Learn to trade options

OPTION STRATEGIES
FOR ADVANCED
TRADERS

QUESTRADE®

PREFACE

Dear trader,

When we introduced multi-leg option strategies in our Questrade IQ trading platforms, we saw many of our clients embrace the service. An equal number said: "I haven't traded options yet, but now I want to… how do I get started?" That was our cue. One year, two options eBooks, and over 10,000 downloads later, we're wrapping up our series with **Option strategies for advanced traders.**

In this book, we'll introduce six new strategies, including straddles, strangles and the iron condor. You'll see clear breakdowns of each, with illustrations and videos that outline benefits, downsides, possible results, and profit and loss. These strategies are pretty sophisticated, and this eBook could help you if you decide you're ready to test them out.

At the beginning of this series, I said options trading gives you a level of control you don't get trading stocks. I compared it to switching from an automatic transmission to a six speed stick shift. To take it a step further, these advanced options strategies challenge you to step out of that sedan and into a race car.

I hope you enjoy the ride as much as I do.

Edward Kholodenko
President & CEO, Questrade, Inc.

CHAPTER 1
INTRODUCTION TO OPTIONS

An option is a contract between two market participants that gives the option holder the right, but not the obligation, to buy or sell a specified number of shares at a fixed price up to the option expiration date. The option to buy or sell must be exercised before and/or at the expiration date, depending on the option style (American or European).

Option types

There are two types of options:

- **Call:** gives the owner the right to buy a specified number of shares of the underlying stock at the strike price up to the set expiration date.

- **Put:** gives the owner the right to sell a specified number of shares of the underlying stock at the strike price up to the set expiration date.

Option quotes

A typical option quote contains the following elements:

Underlying stock: security that must be delivered when an option contract is exercised.
Example: THI.TO

Quantity: number of option contracts the option owner will purchase.
In this example, 1,000 shares will be purchased since one standard option contract equals 100 shares.
One standard option contract = 100 shares
One mini option contract = 10 shares
Example: 10

Expiry: date at which an option owner can exercise the right to buy (or sell) shares of the underlying stock.
Example: Mar 16 2013

Strike: price at which the option owner can buy (or sell) the shares.
Example: 52.00

Type: specifies whether the option is a Call or Put option.
Example: Call

Price: premium paid or received to buy or sell one option contract. The premium is calculated per share.
In the example below, the buyer of the option would need to pay $680 ($0.68 premium x 10 contracts x 100 shares) to purchase a call option on the underlying security.
Example: 0.68

Option quote in IQ Edge

Option styles

There are two common types of options – **American** and **European** – which are also referred to as "plain vanilla" options. In general, an American option may be exercised any time before the expiration date, while a European option may only be exercised at the expiration date.

Almost all stock options are American options, while indices are typically classified as European options.

To view option dates in your IQ trading platform, right-click the strike price and choose **Option details**.

Option details in IQ Web

Option assignments

If an option finishes in the money at expiration by $0.01 cent or more, it will be automatically assigned. In some cases, in-the-money options may not be automatically exercised. When this is the case, Questrade will attempt to notify clients on a best-efforts basis. To learn more about option exercise and assignment policies, please visit myQuestrade.

Number of shares per option contract

One standard option contract represents a deliverable of 100 shares of the underlying stock, while one mini

option contract represents a deliverable of ten shares.

Option premium

To buy an option contract, you must pay a premium to the seller. Conversely, when you sell an option contract, you receive a premium from the buyer.

All option premiums are calculated per share. For example, 100 shares x premium per share = cost or profit of option contract.

Important terminology

To understand and trade options, you need to familiarize yourself with some general terminology:

Assign

The act of the seller fulfilling the obligation of the option contract when the buyer of the option exercise their rights.

Seller of the Call options will need to deliver shares of the underlying stock to the buyer at the strike price.

Seller of the Put options will need to purchase shares of the underlying stock from the buyer at the strike price.

At-the-money

When the option's strike price is identical to the current trading price of the underlying stock.

Call

Gives the owner the right to buy a specified number of shares of the underlying stock at the strike price up to the set expiration date.

Expiration

The date at which an option contract expires. This means that the option cannot be exercised after that date.

Extrinsic value

The difference between an option's market price and its intrinsic value.

In-the-money

When the option contract has a positive value if exercised:
Call option: the stock price is above the strike price
Put option: the stock price is below the strike price

Intrinsic value

The difference between the current market value of the underlying stock and the strike price of an option. In-the-money is the term used when the intrinsic value is positive.

Long

A term that refers to ownership of securities. For example, if you are long 100 shares of XYZ, this means that you own 100 shares of XYZ company.

Option premium

The amount per share the option buyer pays to the option seller to purchase an option contract consisting of 100 shares in a standard contract, or 10 shares in a mini option contract.

Out-of-the-money

When the option contract has no intrinsic value:
Call option: the stock price is below the strike price
Put option: the stock price is above the strike price

Put

Gives the owner the right to sell a specified number of shares of the underlying stock at the strike price up to the set expiration date.

Short

The act of selling a stock or option that you don't own. This is a speculative practice done when the seller believes a stock's price is going to fall and the seller will be able to cover the sale by buying the security back at a lower price. The profit is the difference between the initial selling price and the subsequent purchase price.

Strike

The price at which the owner of an option can purchase or sell the underlying security.

Time value

The difference between an option's premium and its intrinsic value.

CHAPTER 2
OPTION STRATEGIES

For advanced traders

Option strategies allow traders to limit their risk and maximize their return, while controlling more positions for less money than trading stocks. They also allow traders to profit in any type of market – upward, downward, or neutral.

An option strategy involves the buy (and/or sell) of one or more option types (calls or puts) – usually simultaneously - which allows a trader to potentially profit from an underlying stock's price movements or stagnant state.

In the following sections, we'll describe each strategy using detailed examples, including the benefits and downsides.

The following strategies are ideal for advanced traders:

- Straddle
- Strangle
- Butterfly call
- Butterfly put
- Condor call
- Condor put
- Iron butterfly
- Iron condor

CHAPTER 3
STRADDLE

A **straddle** is an option strategy in which a trader buys (or sells) a put and call option of the same symbol simultaneously. Both options must also have identical expiration dates and strike prices.

There are two types of straddles:

- **Long straddle (buy):** typically used by a trader who thinks the security will experience considerable short-term volatility, meaning the trader can still potentially profit whether the underlying stock price appreciates or depreciates in value. Profit potential is unlimited if the underlying stock price moves in one direction (unlimited on the upside; substantial on the downside), while maximum loss is limited to the option premium paid.

- **Short straddle (sell):** typically used by a trader who thinks the security will experience limited short-term volatility, meaning the trader can still potentially profit if the stock price stays stagnant. Profit potential is limited to the premium received from the sale of the 2 options, while maximum loss could be unlimited depending on how much the underlying stock price appreciates or depreciates from the strike price.

