



A Fidelity Investments Webinar

Using Straddles and Strangles to Manage Stock Events

BROKERAGE: **OPTIONS**





Agenda



Learn the Trade Structure

Long Straddle

Construction:

Buy a call and put at the same strike price and same expiration

Max Gain:

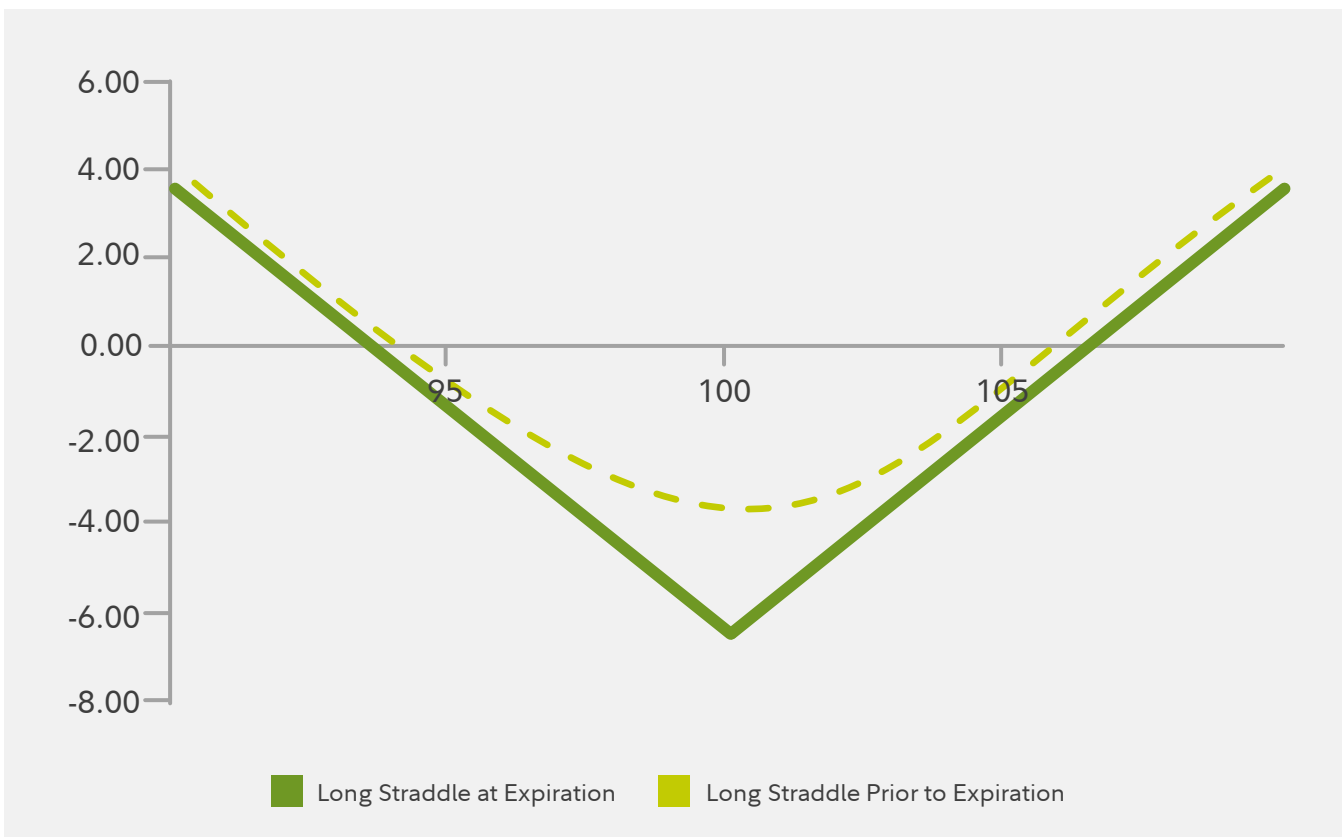
Unlimited

Max Loss:

Initial debit

Breakeven at Expiration:

Strike price \pm the combined premiums (two breakeven points)



Long 1 100 Call at (3.30)
 Long 1 100 Put at (3.20) Total Cost = (6.50)

Long Straddle

The Outlook:

- Significant price swing in either direction during the life of the options (the faster the move, the better)
- Increase in volatility

