Options Strategies

STG SS25 Meeting 7

Agenda

- Announcements
- Market Update
- Open Discussion
- Options
- Q&A

Follow us on social!

- Club Announcements!
- Economic news!
- Previous meeting slides!
- Club updates
- Don't miss out!

Trading Competition

- Showcase your skills
- Compete against your peers
- Starts 01/30, ends 04/17
- **This will not require any capital on your end! Password - msustg**

MarketWatch

Market Update

- S&P 500: 5,693.31 (+0.45%)
- NASDAQ: 17,804.03 (+0.11%)
- DOW Jones: 422.94 (+0.79%)
- Crude Oil: $69.91 (+2.39%)
- Gold: $3069.10 (+1.54%)
- 10-Year Yield: 4.361% (+1.86%)
- Initial Jobless Claims: 224,000 (-0.4%)

Upcoming data on Friday:

- Core PCE (8:30 Am)
  - Forecast: 2.7% (+0.1%)

Sector Update

Open Discussion

- Recent Trades
- Economic Talking Points
- Noticeable Assets/trends

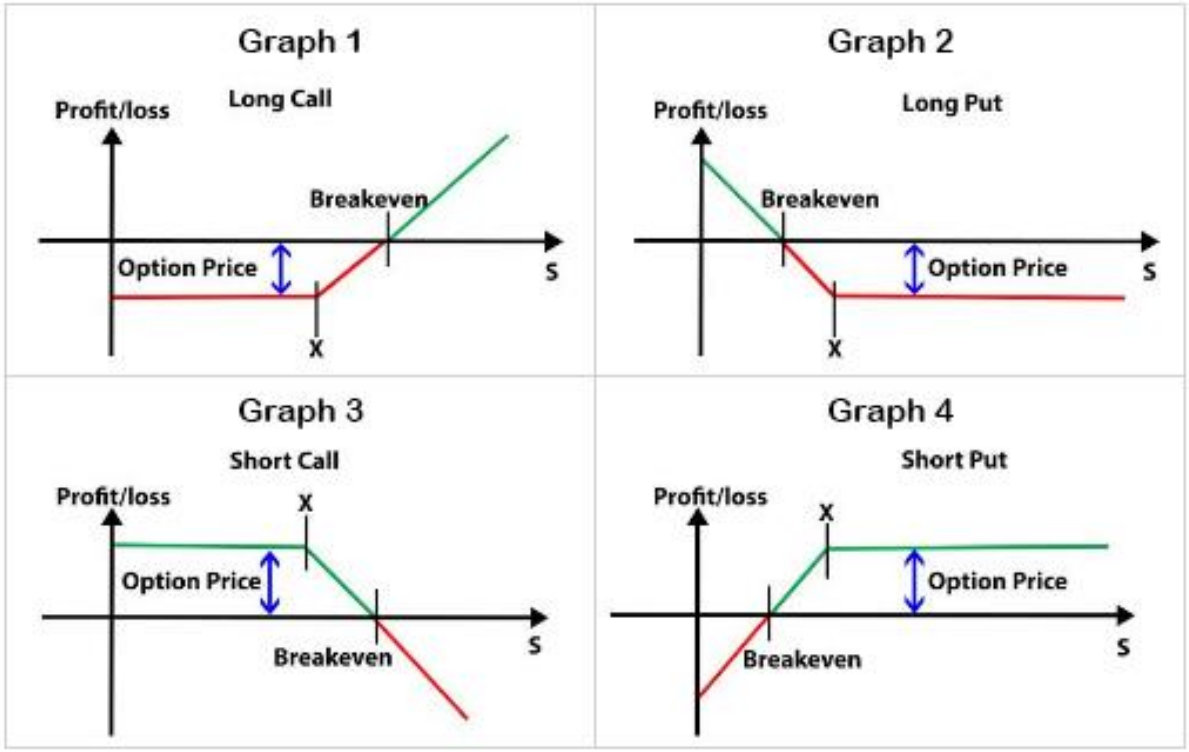
Quick Review

Buy put = right to sell shares at certain price (bearish)