Your market outlook

Neutral (volatile)

Who should run this strategy

Advanced traders

Long straddle strategy benefits

- Allows you to profit whether the underlying stock price appreciates or depreciates in value

- Profit potential is unlimited if the underlying stock price moves in one direction (unlimited on the upside; substantial on the downside)

- Maximum loss is limited to the option premium paid

Long straddle strategy downsides

Loss can occur in several ways, depending on the various outcomes at expiration:

- If the underlying stock price remains neutral

- If the underlying stock price moves above or below the strike price, but remains below the upper or above the lower breakeven levels

Setting up the long straddle strategy

1. Buy one at-the-money (ATM) call option on the underlying stock.

2. Buy one at-the-money (ATM) put option on the same underlying stock, with the same strike price and expiration as the call option.

Ideally you want the stock to either significantly rise in price or drop in price.

Short straddle strategy benefits

- Can profit if the stock price does not move as expiration approaches

Short straddle strategy downsides

- Profit loss could be unlimited

- Maximum profit is limited to the option premium received

Setting up the short straddle strategy

1. Sell one at-the-money (ATM) call option on the underlying stock.

2. Sell one at-the-money (ATM) put option on the same underlying stock with the same strike price and expiration.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Long straddle
Option level required: Level 1

Option strategy: Short straddle
Option level required: Level 4

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long straddle example

Scenario

Let's say that ABC shares are currently trading at $70 in September. Since you think the stock will experience major volatility in the short term, you decide to employ a long straddle strategy. You purchase a 70 October put option for $250 and simultaneously buy a 70 October call option for the same price.

To enter into this position, you will be debited $500.

Possible results

1. At expiration, ABC shares are trading at $80, meaning the put option expires worthless. However, the 70 call option would expire in the money, and subsequently the option would automatically be exercised if held until expiration, resulting in purchasing 100 ABC at $70. The call option's intrinsic value would be $1,000 (stock price – call strike price x number of shares in option contract). After subtracting the initial debit of $500, that would leave you with a $500 profit.

2. At expiration, ABC shares are trading at $72, meaning the put option expires worthless. Again, the $70 call option would expire in the money and the option would automatically be exercised, resulting in purchasing 100 ABC at $70. Although the call option's intrinsic value would be $200, you would still lose $300 after subtracting the initial $500 debit.

3. ABC shares are trading at $65 at expiration, meaning the call option expires worthless. This time, the put option would have a $500 intrinsic value and is automatically exercised, resulting in selling short 100 ABC at $70. Minus the initial debit of $500, you would break even.

Profit and loss explained

Maximum profit

The maximum profit will be calculated differently depending on the direction of the stock price since the trader is holding long positions for both option types.

- Maximum profit when stock price goes up = stock price – strike price of long call – option premium paid

   or

- Maximum profit when stock price goes down = strike price of long put – stock price – option premium paid

Maximum loss

Maximum loss = option premium paid

Break-even at expiration

There are two break-even points at expiration:

Upper breakeven level = Strike price of long call + option premium paid per share

Lower breakeven level = Strike price of long put – option premium paid per share

Stock value at start of strategy: $70
To execute the long straddle strategy:
Buy: $70 put option for $250
Buy: $70 call option for $250
Result: $500 net debit

Scenario 1

Stock price at expiration: $65
70 long put option exercised at expiration.
Profit and loss calculations:
Spread value: ($70 long put strike price – $65 stock price at expiration) x 100 shares = $500
– Option premium paid: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares) = -$500
= $0 (break-even)

Scenario 2

Stock price at expiration: $72
70 long call option exercised at expiration.
Profit and loss calculations:
Spread value: ($72 stock price at expiration – $70 long call strike price) x 100 shares = $200
– Option premium paid: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares) = -$500
= -$300 loss

Scenario 3

Stock price at expiration: $80
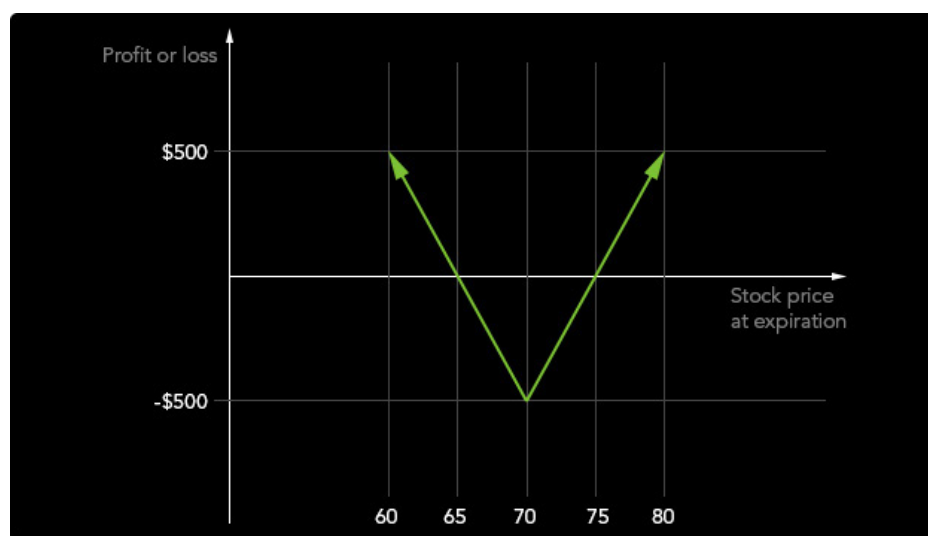**70 long call option exercised at expiration.**
Profit and loss calculations:
Spread value: ($80 stock price at expiration – $70 long call strike price) x 100 shares = $1,000
– Option premium paid: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares)
= -$500
= $500 profit

Note: commission fees are not included in the above calculations.

Long straddle payoff diagram

Real-world example

Learn how to set up a [long straddle](#) in IQ, and see it in action.

Short straddle example

Scenario

Let's say that ABC shares are currently trading at $70 in September. Since you think the stock's price will remain stagnant in the short term, you decide to employ a short straddle strategy. You sell a 70 October put option for $250 and simultaneously sell a 70 October call option for the same premium. As a result, you will be initially credited $500.

Possible results

1. At expiration, ABC's shares continue to trade at $70, meaning both options would expire worthless, and you would get to keep the $500 credit as profit.

2. At expiration, ABC's shares rise in value to $85. The put option would expire worthless; however, the call option would be assigned since it expired in the money, resulting in selling short 100 ABC at $70. The short 100 ABC would have a $1500 loss (($70-$85) x 100). Even after applying the initial credit of $500, you would still have a $1,000 loss.

Profit and loss explained

Maximum profit

Maximum profit = option premium received

Maximum loss

When employing a short straddle strategy, significant loss can occur whether the stock moves up or down. Theoretically, depending on how much the stock price moves up, your losses could be unlimited.