The Greeks (at time of trade):

- Delta = Neutral
- Gamma = +
- Vega = +
- Theta = -

Long Strangle

Construction:

Buy a higher strike call and a lower strike put at the same expiration

Max Gain:

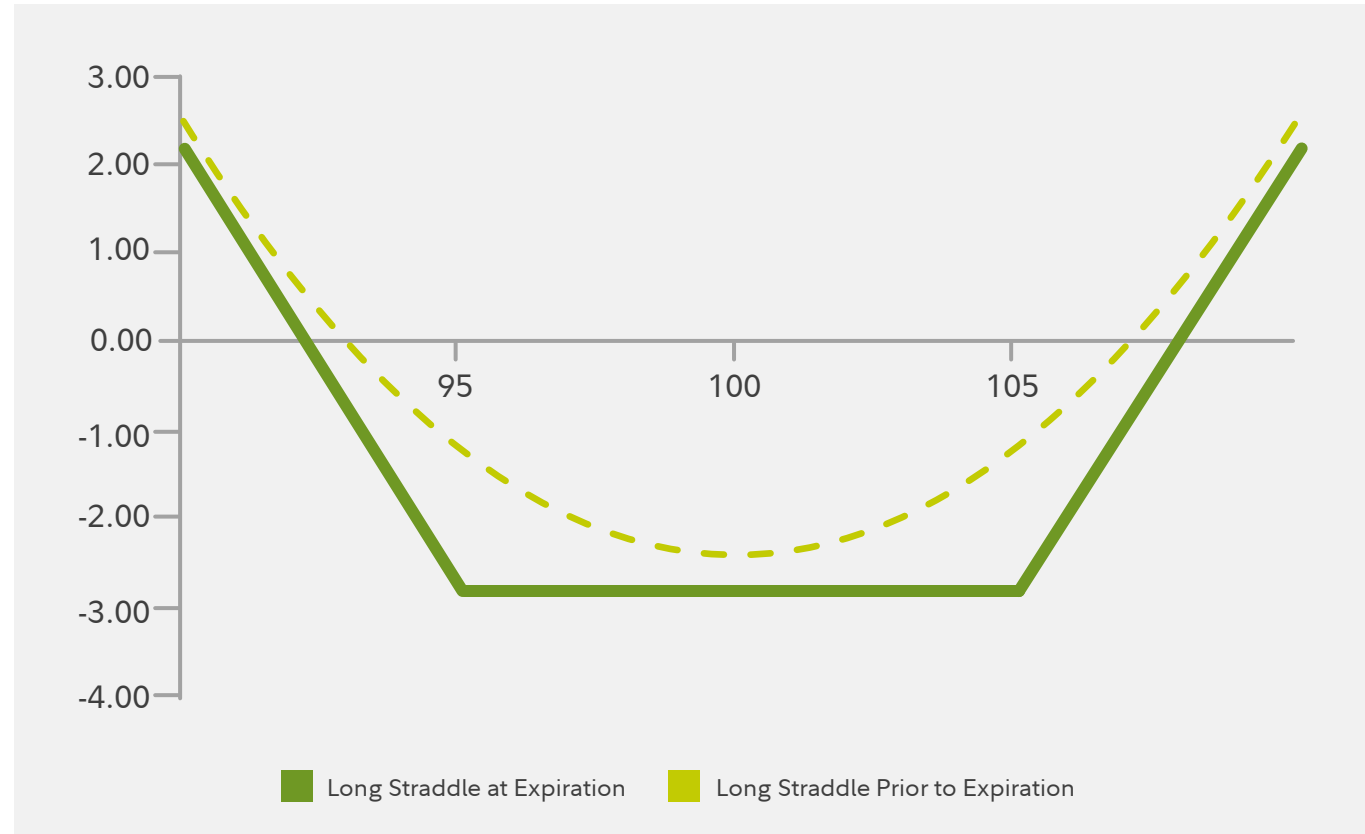
Unlimited

Max Loss:

Initial debit

Breakeven at Expiration:

Call strike price
+ the combined premiums
Put strike price
– the combined premiums
(two breakeven points)



Long 1 105 Call at (1.50)
Long 1 95 Put at (1.30) Total Cost = (2.80)

Long Strangle

The Outlook:

