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The Directional Butterfly

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The Directional Butterfly

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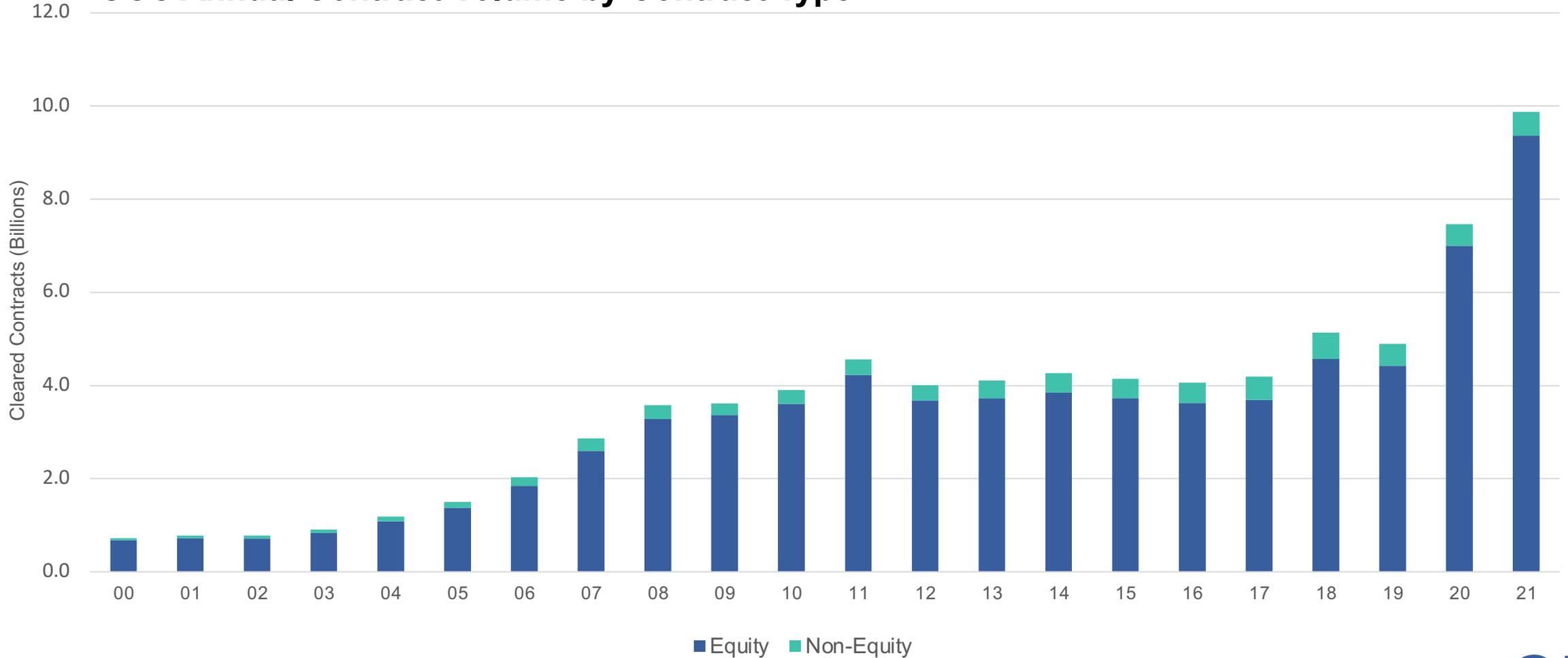
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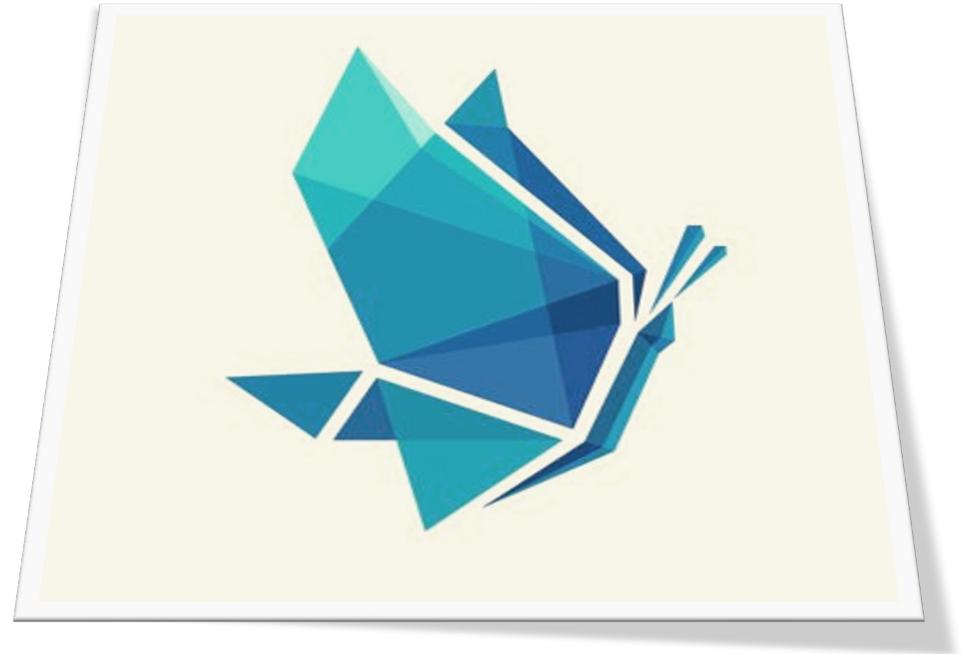
Annual Options Volume 2000-2021

