

# CallDex®

NATIONS®

INDEXES

## A VITAL MEASURE OF THE COST OF CALL OPTIONS

The Nations® Large Cap CallDex® Index is a new measure of the cost of the most popular large cap index call options. CallDex is a normalized, strike independent measure of the cost of a SPY call option with 30 days to expiration which is struck 1 standard deviation out-of-the-money.

The call options used in CallDex are options on SPY, the SPDR® S&P 500® ETF. SPY options are the most active, liquid options in the world.

CallDex is the first measure of the cost of call options. As such, it is a measure of expectations for a rally in large cap equity prices as well as a measure of the likelihood of large cap equity index volatility during the next 30 days.

## INTERPRETING THE VALUE OF CALLDEX

The value of CallDex increases as the price of the 1 standard deviation out-of-the-money call option with 30 days to expiration increases. Higher call option prices indicate expectations for greater volatility during the next 30 days and potentially an upside bias on the part of speculators and traders.

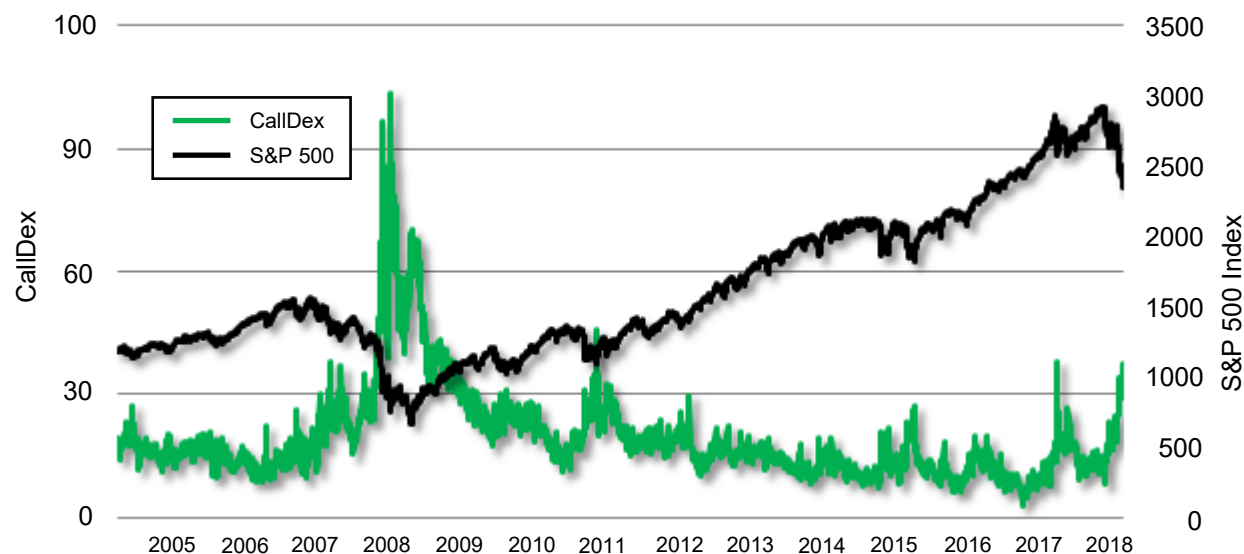
## Nations® CallDex®

The Nations Large Cap CallDex Index is a measure of expectations for market volatility and direction over the next 30 calendar days as expressed by options on SPY, the most liquid options in the world.

Volatility is a measure of both the speed and magnitude of price movements over a finite period of time. The faster or more dramatic the price changes, the greater the volatility.

CallDex provides insight into both expectations for this future volatility and the market's expectations for the direction of those price changes. Obviously, the direction of the price changes is important to long-term investors.

