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March 8, 2023

MIAX Exchange Group

Effective Hedging Techniques in the Current Environment

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Effective Hedging Techniques in the Current Environment



About MIAX

- MIAX's parent holding company, Miami International Holdings, Inc. (MIH), owns Miami International Securities Exchange, LLC (MIAX®), MIAX Pearl, LLC (MIAX Pearl®) and MIAX Emerald, LLC (MIAX Emerald®), Minneapolis Grain Exchange, LLC (MGEX™), and Bermuda Stock Exchange (BSX™). MIAX, MIAX Pearl and MIAX Emerald are national securities exchanges registered with the Securities and Exchange Commission (SEC). Learn more about MIAX at www.miaxoptions.com.
- MGEX is a registered exchange with the Commodity Futures
 Trading Commission (CFTC) serves as the exclusive market for a
 variety of products including Hard Red Spring Wheat and SPIKES
 Futures. MGEX is a Designated Contract Market (DCM) and
 Derivatives Clearing Organization (DCO) under the CFTC,
 providing DCM, DCO and cash market services in an array of
 asset classes.
- BSX is a fully electronic, vertically integrated international securities market regulated by the Bermuda Monetary Authority (BMA) specializing in the listing and trading of capital market instruments such as equities, debt issues, funds, hedge funds, derivative warrants and insurance linked securities. BSX is globally recognized, including by the SEC.



SPIKES Volatility Index

SPIKES Index

- A measure of expected 30-day volatility of SPY
- Index and Settlement values priced from SPY ETF option, using the variance swap methodology
 - SPY options trade on all 16 exchanges.
 - SPY options offer tighter bid/offer spreads
- The index value publishes every 100 milliseconds and uses a proprietary price dragging methodology avoiding any erratic jumps in the index level.
- SPIKES makes for an excellent signal or indicator with reliable and stable index level, no erratic false moves.

SPIKES Ecosystem: Futures, Options and ETFs

- SPIKES products can be a diversifier in a portfolio giving another access point to the implied volatility of the S&P 500 through the SPY ETF.
- Lower cost alternative with <u>significantly lower fees</u> for market participants.
- Offers a diversifier to the potential exposure to a single point of failure.



SPIKES vs. VIX

Volatility Index Comparisons	SPIKES ®	VIX ®			
Options prices used for calculation	SPY	SPX			
# of exchanges that list the options used in calculation	All (~16)	One			
Option bid/ask method used	Price Dragging	Mid-Point			
Time of Settlement	8:30 CT	8:30 CT			
Expirations used in daily Index calculations	First two monthly with at least two full days until expiry	Monthly and weekly between 23 & 37 days			
Includes Weekly options in calculation	No	Yes			
Overnight Index levels available	No	Yes			
Index price dissemination	Every 100 milliseconds	Every 15 seconds			
Data subscription needed	MIAX Product Feed (MPF) ¹ & OPRA	CBOE			
Options truncation for Index calculation	Exclude strikes below/above ² two consecutive \$0.05 CRPs ³	Exclude strikes with and below/above ² two consecutive zero bids			
¹ Data feed available to market participants providing real-time updates for MIAX Options proprietary products. Contact MIAX.					

Data teed available to market participants providing real-time updates for MIAX Options proprietary products. Contact MIAX.



² Below/above as it relates to puts/calls

³ \$0.05 on SPY would be the equivalent of \$0.50 in SPX. CRP = Cash Reference Price

SPIKES and VIX Options Exchange Fee Comparison: "Customer"

Exchange Fee Comparison, Customer					
Order	Option Premium	SPIKES ¹	VIX		
Simple	\$0.00 - \$0.10	\$0	\$0.10		
	\$0.11 - \$0.99	\$0	\$0.25		
	\$1.00 - \$1.99	\$0	\$0.40		
	\$2.00+	\$0	\$0.45		
Complex	\$0.00 - \$0.10	\$0	\$0.05		
	\$0.11 - \$0.99	\$0	\$0.17		
	\$1.00 - \$1.99	\$0	\$0.30		
	\$2.00+	\$0	\$0.45		

