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OCC / The Options Industry Council (OIC)

Iron Condors and Butterflies

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OCC / The Options Industry
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As with all investments, your capital is at risk

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An Intro to Complex Spreads – Iron Condors and Iron Butterflies

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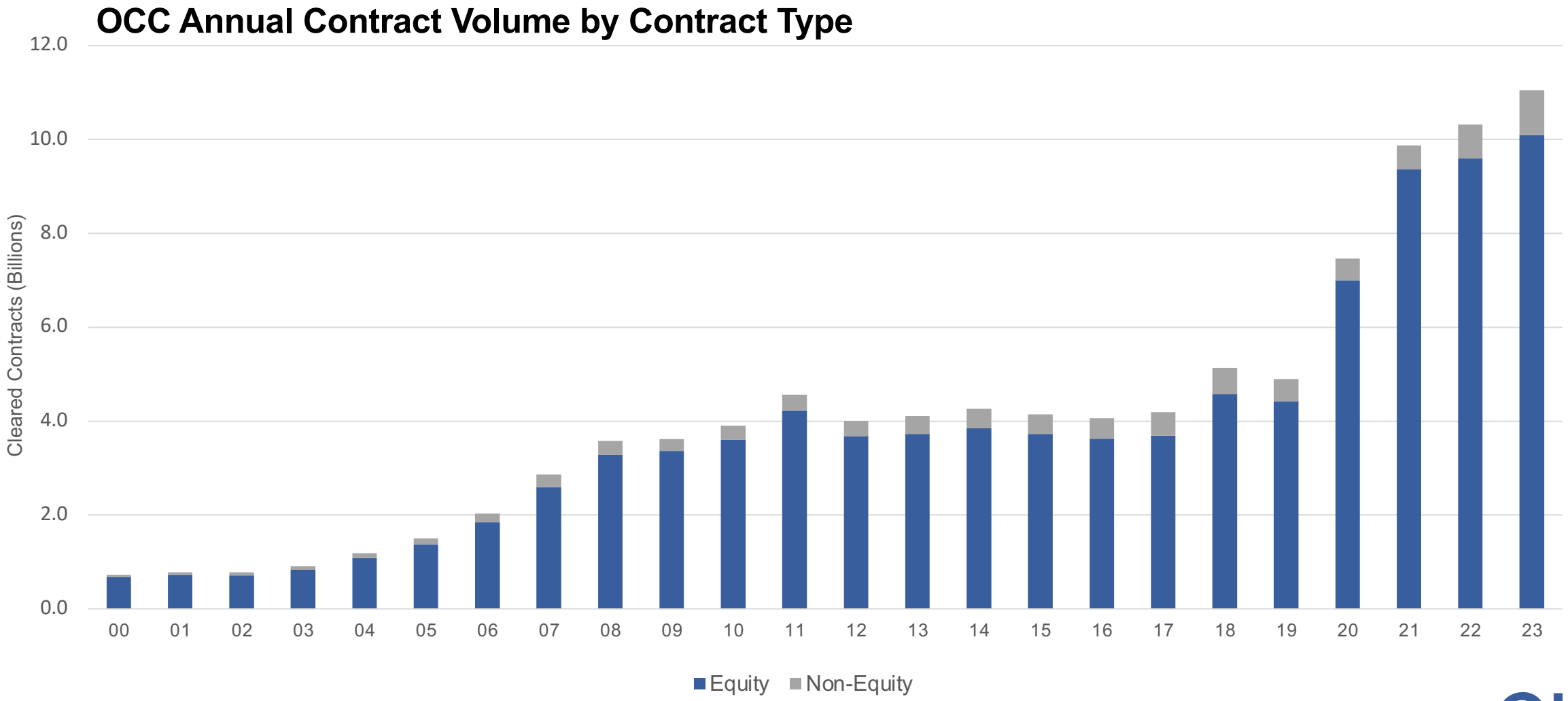
Annual Options Volume 2000-2023



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Presentation Outline

- Overview of Vertical Spreads
- Call Credit Spread
- Put Credit Spread
- Iron Condor
- Iron Butterfly
- Q & A

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A Spread Transaction

A spread involves two or more positions:

Buy or sell one option and ***buy or sell*** another option:

- Likely the same underlying
- Likely the same expiration dates
- Likely different strike prices
- Possibly different quantities

- Spreads could also involve a stock position

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Vertical Spreads

***Buy* one** option and ***sell* another** option

- Same underlying and expiration
- Different strike prices
- Defined risk/reward characteristics

Two Main types of spreads:

- **Debit Spread *(calls & puts)***
  - You pay premium to initiate the position
- **Credit Spread *(calls & puts)***
  - You receive the premium to initiate the position

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Call Credit Spread

Why a Call Credit Spread?