OCC Annual Contract Volume by Contract Type



Presentation Outline

- A recap of vertical spreads
- Traditional butterflies
- Directional butterflies – bearish and bullish
- Strike selection and managing positions at expiration
- Q&A



Vertical Spreads



Spread Basics

A spread involves two or more positions:

Buy or sell one option and ***buy or sell*** an option, stock or other product

- May have the same or different underlying asset
- May have the same or different expiration dates
- May have the same or different strike prices

Different types of spreads:

- Vertical Spreads
- Horizontal (Time/Calendar) Spreads
- Diagonal Spreads

Vertical Spreads

Vertical Spreads

- All calls or all puts
- Same expiration
- Different strikes

Nov Calls	
85	B
90	S

Long Nov 85/90
call spread

Jan Calls	
80	S
90	B

Short Jan 80/90
call spread

- When **buying** a spread—investor purchases the more expensive strike and sells the less expensive (Debit Spread—***Bull Call or Bear Put***)
- When **selling** a spread—investor sells the more expensive strike and buys the less expensive (Credit Spread—***Bear Call or Bull Put***)

Defined Risk/Reward of Verticals

Trade with eyes wide open—defined maximum risk/maximum reward

Vertical Debit Spread:

- Maximum risk is debit paid for spread
- Maximum reward is difference in strikes – net premium paid

Vertical Credit Spread:

- Maximum risk is difference in strikes – net credit received
- Maximum reward is net credit received for spread

Important: *Defined risk exists only while within the position. Exercise or assignment may change risk/reward parameters*

Traditional Butterflies



What is a Long Butterfly?

Combination of either:

- Bull call spread + Bear call spread
- Bear put spread + Bull put spread

Consists of:

- 3 Options series
- Traditional butterfly either all calls or all puts
- Strikes equal distance apart
- Always a net debit

