

# The Nasdaq-100<sup>®</sup> Volatility Index: VOLQ<sup>®</sup>

## Frequently Asked Questions

### **Q. What is Volatility?**

A. Volatility is a risk metric that can measure either past (historical) or future (implied) price action for an index or equity. Historical volatility may be measured by standard deviation (the variation between daily settlement prices to the mean over a specified time period, like 10 or 100 days). In contrast, implied volatility is an estimate of the future volatility of the index or equity based on options prices.

### **Q. What is VOLQ<sup>®</sup>?**

A. The Nasdaq-100<sup>®</sup> Volatility Index ("Volatility Index" or "VOLQ<sup>®</sup>") measures 30-day implied volatility as expressed by options on the Nasdaq-100<sup>®</sup> index (NDX).

### **Q. What does VOLQ<sup>®</sup> index price level indicate?**

A. VOLQ is expressed as an annualized percentage and is positively correlated to NDX options prices (both calls and puts). The resulting value broadcasts the expected NDX index trading range over the next 30 consecutive days. For example, if VOLQ is at a price level of 34.65, dividing by the square root of 12 (reflecting the number of 30-day periods in one year) implies an NDX trading range unlikely to rise or fall more than 10.0% over the next 30-day period at a 68% confidence level (i.e. one standard deviation of the normal probability curve). Assuming NDX is at a price level of 10,000, VOLQ indicates that the aggregate marketplace view is that NDX will have a potential trading range over the next 30 days contained within a range of up 10.0% (11,000) to down 10.0% (9,000).

### **Q. What does the VOLQ<sup>®</sup> tell me as an investor?**

A. Implied volatility is the aggregate marketplace perception about whether the Nasdaq-100<sup>®</sup> index will have a broad or narrow trading range (up and down) over the next thirty calendar days. VOLQ expresses the market's perceptions regarding minor or major moves based on Nasdaq-100<sup>®</sup> (NDX) option premiums. Accordingly, as options are akin to insurance, if there is more uncertainty, NDX options prices are higher, therefore VOLQ<sup>®</sup> will be higher, and vice-versa.

### **Q. How do investors use volatility products for portfolio and trading strategies?**

A. Retail and institutional investors alike have many choices to deploy cash. When evaluating an investment, the investor considers the rate of return in a risk-free investment (like U.S. T-Bills) and adds on a risk premium (interest rate) to arrive at a minimum required rate of return, in other words, a benchmark like an 8% return. Both historical and implied volatility are expressed in percentage terms. Historical volatility fits the time period measured whereas implied volatility is expressed in annualized (365 day) terms. Accordingly,

an investor required rate of return is positively related to the underlying risk the index or equity is expected to generate. If an investor were to choose a long term investment holding in the Nasdaq-100® index FAANG components (Facebook, Amazon, Apple, Netflix and Alphabet), they may elect to deploy volatility hedging strategies to guard against market selloffs. The resulting outcome would be continual holding of long stock positions whilst capturing risk premium greater than that forecasted at time of investment.

**Q. How is VOLQ® different from CBOE Volatility Index® (VIX®)?**

A. VOLQ® focuses on the options practitioners, hedgers, and trader use most, at-the-money Nasdaq-100® index options. VIX® is comprised of three types of S&P 500® index options, at-the-money, out-of-the-money and deep out-of-the-money options.

**Q. How does VOLQ® relate to NDX?**

A. VOLQ® movement was negatively correlated (-79.19%) to daily price movement of the Nasdaq-100® index for the period 2014-June, 2020.. However, as this metric is based on past data, it is important to note that on any given trading day, the precedent correlation may not be applicable.

**Q. Which VOLQ® products will be available for trading?**

VOLQ® futures are expected to begin trading on CME Globex on October 5 pending all regulatory review and approvals. Online futures brokers will have access to trading and clearing services for VOLQ® futures. VOLQ® securities-options are expected to begin trading on Nasdaq PHLX LLC ("PHLX") in the first half of 2021 pending all regulatory review and approvals.