- Significant price swing in either direction during the life of the options (the faster the move, the better)
- Increase in volatility

The Greeks (at time of trade):

- Delta = Neutral
- Gamma = +
- Vega = +
- Theta = -

Long Straddle vs. Long Strangle

	LONG STRADDLE	LONG STRANGLE
HIGHER ROI POTENTIAL		X
HIGHER PROBABILITY OF PROFIT	X	
TIGHTER BREAKEVEN RANGE	X	
LOWER MAX LOSS		X
GREEK EXPOSURE	LONG STRADDLE	LONG STRANGLE
DELTA (NEUTRAL)	Neutral	Neutral
GAMMA (+)	More Positive	Less Positive
VEGA (+)	More Positive	Less Positive
THETA (-)	More Negative	Less Negative

Short Straddle

Construction:

Sell a call and put at the same strike price and same expiration

Max Gain:

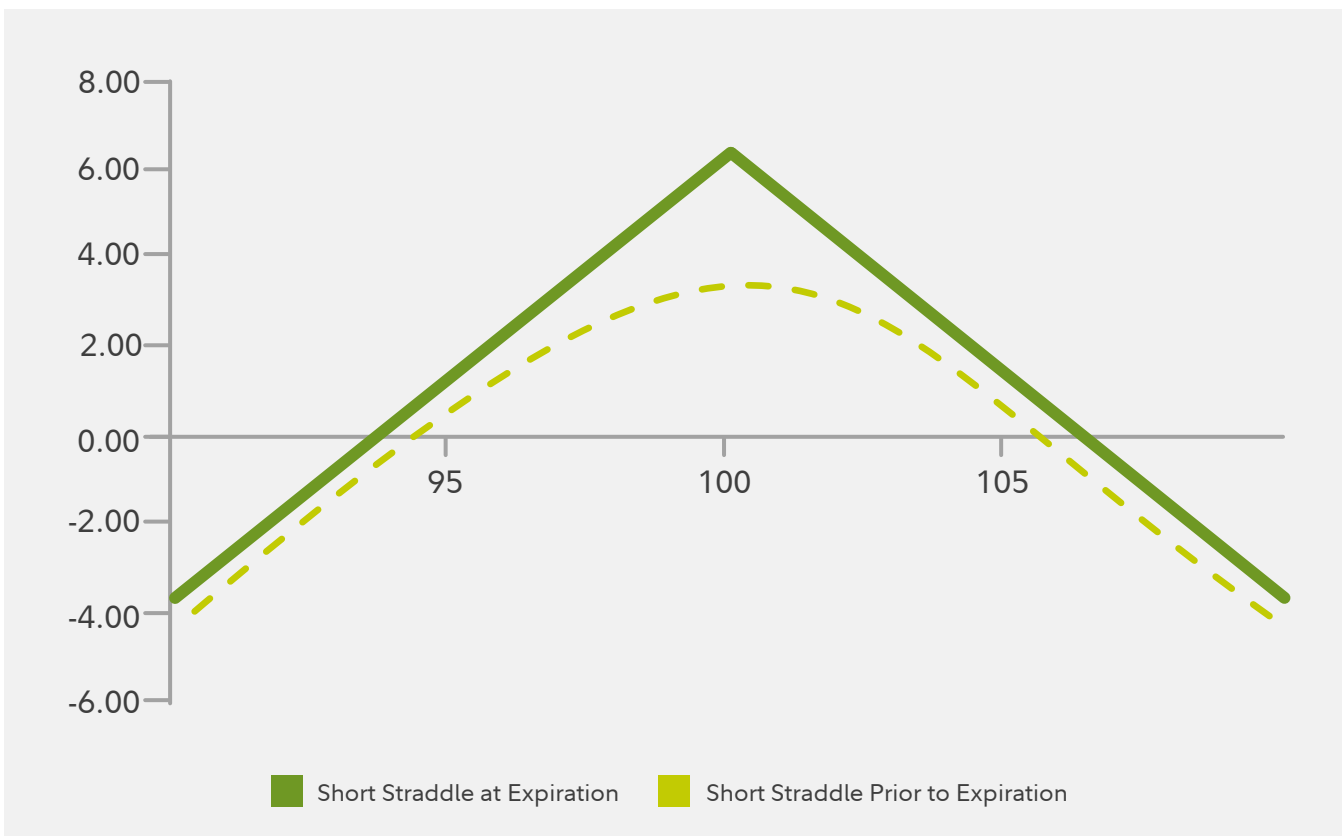
Premium received

Max Loss:

Unlimited

Breakeven at Expiration:

Strike price \pm the combined premiums (two breakeven points)



Short 1 100 Call at 3.30

Short 1 100 Put at 3.20

Total Credit = 6.50

Short Straddle

The Outlook:

- Small price movement (range bound)
- Decrease in volatility

The Greeks (at time of trade):

- Delta = Neutral
- Gamma = -
- Vega = -
- Theta = +

Short Strangle

Construction:

Sell a higher strike call and a lower strike put at the same expiration

Max Gain:

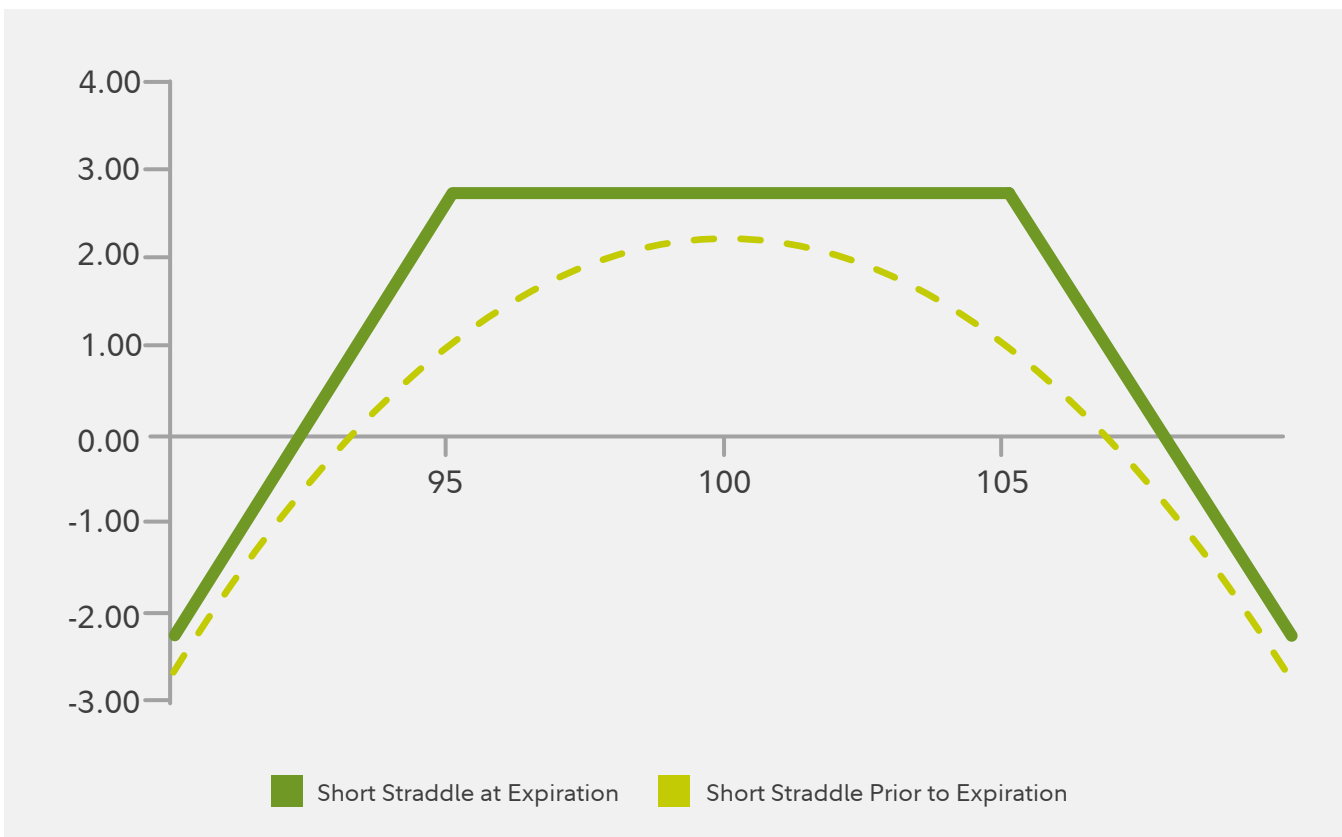
Premium received

Max Loss:

Unlimited

Breakeven at Expiration:

Call strike price +
the combined premiums
Put strike price -
the combined premiums
(two breakeven points)



Short 1 105 Call at 1.50

Short 1 95 Put at 1.30

Total Credit = 2.80

Short Strangle

The Outlook:

- Small price movement (range bound)
- Decrease in volatility

The Greeks (at time of trade):

- Delta = Neutral
- Gamma = -
- Vega = -
- Theta = +

Short Straddle vs. Short Strangle

	SHORT STRADDLE	SHORT STRANGLE
HIGHER ROI POTENTIAL	X	
HIGHER PROBABILITY OF PROFIT		X
TIGHTER BREAKEVEN RANGE		X
LOWER MAX LOSS	X	
GREEK EXPOSURE	SHORT STRADDLE	SHORT STRANGLE
DELTA (NEUTRAL)	Neutral	Neutral
GAMMA (-)	More Negative	Less Negative
VEGA (-)	More Negative	Less Negative
THETA (+)	More Positive	Less Positive



Understand Your Greeks Exposure

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Meet the main players

Gamma:

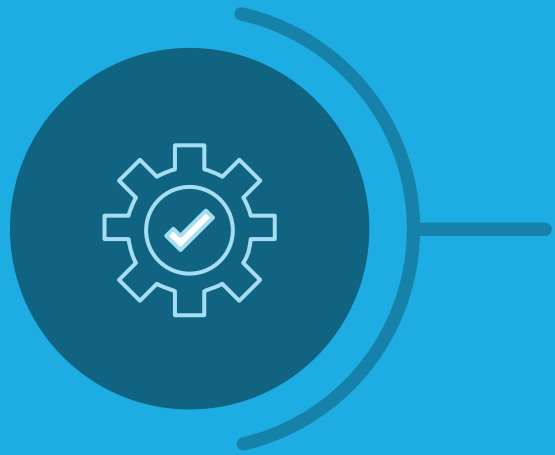
- Rate of change of Delta, given a \$1 change in the underlying
- Gamma is the creator and destroyer of Deltas

Vega:

- Rate of change of the option's price, given a 1% change in volatility

Theta:

- Measures the rate of decay in the value of the option due to the passage of time
- Significant consideration for longer-term trades; less relevant for a short-term trade



Learn How to Set Up a Trade for a Binary Event

The Earnings "Play"



The Expected Move:
ATM Call Premium + ATM Put Premium
= "Expected Move"

Note: Some traders use a percentage of this value, such as 85%, as the "expected move."

Example

Stock Trading at \$21

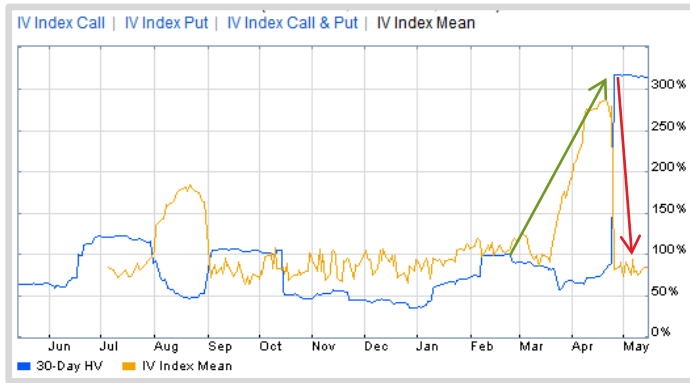
ATM Call (mid) = \$.75

ATM Put (mid) = \$.45

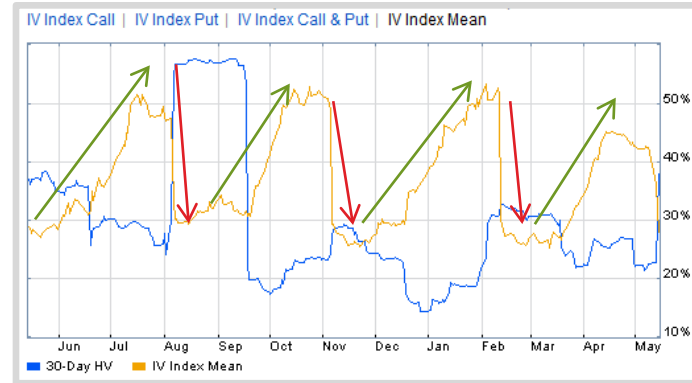
Expected Move = ± \$1.20

The Earnings "Play"

