

VolX[®]

RealVol[®] SPY Options

The Company

VolX has developed RealVol Instruments and RealVol Indices based on realized volatility as defined by the RealVol Formulas.

The Exchange

An SEC regulated options exchange is planning to list RealVol SPY Options under an exclusive license with VolX.

Realized Volatility

Realized volatility, as defined by the RealVol Formula, measures the daily movement of the underlying asset regardless of direction. It is functionally different from instruments based on implied volatility.

The Product

RealVol SPY Options are standard exchange-traded options that cash settle to the RealVol SPY Index.

RealVol Indices

While there are many RealVol Indices, the one most relevant for this brochure is the 1-month (21-day) RealVol SPY Index.

RealVol Formula

At the heart of the RealVol Indices is the RealVol Formula. It is a simple, modified standard deviation formula that sets the degrees of freedom to zero, the mean to zero, and the annualization factor to a constant 252 trading days.

RealVol SPY Indices

These indices come in two forms:

1. A daily version
2. A real-time version

The resulting values for both versions are the same at the close of trading each day.

RealVol Daily SPY Index

The RealVol Daily SPY Index is based on the 21-trading-day (approximately 1-month), rolling, realized volatility of the daily closing price of the SPDR[®] S&P 500[®] ETF Trust (symbol SPY). This index is used to settle all RealVol SPY Options.

RealVol Real-Time SPY Index (TBA)

The RealVol Real-Time SPY Index will use the current day's real-time SPY price to estimate the RealVol Daily SPY Index throughout the trading day.

Contract Types

RealVol SPY Options will include in-the-money, at-the-money, and out-of-the-money strikes and will expire every Friday afternoon.

Uses

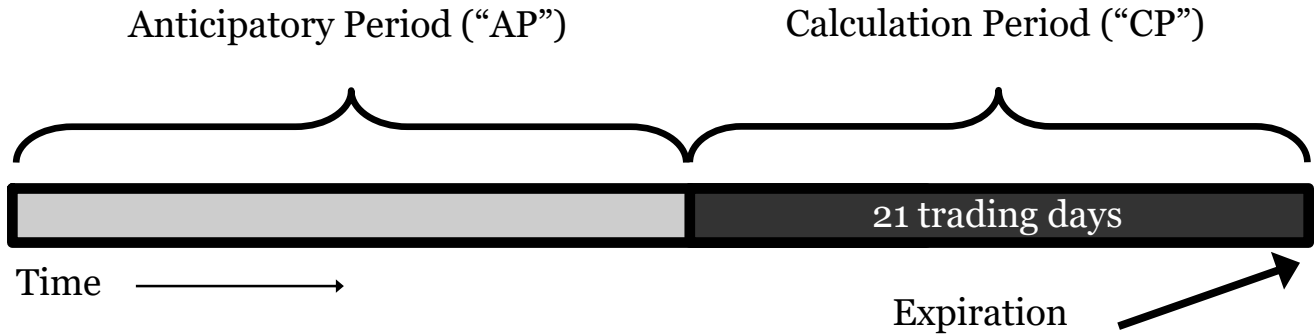
RealVol SPY Options will allow market participants to hedge against, invest in, or trade on realized volatility. They will be useful particularly for hedging standard options, spreading with implied volatility products, and enhancing a SPY portfolio.

“Risk comes from not knowing what you’re doing.”
— Warren Buffet

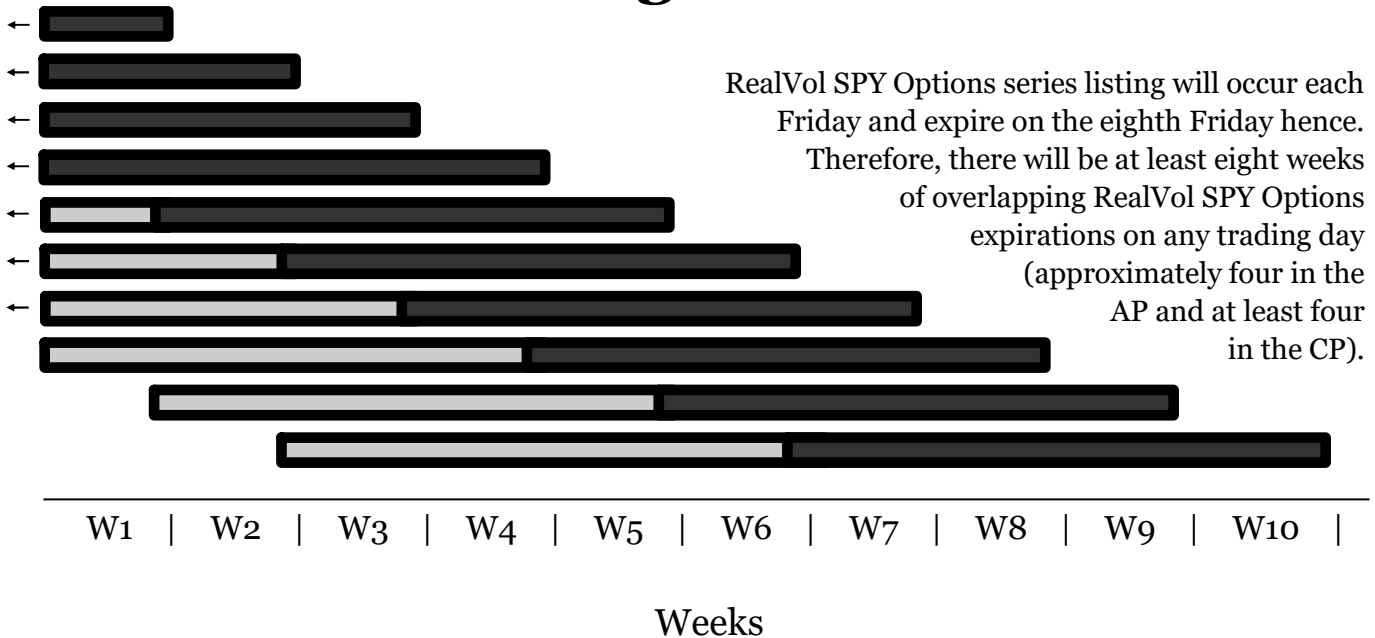
Brochure updated: 1 June 2017

$$\sqrt{\frac{252}{n} \sum_{t=1}^n R_t^2}$$

The Life of a RealVol Instrument



Listing Pattern*



*All time frames are approximate.