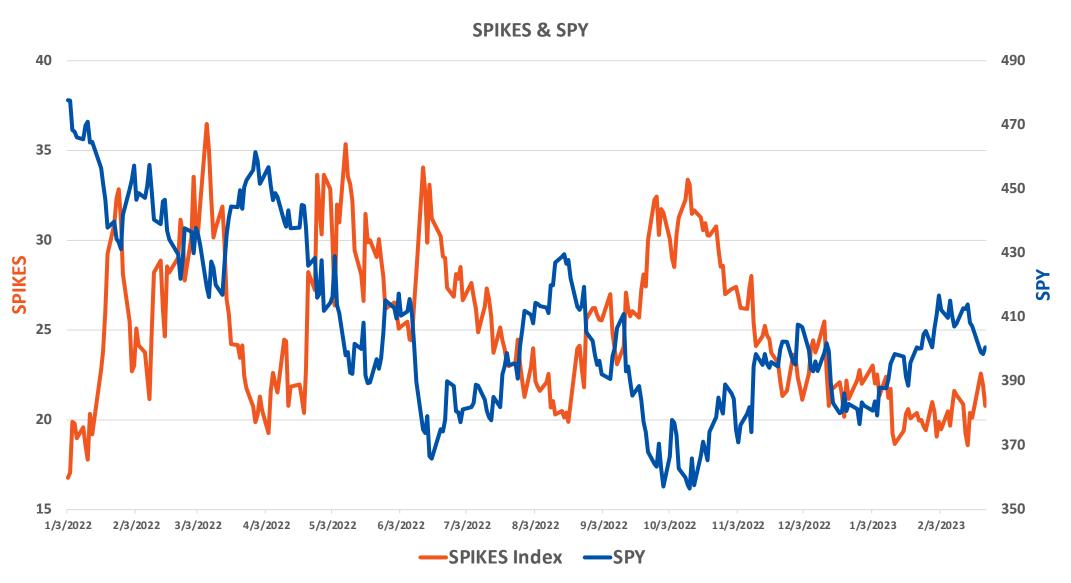
As of October 31, 2022

There are a few carve outs where VIX options customer exchange fees can be lower than what is displayed in the table. Specifically:

- VIX options customer exchange fees are waived during non-US trading hours through December 31, 2022 (Note SPIKES options only trade during US trading hours)
- VIX option customer exchange fees are waived for customers on combination orders (i.e. a synthetic future where a call is bought (sold) vs a put that is sold (bought) at the same strike price and same expiration)
- There is a large trade discount where only the first 15,000 contracts incur exchange fees Cboe has a Frequent Trader Program where clients that opt-in can earn small discounts on exchange fees if certain monthly volume thresholds are met



SPIKES Volatility Index





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Thank you.

Learn more at miaxoptions.com/spikes



Host Profile (Gareth Ryan)



Founded IUR Capital Ltd in 2007, IUR Capital LLC in 2010

IUR Capital is an investment advisor for institutional and retail investors

Focusing in exchange-traded option strategies

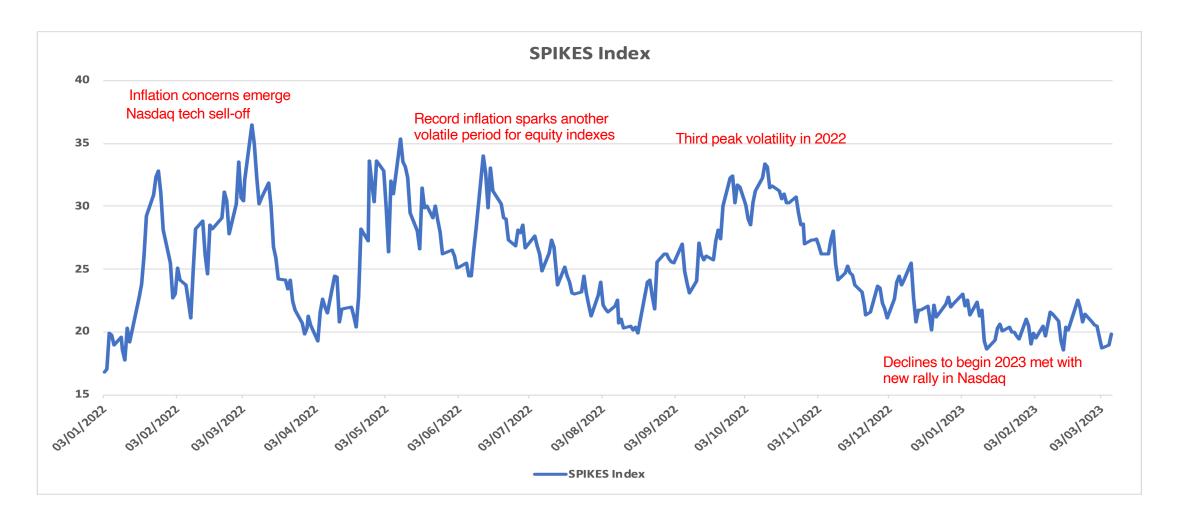
2023....some upside action in Q1



- US equity markets coming off their worst year since 2008 GFC
- Nasdaq +9% YTD / S&P 500 +4% YTD
- 2022's biggest losers are 2023's biggest gainers (NVDA/TSLA/AMD)
- 10Y Treasury yields have peaked once again in recent trading sessions
- But March is a busy month Jobs Report / CPI / Fed meeting
- Are we really out of the woods yet?

SPIKES tells its own story about *implied* market moves...





Source: MIAX





Strategy	Vega	Rise in IV	Fall in IV
Long Call	Positive/Long	Gain	Loss
Short Call	Negative/Short	Loss	Gain
Long Put	Positive/Long	Gain	Loss
Short Put	Negative/Short	Loss	Gain

Am I long vol or short vol? (Spreads)



Strategy	Vega	Rise in IV	Fall in IV
Long Strangle	Positive / Long	Gain	Loss
Long Straddle	Positive / Long	Gain	Loss
Credit Spread	Negative / Short	Loss	Gain
Debit Spread	Positive / Long	Gain	Loss
Butterfly Spread	Negative / Short	Loss	Gain
Calendar Spread	Positive / Long	Loss	Gain

Options involve risk and are not suitable for all investors. Multiple leg strategies, including spreads, will incur multiple transaction costs