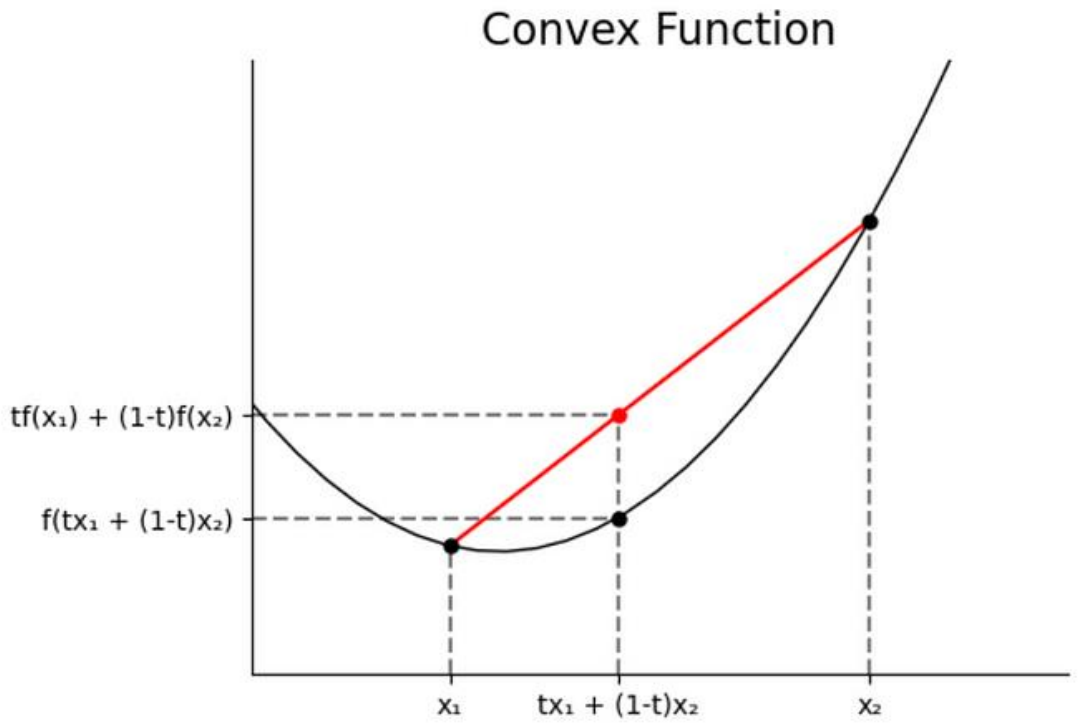
Sell put = obligation to buy shares at certain price (bullish)

Buy call = right to buy shares at certain price (bullish)

Sell call = obligation to sell shares at certain price (bearish)