There are two ways to calculate the maximum loss, depending on the direction of the stock at expiration:

- **Stock value moves upward:** Maximum loss = stock price – strike price of short call – option premium received

  or

- **Stock moves downward:** Maximum loss = strike price of short put – stock price – option premium received

Break-even at expiration

There are two break-even points:

Upper breakeven level: Strike price of short call + option premium received per share

Lower breakeven level: Strike price of short put - option premium received per share

Stock value at start of strategy: $70
To execute the short straddle strategy:
Sell: $70 put option for $250
Sell: $70 call option for $250
Result: $500 net credit

Scenario 1

Stock price at expiration: $65
70 short put option assigned at expiration.
Profit and loss calculations:
Option premium received: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares) = $500
- Spread loss: ($70 short put strike price – $65 stock price at expiration) x 100 shares = -$500
= $0 (break-even)

Scenario 2

Stock price at expiration: $72
**70 short call option assigned at expiration.**
Profit and loss calculations:
Option premium received: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares) = $500
- Spread loss: ($72 stock price at expiration – $70 short call strike price) x 100 shares = -$200
= $300 profit

Scenario 3

Stock price at expiration: $80
70 short call option assigned at expiration.
Profit and loss calculations:
Option premium received: ($2.50 put premium x 100 shares) + ($2.50 call premium x 100 shares) = $500
- Spread loss: ($80 stock price at expiration – $70 short call strike price) x 100 shares = -$1,000
= -$500 loss

Note: commission fees are not included in the above calculations.

Short straddle payoff diagram
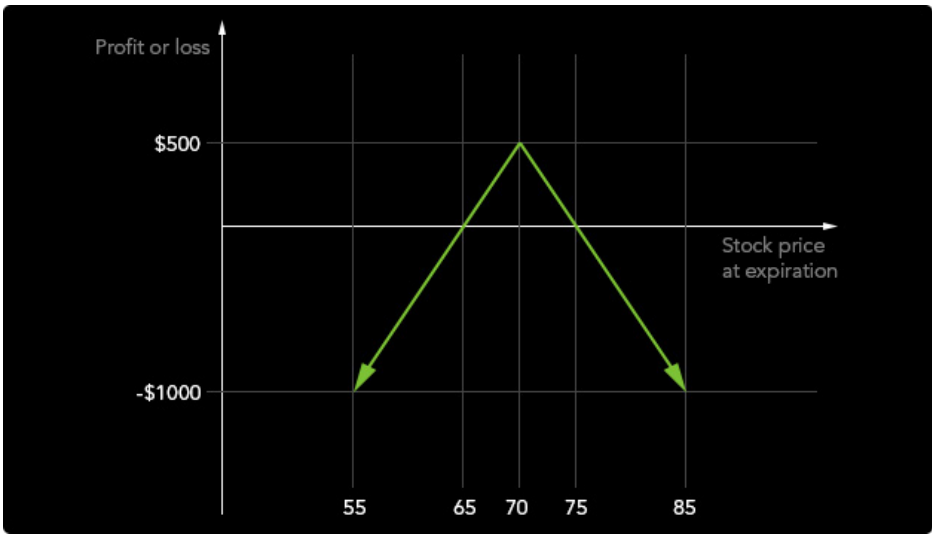
Real-world example

Learn how to set up a short straddle in IQ, and see it in action.

CHAPTER 4
STRANGLE

A **strangle** is an option strategy in which a trader buys (or sells) one out-of-the money put and one out-of-the money call of the same symbol simultaneously, each with different strike prices, but identical expiration dates.

There are two types of strangles:

- **Long strangle:** used by a trader who thinks the security will experience considerable short-term volatility. Gives the option holder the right to buy or sell the stock at the fixed strike prices.

- **Short strangle:** used by a trader who thinks the security will experience limited short-term volatility, or remain range bound until expiration. If the options are assigned, the option holder is obligated to buy or sell the stock at the fixed strike prices.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Long strangle strategy benefits

- Allows you to profit whether the underlying stock price appreciates or depreciates in value

- Unlimited profit if the stock continues to move up or down

- Maximum loss is limited to the option premium paid

- Lower cost to enter into this strategy than the long straddle strategy

Long strangle strategy downsides

- Loss occurs if the stock stays stagnant

- Loss can occur if the underlying stock price moves above or below the strike price, but below the upper or above the lower break-even points

Setting up the long strangle strategy

1. Buy one out-of-the-money (OTM) call option on the underlying stock.

2. Buy one out-of-the-money (OTM) put option on the same underlying stock.

Ideally you want the stock to go up or down significantly to attain the most profit.

Short strangle strategy benefits

- Can still profit if the stock price stays stagnant or within a tight trading range

Short strangle strategy downsides

- Potential loss is unlimited if the stock rises significantly

- Net credit is lower than a short straddle strategy, while increasing the probability of trading being profitable.

Setting up the short strangle strategy

1. Sell one out-of-the-money (OTM) call option on the underlying stock.

2. Sell one out-of-the-money (OTM) put option on the same underlying stock.

Ideally, you want the stock to expire at or between the strike prices, so they expire worthless.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Long strangle
Option level required: Level 1

Option strategy: Short strangle
Option level required: Level 4

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long strangle example

Scenario

Let's say that ABC shares are currently trading at $70 in September. To employ a long strangle, you purchase a 60 October put option for $75 and simultaneously buy an 80 October call option, also for $75.

To enter into this position, you will be debited $150.

Possible results

1. At expiration, ABC shares are trading at $70, meaning both the call and put options expire worthless. Your total loss would be the initial debit to enter the trade.

2. At expiration, ABC shares are up significantly at $85, meaning the put option expires worthless. However, the 80 call option would expire in the money and the option would be exercised, resulting in purchasing 100 ABC at $80. The call option's intrinsic value would be $500, and your profit would be $350 after subtracting the initial debit of $150 to enter the strategy.

Profit and loss explained

Maximum profit

When employing a long strangle strategy, it is possible to obtain significant gains when the stock price moves away from the strike price.

- Stock value moves upward at expiration: Maximum profit = stock price – strike price of long call option – option premium paid

- Stock value moves downward at expiration: Maximum profit = strike price of long put – stock price – option premium paid

Maximum loss

Maximum loss = option premium paid

Break-even at expiration

There are two break-even points:

Upper breakeven level = strike price of long call + option premium paid per share

Lower breakeven level = strike price of long put – option premium paid per share

Stock value at start of strategy: $70
To execute the diagonal call strategy:
Buy: 60 put option for $75
Buy: 80 call option for $75
Result: $150 net debit

Scenario 1

Stock price at expiration: $70
Both 60 long put and 80 long call option expired worthless.
Profit and loss calculations:
Put option premium paid: ($0.75 premium x 100 shares) = $75 + Call option premium paid: ($0.75 premium x 100 shares) = $75
= $150 loss

Scenario 2

Stock price at expiration: $85
80 long call option exercised at expiration.
Profit and loss calculations:
Spread value: ($85 stock price at expiration – $80 long call strike price) x 100 shares = $500 – Put option premium paid: ($0.75 premium x 100 shares) = $75 – Call option premium paid: ($0.75 premium x 100 shares) = $75
= $350 profit

