Directional Options Strategies and Trade Management

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Disclaimer

In order to simplify the computations, commissions and other costs have not been included in the examples used in this presentation. These costs will impact the outcome of stock and options transactions and should be considered. Investors considering options should consult their tax advisor as to how taxes may affect the outcome of contemplated options transactions.

Options involve risks and are not suitable for all investors. Prior to buying or selling an option, a person must receive a copy of Characteristics and Risks of Standardized Options (ODD). Copies of the ODD are available from your broker, by calling 1-888-OPTIONS, or from The Options Clearing Corp., One North Wacker Drive, Suite 500, Chicago, Illinois 60606. The information in this presentation is provided solely for general education and information purposes and therefore should not be considered complete, precise or current. No statement should be construed as a recommendation to buy or sell a security or to provide investment advice.

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Versatility of Options

Option usage: Big growth area for risk management, and for good reason

Options are versatile
  • Stock replacement
  • Hedging
  • Leverage
  • Income strategies
  • Volatility trading...
Volatility-Based Setups for Directional Trades

• Directional trades are among the most popular option strategies used. However...

• Many factors influence the value of an options position, not only direction

• Thus, consideration of other price influences can give traders an advantage, or edge, on directional trades
Review of the Greeks and Volatility
The Greeks

- **Delta**: The rate of change of an option value relative to a change in the underlying stock price.
- **Gamma**: The rate of change of an option’s delta relative to a change in the price of the underlying security.
- **Theta**: The rate of change of an option’s value relative to a change in the time to expiration.
- **Vega**: The rate of change of an option value relative to a change in implied volatility.
- **Rho**: The rate of change of an option value relative to a change in the interest rate.
Volatility Refresher / Crash Course

• Realized Volatility
  • Lay definition: How much the stock has moved around lately
  • Textbook definition: The annualized standard deviation of an asset’s price
  • Synonym: Historical volatility, stock volatility

• Implied Volatility
  • Lay definition: How cheap or expensive options are
  • Textbook definition: The volatility figure that when entered in an option-pricing model yields a theoretical value reflecting current market prices
  • Interpreted as the market’s estimation of future volatility
  • The volatility “implied” by option prices
Should Implied Volatility and Realized Volatility Be the Same?

• Realized volatility is calculated from actual stock prices
  • Past
  • Future

• An implied volatility position’s profitability is contingent upon future stock volatility

• If investor expects stock volatility to remain unchanged from current value, the investor would expect implied to be equal realized

• If not, then not
Pre-Trade “Cheap-Rich” Analysis

• The value of all option positions (whether bullish, bearish or otherwise) is influenced by implied volatility

• i.e., Trades may make or lose money as a result of delta, but will also make or lose money as a result of vega

• Traders, therefore, benefit from performing volatility analysis when planning trades

• Volatility charts
Volatility Charts

Courtesy of Livevol
Guidelines for Implied Volatility’s Relative Expense of Options

• “Cheap options”
  - Implied volatility is toward the bottom of the recent range
  - Implied volatility is below realized volatility
  - Future realized volatility is expected to be above current executable implied volatility

• “Expensive options”
  - Implied volatility is toward the top of the recent range
  - Implied volatility is above realized volatility
  - Future realized volatility is expected to be below current executable implied volatility
Volatility Screen on a Directional (Long Call) Trade

• Should use volatility as a screener for trades
• Strategy selection: Is long call is a valid strategy per given volatility profile?
• Edge and volatility
Facebook Long Call Candidate

Courtesy of Livevol
Facebook Long Call Candidate: Delta

- Delta analysis: Bullish
  - Price chart set up has technical support
  - Assume fundamentally expecting rally off lows

Courtesy of Livevol
Facebook Long Call Candidate: Vega

- Volatility analysis: Underpriced
  - Implied in the bottom of range (25th percentile)
  - Implied (at 24) below historical (at 30)