- Investor motivation:
  - Neutral and/or bearish outlook on the underlying
  - Defined risk / reward
  - Favorable break-even point (credit received moves break-even point)
  - Profit potential heavily influenced by the amount of credit received

- Risk control
  - Defined profit potential
  - Defined maximum loss
  - Position monitoring is critical

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Call Credit Spread Example

XYZ @ $88.50 28 Days to Expiration

- Sell 1 28-day 90 Call $ 3.50
- Buy 1 28-day 95 Call $ 1.80

  Net Credit $ 1.70
- This investor is short the 90 / 95 call spread

This is a **neutral/bearish** call spread

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Call Credit Spread Example

XYZ @ $88.50 28 Days to Expiration

Sell the 90 / 95 call credit spread at $1.70

Maximum Gain:	$1.70
Maximum Risk:	$3.30
Margin:	$3.30
Break-even:	$91.70

What is this spread worth with XYZ at $88.50 in 21 days? In 7 days?

Excludes transaction costs

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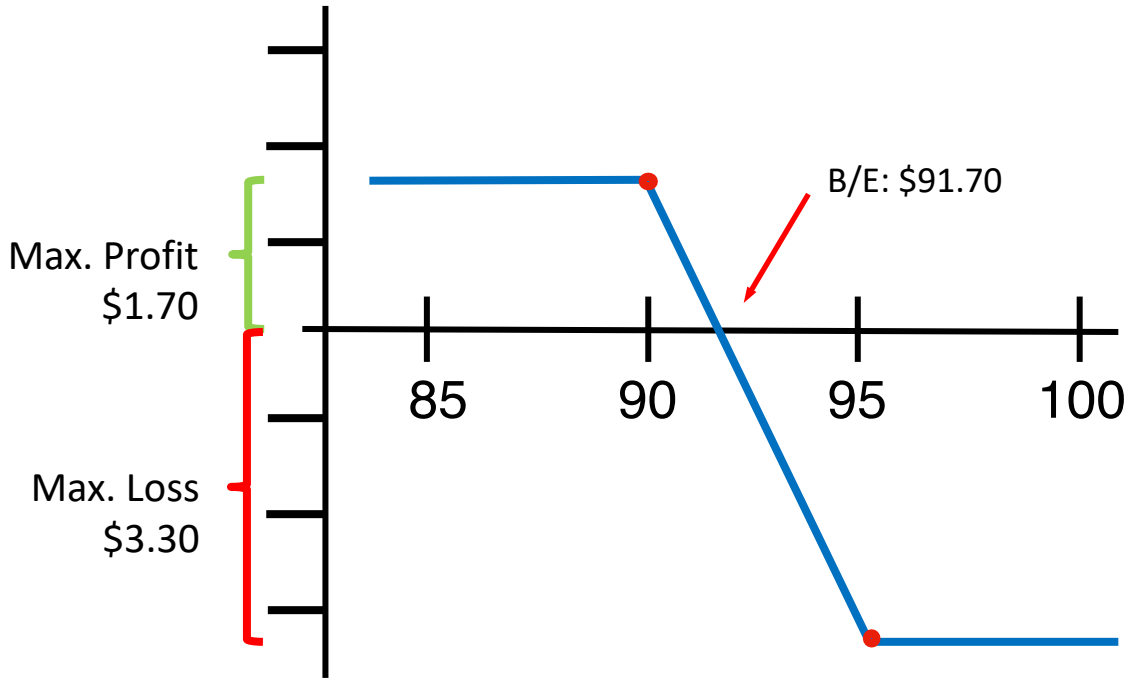
Call Credit Spread Example

Sell a lower strike call and ***buy*** a higher strike call

- Sell 1 90 Call $3.50
- Buy 1 95 Call $1.80

Net Credit $1.70



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What Happens at Expiration?

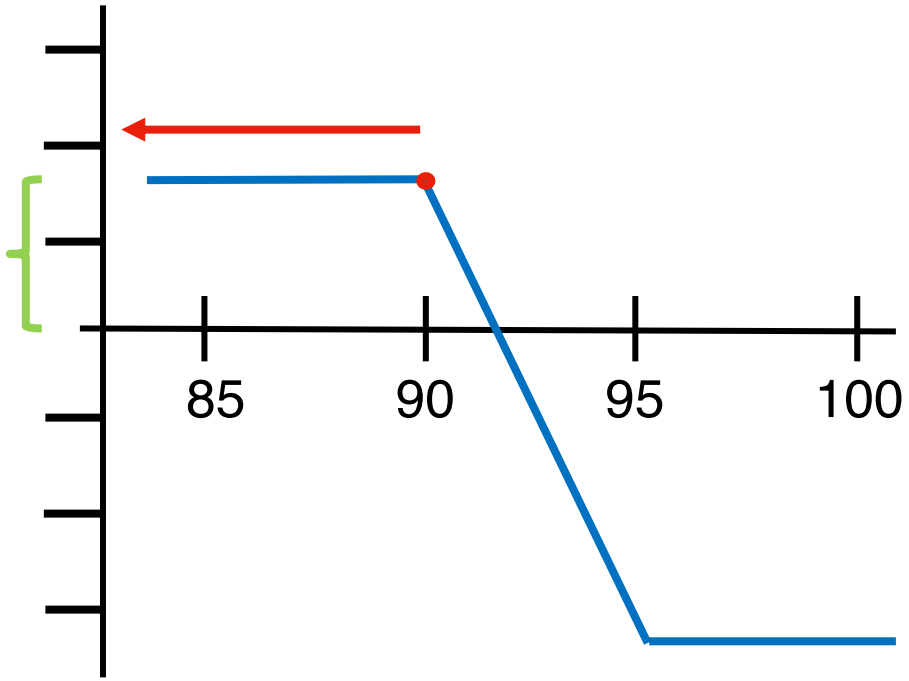
Stock is < or = $90?