Comparison to Existing Products

Features	RealVol Options (realized volatility)	VIX® Options (implied volatility)	Volatility & Variance Swaps (realized volatility)	Delta-Neutral Hedged Options (realized volatility)
Expires to actual, or realized, volatility or variance	✓	X Expires to a forecast	✓	? Path dependency does not provide "pure" volatility exposure
Appeals to retail traders	✓	X Difficult to understand	X No access	X Too complicated
Appeals to option market-makers	✓	X Not a good hedge for standard options	? May be difficult to execute quickly and at favorable prices	✓
Appeals to investment banks and institutions	✓	X Not a good hedge for banks' volatility swap exposure	✓	✓
Appeals to portfolio managers	✓	X No exposure to actual price movement	? Losses can be extreme for variance swaps	X Requires constant monitoring
Exchange-cleared (regulated with no credit risk)	✓	✓	X Subject to credit risk	✓
Difficult to manipulate market	✓	X Special opening quote at expiration that depends on liquidity	✓	✓
Transparency and price discovery	✓	✓	X No public quote	✓
Could be traded on all assets	✓	X Only on very liquid option markets	? Typically traded only in large size	✓
Easy to calculate	✓	X Formula is complex	✓	X Calculation requires execution prices and commissions for each transaction
Execution costs low	✓	✓	? No direct expense, but execution cost built into market quote	X Market spreads and commissions on all legs and follow-up trades

Detailed Information*

Symbol

VOLS

Underlying Index

The RealVol SPY Index. This index is based on the rolling, 21-trading-day realized volatility (adjusted for dividends and any market disruption events) of the daily closing prices of the SPDR S&P 500 ETF (SPY) as calculated by the RealVol Daily Formula.

Index Price

Volatility, which is typically expressed as a percentage, will be quoted without the percentage sign; e.g., 23.45% is quoted as 23.45.

Premium Quotation

Stated in points and fractions; one point equals \$100. Minimum tick for a series trading below \$3 will be 0.05 (\$5.00); above \$3 is 0.10 (\$10.00).

Margin

Margin has not been determined. Expected margin is as follows: Purchases of puts or calls with nine months or less until expiration must be paid for in full. Writers of uncovered puts or calls must deposit and maintain 100% of the option proceeds plus 20% of the aggregate contract value (current index value x \$100) minus the amount by which the option is out-of-the-money, if any, subject to a minimum for calls of option proceeds plus 10% of the aggregate contract value and a minimum for puts of option proceeds plus 10% of the aggregate exercise price amount.

To calculate maintenance margin, current market value is used instead of option proceeds. Additional margin may be required pursuant to Exchange Rules.

Trading Hours

8:30 AM to 3:15 PM CT

Strike Price Increment

0.50 points below 15.00; 1.00 point between 15.00 and 30.00; 2.50 points between 30.00 and 50.00; 5.00 points above 50.00.

Strike Prices

Strike prices will be listed in-, at-, and out-of-the-money. New series generally will be added when the underlying index exceeds the highest or lowest strike price available.

Listing Pattern

Approximately 52 weekly VOLS per year with eight or nine VOLS listed on any given day.

First Trading Day

Eighth Friday prior to expiration Friday.

Expiration Dates

Will correspond to the Friday expirations of standard SP options.

Final or Contract Settlement

All RealVol SP Options will automatically settle to the RealVol SP Index at expiration.

Exercise Style

European (only at expiration)

Settlement Style

Cash

RealVol Daily Formula

A formula used to calculate the annualized standard deviation of continuously compounded daily returns of SPY, assuming zero degrees of freedom, a zero mean, and a constant 252 trading days in a year.

$$\text{Vol} = 100 \cdot \sqrt{\frac{252}{n} \sum_{t=1}^n R_t^2}$$

Where

- Vol = realized volatility
- n = number of trading days in the period (in this case n is normally 21)
- R_t = continuously compounded daily returns as calculated by the formula:

$$R_t = Ln \frac{P_t}{P_{t-1}}$$

Where

- Ln = natural logarithm
- P_t = Underlying Reference Price at time t
- P_{t-1} = Underlying Reference Price at the time period immediately preceding time t

Special Events

The RealVol SPY Index will be adjusted for stock dividends and certain other corporate events. Please see the brochure outlining the RealVol Index at volx.us.

For more information

www.volx.us
info@volx.us
1-888-VolX-Corp (865-9267)

*Subject to change. All contract specifications are only proposed and are subject to change based on rules of the listing exchange. RealVol SPY Options have been approved for listing by the Securities and Exchange Commission (SEC). However, RealVol SPY Options are not currently listed for trading on any exchange. Details may vary according to the underlying asset. See volx.us for detailed information. The information provided herein is for informational purposes only; it must not be relied upon and The VolX Group Corporation will not be liable for actions taken or not taken in reliance thereon.