Courtesy of Livevol
Implied Volatility, the Long Call and The Rationale for Edge

- Can buy call at 1.79, at a 24 volatility (rounded)
- Inferring implied volatility “value” is 6 points higher (valued at 30)
- Vega is 12 cents (rounded)
- Thus, there is 0.72 of edge in this directional trade
- Or, should be willing to pay up to 2.51 for call (6 IV points x 0.12 vega + 1.79 current ask price = 2.51)
Implication

- Active traders should only buy calls (or puts) outright if implied volatility is undervalued.
- Even passive investors benefit from only buying calls (or puts) if implied volatility is undervalued.
Edge vs. Profit

• Like other trader edges, a directional trade with a positive volatility edge can make or lose money
• Stock generally still must rise for long call to profit
• Time decay can erode delta profits if stock doesn’t move enough within holding period
How Implied Volatility Edge Becomes Profit

• Buying under-priced assets offers an inherent advantage

• Two possible quantifiable profit manifestations resulting from volatility edge
  • Implied volatility rises to become fairly priced, leads to vega profit, or
  • Time passes and option loses “less than it should”
    • Theta is lower than it would be if IV was higher, giving more time for trade to work out, or
    • Greater profit in given period of time on winners
Negative Edge

• What if implied volatility is over-priced?
• Aforementioned benefits become detriments
• Can position still be taken?
Negative Volatility Edge in XLE
Implied Volatility Over-Priced

- Implied volatility near the top of the recent range
- Implied volatility (26) above historical volatility (18)
- Can a trader make a bullish trade?
Strategy Selection and Volatility

- Implied volatility guides strategy selection
- Can trade *with volatility* or hedge it off
Positioning With Volatility

- Cheap volatility
  - Long calls or puts
  - Long straddles
  - Debit spreads

- Rich volatility
  - Short calls or puts
  - Credit spreads
  - Butterflies, iron condors
Hedging Off Implied Volatility

- Traders can use spreads to offset implied volatility exposure
- Possible spreads
  - Debit spreads
  - Credit spreads
  - Time spreads
Hedging Volatility and the Greeks

• Buy Dec 72 calls at 1.60
  • $\Delta = 43.6$
  • $\Theta = 2.89$
  • Vega = 7.98
• Buy Dec 72-75 call spd at 1.09
  • $\Delta = 22.8$
  • $\Theta = 0.87$
  • Vega = 2.16
Proportionality of Greeks

Exposure Hedged

- Buy Dec 72 calls at 1.60
  - $\Delta = 43.6$
  - $\Theta = 2.89$
  - Vega = 7.98
- Buy Dec 72-75 call spd at 1.09
  - $\Delta = 22.8$
  - $\Theta = 0.87$
  - Vega = 2.16

- Spread $\Delta$: 47.7% less
- Spread $\Theta$: 69.9% less
- Spread vega: 72.6% less

Vertical spreads retain delta well and hedge off more vega
Trading with Volatility in XLE
Positive Delta, Negative Theta: Short Put

• Sell December 70 put at 1.53
• Implied volatility is “on your side”
• Alternate dynamics
  • Limited reward, substantial risk
  • Negative gamma
  • Positive theta
Positive Delta, Negative Theta: Put Credit Spread

- Sell December 68-70 put spread at 0.57
- Implied volatility is “on your side” but not as much
- Alternate dynamics
  - Limited reward, limited (but disproportionate) risk
  - Small negative gamma
  - Small positive theta
Position Management
Good Management Starts with Good Trade Construction

• Expiration cycle selection
  • Expected time horizon of trade / investment guides expiration cycle
  • Also select based on desired / acceptable influence of theta and vega
  • Strike proximity also influenced by time to expiration

• Strike selection
  • Target prices guide strike selection
  • Also select based on desired delta, theta and vega
## A Look at Strike and Expiration Selection

