap Index (NQUS700SC) collectively.

#### Nasdaq Victory Emerging Market Value Momentum Index (VMELM)

A security must have a twelve-month average daily traded value greater than that of at least ten percent of the securities included in the Nasdaq Emerging Large Mid Cap Index (NQEMLMC).

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

## INDEX CALENDAR

### Reconstitution schedule

The Indexes are reconstituted quarterly in March, June, September and December by applying the Constituent Selection Process to all securities meeting the applicable Security Eligibility Criteria.

### Reconstitution reference dates

Unless otherwise specified, the Security Eligibility Criteria and Constituent Selection Process are applied using data as of the end of February, May, August and November.

### Reconstitution announcement dates

Index Reconstitutions are announced in early March, June, September and December.

### Reconstitution effective dates

Index Reconstitutions become effective at market open on the first trading day following the third Friday in March, June, September and December, save for one exception: in years when the third Friday of the Reconstitution month is an Index holiday, the Index Reconstitution becomes effective at market open on the second trading day following the third Friday of the Reconstitution month.

### Rebalance schedule

The Indexes are rebalanced quarterly in March, June, September and December by applying the Constituent Weighting Process.

### Rebalance reference dates

The Index Rebalances are conducted using data as of the prior month-end (February, May, August, and November).

### Rebalance announcement dates

Index Rebalances are announced in early March, June, September and December.

### Rebalance effective dates

Index Rebalances become effective at market open on the first trading day following the third Friday in March, June, September and December, save for one exception: in years when the third Friday of the Rebalance month is an Index holiday, the Index Rebalance becomes effective at market open on the second trading day following the third Friday of the Rebalance month.

## Holiday schedules

### **Nasdaq Victory US Value Momentum Index (VMULC)**

The Index is calculated Monday through Friday, except on days when The Nasdaq Stock Market is closed.

### **Nasdaq Victory US Small Mid Cap Value Momentum Index (VMUSM)**

The Index is calculated Monday through Friday, except on days when The Nasdaq Stock Market is closed.

### **Nasdaq Victory International Value Momentum Index (VMILM)**

The Index is calculated Monday through Friday, and does not close for holidays.

### **Nasdaq Victory Emerging Market Value Momentum Index (VMELM)**

The Index is calculated Monday through Friday, and does not close for holidays.

## Index calculation and dissemination schedule

### **Nasdaq Victory US Value Momentum Index (VMULC)**

The Index is calculated during the trading day based on the Last Sale Price and are disseminated once per second from 09:30:01 to 17:16:00 ET. The closing value of the Index may change up until 17:15:00 ET due to corrections to the Last Sale Price of the Index Securities.

### **Nasdaq Victory US Small Mid Cap Value Momentum Index (VMUSM)**

The Index is calculated during the trading day based on the Last Sale Price and are disseminated once per second from 09:30:01 to 17:16:00 ET. The closing value of the Index may change up until 17:15:00 ET due to corrections to the Last Sale Price of the Index Securities.

### **Nasdaq Victory International Value Momentum Index (VMILM)**

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).

### **Nasdaq Victory Emerging Market Value Momentum Index (VMELM)**

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).

## CONSTITUENT SELECTION

### **Constituent selection process**

Every security that passes all applicable eligibility criteria is considered for inclusion in the Indexes, and is deemed to be a part of each respective index's "eligible universe" of securities. Separately for each

Index in the Nasdaq Victory Value Momentum Index Family, securities in the eligible universe are selected for inclusion according to the following process.

### **Calculation of Value Score**

Three ratios are used to measure a security's Value: book-to-market ratio, net income-to-market capitalization ratio and operating cash flow-to-market capitalization ratio.

For each security, a z-score is calculated for the Book-to-Market ratio and the Net Income to Market Capitalization ratio by using the respective ratio's mean and standard deviation among the eligible universe. For each security that is not allocated by the Industry Classification Benchmark (ICB) to the Financials industry, a z-score is calculated for the operating cash flow-to-market capitalization ratio by using the ratio's mean and standard deviation among the eligible universe excluding securities allocated to the Financials industry. ICB is a product of FTSE International Limited that is used under license.

The three Value ratio z-scores are used to calculate each security's Value Score as follows:

- 1) For each Value ratio, z-scores are winsorized at three standard deviations.
- 2) A Composite Value Z-Score is calculated for each security as the average of all applicable winsorized Value ratio z-scores.
- 3) An Industry-normalized Composite Value Z-Score is calculated for each security by calculating z-scores using the Composite Value Z-Score's mean and standard deviation among all securities allocated to the security's Industry.
- 4) For each Industry, Industry-normalized Composite Value Z-Scores are winsorized at three standard deviations, producing the securities' Value Scores.

### **Calculation of Momentum Score**

Two price changes are used to measure a security's Momentum: six-month price change, excluding the most recent month, and 12-month price change, excluding the most recent month. For each security, six-month and 12-month risk-adjusted momentum values are calculated by dividing the respective price changes by the (capped) standard deviations of daily price changes over the most recent 180 trading days (volatility), using standard deviations that are capped at 80% and 12%.