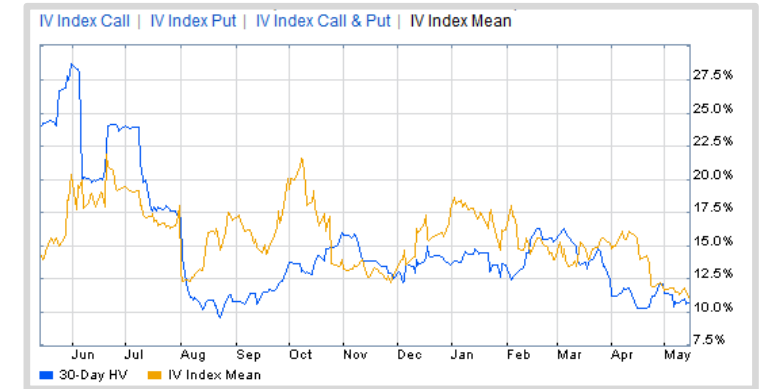
The IV Exhibition



Pharmaceutical company that released results from tests done on an experimental new drug



Consumer discretionary with volatile quarterly earnings



Large-cap blue chip bellwether

The Earnings "Play"

The Buy-Side Appeal:

- Taking advantage of an event that can serve as a catalyst for a significant price swing
- No directional analysis needed

The Sell-Side Appeal:

- Taking advantage of "expensive" options by selling the volatility
- Once earnings results are released, the unknown becomes known and IV is "crushed"

The Earnings "Play" – Example 1: ABC



Opening Trade:

ABC Price = \$524.75

ATM (\$525) Straddle
purchased for \$22.20

Closing Trade:

ABC Open = \$566.75

ATM (\$525) Straddle
closed for \$39.86



The Earnings "Play"

Post-Earnings Trade Analysis

- The stock price moved by \$42; about an 8% move.
- The long ATM straddle increased in value by \$17.66; about a 79% ROI.
- Statistically speaking, there was a very low probability that ABC would move this much.
- A big, quick move = a big profit on the long straddle.
- Gamma overwhelmed Vega.

The Earnings "Play" – Example 2: XYZ



Opening Trade:

XYZ Price = \$103.38

ATM (\$103) Straddle
purchased for \$3.54

Closing Trade:

XYZ Price = \$105.38

ATM (\$103) Straddle
closed for \$2.27



The Earnings "Play"

Post-Earnings Trade Analysis

- The stock price moved by \$2; about a 2% move.
- The long ATM straddle decreased in value by \$1.27; about a -36% ROI.
- Even with a 2% overnight move in the underlying, the long straddle lost.
- How did this happen? Volatility crush.

Volatility Crush



Step 1 – Analyze impact on IV

Pre-earnings IV on ATM XYZ Straddle = 52%

Post-announcement IV = 27%

Drop in IV = 25%

Step 2 – Quantify using Vega

Pre-earnings Vega on ATM contracts = .03

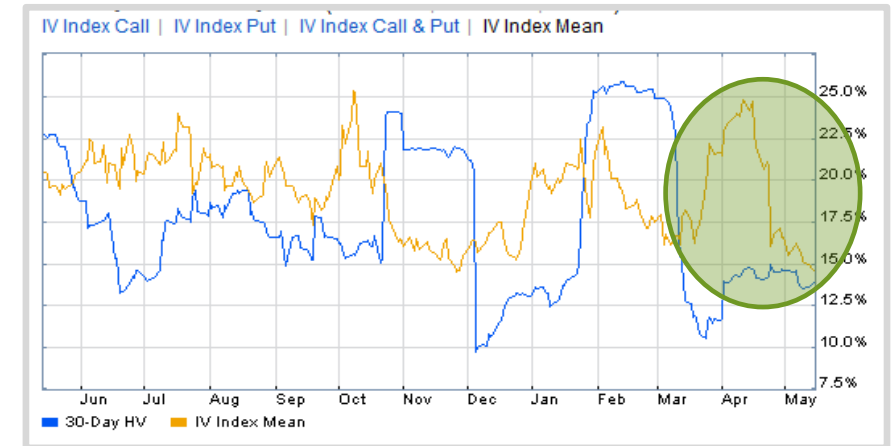
25-point drop in IV * .03 Vega = $-\$0.75/\text{contract}$

Straddle lost \$1.50 from the drop in IV

*Important: Vega is dynamic, so calculations provide estimates

Why did the trade lose?

