

# Nasdaq-100 Volatility Index - VOLQ

NATIONS®

INDEXES

## AN IMPROVED MEASURE OF IMPLIED VOLATILITY ON THE NASDAQ-100 INDEX

The Nasdaq-100 Volatility Index (VOLQ) is an improved measure of implied volatility on one of the most important domestic equity indexes, the Nasdaq-100 Index®. VOLQ uses the Nations® VoIDex® methodology to measure implied volatility the way practitioners do, by focusing on at-the-money options. This methodology allows investors to fully understand the state of the Nasdaq 100 options market.

### POWERED BY VoIDex®

VOLQ is powered by the VoIDex methodology which uses the first in-the-money and first out-of-the-money call and put options for the four weekly expirations bracketing the moment 30 days in the future. These 16 options are interpolated to generate a mathematically robust, closed-form measure of at-the-money, precisely 30 days to expiration, implied volatility.

### VOLQ INDEX - AVERAGE DAILY CLOSE PER YEAR

2014	2015	2016	2017	2018
13.95	16.11	16.03	11.93	18.45

### The Nasdaq-100 Index

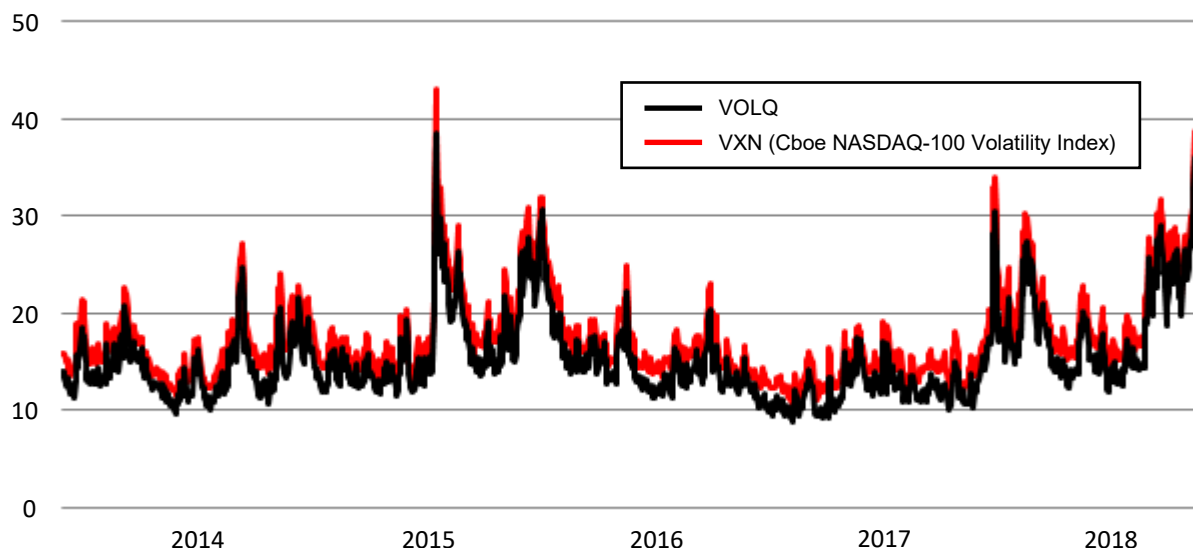
The Nasdaq-100 Index includes 100 of the largest domestic and international non-financial companies listed on The Nasdaq Stock Market. The Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology.

The Nasdaq-100 Index has become the bellwether for technology companies.

Ticker Symbol:

**VOLQ**

## HISTORICAL COMPARATIVE RESULTS



Better Ideas. Better Indexes.®

## UNDERSTAND WHAT VOLATILITY IS TELLING YOU

VOLQ uses 16 at-the-money NDX options, the most important options for Nasdaq-100 market participants. Other measures of implied volatility, notably VXN, incorporate a large and variable number of options, many of which rarely trade, which reduces the value of the resulting measure and generates misleading statistical noise created by phenomena like the distance between strike prices, number of strike prices listed, and option skew.

If a measure of volatility uses all the options listed in an expiration, it is impossible to know what is driving index changes. Is the measure moving because of at-the-money options? Is it because of deep out-of-the-money puts? Is it because of calls? While it is impossible to know, each of these scenarios result in a very different outlook for investors.

## VOLQ USES THE MOST LIQUID NASDAQ-100 OPTIONS

The underlying option for VOLQ is NDX, options on the Nasdaq-100 Index, which trade on three different exchanges. Multiple trading venues means NDX options have tight bid/ask spreads with substantial market depth. The result is that VOLQ provides a clearer measure of expectations for future volatility.

## THE NATIONS SUITE OF VOLATILITY INDEXES

Nations VolDex Indexes isolate the impact of skew and makes it knowable through its suite of volatility indexes. TailDex<sup>®</sup> NDX measures the cost of deep out-of-the-money NDX puts which insure against a “tail event” or extremely steep drop in the NDX index while SkewDex<sup>®</sup> NDX defines the amount of put skew in the NDX option market giving an indication of demand from investors for protective options.

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## VOLQ Construction

The Nasdaq-100 Volatility Index (VOLQ) measures the implied volatility of a hypothetical precisely at-the-money Nasdaq-100 index option with 30 days to expiration.

VOLQ identifies the four weekly NDX option expirations bracketing 30 days from the current minute then incorporates the first call and put option above and below the forward price in each of those expirations. Those 16 at-the-money options are then interpolated into a single mathematically robust, closed-form measure of implied volatility.

Every option practitioner focuses their analysis on at-the-money volatility to understand the dynamics of any option market. VOLQ provides the information they need.

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## Nasdaq-100 Volatility Index Daily Results

Average Close:	15.40
Median Close:	14.15
High Close: (August 24, 2015)	38.41
Low Close: (March 20, 2017)	8.69
Correlation to NDX:	-73.14%
Correlation to VXN:	85.05%
STD of Daily Change:	8.69%
Largest Daily Gain: (February 5, 2018)	53.92%
Largest Monthly Gain: (August 2015)	106.05%

1/2/2014 through 12/31/2018