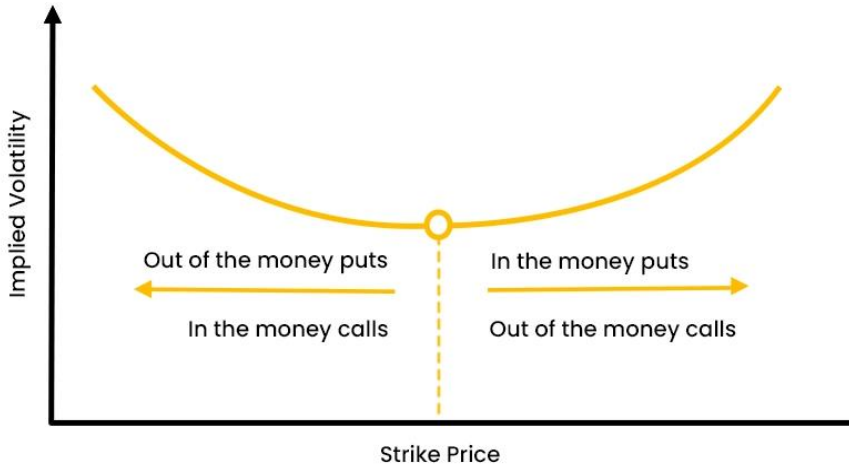
Convexity



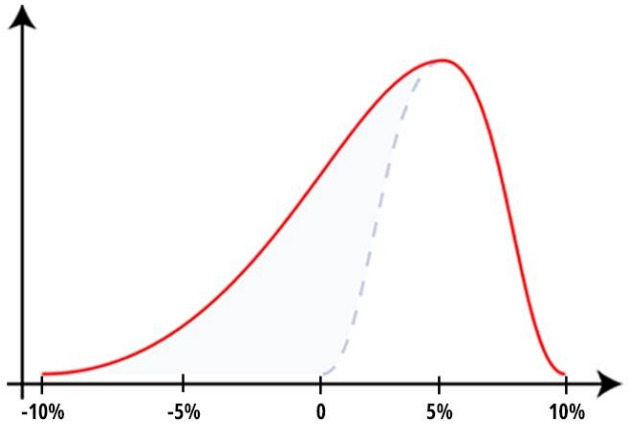
Skew/Smile

(OTM Put IV-OTM Call IV)/(ATM IV)×100

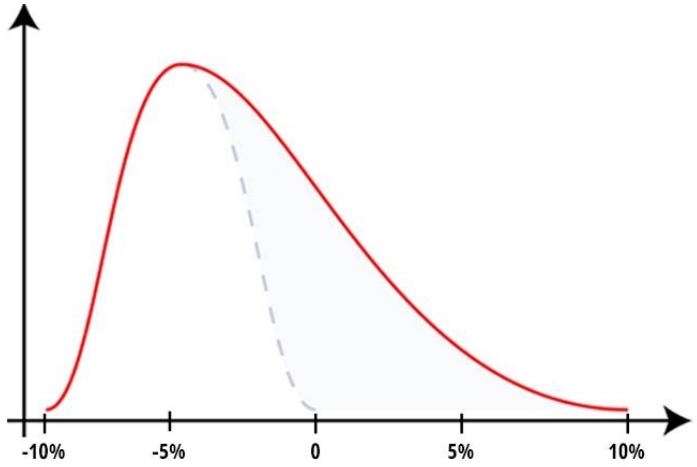
All based on IV, creating a discrepancy in the option pricing



OTM IV is very high for C&P



OTM Call IV < OTM Put IV



OTM Call IV > OTM Put IV

Skew Example

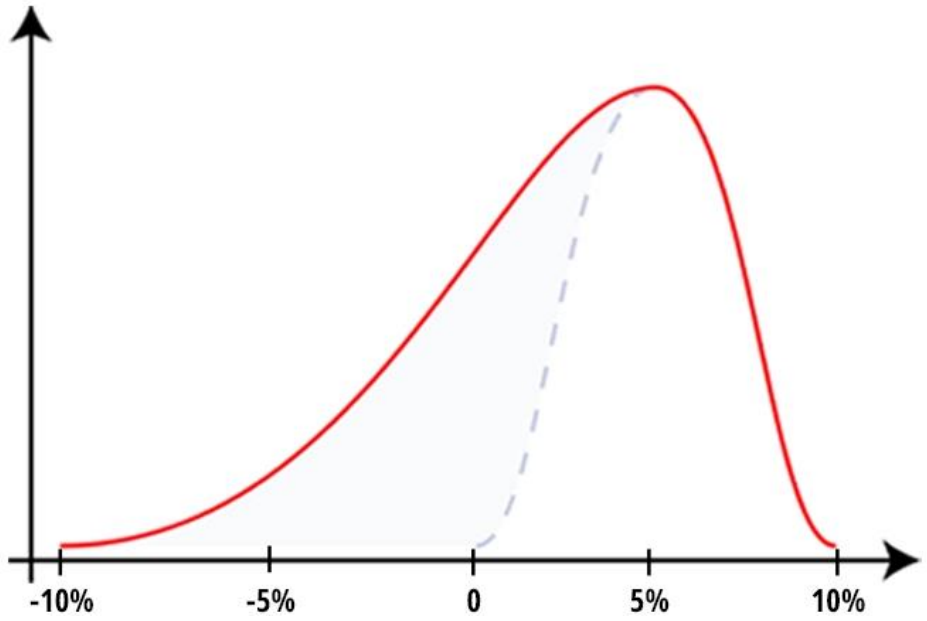
OTM Put: 30%

ATM: 20%

OTM Call: 25%

30%-25% = 5%

5%/20% x100 = 25%



Skew Example

Important to Normalize!!

