

NASDAQ Biotechnology Index[®] Methodology

Index Description

The NASDAQ Biotechnology Index is designed to track the performance of a set of securities listed on The Nasdaq Stock Market[®] (Nasdaq[®]) that are classified as either biotechnology or pharmaceutical according to the Industry Classification Benchmark (ICB).

Index Calculation

The NASDAQ Biotechnology Index is a modified market capitalization weighted index. The value of the Index equals the aggregate value of the Index share weights, also known as the Index Shares, of each of the Index Securities multiplied by each such security's Last Sale Price¹, and divided by the divisor of the Index. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude which is more desirable for reporting purposes. If trading in an Index Security is halted on its primary listing market, the most recent Last Sale Price for that security is used for all index computations until trading on such market resumes. Likewise, the most recent Last Sale Price is used if trading in a security is halted on its primary listing market before the market is open. The Index began on November 1, 1993 at a base value of 200.00.

The formula for index value is as follows:

$$\text{Aggregate Adjusted Market Value/Divisor}$$

The formula for the divisor is as follows:

$$(\text{Market Value after Adjustments/Market Value before Adjustments}) \times \text{Divisor before Adjustments}$$

Six versions of the Index are calculated:

- The price return index in USD (Nasdaq: NBI) is ordinarily calculated without regard to cash dividends on Index Securities.
- The total return index in USD (Nasdaq: XNBI) reinvests cash dividends on the ex-date. The total return index was synchronized to the value of the price return index at the close on September 24, 2003.
- The notional net return index in USD (Nasdaq: XNBINNR) is designed to reflect a net total return index reinvesting 70% of cash dividends and factors in a deduction based on an indicative 30% tax rate. The notational net total return index began on July 17, 2017 at a base value of 1000.00.
- The price return index in JPY (Nasdaq: NBIJPY) is ordinarily calculated without regard to cash dividends on Index Securities. The notational net total return index began on January 22, 2018 at a base value of 1000.00.
- The total return index in JPY (Nasdaq: XNBIJPY) reinvests cash dividends on the ex-date. The total return index began on January 22, 2018 at a base value of 1000.00.
- The notional net return index in JPY (Nasdaq: XNBINNRJPY) is designed to reflect a net total return index reinvesting 70% of cash dividends and factors in a deduction

¹ For purposes of this document Last Sale Price refers to the last sale price on Nasdaq, which may be the Nasdaq Official Closing Price (NOCP).

based on an indicative 30% tax rate. The notational net total return index began on January 22, 2018 at a base value of 1000.00.

All Indexes reflect extraordinary cash distributions.

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

Eligibility

Index eligibility is limited to specific security types only. The security types eligible for the Index include common stocks, ordinary shares, ADRs, and shares of beneficial interest or limited partnership interests.

Eligibility Criteria

To be eligible for inclusion in the Index, a security must meet the following criteria:

- the security's U.S. listing must be exclusively on the Nasdaq Global Select Market or the Nasdaq Global Market (unless the security was dually listed on another U.S. market prior to January 1, 2004 and has continuously maintained such listing);
- the issuer of the security must be classified according to the Industry Classification Benchmark (ICB) as either biotechnology or pharmaceutical;
- may not be issued by an issuer currently in bankruptcy proceedings;
- have a market capitalization of at least \$200 million;
- have an average daily trading volume of at least 100,000 shares;
- the issuer of the security may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being Index eligible;
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn; and
- have "seasoned" on Nasdaq, NYSE or NYSE Amex (generally, a company is considered to be seasoned if it has been listed on a market for at least three full months (excluding the first month of initial listing) as of the last trading day in October.

For the purposes of Index eligibility criteria, if the security is a depositary receipt representing a security of a non-U.S. issuer, then references to the "issuer" are references to the issuer of the underlying security.

Index Evaluation

The Index Securities are evaluated annually in December. The eligibility criteria is applied using market data through the end of October and is updated for total shares outstanding submitted in a publicly filed SEC document via EDGAR through the end of November to determine security market capitalization. Securities meeting the criteria are included in the Index. Generally, the list of additions and deletions is publicly announced via a press release in the early part of December. Security additions and deletions are made effective after the close of trading on the third Friday in December.

Moreover, if at any time during the year other than the Evaluation, an Index Security no longer meets the Eligibility Criteria, or is otherwise determined to have become ineligible for continued inclusion in the Index, the security is removed from the Index and will not be replaced. Ordinarily, a security will be removed from the Index at its Last Sale Price. If,

however, at the time of its removal the Index Security is halted from trading on its primary listing market and an official closing price cannot readily be determined, the Index Security may, in Nasdaq's discretion, be removed at a zero price. The zero price will be applied to the Index Security after the close of the market but prior to the time the official closing value of the Index is disseminated, which is ordinarily 17:16:00 ET.

Index Maintenance

Changes in the price and/or Index Shares driven by corporate events such as stock dividends, stock splits and certain spin-offs and rights issuances are adjusted on the ex-date. If the change in total shares outstanding arising from other corporate actions is greater than or equal to 10.0%, the change is made as soon as practicable. Otherwise, if the change in total shares outstanding is less than 10.0%, then all such changes are accumulated and made effective at one time on a quarterly basis after the close of trading on the third Friday in March, June, September and December. The Index Shares are adjusted by the same percentage amount by which the total shares outstanding have changed.

A special cash dividend announced by the listing exchange, will result in an adjustment to the Last Sale Price of an Index Security prior to market open on the ex-date for the special amount distributed. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

Ordinarily, whenever there is a change in Index Shares, a change in an Index Security or a change to the price of an Index Security due to spin-offs, rights issuances or special cash dividends, the divisor is adjusted to ensure that there is no discontinuity in the value of the Index which might otherwise be caused by any such change. All changes are announced in advance and are reflected in the Index prior to market open on the Index effective date.

Index Rebalancing

The Index employs a modified market capitalization weighting methodology. At each quarter, the Index is rebalanced such that the maximum weight of any Index Security does not exceed 8% and no more than 5 securities are at that cap. The excess weight of any capped security is distributed proportionally across the remaining Index Securities. If after redistribution, any of the 5 highest ranked Index Securities are weighted below 8%, these securities are not capped. Next, any remaining Index Securities in excess of 4% are capped at 4% and the excess weight is redistributed proportionally across the remaining Index Securities. The process is repeated, if necessary, to derive the final weights.

The modified market capitalization weighting methodology is applied to the capitalization of each Index Security, using the Last Sale Price of the security at the close of trading on the last trading day in February, May, August and November and after applying quarterly changes to the total shares outstanding. Index Shares are then calculated multiplying the weight of the security derived above by the new market value of the Index and dividing the modified market capitalization for each Index Security by its corresponding Last Sale Price. The changes are effective after trading on the third Friday in March, June, September and December.

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity.

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