Scenario 3

Stock price at expiration: $58.49
60 long put option exercised at expiration.
Profit and loss calculations:
Spread value: ($60 long put strike price - $58.49 stock price at expiration) x 100 shares = $151
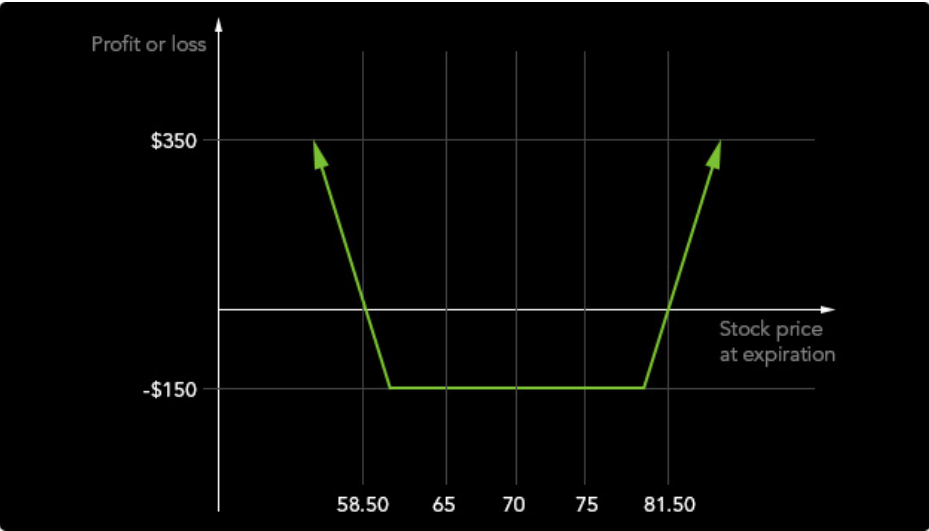– Put option premium paid: ($0.75 premium x 100 shares) = $75
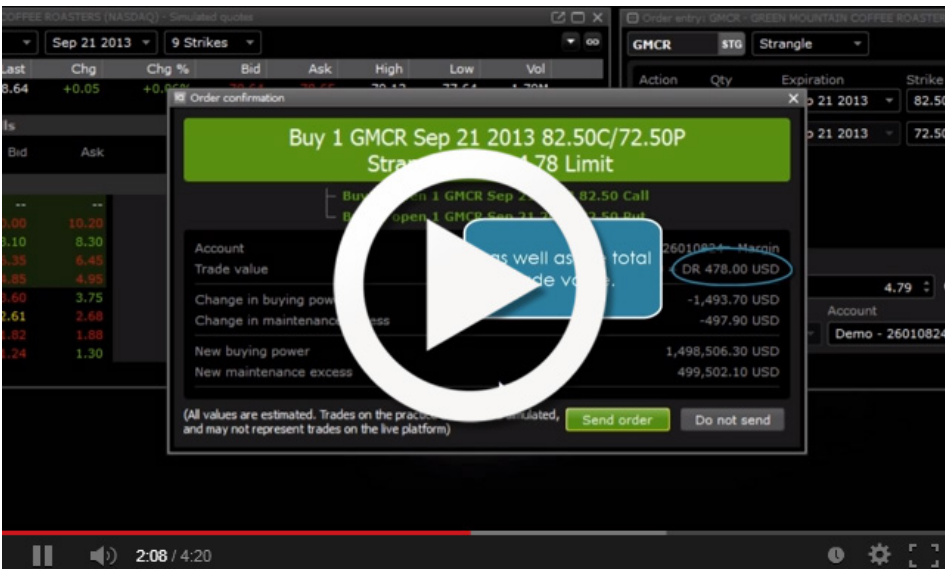– Call option premium paid: ($0.75 premium x 100 shares) = $75
= $1 profit

Note: commission fees are not included in the above calculations.

Long strangle payoff diagram

Real-world example

Learn how to set up a long strangle in IQ, and see it in action.

Short strangle example

Scenario

Let's say that ABC shares are currently trading at $50 in September. To employ a short strangle, you sell a 43 October put option for $150 and simultaneously sell a 57 October call option, also for $150.

As a result, you will be initially credited $300 from the two transactions.

Possible results

1. At expiration, ABC shares continue to hover around the $50 price point, meaning both the call and put options expire worthless. Your total profit would be $300.

2. ABC shares move up 13 points, trading at $63 on expiration, meaning the put option would expire worthless. However, the call option would be assigned and expires in the money, resulting in selling short 100 ABC at $57. The short 100 ABC would have a loss of $600 (($57-$63) x 100). In this case, you would suffer a $300 loss after subtracting the initial $300 credit you received.

Profit and loss explained

Maximum profit

Maximum profit = option premium received

Maximum loss

When employing a short strangle strategy, significant loss can occur whether the stock moves up or down. Theoretically, depending how much the stock price moves up, your losses could be unlimited.

There are two ways to calculate the maximum loss, depending on the direction of the stock at expiration.

- Stock value moves upward: Maximum loss = stock price – strike price of short call – option premium received

- Stock moves downward at expiration: Maximum loss = strike price of short put – stock price – option premium received

Break-even at expiration

There are two break-even points:

Upper breakeven level = strike price of short call option + option premium received per share

Lower breakeven level = strike price of short put option – option premium received per share

Stock value at start of strategy: $50
To execute the short strangle strategy:
Sell: 43 put option for $150
Sell: 57 call option for $150
Result: $300 net credit

Scenario 1

Stock price at expiration: $50
Both 43 put and 57 call option expired worthless at expiration.
Profit and loss calculations:
Call option premium received: ($1.50 premium x 100 shares) = $150 + Put option premium received:
($1.50 premium x 100 shares) = $150
= $300 profit

Scenario 2

Stock price at expiration: $63
43 short put option is assigned at expiration.
Profit and loss calculations:
Spread value: ($63 stock price at expiration – 57 short call strike price) x 100 shares = $600
- Call option premium received: ($1.50 premium x 100 shares) = $150
- Put option premium received: ($1.50 premium x 100 shares) = $150
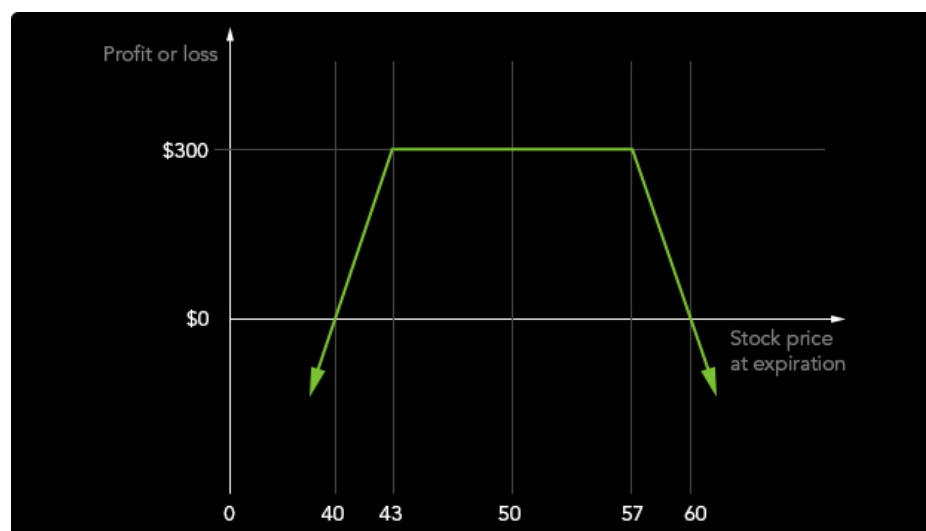= $300 loss