For each security, z-scores are calculated for the six-month and 12-month risk-adjusted momentum values by using the respective value's mean and standard deviation among the eligible universe.

Using the two risk-adjusted Momentum z-scores, each security's Momentum Score is calculated as follows:

- 1) For each risk-adjusted Momentum z-score, z-scores are winsorized at three standard deviations.
- 2) A Composite Momentum Z-Score is calculated for each security as the average of the two winsorized risk-adjusted Momentum z-scores.
- 3) An Industry-normalized Composite Momentum Z-Score is calculated for each security by calculating z-scores using the Composite Momentum Z-Score's mean and standard deviation among all securities allocated to the security's Industry.
- 4) For each Industry, Industry-normalized Composite Momentum Z-Scores are winsorized at three standard deviations, producing the securities' Momentum Scores.

## Calculation of Value Momentum Score

Each security's Value Momentum Score is calculated as the average of its Value Score and its Momentum Score.

## Value Momentum Score-Based Selection

Twenty-five percent of the eligible universe is selected for inclusion in the Index according to the following steps:

- 1) A security is excluded from consideration if it is included in the Index as of the Reconstitution Reference Date and its Value Momentum Score does not rank among the top 40 percent of Scores in the eligible universe.
- 2) A security is selected for inclusion if its Value Momentum Score ranks among the top 10 percent of Scores in the eligible universe.
- 3) Securities eligible for consideration but not selected in Step 2 are ordered along two dimensions: first, by index inclusion as of the Reconstitution Reference Date (ordered yes to no); second, by Value Momentum Score. The first-ordered securities, comprising 15 percent of the eligible universe, are selected.

## CONSTITUENT WEIGHTING

### Constituent weighting scheme

The Index is a modified volatility-weighted index.

### Constituent weighting process

Each Index Security's initial weight is determined by dividing its inverse volatility value (standard deviation of daily price changes over the most recent 180 trading days) by the sum of the inverse volatility values of all Index Securities.

Some of the Indexes have weight constraints based on Region classifications determined by the **Nasdaq Global Index Family Methodology**. For those Indexes, Index Securities' initial weights are adjusted to meet the following constraints:

#### Nasdaq Victory International Value Momentum Index

- The aggregate weight of Index Securities assigned to North America may be no more than 500 basis points above the Nasdaq DM Ex United States Large Mid Cap Index (NQDMXUSLM) aggregate weight of securities assigned to North America.
- The aggregate weight of Index Securities assigned to Europe or Middle East Africa (excluding the United Kingdom) may be no more than 500 basis points above the NQDMXUSLM aggregate weight of securities assigned to Europe or Middle East Africa (excluding the United Kingdom).
- The aggregate weight of Index Securities assigned to the United Kingdom may not be more than 500 basis points above the NQDMXUSLM aggregate weight of securities assigned to the United Kingdom.

- The aggregate weight of Index Securities assigned to Japan may be no more than 500 basis points above the NQDMXUSLM aggregate weight of securities assigned to Japan.
- The aggregate weight of Index Securities assigned to Asia Pacific (excluding Japan) may be no more than 500 basis points above the NQDMXUSLM aggregate weight of securities assigned to Asia Pacific (excluding Japan).

#### **Nasdaq Victory Emerging Market Value Momentum Index**

- The aggregate weight of Index Securities assigned to Asia may be no more than 500 basis points above the Nasdaq Emerging Large Mid Cap Index (NQEMLMC) aggregate weight of securities assigned to Asia.
- The aggregate weight of Index Securities assigned to Europe or Middle East Africa may be no more than 500 basis points above the NQEMLMC aggregate weight of securities assigned to Europe or Middle East Africa.
- The aggregate weight of Index Securities assigned to Latin America may be no more than 500 basis points above the NQEMLMC aggregate weight of securities assigned to Latin America.

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

## **INDEX MAINTENANCE**

### **Deletion policy**

If, at any time other than an Index Reconstitution, Nasdaq becomes aware that an Index Security has become ineligible for continued inclusion, it is removed from the Index as soon as practicable. This includes events such as filing bankruptcy or similar protection from creditors, delisting or other arrangement including mergers and acquisitions. Refer to the **Corporate Actions and Events Manual – Equities** for further information.

### **Replacement policy**

Index Securities are not replaced between Index Reconstitutions.

### **Addition policy**

Index Securities are not added between Index Reconstitutions.

### **Corporate actions**

In the interim periods between scheduled index reconstitution events, individual Index securities may be the 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 Policy**.

### **Unexpected market closures**

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

### **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 & 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 Policy**.

### **Contact information**

For any questions regarding an Index, please contact the Nasdaq Index Client Services team at [indexservices@nasdaq.com](mailto: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 Policy**.

## 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 Policy**.

## 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 Policy**.

## Internal reviews of methodology

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

## Communication with stakeholders and consultations

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

## 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 Policy**.

## GLOSSARY OF TERMS AS USED IN THIS DOCUMENT

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

## 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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