Sell 1 90 Call $3.50

Buy 1 95 Call $1.80

Net Credit $1.70

Assignment risk: If stock is very close to $90, the uncertainty of assignment on the short 90 call results in the uncertainty of a possible stock position after expiration.



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What Happens at Expiration?

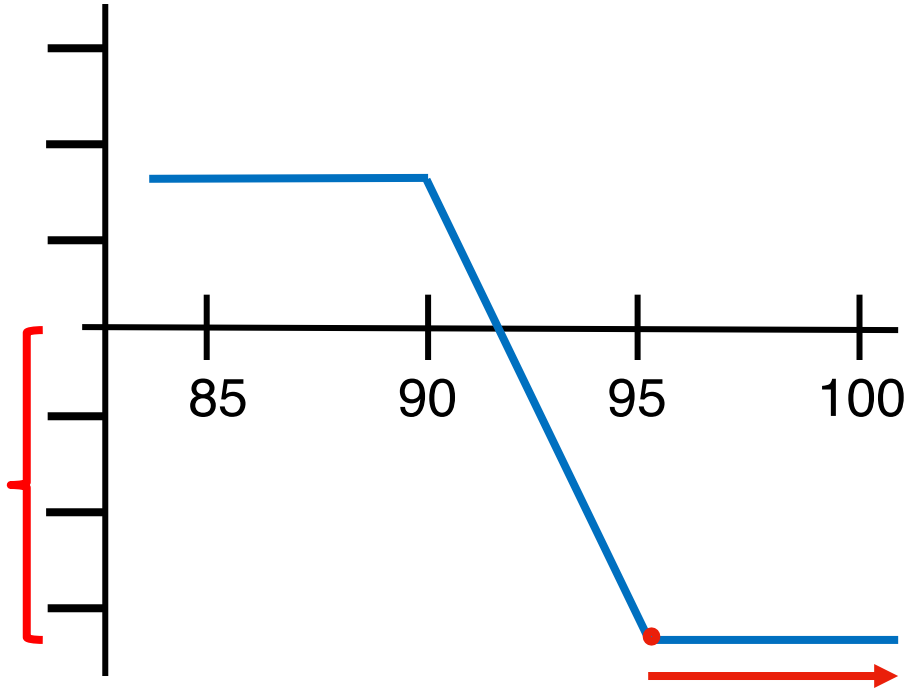
Stock is > or = $95?

Sell 1 90 Call $3.50

Buy 1 95 Call $1.80

Net Credit $1.70

Maximum loss = difference in strikes ($5) less premium received ($1.70) = $3.30
Short call is assigned, long call can be exercised to avoid a stock position.



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What Happens at Expiration?

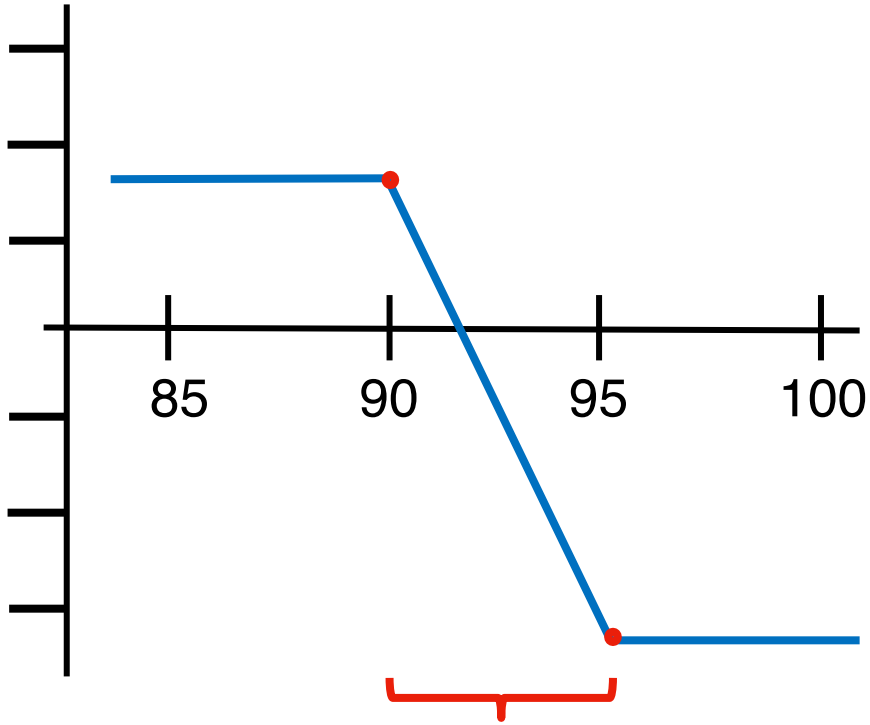
Stock is > $90 and < 95?