If you just did OTM Put – OTM Call, it isn't relative to the asset

e.g.
30%-25% = 5%

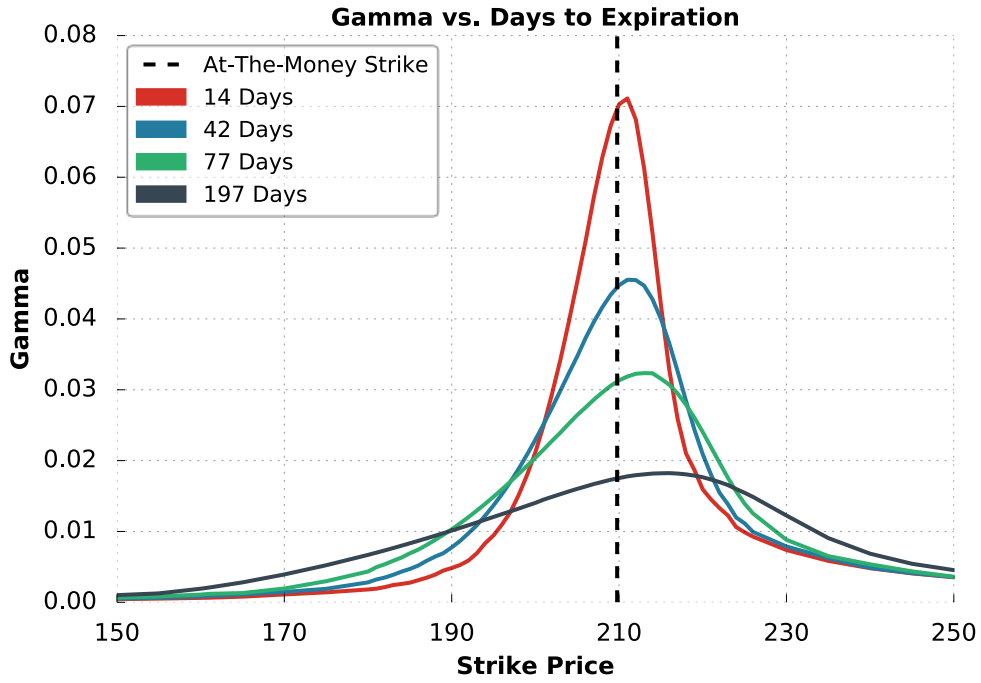
If another asset has:
Put 60%
ATM 40%
Call 55%

They both produce 5% raw skew but normalized the second is 12.5% vs 25% so it is half as skewed relative to itself