Scenario 3

Stock price at expiration: $30
57 short call option assigned at expiration.
Profit and loss calculations:
Spread value: (43 short put strike price - $30 stock price at expiration) x 100 shares = $1,300
- Call option premium received: ($1.50 premium x 100 shares) = $150
- Put option premium received: ($1.50 premium x 100 shares) = $150
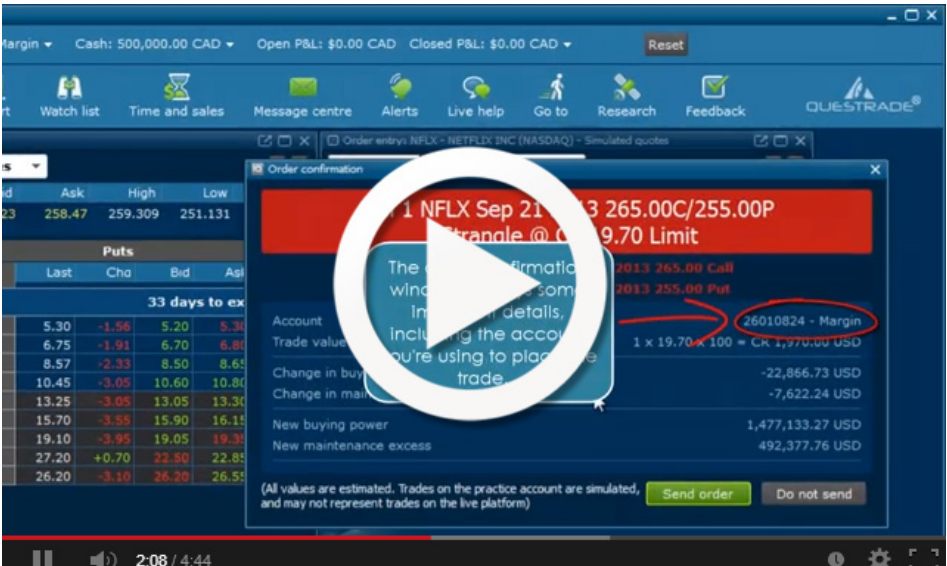= $1,000 loss

Note: commission fees are not included in the above calculations.

Short strangle payoff diagram

Real-world example

Learn how to set up a short strangle in IQ, and see it in action.

The contents of this eBook are for informational purposes only, and are not intended to provide any specific financial advice or guidance.

CHAPTER 5
LONG BUTTERFLY CALL

A **long butterfly call** is an option strategy in which a trader sells two call options at a specific strike price, while simultaneously buying one call option below the short strike and buying one call option above the short strike. All options must have the same expiration.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Profit potential is good because there's a relatively low cost for entering into the strategy

- Risk is minimal if the stock were to rise or drop significantly

- Maximum loss and maximum profit can be accurately estimated

Strategy downsides

- Strategy should only be implemented by experienced traders due to its complexity

Setting up the strategy

1. Sell two call options on the same underlying stock with the same expiration at a specific strike.

2. Buy one call option on the same underlying stock with the same expiration. The strike price must be below the short strike price.

3. Buy one call option on the same underlying stock with the same expiration and a strike price above the short strike price. The strike distance between the lower strike and the short strike must be the same.

At expiration, you want the stock to close at the strike price of the two short call options.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Butterfly call
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long butterfly call example

Scenario

ABC shares are currently trading at $32 in February 2013, and you believe the stock will remain stagnant over the next few months. To set up a long butterfly call strategy, you do the following:

- Buy one March 27 call option for $570 ($5.70 premium x 100 shares)

- Sell two March 32 call options for $394 ($1.97 x 200 shares)

- Buy one March 37 call option for $14 ($0.14 x 100 shares)

To enter into this strategy, you will be initially debited $190.

Possible results

1. Upon expiration in March, the stock drops slightly from $32 to $31.90, meaning the two 32 short call options and the 37 long call option all expire worthless. However, the 27 call option finishes in the money and has an intrinsic value of $490 ($4.90 per share). Once you factor in the initial debit of $190, your total profit would be $300 ($490 – $190).

2. Upon expiration in March, ABC shares are trading at $26.50, which results in all call options expiring worthless. Your total loss would be the $190 you used to enter into the strategy.

3. At expiration, the shares close at $42. This results in the two short call options being assigned. Your total loss would be the $190 that you paid for this strategy. You will exercise the two long calls to cover the assignment on the two short calls.

Profit and loss explained

Maximum profit

Maximum profit = strike price of short call – [strike price of lower strike long call x number of contracts on the lower strike x 100] – net debit

Maximum loss

Maximum loss = net debit paid

Break-even at expiration

There are two break-even points at expiration:

Break-even point #1= strike price of high strike long call – net debit paid per share

Break-even point #2 = strike price of low strike long call + net debit paid per share

Stock value at start of strategy: $32
To execute the long butterfly call strategy:
Buy: 27 call option for $570
Sell: two 32 call options for $394
Buy: 37 call option for $14
Result: $190 net debit

Scenario 1

Stock price at expiration: $26.50
All options expired worthless at expiration.
Profit and loss calculations:

Option premium received: ($1.97 short call premiums x 2 short call contracts x 100 shares) = $394
– Option premium paid: ($5.70 lower strike long call premium x 100 shares) + ($0.14 higher strike long call premium x 100 shares) = -$584 = -$190 loss

Scenario 2

Stock price at expiration: $31.90
27 long call option exercised at expiration.
Profit and loss calculations:

Intrinsic value of lower strike call: ($31.90 stock price at expiration – $27 lower strike long call) x 100 shares = $490 + Option premium received: ($1.97 short call premiums x 2 short call contracts x 100 shares) = $394 – Option premium paid: ($5.70 lower strike long call premium x 100 shares) + ($0.14 higher strike long call premium x 100 shares) = -$584 = $300 profit

Scenario 3

Stock price at expiration: $42
27 long call and 37 long call option exercised at expiration.
Profit and loss calculations:

In this case, your two short options will be assigned, and you will need to exercise the two long options to obtain shares for your assignment. Cost of exercising $27 long call: ($27 stock price per share paid for lower long call option x 1 contract x 100 shares) = - $2,700
+ Cost of exercising $37 long call: ($37 stock price per share paid for higher long call option x 1 contract x 100 shares) = -$3,700
= -$6,400
+ Selling stock at $32 for short call options assigned: ($32 stock price per share received for two short call options x 2 contracts x 100 shares) = $6,400
+ Option premium received: ($1.97 short call premiums x 2 short call contracts x 100 shares) = $394
– Option premium paid: ($5.70 lower strike long call premium x 100 shares) + ($0.14 higher strike long call premium x 100 shares) = -$584
= -$190 loss

Scenario 4

Stock price at expiration: $34
27 long call options exercised at expiration.
Profit and loss calculations:

In this case, your two short options will be assigned, and you will need to exercise the $27 long option to obtain shares for your assignment. The other short option assignment you will purchase 100 shares at market value.
Cost of exercising $27 long call: ($27 stock price per share paid for lower long call option x 1 contract x 100 shares) = -$2,700
+ Cost of buying 100 shares at $34 ($34 x 100) = -$3,400
+ selling stock at $32 for two short call assignment ($32 stock price per share received for two short call options x 2 contracts x 100 shares) = $6,400
+ Option premium received: ($1.97 short call premiums x 2 short call contracts x 100 shares) = $394

– Option premium paid: ($5.70 lower strike long call premium x 100 shares) + ($0.14 higher strike long call premium x 100 shares) = -$584
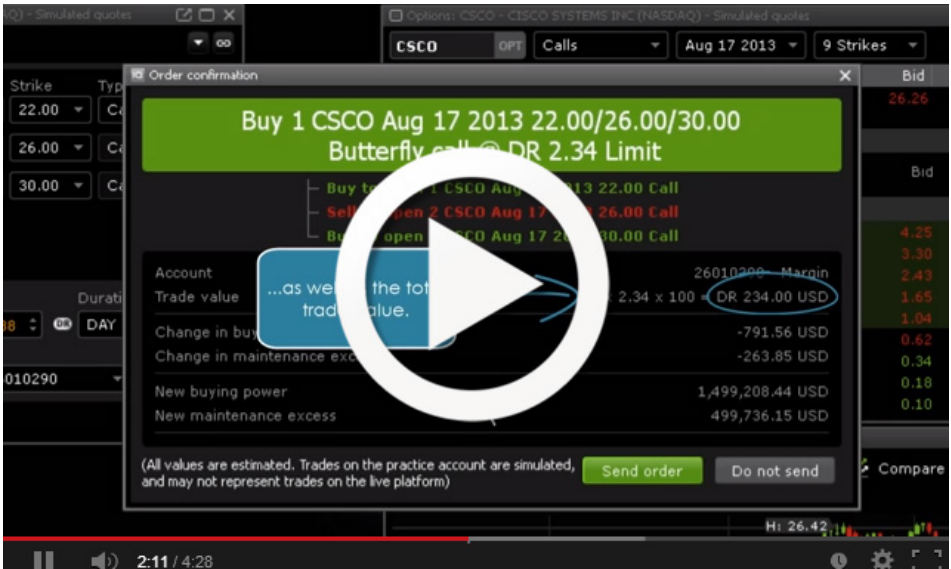
$110 profit

Note: commission fees are not included in the above calculations.

Long butterfly call payoff diagram
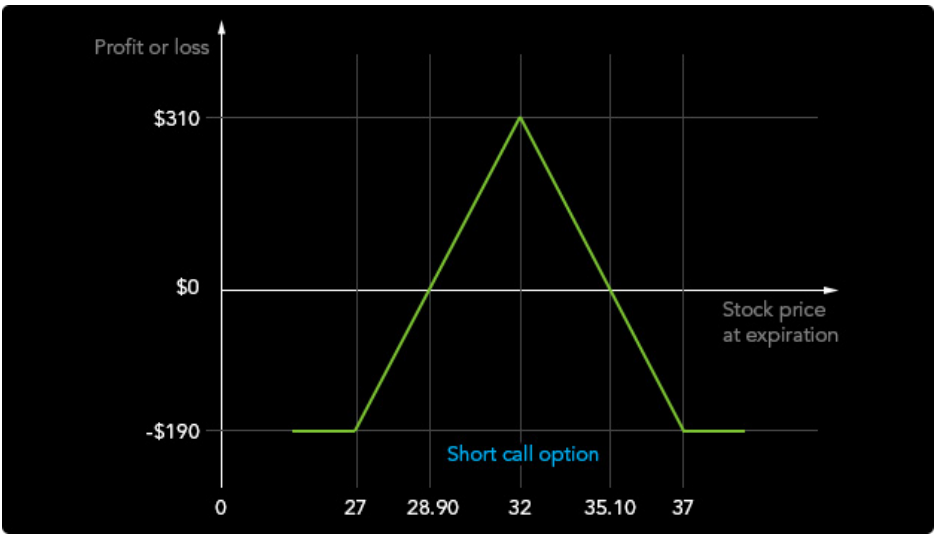
Real-world example

Learn how to set up a long butterfly call in IQ, and see it in action.

CHAPTER 6
BUTTERFLY PUT

A **long butterfly put** is an option strategy in which a trader sells two put options at a specific strike price and simultaneously buys one put option above the short strike and buys one put option below the short strike.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Profit potential is good because there's a relatively low cost required entering into the strategy

- Risk is minimal if the stock were to rise or drop significantly

- Maximum loss and maximum profit can be accurately estimated

Strategy downsides

- Strategy should only be implemented by experienced traders due to its complexity

Setting up the strategy

1. Sell two put options on the same underlying stock with the same expiration date.

2. Buy one put option on the same underlying stock with the same expiration date. The put option must have a strike lower than the short strike.

3. Buy one put option on the same underlying stock with the same expiration date. The put option must have a strike higher than the short strike with the same strike distance apart between the lower strike and the short strike.

4. At expiration, you want the stock to close at the strike price of the two short put options.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Butterfly put
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long butterfly put example

Scenario

ABC shares are currently trading at $95 in March 2013, and you believe the stock will remain stagnant for the next 30 days. To set up a long butterfly put strategy, you do the following:

- Buy one April 85 put option for $16 ($0.16 premium x 100 shares)

- Sell two April 95 put options for $302 ($1.51 premium x 200 shares)

- Buy one April 105 put option for $955 ($10.55 premium x 100 shares)

To enter into this strategy, you will be initially debited $769.

Possible results

1. Upon expiration in April, ABC stock is trading at $95.95. The 85 put and two 95 put options would all expire worthless, while the 105 put would have an intrinsic value of $905 ($9.05 per share). Your total profit would be $136 after deducting the $769 initially debited to enter into the strategy.

2. At expiration, ABC shares drop dramatically to $82. In this case, the two short options would be assigned. In order to fulfill your assignment to buy at the short strike, you will need to exercise the two long put options so that you can sell at the two long strike prices, respectively. As a result, your total loss would be your initial debit of $769.

3. If the stock moved up significantly at expiration to $107, all options would expire worthless and your total loss would still be your initial debit of $769.