Sell 1 90 Call $3.50

Buy 1 95 Call $1.80

Net Credit $1.70

*Short call is assigned = **short stock***
Margin required
Long call expires out of the money/worthless



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Put Credit Spread

Why a Put Credit Spread?

- Investor motivation:
  - Neutral and/or bullish outlook on the underlying
  - Defined risk / reward
  - Favorable break-even point (credit received moves break-even point)
  - Profit potential heavily influenced by the amount of credit received

- Risk control
  - Defined profit potential
  - Defined maximum loss
  - Position monitoring is critical

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Put Credit Spread Example

XYZ @ $88.50 28 Days to Expiration

- Sell 1 28-day 85 Put $ 2.05
- Buy 1 28-day 80 Put $ 0.70

  Net Credit $ 1.35
- This investor is short the 85 / 80 put spread

This is a **neutral/bullish put** spread

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Put Credit Spread Example

XYZ @ $88.50 28 Days to Expiration

Sell the 85 / 80 put credit spread at $1.35

Maximum Gain: $1.35

Maximum Risk: $3.65

Margin: $3.65

Break-even: $83.65

What is this spread worth with XYZ at $88.50 in 21 days? In 7 days?

Excludes transaction costs

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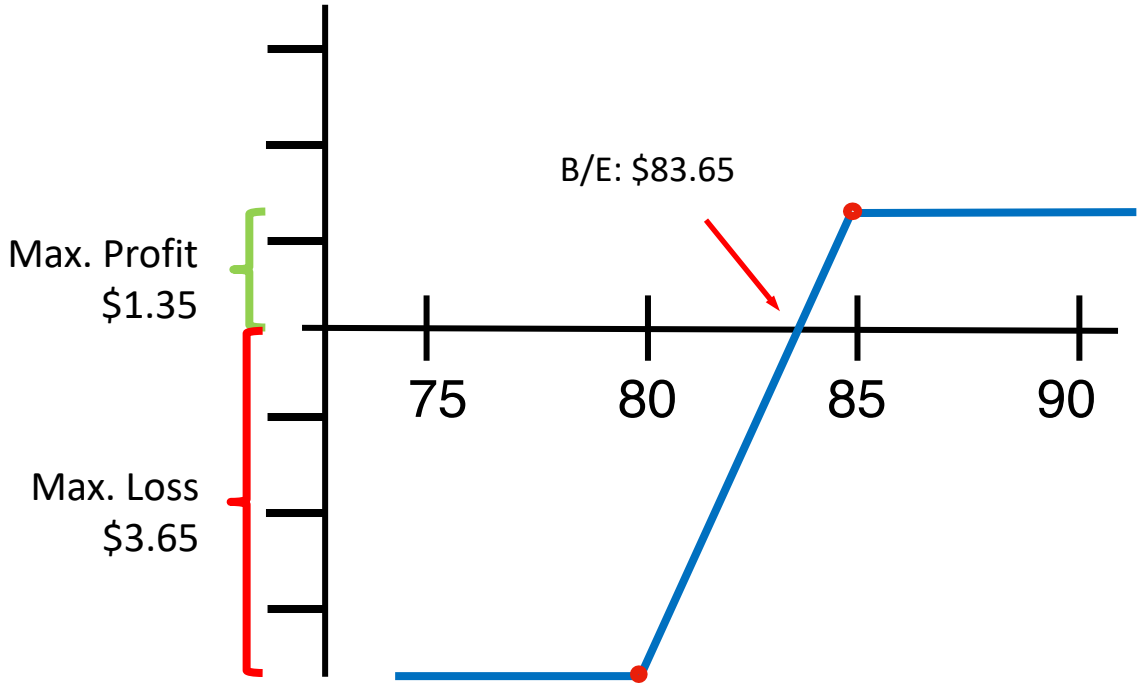
Put Credit Spread Example

Sell a higher strike put and ***buy*** a lower strike put

- Sell 1 85 Put $2.05
- Buy 1 80 Put $0.70

Net Credit $1.35



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What Happens at Expiration?