## HISTORICAL COMPARATIVE RESULTS

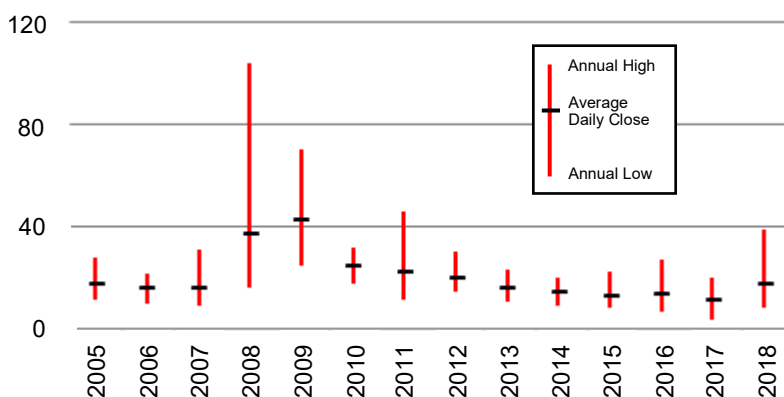


Better Ideas. Better Indexes.®

## HOW IS CALLDEx RELATED TO VOLDEX

CallDex and VolDex are different measures of the risk of returns for SPY options. VolDex measures the market's perceptions of expected volatility over the next 30 days. CallDex is the normalized price of an out-of-the-money call option. While both are driven by expectations for future volatility, CallDex is also impacted by directional risk as expressed by skew. This is an important measure for investors concerned with expectations for direction, not just absolute volatility of returns.

## ANNUAL RANGE AND AVERAGE DAILY CLOSE



## THE NATIONS SUITE OF VOLATILITY INDEXES

Nations Indexes measure important aspects of the large cap index option market and when used together provide unique insight into the market's perceptions of risk and/or future direction. For example, PutDex<sup>®</sup> measures the cost of a 1 standard deviation out-of-the-money SPY put option and when compared to CallDex provides understanding not offered by other indexes. RiskDex<sup>®</sup> calculates this formal relationship and captures the positioning of investors and speculators.

Nations indexes are protected by patents pending.

Performance of an index is not illustrative of any particular investment. Index returns quoted represent past performance, which is not a guarantee of future results.

"Nations" is a registered trademark of Bank of America Corporation. Nations Indexes are not sponsored, endorsed, sold or promoted by Bank of America and Bank of America makes no representation regarding the advisability of investing in any Nations products.

VolDex<sup>®</sup>, VOLI<sup>®</sup>, SkewDex<sup>®</sup>, TailDex<sup>®</sup>, CallDex<sup>®</sup>, PutDex<sup>®</sup>, RiskDex<sup>®</sup>, SDEX<sup>®</sup>, TDEX<sup>®</sup>, and Better Ideas, Better Indexes<sup>®</sup> are registered trademarks of Nations Indexes. VIX<sup>®</sup> is a registered trademark of CBOE. SPDR<sup>®</sup> and S&P 500<sup>®</sup> are registered trademarks of Standard & Poor's Financial Services.

## CallDex Construction

The Nations Large Cap CallDex Index measures the normalized cost of a hypothetical SPY (SPDR S&P 500 ETF) call option with precisely 30 days to expiration which is precisely 1 standard deviation out-of-the-money.

CallDex uses current option prices to calculate the 1 standard deviation threshold for the 2 expiration dates bracketing 30 days from today. It then calculates a normalized call option price for each expiration date and interpolates to arrive at a 30 day figure.

The best way to understand everything the SPY option market has to say is to deconstruct skew and CallDex provides insight into this vital portion of the option market.

## Nations CallDex Index

### Daily Results<sup>1</sup>

Average Close:	19.60
Median Close:	16.55
High Close: (November 20, 2008)	103.96
Low Close: (August 11, 2017)	3.23
Largest Daily Increase: (February 6, 2018)	69.88%
Largest Daily Decrease: (July 21, 2014)	47.22%
Correlation to S&P	- 42.78%
Correlation to VOLI:	46.13%
STD of Daily Change:	10.18%
Beta (vs. VIX)	0.593
R-Squared (vs. VIX)	21.28%

<sup>1</sup> As of 12/31/2018