

## THE ONLY MEASURE OF OPTION TERM STRUCTURE

The Nations<sup>®</sup> TermDex<sup>®</sup> Index is the only measure of option term structure. Option term structure is the change in implied volatility of at-the-money options, calculated using the Nations VolDex methodology, as the time to maturity of options increases. By calculating the closed-form implied volatility for precisely at-the-money options with expirations of from 7 days to 360 days, and then calculating the slope of the best-fit line for those values, TermDex describes option term structure in a single, simple to understand value which provides important information to both traders and investors.

### Nations TermDex Index

The Nations TermDex Index calculates and standardizes the measurement of option term structure, which is the tendency for options with different expiration dates, but which are otherwise identical, to display different implied volatilities.

Nations TermDex is the only index measuring option term structure and measures it as option users and theorists use it. TermDex is a robust and consistent measure which can be compared over time and across assets.

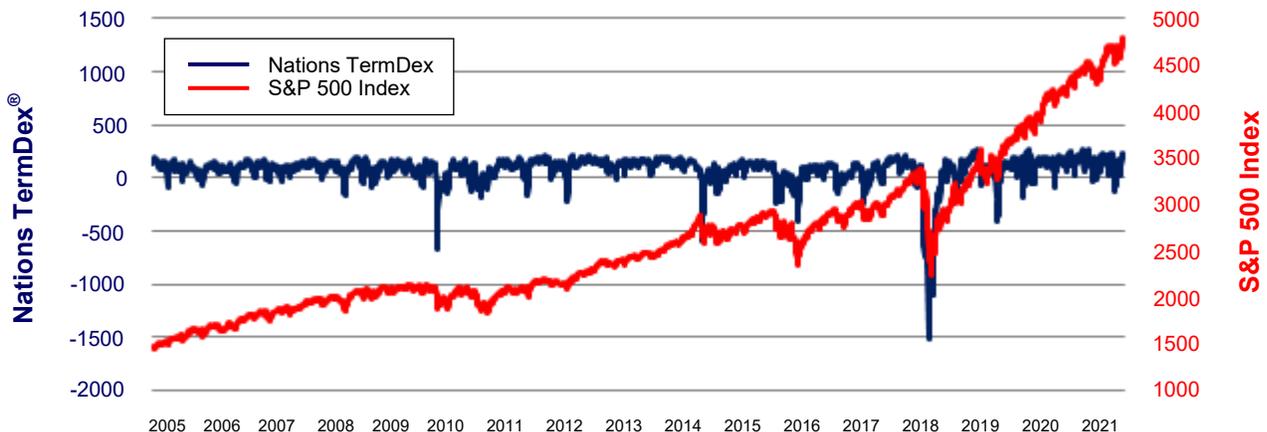
### What Is Term Structure?

Option term structure is the tendency for options with different expiration dates to exhibit differing implied volatilities. Differing implied volatilities across different expiration dates is to be expected, but the nature of the difference can be telling.

This difference can be a measure of the option market's expectations for future volatility, both realized and implied.

Shorter-term implied volatility is usually lower than longer-term implied volatility. This form of the relationship, called "Contango," signals lower expectations for realized volatility in the near future. When shorter-term implied volatility is higher than longer-term implied volatility, the market expects heightened realized volatility.

## HISTORICAL COMPARATIVE RESULTS



## The Nations Large Cap TermDex Index

The Nations Large Cap TermDex Index calculates the cost of precisely at-the-money implied volatility for SPDR® S&P 500 (SPY) options across a range of expirations from 7 days to 360 days. Through this comparison, TermDex measures the relative cost of near-term, mid-term, and longer-term options and thus, the market's expectations for changes in realized and implied volatility.

When TermDex is positive, the SPY option term structure is normal, meaning it is in contango and shorter-dated options display lower implied volatility than longer-dated options. When TermDex is equal to zero term structure is flat meaning the slope of the best-fit line for the constituent implied volatilities is zero. When TermDex is below zero, term structure is in backwardation meaning shorter-dated implied volatility is greater than longer-dated implied volatility.

## Nations TermDex Index Values Are Helpful

TermDex has historically described expectations for realized volatility across the constituent expiration dates. TermDex has a natural upper boundary of approximately 200 but negative values are more variable. When TermDex is high the expectation for near-term realized volatility is low. When TermDex is negative the expectation is for increased near-term volatility. As TermDex becomes more negative the expectation for near-term realized volatility is increasing.

## Historical Values

	Nations TermDex Index
Average Closing Value	77.19
Median Closing Value	107.08
Highest Closing Value	269.04 (2/12/2021)
Lowest Closing Value	-1515.58 (3/12/2020)

1/2/2013 through 12/31/2021

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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## Index Description

The Nations TermDex Index calculates the slope of the "best-fit" line for implied volatility for SPY option expirations of from 7 days to 360 days from the current moment and includes expirations of 7, 15, 30, 60, 90, 120, 150, 270, and 360 days.

The implied volatility measure for each expiration is the Nations VolDex calculation of closed-form, precisely at-the-money implied volatility. Thus, TermDex is rules based and robust. It can also be compared to historical values and across asset classes.

## TermDex Can Be Predictive

Since the Nations TermDex index is the market's best estimate of short-term realized volatility, it can be predictive as to the direction of the broad market over the short term.

TermDex does this by flagging extremes in market sentiment which can signal inflection points or capitulation among investors.

Current TermDex vs. Historical Values	Average S&P 500 Return - Next 20 Trading Days
Lowest Quintile	2.33%
Second Lowest Quintile	1.27%
Middle Quintile	0.36%
Second Highest Quintile	0.55%
Highest Quintile	0.91%