



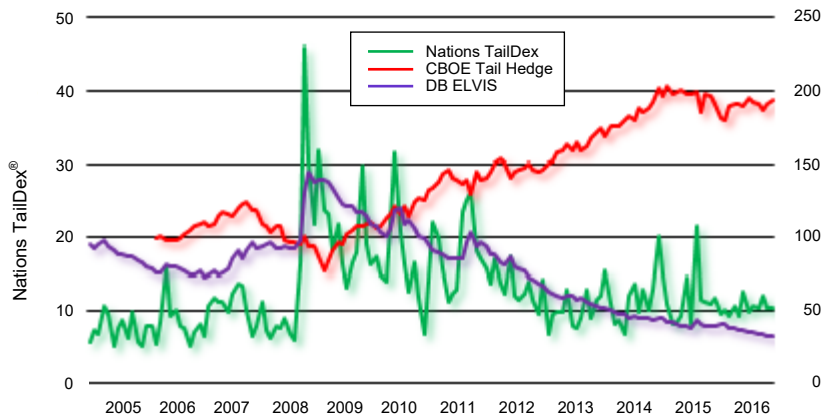
A ROBUST, MODEL-FREE AND INVESTABLE MEASURE OF TAIL RISK

The Nations® family of TailDex® Indexes measure the market's expectations of an extreme event. By creating a synthetic put option that is three standard deviations out-of-the-money and then normalizing that option price, the Nations TailDex Indexes provide a clearer measure of expectations of an extreme move that can be compared across time, market regimes and for all equity indexes. TailDex Indexes are model-free and robust from a theoretical point of view.

Nations TailDex Indexes

Nations TailDex Indexes calculate and standardize the cost of options that hedge against a three standard deviation drop in price. Since TailDex Indexes measure the cost of hedging tail risk and standardizes the threshold of a such tail event, a threshold shared by the academic and investment communities, TailDex Indexes are a vastly superior measure and can be compared to Nations TailDex Indexes on other equity indexes and asset classes. Existing measures of tail risk exhibit significant flaws as most focus on the reaction of option implied volatility to an extreme event rather than the market risk of the event. The calculation of the tail event threshold for Nations TailDex is logically based on the current volatility environment rather than stale historical data that may or may not be relevant to the existing volatility regime.

Historical Comparative Results



Index Description

The Nations family of TailDex Indexes provide an improved measure of the market's perception of tail risk. Nations defines a "tail" event the way academics and practitioners define it, as a price drop of three standard deviations. Since TailDex Indexes are constructed without using an option pricing model or volatility derivatives, they can be compared across equity indexes and asset classes.

Nations Large Cap

TailDex Ticker Symbol:

TDEX

What Is Tail Risk?

Tail Risk is the likelihood of an extreme downward move in an asset's price, a move of at least three standard deviations. The likelihood of such an event is more probable than anticipated by a normal distribution of returns.

If investment returns exhibited a true normal distribution the likelihood of such an event would be 0.135% but investment returns are clearly not normally distributed; the occurrence of extreme events is much higher than predicted by a normal distribution. This phenomenon has significant negative implications for investors and asset managers.

The Nations Large Cap TailDex Index

The Nations Large Cap TailDex Index calculates the cost of a SPDR S&P 500 (SPY) put option that is precisely three standard deviations out-of-the-money with precisely 30 days to expiration. As such, TailDex informs investors of the market's estimation of the likelihood of a three standard deviation drop in the SPDR S&P 500 (SPY) over the next 30 days and the cost of insuring against such a drop. The Nations TailDex is a superior, investable measure of tail risk because TailDex measures tail risk as academics and market participants define it. The Nations TailDex Indexes are protected by patents pending.

Nations TailDex Index Values Are More Meaningful

TailDex Index values represent the cost of purchasing a precisely 30-day put option with a strike price precisely three standard deviations out-of-the-money. The Nations TailDex Index was recently at 10.41 indicating that a 30-day put option struck three standard deviations out-of-the-money would cost 0.1041% of the underlying, in this case the SPDR S&P 500 (SPY) ETF.

Historical Values

	Nations TailDex Index	CBOE Tail Hedge Index	Deutsche Bank Elvis Index
Recent Closing Value (12/30/2016)	10.41	193.66	33.29
Average Monthly Closing Value	12.921	142.119	78.763
Median Monthly Closing Value	11.478	141.120	81.050
Standard Deviation of Monthly Change	39.274%	3.686%	5.047%
Correlation to S&P 500	-37.112%	91.161%	-94.682%
Monthly Closing High	45.964 (October 2008)	203.839 (February 2015)	146.001 (November 2008)
Monthly Closing Low	5.278 (December 2005)	77.810 (February 2009)	38.350 (July 2015)
Largest Monthly Increase	178.448% (October 2008)	11.709% (October 2011)	34.223% (October 2008)
Largest Monthly Decrease	-52.594% (January 2013)	-10.697% (February 2009)	-9.459% (July 2010)
Initiation	1/31/2005	3/20/2006	3/16/1990

Performance of an index is not illustrative of any particular investment or vehicle. Index results quoted represent past performance, which is no guarantee of future results.

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A Superior Measure

TailDex is a vastly superior measure of perceptions of tail risk:

- TailDex measures tail risk as investors and asset managers define it, as a downward move of three standard deviations.
- The TailDex measure is meaningful. It is the cost of a precisely 30-day put option expressed in basis points of the underlying.
- Since time to expiration and relative moneyness are standardized, Nations TailDex Indexes can be compared to those of other equity assets (unlike the CBOE Tail Risk Hedge Index or Deutsche Bank's ELVIS Index).

Other Tail Risk Indexes

The CBOE Tail Risk Hedge Index (VXTH) replicates the S&P and then allocates a portion of the portfolio to buying VIX call options. The amount of the allocation depends on the level of VIX so VXTH will allocate none of the portfolio to VIX call purchases if the VIX is low, just the time one would want to buy volatility. VXTH doesn't protect against a tail event, it seeks to profit from an increase in implied volatility.

Deutsche Bank's ELVIS (Equity Long Volatility Investment Strategy) Index tracks the performance of a long position in variance swaps on the S&P 500. As such it doesn't address tail risk but rather compares implied volatility to realized volatility.