

Nasdaq Yewno Global Disruptive Technology Benchmark IndexSM

Methodology

Index Description

The Nasdaq Yewno Global Disruptive Technology Benchmark Index is designed to track the performance of companies engaged in the following themes:

- Artificial Intelligence;
- Robotics;
- Automotive Innovation;
- Healthcare Innovation;
- New Energy & Environment;
- Internet of Things; and
- Data Computing & Processing

The Index analyzes millions of approved patents to link them to the above themes (for more detail on the mapping of themes to specific sub-themes, please refer to Appendix A). Patents show the extent in which a company has intellectual property and invests in research and development. Since research and development spending of a company is not necessarily reflected in its current revenue but more rather likely realized in its future revenue, the Index aims to select companies which are likely to be innovative in their space based on their patent data linked to the themes outlined in this document.

Index Calculation

The Nasdaq Yewno Global Disruptive Technology Benchmark 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. The Index began on April 30, 2018, at a base value of 1,000.00.

The formula for index value is as follows:

Aggregate Adjusted Market Value/Divisor

The formula for the divisor is as follows:

(Market Value after Adjustments/Market Value before Adjustments) X Divisor before Adjustments

¹ For purposes of this document, Last Sale Price refers to the last regular way trade reported on such security's Index Market. The Index Market is the listing market for which prices are received and used by Nasdaq in the Index calculation and generally will represent the most liquid trading market of the Index Security. If a security does not trade on its Index Market on a given day or the Index Market has not opened for trading, the most recent last sale price from the Index Market (adjusted for corporate actions, if any) is used. For securities where Nasdaq is Index Market, the Last Sale Price may be the Nasdaq Official Closing Price (NOCP) when Nasdaq is closed.

Three versions of the Index are calculated, as shown in [Appendix B](#).

- The price return index is ordinarily calculated without regard to cash dividends on Index Securities.
- The total return index reinvests cash dividends on the ex-date.
- The net total return index reinvests cash dividends on the ex-date and adjusts for an Index Security's country of incorporation withholding rate.

All Indexes reflect extraordinary cash distributions.

The Indexes are calculated during the trading day and are disseminated once per second. The Indexes are calculated five (5) days a week, Monday through Friday, starting by the earliest time zone Asia/Tokyo and close by the latest time zone America/New York.

Eligibility

Index eligibility is limited to specific security types only. The security types eligible for the Index include common stocks, ordinary shares, depositary receipts (both American and Global), depositary shares, shares of beneficial interest or limited partnership interests and tracking stocks.

Eligibility Criteria

To be included in the Index, a security must meet the following criteria:

- be a part of the Nasdaq Global Index or any security listed on Nasdaq, NYSE, NYSE American, or the CBOE Exchange outside of the Nasdaq Global Index (NQGI);
- have a Pure and Contribution Score (explained below) related to any of the sub themes in [Appendix A](#);
- one security per issuer is permitted²;
- may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being Index eligible; and
- may not be issued by an issuer currently in bankruptcy proceedings.

Index Evaluation

The Index Securities are evaluated quarterly in January, April, July, and October. The above Eligibility Criteria are applied using market data through the end of November, February, May, and August, respectively. In addition, the Index utilizes Yewno's Pure and Contribution Scores for each company within each sub theme which is defined as:

- Pure Score – the extent to which a company is involved in a particular theme relative to all the other themes that it is involved in; and
- Contribution Score – the extent to which a company is involved in a particular theme relative to the other companies also involved in that theme

If a security in the eligible universe has a Pure and Contribution Score for any sub theme, then it is eligible to be included in the Index.

² If an issuer has multiple securities, the security with the highest dollar trading volume will be selected for possible inclusion into the Index.

Additionally, if at any time during the year other than the evaluation dates, an Index Security undergoes a fundamental alteration such as, but not limited to, its issuer filing for bankruptcy proceedings, switching its listing to an ineligible listing venue, conducting activities that are not legal under applicable law or if it undergoes major corporate actions such as merger & acquisition (M&A) activity that would make the Index Security ineligible for inclusion in the Index, the security is removed from the Index and is not replaced. In all cases, a security is 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

Index Share changes are not made outside of the evaluation and rebalancing; however changes arising from stock dividends and stock splits are made to the Index on the evening prior to the effective date of such corporate action. In the case of certain spin-offs or rights issuances, the price of the Index Security is adjusted and a corresponding adjustment is made to the Index Shares such that the weight of the Index Security does not change as a result of the action.