Profit and loss explained

Maximum profit

Maximum profit = strike price of higher long put option – [strike price of short put x number of contracts on the highest put x 100] – net debit paid

Maximum loss

Maximum loss = net debit paid

Break-even at expiration

There are two break-even points at expiration:

Break-even point #1= strike price of high strike long put – net debit paid per share

Break-even point #2 = strike price of low strike long put + net debit paid per share

Stock value at start of strategy: $95
To execute the long butterfly put strategy:
Buy: 85 put option for $16
Sell: two 95 put options for $302
Buy: 105 put option for $1,055
Result: $769 net debit

Scenario 1

Stock price at expiration: $82
85 long put and 105 long put option exercised at expiration.
Profit and loss calculations:
In this case, the two short 95 put options would be assigned to buy at the short put strike. You would need to exercise the two long put options so that you can sell at the higher and lower strike prices, respectively. Cost of short put options assigned: ($95 price per share paid for two short put options x 2 contracts x 100 shares) = -$19,000
+ Sell stock at $85 for exercising $85 long put option: ($85 price per share received for lower long put option x 1 contract x 100 = $8,500
+ Sell stock at $105 for exercising $105 long put option: ($105 price per share received for higher long put option x 1 contract x 100 shares) = $10,500
– Option premium paid: ($0.16 lower strike long put premium x 100 shares) + ($10.55 higher strike long put premium x 1 contract x 100 shares) = -$1,071
+ Option premium received: ($1.51 short put premium x 2 contracts x 100 shares) = $302
= -$769 loss

Scenario 2

Stock price at expiration: $95.95
105 long put option exercised at expiration.
Profit and loss calculations:
Spread value: ($105 higher long put strike – $95.95 stock price at expiration) x 1 contract x 100 shares
= $905 + Option premium received: ($1.51 short put premium x 2 contracts x 100 shares) = $302
– Option premium paid: ($0.16 lower strike long put premium x 100 shares) + ($10.55 higher strike long put premium) x 1 contract x 100 shares = -$1,071 = $136 profit

Scenario 3

Stock price at expiration: $107
All optoins expired worthless at expiration.
Profit and loss calculations:
In this case, all options expire worthless: Option premium received: ($1.51 short put premium x 2 contracts x 100 shares) = $302 – Option premium paid: ($0.16 lower strike long put premium x 100 shares) + ($10.55 higher strike long put premium) x 1 contract x 100 shares = -$1,071 = -$769 loss

Scenario 4

Stock price at expiration: $94
105 long put option exercised at expiration.
Profit and loss calculations:
n this case, the two short 95 put options would be assigned to buy at the short put strike. You would need to exercise the 105 long put options so that you can sell at the higher price.
Cost of short put options assigned: ($95 price per share paid for two short put options x 2 contracts x 100 shares) = -$19,000
+ Sell stock at $105 for exercising $105 long put option: ($105 price per share received for higher long put option x 1 contract x 100 shares) = $10,500
– Option premium paid: ($0.16 lower strike long put premium x 100 shares) + ($10.55 higher strike long put premium x 1 contract x 100 shares) = -$1,071
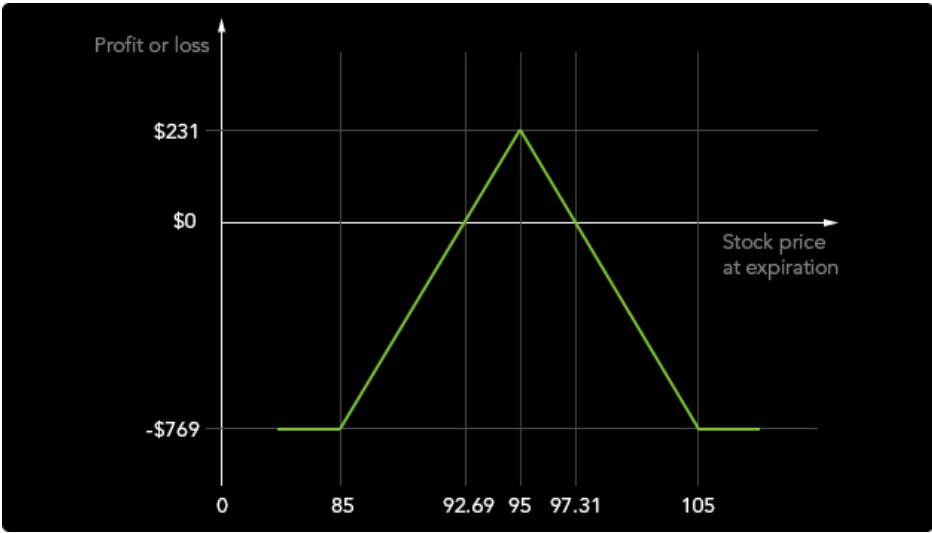+ Option premium received: ($1.51 short put premium x 2 contracts x 100 shares) = $302
= -$9269 with a 100 long stock.

Market value of the stock is currently at $9,400. You profit would be $9,400 - $9,269 = $131
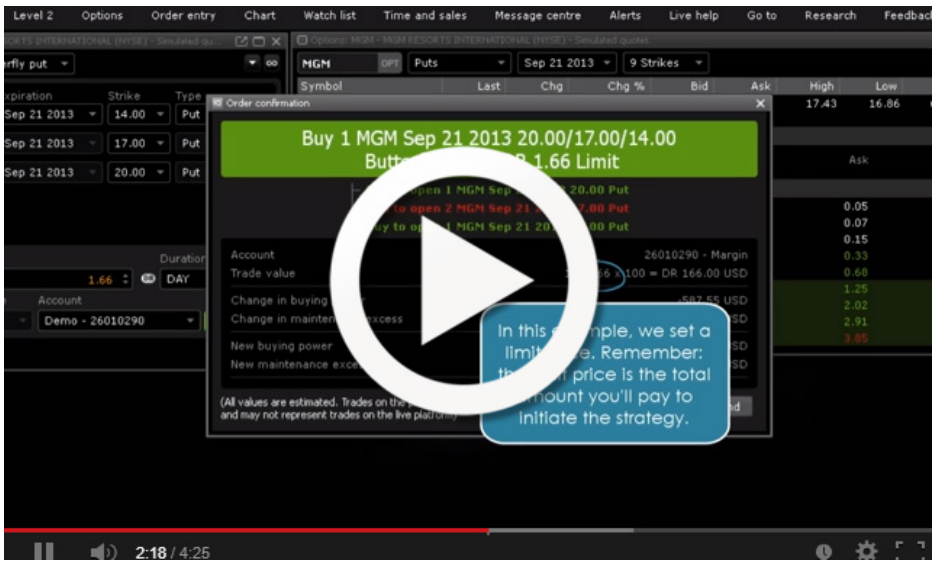
Note: commission fees are not included in the above calculations.

Long butterfly put payoff diagram

Real-world example

Learn how to set up a long butterfly put in IQ, and see it in action.

The contents of this eBook are for informational purposes only, and are not intended to provide any specific financial advice or guidance.