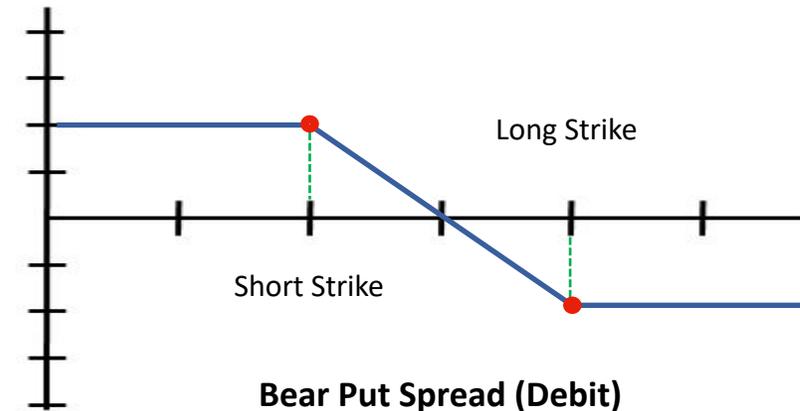
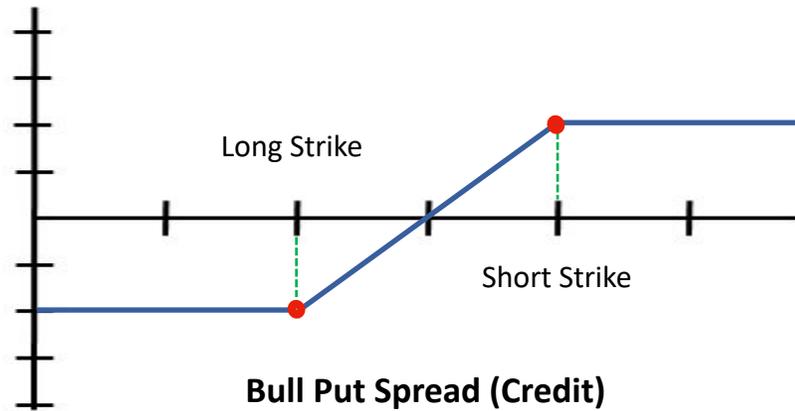
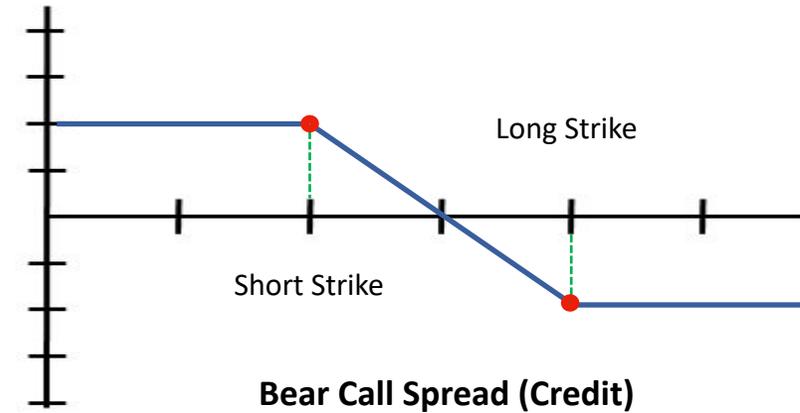
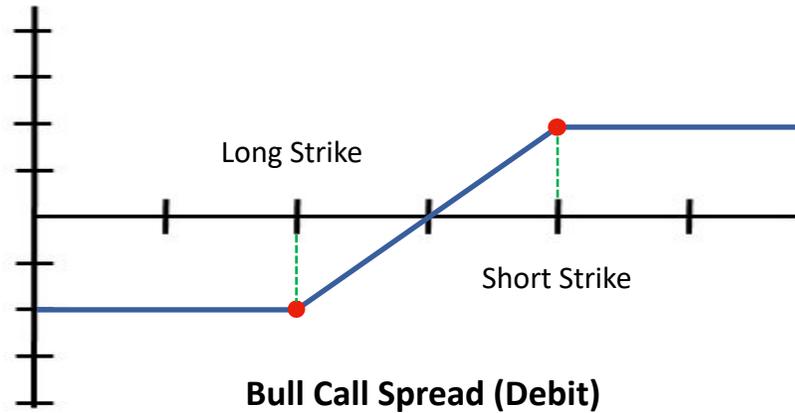
Why Butterflies?