A special cash dividend announced by the listing exchange, will result in an adjustment to the Last Sale Price for the special amount distributed and a corresponding adjustment to the Index Shares of an Index Security prior to market open on the ex-date such that the weight of the Index Security will not change as a result of the action. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

Ordinarily, whenever there is 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 as mentioned above, 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 market cap weighting methodology. The Index Shares are then calculated by dividing the dollar value for each Index Security based on the market cap weight by the corresponding Last Sale Price of the security at the close of the last trading day in December, March, June, and September. The changes are effective after trading on the third Friday in January, April, July, and October, respectively.

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

Appendix A

The following table shows the themes as well as the specific sub themes within each theme that are covered in this index.

#	Theme	Sub Theme
1	Artificial Intelligence	Deep Learning
2	Artificial Intelligence	Image Recognition
3	Artificial Intelligence	NLP
4	Artificial Intelligence	Speech Recognition & Chatbots
5	Automotive Innovation	Autonomous Vehicles
6	Automotive Innovation	Electric Vehicles
7	Automotive Innovation	Hybrid Vehicles
8	Data Computing & Processing	3D Graphics
9	Data Computing & Processing	Big Data
10	Data Computing & Processing	Blockchain
11	Data Computing & Processing	Cloud Computing
12	Data Computing & Processing	Cyber Security
13	Data Computing & Processing	Quantum Information & Optics
14	Data Computing & Processing	Virtual Reality & AR
15	Healthcare Innovation	Bioinformatics
16	Healthcare Innovation	Human Augmentation
17	Healthcare Innovation	Robotic Surgery
18	Internet of Things	Digital Currency
19	Internet of Things	Internet of Things
20	Internet of Things	Mobile Payments
21	Internet of Things	Wearable Technology
22	New Energy & Environment	Agriscience
23	New Energy & Environment	Biofuel
24	New Energy & Environment	Electric Batteries
25	New Energy & Environment	Geothermal Energy
26	New Energy & Environment	Hydro Energy
27	New Energy & Environment	Lithium Batteries
28	New Energy & Environment	Nuclear Power
29	New Energy & Environment	Solar Energy
30	New Energy & Environment	Waste Management
31	New Energy & Environment	Wind Energy
32	Robotics	3D Printing
33	Robotics	Drones
34	Robotics	Nanorobotics
35	Robotics	Spacecraft & Satellites

Appendix B

The following table shows the 18 versions of the Nasdaq Yewno Global Disruptive Technology Benchmark Indexes as well as Index Tickers.

Symbol	Index Name
NYDTB	Nasdaq Yewno Global Disruptive Technology Benchmark Index
NYDTBT	Nasdaq Yewno Global Disruptive Technology Benchmark Total Return Index
NYDTBN	Nasdaq Yewno Global Disruptive Technology Benchmark Net Total Return Index
NYDTBEUR	Nasdaq Yewno Global Disruptive Technology Benchmark EUR Index
NYDTBTEUR	Nasdaq Yewno Global Disruptive Technology Benchmark EUR Total Return Index
NYDTBNEUR	Nasdaq Yewno Global Disruptive Technology Benchmark EUR Net Total Return Index
NYDTBGBP	Nasdaq Yewno Global Disruptive Technology Benchmark GBP Index
NYDTBTGBP	Nasdaq Yewno Global Disruptive Technology Benchmark GBP Total Return Index
NYDTBNGBP	Nasdaq Yewno Global Disruptive Technology Benchmark GBP Net Total Return Index
NYDTBHKD	Nasdaq Yewno Global Disruptive Technology Benchmark HKD Index
NYDTBTHKD	Nasdaq Yewno Global Disruptive Technology Benchmark HKD Total Return Index
NYDTBNHKD	Nasdaq Yewno Global Disruptive Technology Benchmark HKD Net Total Return Index
NYDTBCNY	Nasdaq Yewno Global Disruptive Technology Benchmark CNY Index
NYDTBTCNY	Nasdaq Yewno Global Disruptive Technology Benchmark CNY Total Return Index
NYDTBNCNY	Nasdaq Yewno Global Disruptive Technology Benchmark CNY Net Total Return Index
NYDTBJPY	Nasdaq Yewno Global Disruptive Technology Benchmark JPY Index
NYDTBTJPY	Nasdaq Yewno Global Disruptive Technology Benchmark JPY Total Return Index
NYDTBNJPY	Nasdaq Yewno Global Disruptive Technology Benchmark JPY Net Total Return Index

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