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| 24 days to expiration |
| 10.3 | 248.42 | -42.04 | 60.0  | 34.50 | 35.20 | SPXW(W) Dec23 2185 | | 18.90 | 19.50 | 40.0  | -40.27 | 248.42 | 10.3 |
| 10.1 | 252.37 | -41.78 | 57.1  | 31.10 | 31.80 | SPXW(W) Dec23 2190 | | 20.50 | 21.10 | 42.9  | -40.01 | 252.37 | 10.1 |
| 9.9  | 255.09 | -41.36 | 54.2  | 27.90 | 28.60 | SPXW(W) Dec23 2195 | | 22.20 | 22.90 | 45.8  | -39.59 | 255.09 | 9.9 |
| 9.7  | 256.39 | -40.67 | 51.0  | 24.70 | 25.60 | SPXW(W) Dec23 2200 | | 24.10 | 24.80 | 49.0  | -38.89 | 256.39 | 9.7 |
| 9.5  | 256.05 | -39.74 | 47.7  | 21.90 | 22.50 | SPXW(W) Dec23 2205 | | 26.20 | 26.90 | 52.3  | -37.95 | 256.05 | 9.5 |
| 9.3  | 253.88 | -38.63 | 44.3  | 19.20 | 19.80 | SPXW(W) Dec23 2210 | | 28.50 | 29.20 | 55.7  | -36.84 | 253.88 | 9.3 |
| 9.1  | 249.76 | -37.17 | 40.9  | 16.70 | 17.20 | SPXW(W) Dec23 2215 | | 30.90 | 31.60 | 59.1  | -35.38 | 249.76 | 9.1 |
| 8.9  | 243.33 | -35.34 | 37.3  | 14.10 | 14.90 | SPXW(W) Dec23 2220 | | 33.30 | 34.40 | 62.7  | -33.54 | 243.33 | 8.9 |
Passive vs. Active Management

• Passive management
  • Basic, set it and forget it, management technique
  • Can be used to acquire position in underlying

• Active management
  • Varying complexity
  • Can include “adjustments” such as rolling
Passive Management: Covered Call to Exit Equity Position

- Covered call: Own stock or ETF, short call
- Rationale
  - Credited premium
  - Potential assignment
Covered Call as an Exit Strategy

- Methodology 1: OTM covered call
- Methodology 2: ITM covered call
- Both short-term, passive management techniques
Methodology 1: OTM Call

- Set strike at profit target
- Outcomes
  - Stock rises through strike, take no action, sell stock at (better than) profit target
  - Stock does not rise, retain equity holding, plus premium
Methodology 2: ITM Call

• Part hedge, part exit strategy

• Outcomes
  • Stock remains above strike, take no action, sell at better than current market price (by amount of time value)
  • Stock falls through strike, hedged (by amount of intrinsic and time value), still maintain a value investment
ITM Covered Call Passive Management Example

- Own stock at $185.02, short 180 call at 9.85
- Intrinsic = 5.02
- Time value = 4.83
Active Management: Covered Call to Generate Premium

- Covered call: Own stock or ETF, short call
- Rationale
  - Credited premium
  - Potential assignment
Covered Call to Generate Premium

- Methodology: OTM covered call
- Short-term, active management technique
- Requires monitoring and occasional adjusting
Methodology: OTM Call

• Set strike at price above forecasted range

• Outcomes
  • Stock does not rise through strike, retain equity holding, plus premium
  • Stock rises through strike, roll up to higher strike by executing debit spread
OTM Covered Call Active Management Example

- Own stock at $185.02, short 200 call at 2.10
- If stock rises above 200, buy 200-210 call debit spread
Roll Up (Debit Spread)

- Now
  Short 1 Dec 200 call
Roll Up (Debit Spread)

• Now
  Short 1 Dec 200 call

• Roll (debit spread)
  Buy 1 Dec 200 call
  Sell 1 Dec 210 call

• New position
  Short 1 Dec 210 call

Closed out by this leg of the spread
Advantage Risk Management

• Options offer versatile risk management, giving traders edge and flexibility
• Positions can lower risk, while maintaining profit potential at a strategic advantage
• Passive and active trade management techniques helps traders and investors achieve goals
This has been a presentation of Market Taker Mentoring, Inc.
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