- Defined risk
- Cost
- Delta neutral
- Positive theta (time decay)
- Ability to sell high IV with limited risk
- Bullish/ Bearish/ Neutral



Four Basic Vertical Spreads

Vertical spreads are building blocks for more advanced strategies



Putting the Fly into Action

Stock currently = \$55 DTE 30

Expiry	Strike	Call Value
July	45	\$10.38
July	50	\$6.29
July	55	\$3.15
July	60	\$1.21
July	65	\$0.39

Net Debit of **\$1.20/per contract**

Neutral forecast (Shares expected to be rangebound trading around \$55 in either direction)

Action:

Buy 1 July 50 call for \$6.29

Sell 2 July 55 calls at \$3.15

Buy 1 July 60 call for \$1.21

What Happens at Expiration?

Buy 1 July 50 call for \$6.29

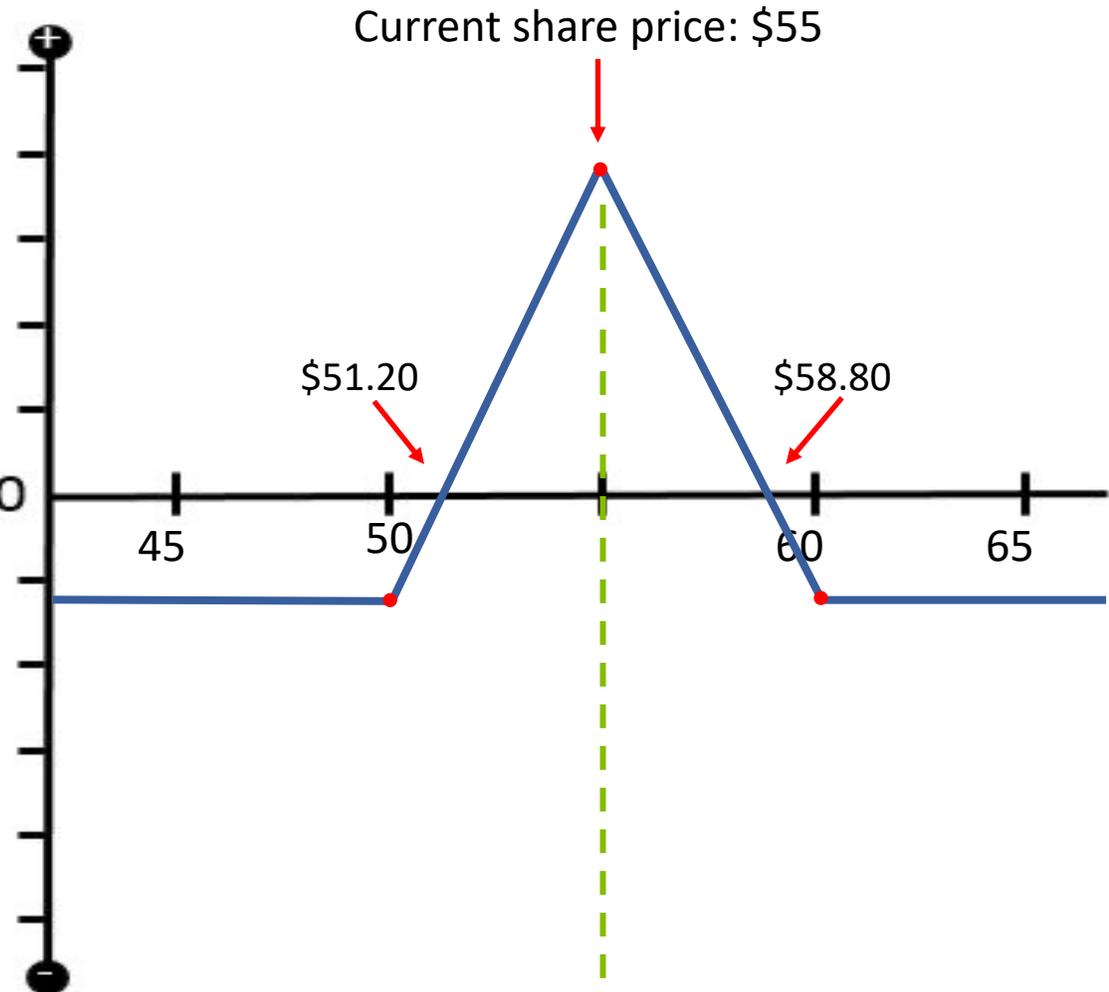
Sell 2 July 55 calls for \$3.15

Buy 1 July 60 call for \$1.21

Net Debit: \$1.20

Max Profit: \$3.80

Max Loss: \$1.20



Not including commissions

Directional Butterflies



Bearish Directional Butterfly

Scenario: Investor is bearish on MISS, a \$53/share software company. Our investor thinks that MISS has a good chance of not making their earnings numbers and could fall by 15% before settling into support. Rather than shorting the shares with unlimited upside exposure, they're looking to purchase an out-of-the money butterfly.

Trade Setup: DTE 14 / Earnings in 7 days

Buy 1 July \$50 put for \$2.30	}	Net debit of \$0.60 or \$60 per spread
Sell 2 July \$45 puts at \$1.08		
Buy 1 July \$40 put for \$0.46		

Bearish Directional Butterfly

This gives us a targeted zone centered at \$45.00 which represents a 15% discount to where the stock is currently trading.

The cost for each spread is \$60 with a maximum profit potential of \$440 per spread.

The trade makes money with the stock trading between \$40.60 and \$49.40 at expiration.

Directional butterflies are a less expensive way to play a bullish or bearish forecast.