Gamma

Gamma is the Greek that determines the speed at which Delta changes

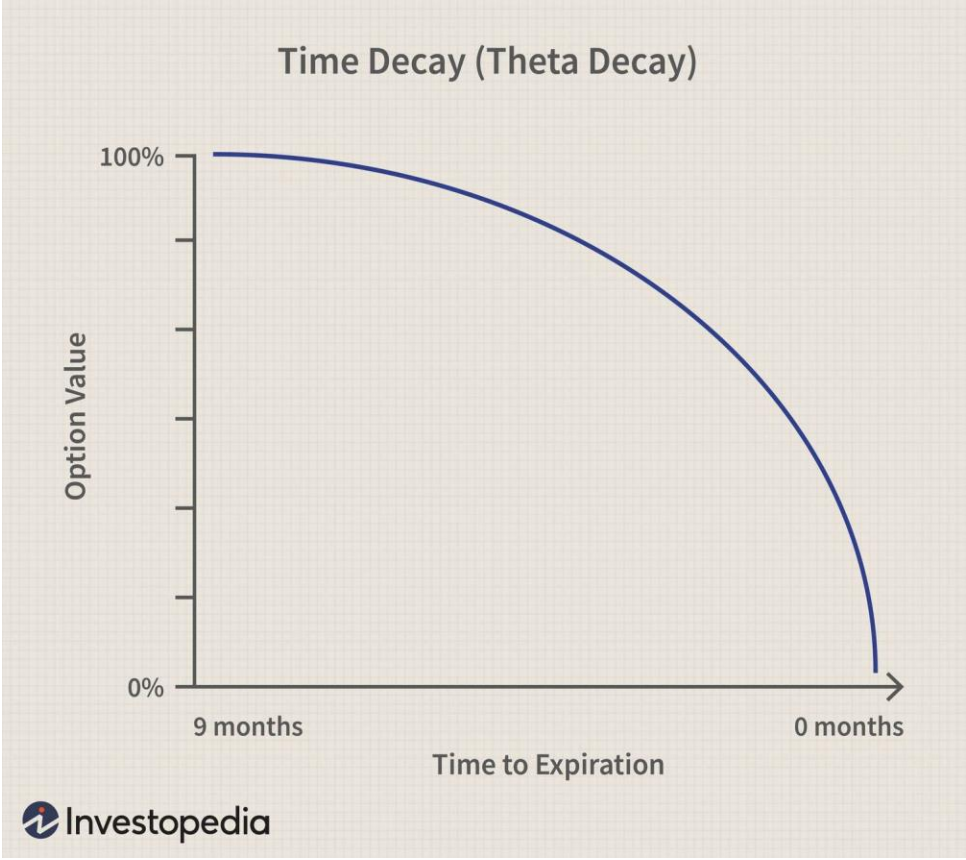
e.g. if Gamma is .25 for every $1 move in the underlying Delta will move .25



Theta

Theta is the Greek which represents the decay of the option's value throughout the life cycle of the option

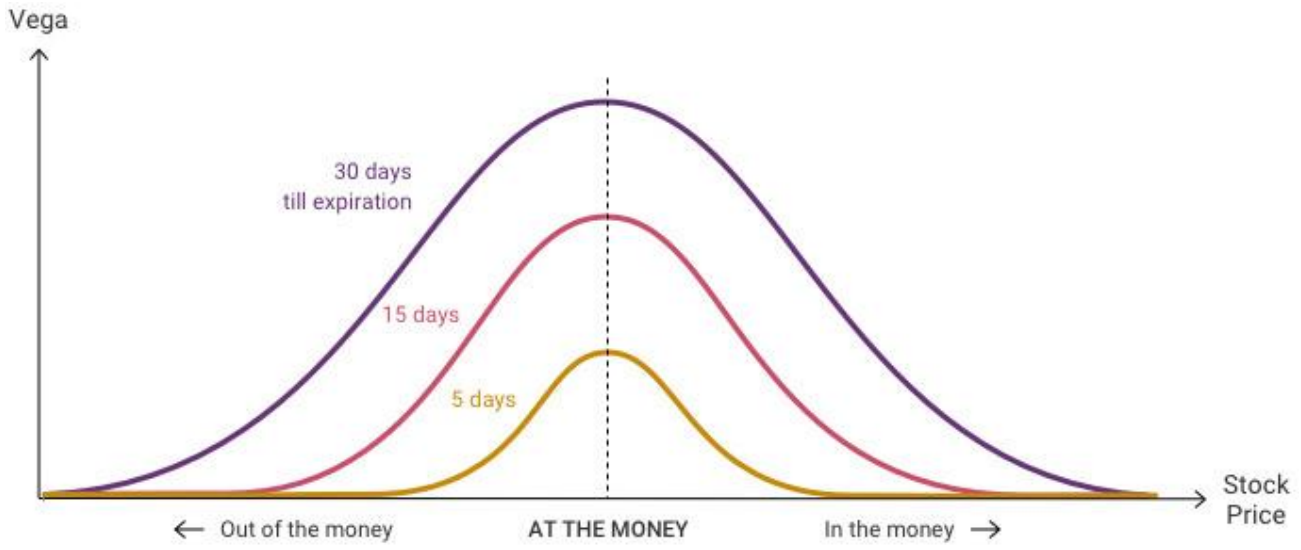
e.g. if Theta is .25 each day the value of the option contract will fall .25 all else held equal