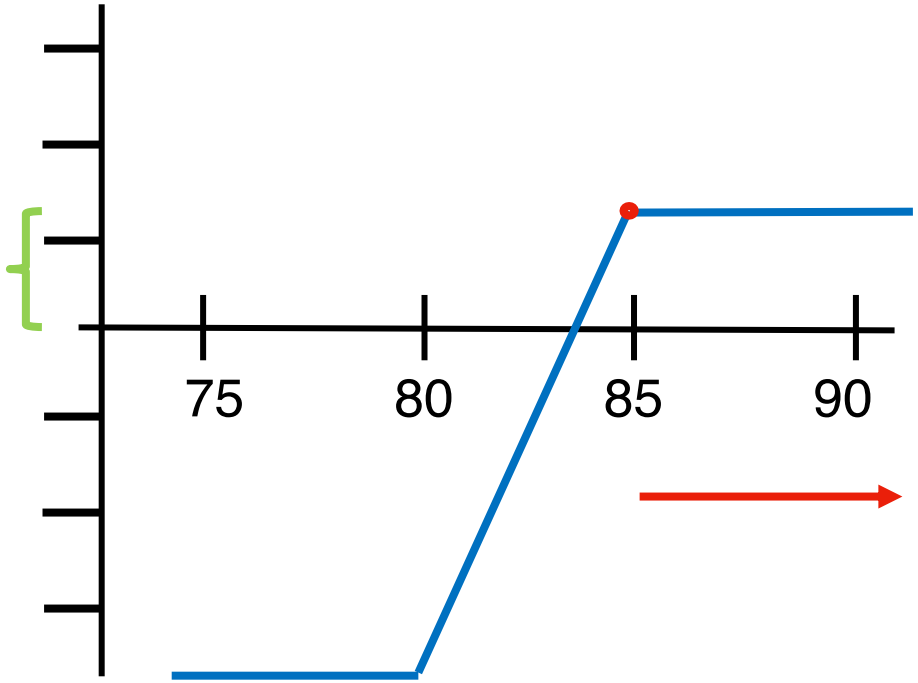
Stock > or = $85?

Sell 1 85 Put $2.05

Buy 1 80 Put $0.70

Net Credit $1.35

Assignment risk: If stock is very close to $85, the uncertainty of assignment on the short 85 put results in uncertainty of a possible stock position after expiration.



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What Happens at Expiration?

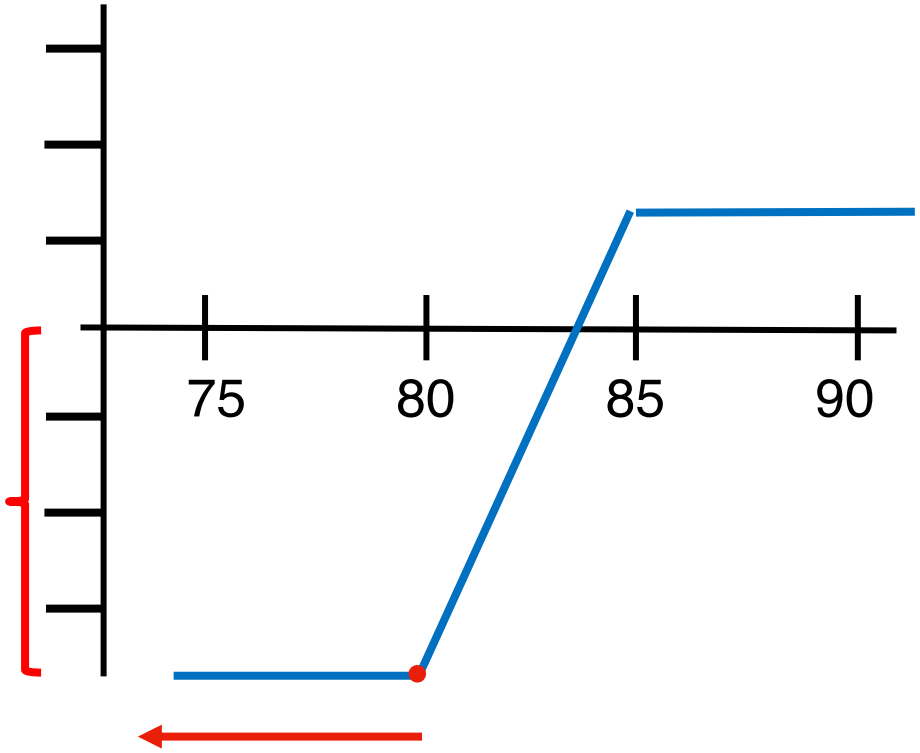
Stock < or = $80?

Sell 1 85 Put $2.05

Buy 1 80 Put $0.70

Net Credit $1.35

Maximum loss = difference in strikes ($5) less premium received ($1.35) = $3.65. Short put is assigned, long put can be exercised to avoid a stock position.



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What Happens at Expiration?