Bearish Directional Butterfly

Buy 1 July \$50 put for \$2.30

Sell 2 July \$45 puts at \$1.08

Buy 1 July \$40 put for \$0.46

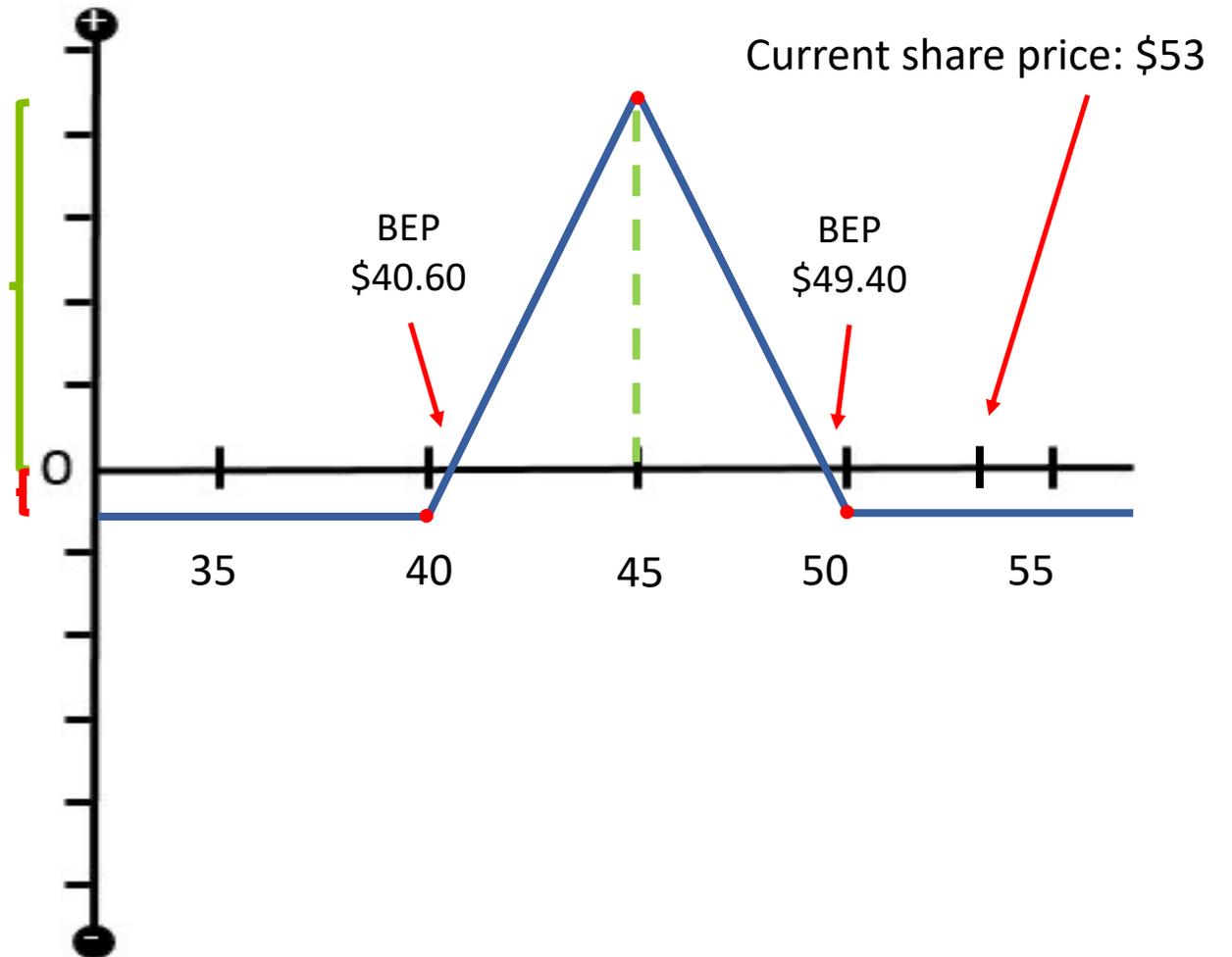
Net Debit: \$0.60

DTE 14

Max Profit of \$4.40

Max Loss of \$0.60

Not including commissions



Butterfly Scenarios

Original cost **\$0.60** / IV Down 25 pts

Stock/ MISS	DTE	Options	Price	Volatility	Price	ROI
\$53	14	July \$40p	\$0.46	110	\$0.60	0
		July \$45p	\$1.08	100		
		July \$50p	\$2.30	90		
\$50	7	July \$40p	\$0.06	85	\$1.05	75%
		July \$45p	\$0.40	75		
		July \$50p	\$1.79	65		
\$45	7	July \$40p	\$0.41	85	\$1.94	223%
		July \$45p	\$1.86	75		
		July \$50p	\$5.25	65		
\$40	7	July \$40p	\$1.88	85	\$1.32	120%
		July \$45p	\$5.28	75		
		July \$50p	\$10.00	65		

Butterfly Scenarios

Original cost **\$0.60** / IV Down 25 pts

Stock/ MISS	DTE	Options	Price	Volatility	Price	ROI
\$53	14	July \$40p July \$45p July \$50p	\$0.46 \$1.08 \$2.30	110 100 90	\$0.60	0
\$55	7	July \$40p July \$45p July \$50p	\$0.01 \$0.05 \$0.35	85 75 65	\$0.26	-57%
\$60	7	July \$40p July \$45p July \$50p	\$0.01 \$0.01 \$0.04	85 75 65	\$0.03	-95%

Bullish Directional Butterfly

Scenario: Investor is bullish on BFLY, a \$120/share pest control company. Investor thinks BFLY has a good chance of rallying to \$130.00 in the next 2 months. Rather than commit \$12,000 to buying shares, they're looking to purchase an out-of-the-money butterfly.

Trade Setup:

Buy 1 Aug \$125 call for \$4.34	}	Net debit of \$0.50 or \$50 per spread
Sell 2 Aug \$130 calls at \$2.67		
Buy 1 Aug \$135 call for \$1.50		

Bullish Directional Butterfly

This gives us a targeted zone centered at \$130.00 which represents an 8.3% premium to where the stock is currently trading.