Vega

Vega is the Greek that measures an option's sensitivity to implied volatility

e.g. if Vega is .50, the value of an option will change (up or down) .5 relative to one unit change in volatility (typically IV)



Directional Spreads

<u>Bull Call Spread aka Call Debit Spread:</u>

Buy long call and sell short call at a higher strike

Limited loss limited gain

The difference between the two strike prices minus the cost to enter the trade is the profit

Great when expecting limited upside on the stock

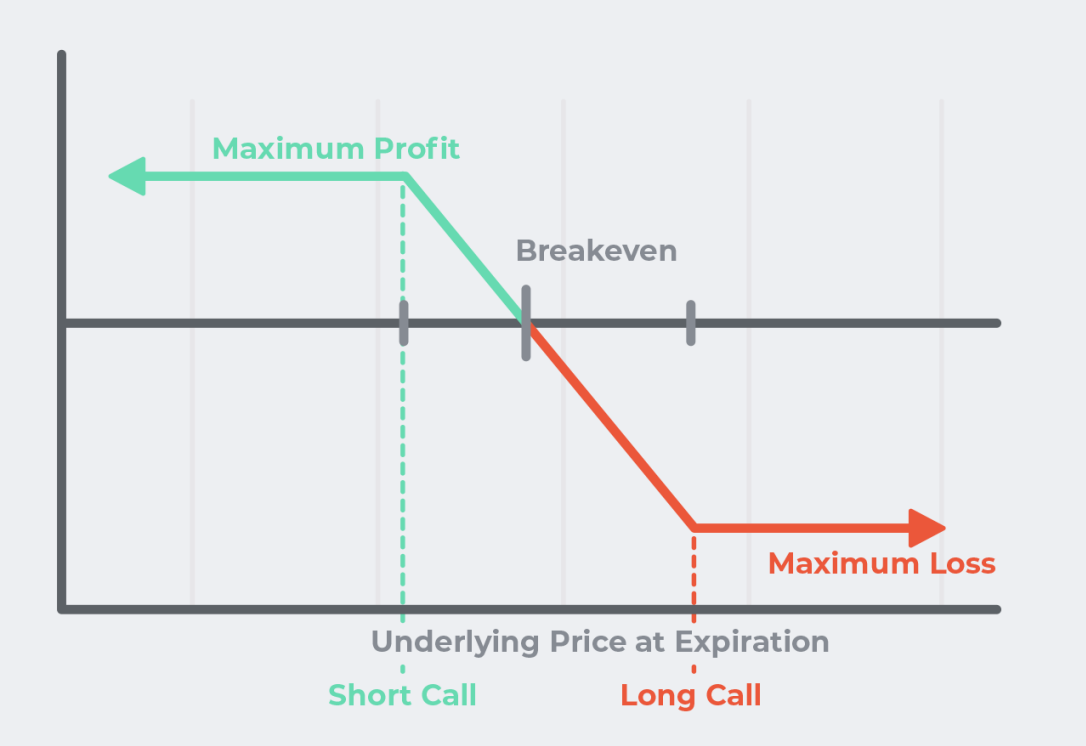
Directional Spreads

<u>Bear Call Spread aka Call Credit Spread:</u>

Sell short call and buy long call at a higher strike

Limited loss limited gain

Profit is the premium if it stays at or below the strike price of the short call



Directional Spreads

Bull Put Spread aka Put Debit Spread:

Sell short put and buy long put at a lower strike

Limited loss limited gain

The goal is for the strike price to fall below the strike price of the sold put

Directional Spreads

Bear Put Spread aka Put Credit Spread:

Buy long put and sell short put at a lower strike

Limited loss limited gain

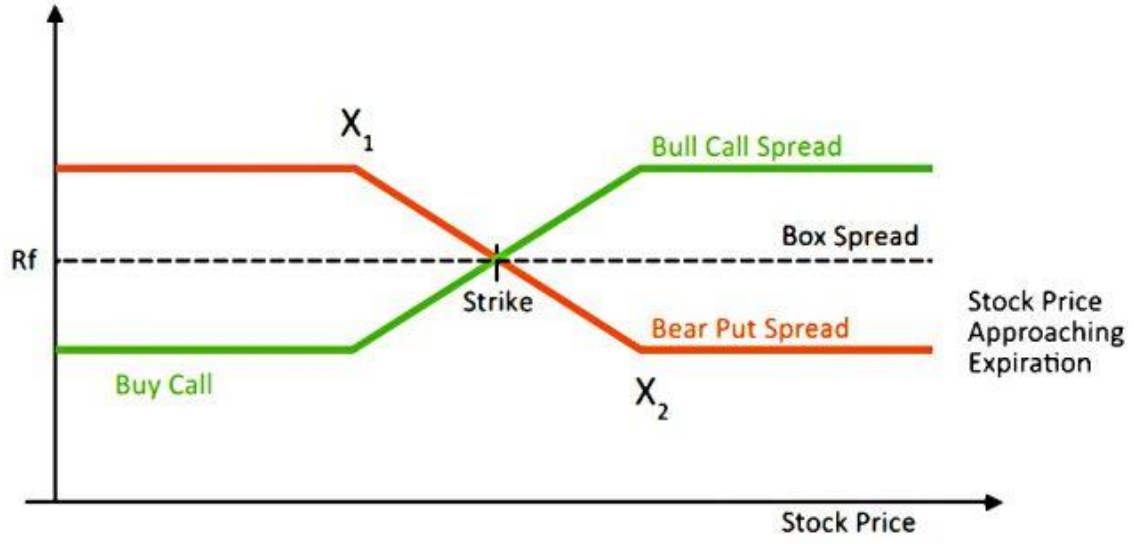
The goal is for the stock to rise above the price of the short put to receive the premium

Nondirectional Spreads

Box Spread:

A combination of a Bull Call Spread and Bear Put Spread

Due to the contradicting directionality of the spreads, it creates a nondirectional spread, there is a risk-free profit of the difference between the underlying price and strike price



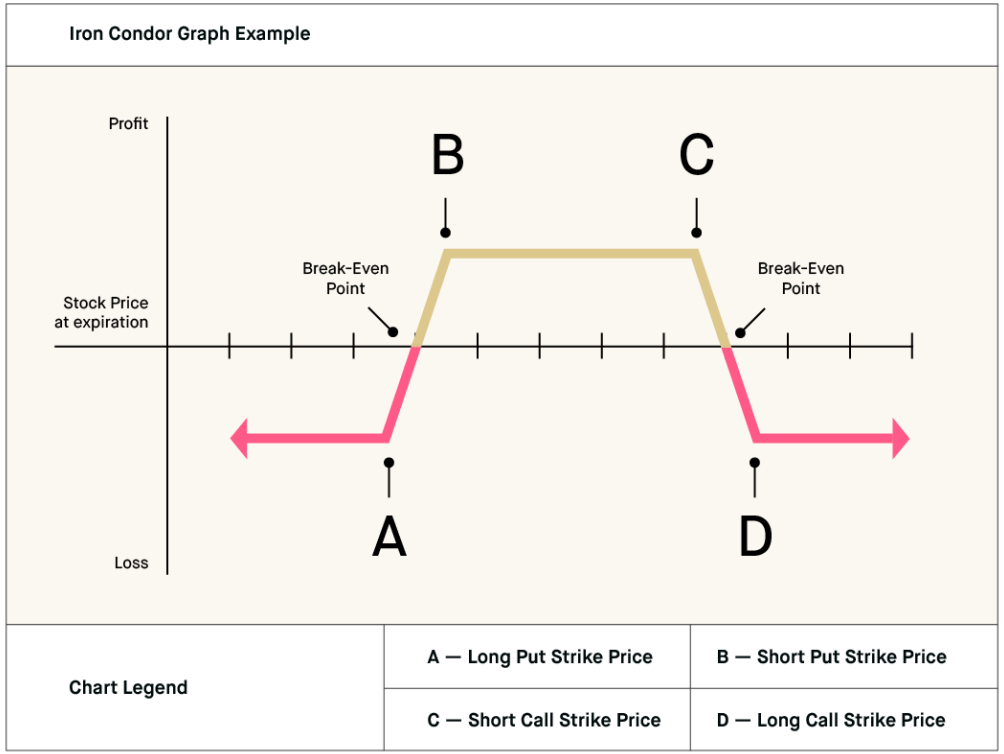
Nondirectional Spreads

Iron Condor:

Combination of Bull Put and Bear Call spreads at different strikes

Creates a range in which price stays for max profit

Limited loss and limited gain



Nondirectional Spreads

Iron Butterfly:

Combination of Bull Put and Bear Call spreads at same strike

Creates a range in which price stays for max profit

Limited loss and limited gain

Works well in low volatility markets where price is less likely to change

Nondirectional Spreads

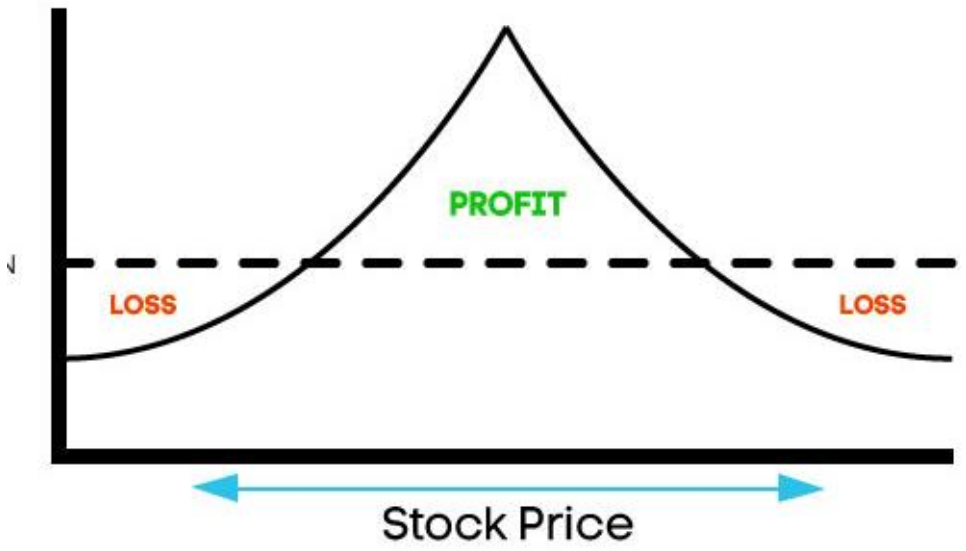
Calendar Spread:

Sell a put/call and buy a put/call of the same strike on a different date

Especially good for capitalizing on volatility changes

The goal is to profit from the time decay on the options

The short term put/call makes a premium where the further expiration hedges your losses



Putting it all together

Options are very flexible and multiple legs can be put together to create spreads to best fit your bias

Long and short legs are added to limit risk and overall cost

Understanding the strengths and weaknesses of each strategy and the overall market conditions is vital

Putting it all together example

NVDA has earnings and is currently trading at $125

A positive volatility skew is present (OTM puts have higher volatility relative to OTM calls implying more fear of NVDA falling post-earnings and therefore puts are more expensive)

To capitalize on the skew, you could enter a calendar spread

For this example you could sell an ATM 1 week expiration put then buy a 1 month expiration put with the same strike

After earnings, IV falls and the skew normalizes leading to a profit in the spread


01% 16.96 17.15 17.00 265 3.40 3.50 3.50
94% 15.25 15.35 15.15 267.5 4.10 4.20 4.10
00% 13.50 13.60 13.50 270 4.90 5.00 4.95
13% 11.95 12.00 11.85 272.5 5.80 5.90 5.80
47% 10.50 10.50 10.40 275 6.80 6.90 6.87
40% 9.11 8.00
△ ITM
ITM ▽
00% 7.92 9.30
67% 6.80 6.85 6.75 282.5 10.60 10.75 10.65
65% 5.85 5.85 5.80 285 12.10 12.30 12.20
00% 4.94 5.00 4.90 287.5 13.75 13.90 13.75
33% 4.20 4.25 4.15 290 15.50 15.70 15.60
21% 3.55 3.60 3.50 292.5 17.35 17.55 17.59

Options Q&A

Thanks for coming!

MSU STG STUDENT TRADING GROUP