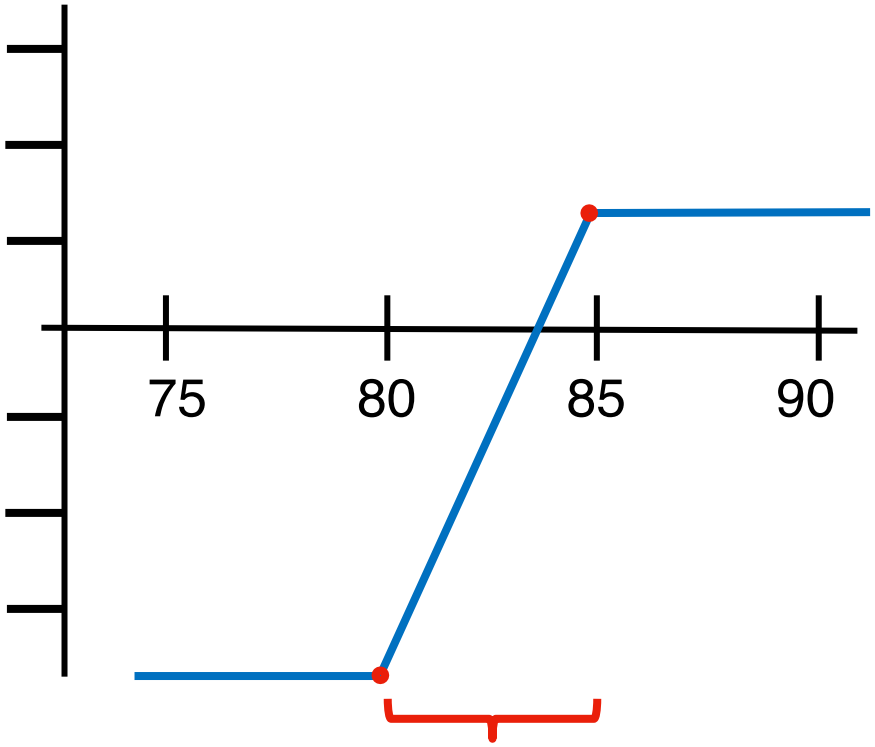
Stock > $80 and < $85?

Sell 1 85 Put $2.05

Buy 1 80 Put $0.70

Net Credit $1.35

*Stock price **between strikes** at expiration:*
Short put is assigned = long stock
Long put expires out of the money/worthless



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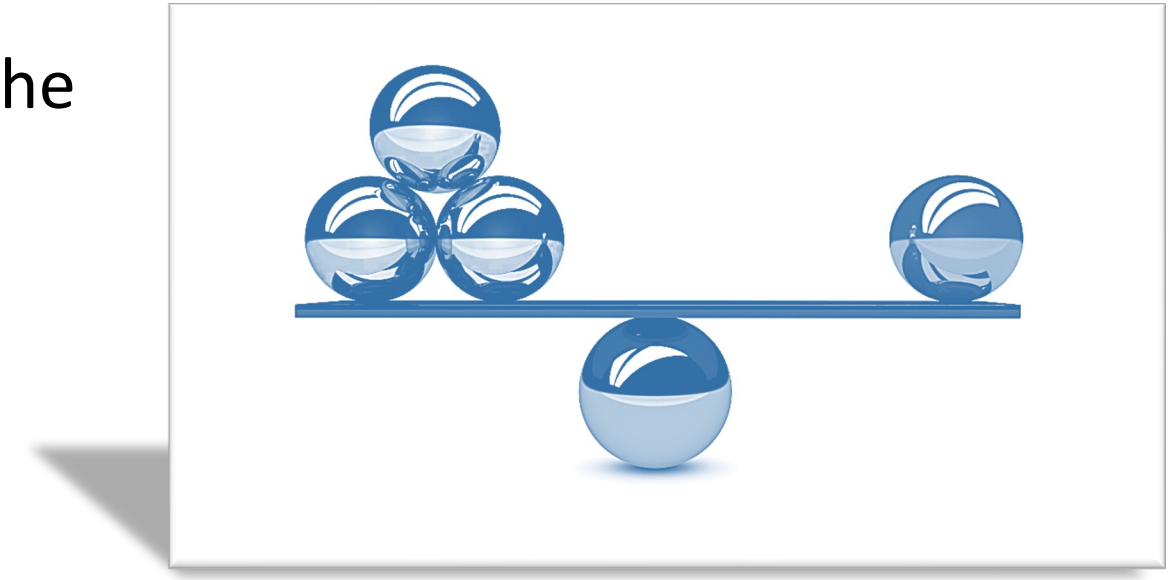
Iron Condor

The Iron Condor

There are some investors who believe that a stock is range bound – they are neutral on the stock and are looking to benefit from a situation without unexpected price movement.

This is where a strategy known as the **Iron Condor** could be utilized.



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What is an Iron Condor?