The cost for each spread is \$50 with a maximum profit potential of \$450 per spread.

The trade makes money with the stock trading between \$125.50 and \$134.50 at expiration.

Directional butterflies are a less expensive way to play a bullish or bearish forecast.

Bullish Directional Butterfly

Buy 1 Aug \$125 call for \$4.34

Sell 2 Aug \$130 calls at \$2.67

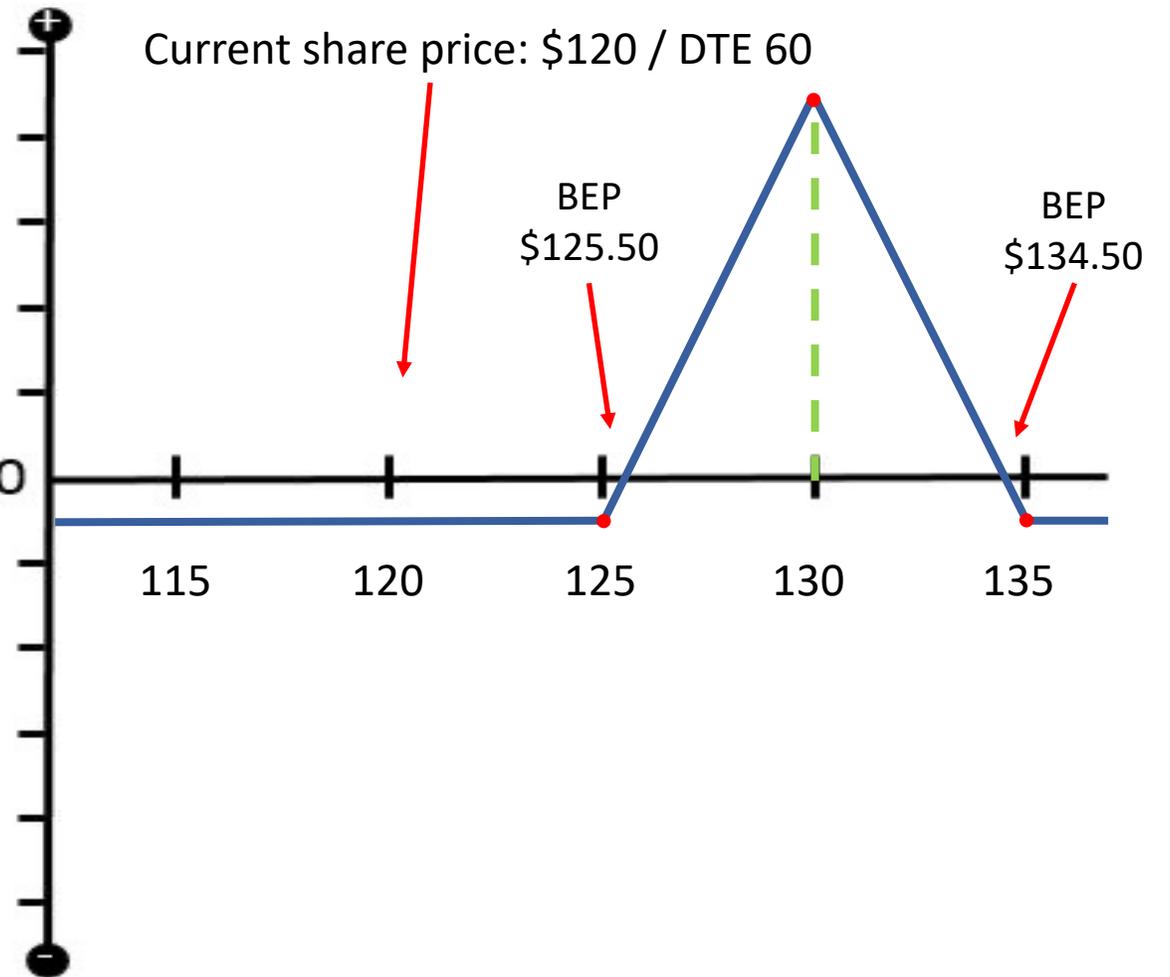
Buy 1 Aug \$135 call for \$1.50

Net Debit: \$0.50

Max Profit of \$4.50

Max Loss of \$0.50

Not including commissions



Butterfly Scenarios

Original cost \$0.50

Stock/ BFLY	DTE	Options	Price	Volatility	Price	ROI
\$120	60	Aug \$125	\$4.34	33	\$0.50	0%
		Aug \$130	\$2.67	32		
		Aug \$135	\$1.50	31		
\$125	30	Aug \$125	\$4.72	33	\$0.78	56%
		Aug \$130	\$2.59	32		
		Aug \$135	\$1.24	31		
\$130	30	Aug \$125	\$7.73	33	\$0.81	62%
		Aug \$130	\$4.77	32		
		Aug \$135	\$2.62	31		
\$115	30	Aug \$125	\$1.18	33	\$0.40	-20%
		Aug \$130	\$0.47	32		
		Aug \$135	\$0.16	31		

Butterfly Scenarios

Original cost **\$0.50** / IV Up 5pts

Stock/ BFLY	DTE	Options	Price	Volatility	Price	ROI
\$130	7	Aug \$125	\$5.89	38	\$1.43	186%
		Aug \$130	\$2.66	37		
		Aug \$135	\$0.86	36		
\$125	7	Aug \$125	\$2.63	38	\$1.14	128%
		Aug \$130	\$0.83	37		
		Aug \$135	\$0.17	36		
\$120	7	Aug \$125	\$0.81	38	\$0.51	2%
		Aug \$130	\$0.16	37		
		Aug \$135	\$0.02	36		
\$115	7	Aug \$125	\$0.15	38	\$0.12	-76%
		Aug \$130	\$0.02	37		
		Aug \$135	\$0.01	36		

Butterfly Scenarios

Original cost **\$0.50** / IV Down 5pts

Stock/ BFLY	DTE	Options	Price	Volatility	Price	ROI
\$120	7	Aug \$125	\$0.36	28	\$0.31	-38%
		Aug \$130	\$0.03	27		
		Aug \$135	\$0.01	26		