Directional movement (in this case, the profit on the long call) is not enough to make up for the drop in IV (double Vega) and double time decay (Theta exposure).



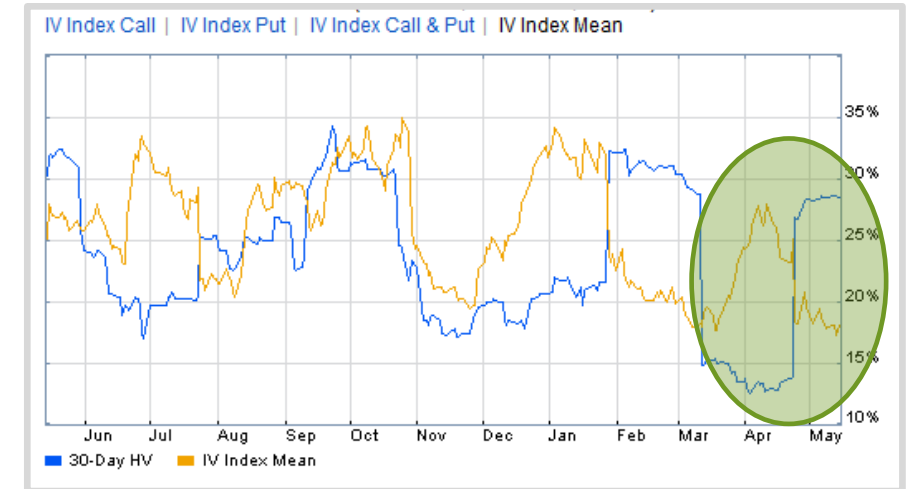
The Effect of Gamma

What is Gamma?

- Rate of change of Delta
- Positive Gamma accelerates gains on winning positions and decelerates losses on losing positions (Long contracts have positive Gamma)
- Negative Gamma decelerates gains on winning positions and accelerates losses on losing positions (Short contracts have negative Gamma)
- Gamma is either creating Delta (driving it to 100) or destroying Delta (driving it to 0)

Why did the ABC trade win?

The positive Gamma on the long call accelerated gains as the stock price moved up. While there was still a volatility crush in the ATM ABC straddle, the effect of Gamma more than offset the loss resulting from the drop in IV and the Theta impact.



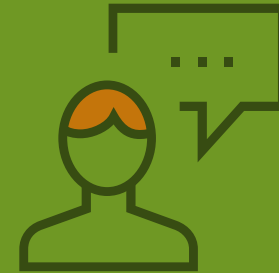


Set Up Your Trade

What to do:

- Consider using charts on Fidelity.com or in Active Trader Pro® to see how the underlying stock, or comparable securities, have reacted to similar announcements in the past.
- Consider evaluating key support/resistance levels using ATP and Trade Armor™
- Consider the trade in light of the “expected move”: markets are efficient and market makers know that security
- Consider analyzing current levels of IV relative to its historical levels using volatility charts
- Have an exit strategy at the time of the trade
 - Set profit and loss targets at the time of trade entry
 - Use Fidelity’s Option Profit/Loss calculator to analyze how the trade will react under different market conditions
- Consider buying protection for short positions

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Thank You



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Important Information

Options trading entails significant risk and is not appropriate for all investors. Certain complex options strategies carry additional risk. Before trading options, contact Fidelity Investments by calling 800-544-5115 to receive a copy of *Characteristics and Risks of Standardized Options*. Supporting documentation for any claims, if applicable, will be furnished upon request.

There are additional costs associated with option strategies that call for multiple purchases and sales of options, such as spreads, straddles, and collars, as compared with a single option trade.

Greeks are mathematical calculations used to determine the effect of various factors on options.

Keep in mind that investing involves risk. The value of your investment will fluctuate over time, and you may gain or lose money.

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