

## SPIKES™ - Frequently Asked Questions

### What is the SPIKES Index?

The SPIKES Volatility Index measures expected 30-day volatility in the SPDR® S&P 500® ETF Trust (SPY) options.

### What is volatility?

Volatility is the amount of variation in a time series of prices, measured by the standard deviation of log returns. Historical volatility is based on what was observed in the past, and implied volatility is the expected future volatility derived from the options market's prices. The implied volatility over the next 30 days is a common measurement used to compare volatilities of different time periods or different instruments.

### How is SPIKES calculated?

SPIKES uses SPY option prices and interpolates between two expirations' computed variances to determine the 30-day volatility.

The full index methodology guide is available [here](#).

### What are some key features of SPIKES?

- **Using SPY options inputs provides a high degree of accuracy.** The options are multiply listed across many venues, ensuring no single point of failure for the option price inputs to the index.
- **SPIKES Price Dragging** technique prioritizes trades over quotes, and updates option price inputs using an algorithm designed to insulate the index from erratic movements in the bid-ask spread of constituent options by only considering order submissions which change the market in a meaningful way.
- **SPIKES truncates SPY options inputs at consecutive 5 cent bids** which reduces the number of low-priced components in the index. This decreases the potential to distort the index value as fewer far out-of-the-money puts are used in the calculation of the index.
- **SPIKES is calculated and disseminated every 100 milliseconds, ensuring timely and accurate representation of actual market conditions.**

The full index methodology guide is available [here](#).

**What are trading hours for SPIKES options?**

9:30 a.m. - 4:15 p.m. Eastern Time (New York time).

**What are SPIKES options trading increments?**

\$0.05 for series trading below \$3.00 and \$0.10 for series trading at or above \$3.00. Complex Orders and PRIME Price Improvement Auctions are in \$0.01 increments.

**Which expirations are available for SPIKES options? Are weekly options available?**

Monthly expirations are available. SPIKES options expire on the Wednesday that is thirty days prior to the third Friday of the calendar month immediately following the expiring month and are AM settled.

Weekly options are not currently available.

The expiration dates are as follows for the rest of 2019:

3/19/2019	4/17/2019	5/22/2019
6/19/2019	7/17/2019	8/21/2019
9/18/2019	10/16/2019	11/20/2019
12/18/2019		

**Why is the SPIKES index more robust in fast markets?**

SPIKES price dragging technique prioritizes trades over quotes, and updates option price inputs using an algorithm designed to insulate the index from erratic movements in the bid-ask spread of constituent options by only considering order submissions which change the market in a meaningful way. This prevents erratic moves in the index from quotes merely widening out.

**How frequently does the SPIKES index update?**

SPIKES is calculated and disseminated every 100 milliseconds, ensuring timely and accurate representation of actual market conditions.

**Who created SPIKES?**

SPIKES has been developed by T3 Index - a research-driven financial indexing firm focused on developing innovative, investible proprietary indices that transform the way people invest and manage risk.  
[www.t3index.com](http://www.t3index.com)

### How can I trade SPIKES?

Cash settled index options are available on MIAX Options. The ticker is **SPIKE**.

### Can I hold the SPIKES index itself?

No. Since the SPIKES index components change over time, it is impossible to hold the index itself.

### When do SPIKES options expire?

SPIKES options expire on the Wednesday that is thirty days prior to the third Friday of the calendar month immediately following the expiring month and are AM settled.

The expiration dates are as follows for the rest of 2019:

3/19/2019	4/17/2019	5/22/2019
6/19/2019	7/17/2019	8/21/2019
9/18/2019	10/16/2019	11/20/2019
12/18/2019		

### When does the settlement auction take place?

The settlement auction takes place on the SPIKES expiration date at the open of the constituent SPY options.

The expiration dates are as follows for the rest of 2019:

3/19/2019	4/17/2019	5/22/2019
6/19/2019	7/17/2019	8/21/2019
9/18/2019	10/16/2019	11/20/2019
12/18/2019		

A document explaining the settlement auction in detail is available [here](#).

### Who can participate in the settlement auction?

Any MIAX Member can enter Settlement Auction Only (SAO) orders (prior to 9:20) to replicate a full or partial strip of options at settlement. Any MIAX Member can see the auction imbalances and can respond to those auctions with orders.

A document explaining the settlement auction in detail is available [here](#).

### How can traders see what is happening in the settlement auction before the open?

Traders may subscribe to the MIAX Administrative Information Subscriber Feed (AIS) which includes imbalance messages beginning at 9:15 am ET. It updates every 5 seconds until 9:30 am. Once SPY opens, the imbalance messages are updated in real time. Traders may also subscribe to the MIAX Order Feed (MOR) which includes all orders on the book beginning at 7:30 am ET.

A document explaining the settlement auction in detail is available [here](#).

### How is settlement determined?

The final settlement value is calculated from actual opening prices of SPY options on MIAX Options through the SPIKES Special Settlement Auction and makes use of a new Special Settlement Imbalance Process (SSIP).

A document explaining the settlement auction in detail is available [here](#).

### What are the full contract specifications for SPIKES options?

Contract specifications are available [here](#).

### What are the fees for trading SPIKES?

Please see the fee schedule [here](#).

### What is the ticker for SPIKES?

SPIKES and its option chain use the ticker **SPIKE**.

### Which vendors carry the real-time index values?

All major data vendors include the index; a sample of vendors and their index symbols is below:

Data Vendor	Symbol
Bloomberg	SPIKE
Thomson Reuters	.SPIKE
LiveVol	^SPIKE
Yahoo Finance	^SPIKE

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**Can I trade a SPIKES combo?**

A trader may enter an order in any individual combo. Orders can also be entered using a combo as a delta hedge against other options.

**Is the margin for SPIKES options the same as for VIX?**

Yes, customer strategy based margin is the same.