\$125	7	Aug \$125	\$1.94	28	\$1.25	150%
		Aug \$130	\$0.36	27		
		Aug \$135	\$0.03	26		
\$130	7	Aug \$125	\$5.41	28	\$1.89	278%
		Aug \$130	\$1.94	27		
		Aug \$135	\$0.36	26		
\$135	7	Aug \$125	\$10.05	28	\$1.17	134%
		Aug \$130	\$5.41	27		
		Aug \$135	\$1.94	26		

Early Assignment for a dividend

Stock has risen

- Short calls now ITM (in-the-money)

Early assignment possible before the dividend

- Before the ex-dividend date

You might expect early assignment when:

- The dividend amount is greater than the extrinsic premium left in the short calls

Action

- To avoid assignment, close the spread

Position Management

- Many traders will trade out of the position before expiration to lock in profits
- Position can be profitable even without the stock at your short strikes:
 - Theta (time decay)
 - Lower IV
 - Directional move
- Achieving max profit is possible but assumes unwanted expiration pin risk
- Adverse move:
 - Close position early
 - Roll position up/down/ and or out

Key Points

- Call or put butterflies/ (liquidity)
 - Behavior and profit/loss profiles much the same
 - Choose suitable risk/reward that current premiums offer
- Inexpensive way to sell costly IV (implied volatility)
- Directional (bullish/bearish/neutral)
- Acceleration of time decay 30-45 DTE

Key Points

- Slightly negative Vega (volatility)
- Positive Theta (time decay)
- Directional OTM butterflies tend to be less expensive → lower probability profit
- Unless all options are expiring worthless, position will need to be totally or partially closed on or before expiration to avoid assignment risk

For More Information

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