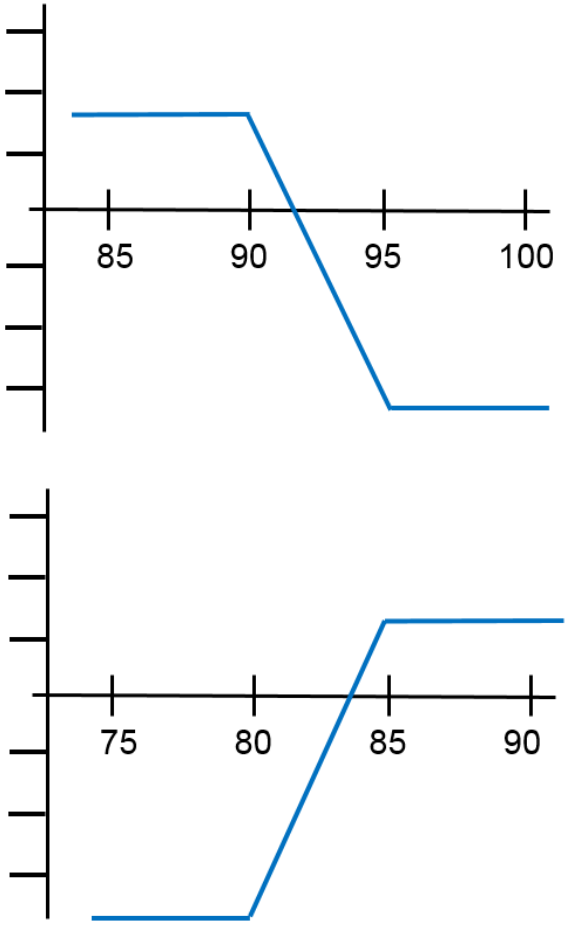
An Iron Condor is:

- The sale of a call credit spread

AND

- The sale of a put credit spread

The same underlying, the same expiration month, both spreads employing out-of-the-money options



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Iron Condor Example

XYZ @ $88.50 28 Days to Expiration

Expected price range: $85 to $90

Sell the 90 / 95 call credit spread at $1.70

Sell the 85 / 80 put credit spread at $1.35

Net Credit $3.05

- This is a ***typical*** Iron Condor

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Iron Condor Example

XYZ @ $88.50. Sell the 85 / 80 put credit spread AND the 90 / 95 call credit spread at $3.05

Maximum Gain:	$3.05
Maximum Risk:	$1.95
Margin:	$1.95
Break-even:	$93.05 and/or $81.95

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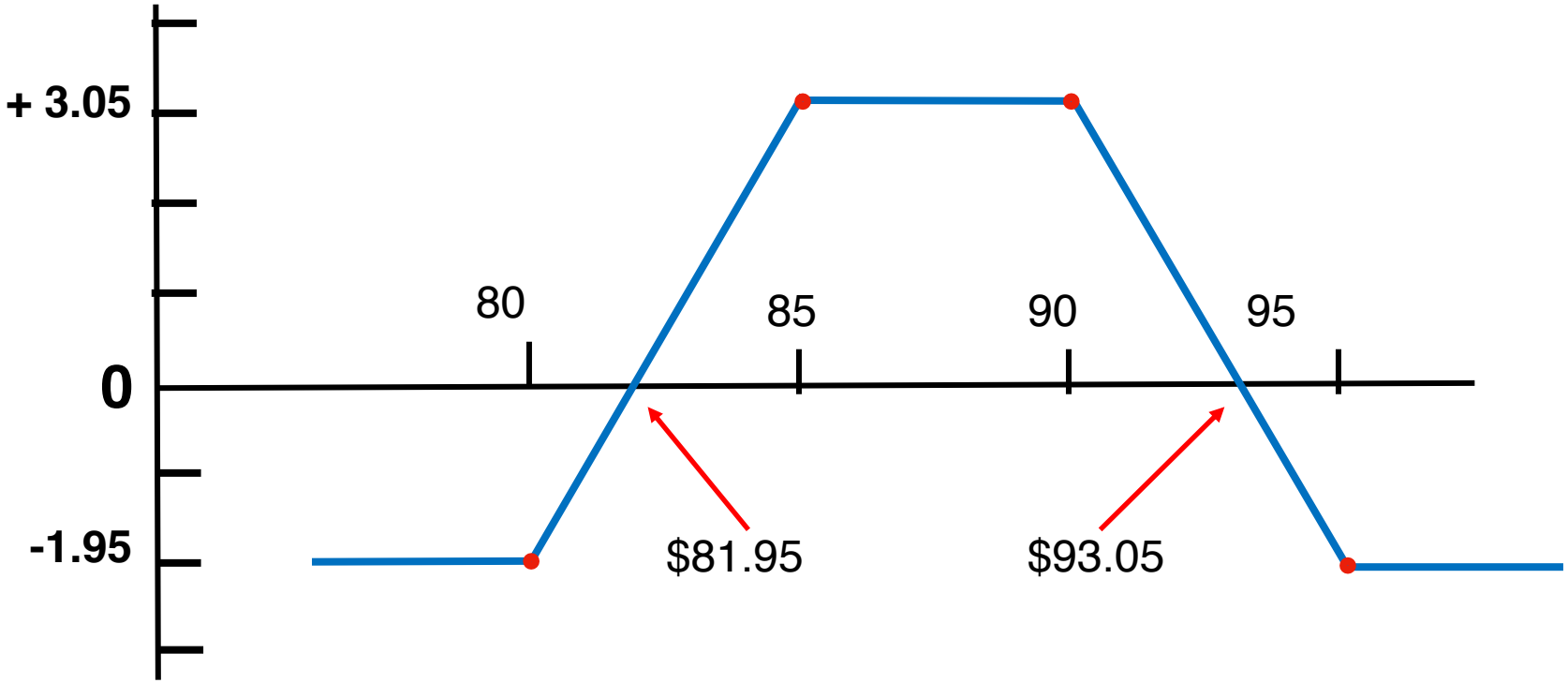
Iron Condor P & L

Sell the 90 / 95 call credit spread ***AND***

the 85 / 80 put credit spread for a net credit of $3.05



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Iron Butterfly

Iron Butterfly Example

XYZ @ $90.00 28 Days to Expiration

Expected price range: ~ $85 to $95

Sell the 90 / 95 call credit spread at $2.00

Sell the 85 / 90 put credit spread at $2.05

Net Credit $4.05

- This is a ***typical*** Iron Butterfly

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Iron Butterfly Example

XYZ @ $90.00. Sell the 85 / 90 put credit spread AND the 90 / 95 call credit spread at $4.05

Maximum Gain:	$4.05
Maximum Risk:	$ .95
Margin:	$ .95
Break-even:	$94.05 and/or $85.95

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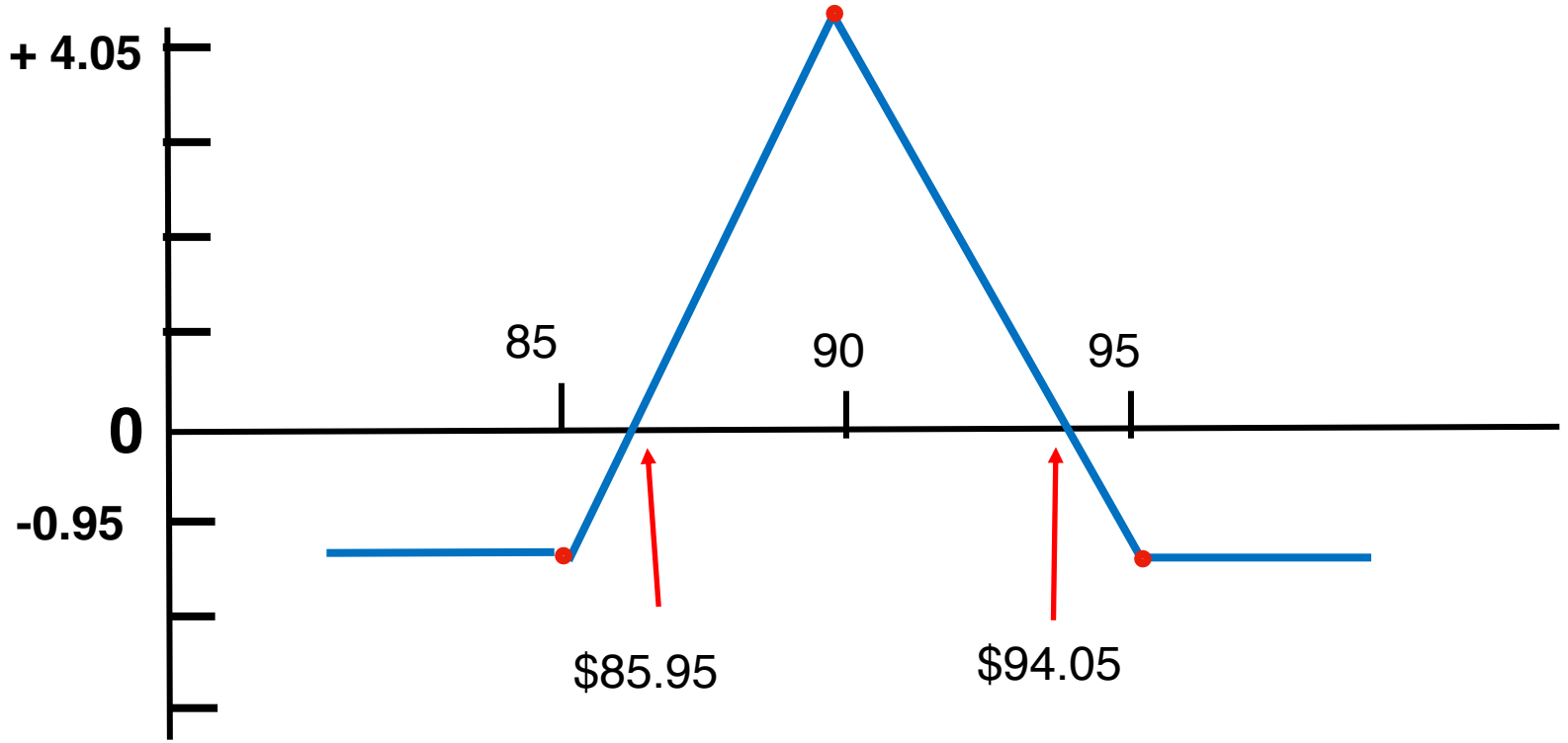
Iron Butterfly P & L

Sell the 90 / 95 call credit spread ***AND***

the 85 / 90 put credit spread for a net credit of $4.05



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