CHAPTER 7
LONG CONDOR CALL

A **long condor call** is an option strategy in which a trader simultaneously does the following:

- Buys one in-the-money call
- Sells one in-the-money call with a higher strike price
- Sells one out-of-the-money call
- Buys one out-of-the-money call with a higher strike price

All call options must have the same expiry date.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Profit potential is good because there's a relatively low cost required for entering into the strategy
- Risk is minimal if the stock were to rise or drop significantly
- Maximum loss and maximum profit can be accurately estimated
- Can still profit if the stock remains stagnant

Strategy downsides

- Strategy should only be implemented by experienced traders due to its complexity

Setting up the strategy

1. Buys one in-the-money call
2. Sells one in-the-money call with a higher strike price
3. Sells one out-of-the-money call
4. Buys one out-of-the-money call with a higher strike price

All call options must have the same expiry date.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Condor call
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long condor call example

Scenario

ABC shares are currently trading at $54 in March 2013, and you believe the stock will remain stagnant for the next 30 days. To set up a long condor call strategy, you do the following:

- Buy one April 44 call option for $1,105 ($11.05 premium x 100 shares)

- Sell one April 49 call option for $604 ($6.04 premium x 100 shares)

- Sell one April 59 call option for $53 ($0.53 premium x 100 shares)

- Buy one April 64 call option for $8 ($0.08 premium x 100 shares)

To enter into this strategy, you will be initially debited $456.

Possible results

1. Upon expiration in April, ABC stock is trading at $43. In this case, all options would expire worthless – your maximum loss would be $456, which was your initial net debit for entering into the strategy.

2. At expiration the stock's trading at $63, meaning the two short call options and the higher strike long call expire in the money. In this case, the 44 call option cancels out the 49 call option, but you gain a $500 "profit". However, you would be short the 59 call option. In this case, you would close out your position at $63 to bring your losses to $356 ($500 profit - $400 loss - $456 initial debit).

3. The shares are trading at $55 at expiration. In this case, the 49 short call and 44 long call both finish in the money. Your profit on the trade would be $500. After subtracting the $456 you used to enter the trade, your total profit would be $44.

Profit and loss explained

Maximum profit

Maximum profit = strike price of lower strike short call – strike price of lower strike long call – option premium paid

Maximum loss

Maximum loss = net debit

Break-even at expiration

There are two break-even points at expiration:

Break-even point #1= strike price of high-strike long call – net debit paid per share

Break-even point #2 = strike price of low-strike long call + net debit paid per share

Stock value at start of strategy: $54
To execute the long condor call strategy:
Buy: 44 call option for $1,105
Sell: 49 call option for $604
Sell: 59 call option for $53
Buy: 64 call option for $8
Result: $456 net debit

Scenario 1

Stock price at expiration: $43
All call option expired worthless at expiration.
Profit and loss calculations:
In this case, all options would expire worthless.
Option premium received: ($6.04 lower strike short call premium x 100 shares) + ($0.53 higher strike short call premium x 100 shares) = $657 – Option premium paid: ($11.05 lower strike long call premium x 100 shares) + ($0.08 higher strike long call premium x 100 shares) = $1,113 = -$456 loss

Scenario 2

Stock price at expiration: $55
44 long call option exercised at expiration.
Profit and loss calculations:
In this case, the 49 short call would be assigned, and the 44 long call options would be exercised. The 49 short call assignment would require you to sell short 100 stocks at $49 x 100 = $4,900. You would exercise the 44 long call and cover the short 100 stocks position at $44 x 100 = -$4400, resulting a $500 profit.
+ Option premium received: ($6.04 lower strike short call premium x 100 shares) + ($0.53 higher strike short call premium x 100 shares) = $657
– Option premium paid: ($11.05 lower strike long call premium x 100 shares) + ($0.08 higher strike long call premium x 100 shares) = $1,113 = $44 profit

Scenario 3

Stock price at expiration: $63
44 long call option exercised at expiration.
Profit and loss calculations:
In this case, the 49 short call, 59 short call would all be assigned, requiring you to sell short 100 stocks at $49 x 100 = $4,900 and another 100 stocks $59 x 100 = $5,900, totaling $10,800 credit.
Since stock is trading at $63, you can exercise the long 44 call option to cover the 100 short stock position at $44 x 100 = -$4400. And since the 64 long call finished out of the money, you can only cover the remaining 100 short stock position at a $63 market price x 100 = -$6,300, totaling -$10,700 debit.
+ Option premium received: ($6.04 lower strike short call premium x 100 shares) + ($0.53 higher strike

short call premium x 100 shares) = $657
– Option premium paid: ($11.05 lower strike long call premium x 100 shares) + ($0.08 higher strike long call premium x 100 shares) = $1,113
= -$356 loss

Long condor call payoff diagram

Real-world example

Learn how to set up a long condor call in IQ, and see it in action.

CHAPTER 8
LONG CONDOR PUT

A **long condor put** is an option strategy in which a trader simultaneously does the following:

- Buys one out-of-the-money put
- Sells one out-of-the-money put with a higher strike price
- Sells one in-the-money put
- Buys one in-the-money put with a higher strike price

All put options must have the same expiry date.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Profit potential is good because there's a relatively low cost required for entering into the strategy
- Risk is minimal if the stock were to rise or drop significantly
- Maximum loss and maximum profit can be accurately estimated
- Can still profit if the stock remains stagnant

Strategy downsides

- Strategy should only be implemented by experienced traders due to its complexity

Setting up the strategy

1. Buy one out-of-the-money put.
2. Sell one out-of-the-money put with a higher strike price.
3. Sell one in-the-money put.
4. Buy one in-the-money put with a higher strike price.

All options must have the same expiry date. At expiration, you want the stock to close between the strike prices of the short puts.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Condor put
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Long condor put example

Scenario

ABC shares are currently trading at $42 in March 2013, and you believe the stock will remain stagnant for the next 30 days. To set up a long condor put strategy, you do the following:

- Buy one April 32 put option for $15 ($0.15 premium x 100 shares)

- Sell one April 37 put option for $42 ($0.42 premium x 100 shares)

- Sell one April 47 put option for $625 ($6.25 premium x 100 shares)

- Buy one April 52 put option for $770 ($7.70 premium x 100 shares)

To implement this strategy, you will be initially debited $118.

Possible results

1. At expiration, the stock drops to $30, meaning that all the put options would expire in the money. Your total loss would be $118, which was your initial debit required to initiate the strategy.

2. The stock closes at $45 at expiration. In this case, the 47 short put and 52 long put would expire in the money, while the other put options would expire worthless. Your profit on the trade would be $500. After subtracting the $118 you used to enter the trade, your total profit would be $382.

3. Upon expiration, the stock closes at $53, meaning all put options expire worthless. Again, your total loss would be the $118 that was initially debited from your account to set up the strategy.

Profit and loss explained

Maximum profit

Maximum profit = strike price of higher strike long put – strike price of higher strike short put – option premium paid

Maximum loss

Maximum loss = net debit

Break-even at expiration

There are two break-even points at expiration:

> Break-even point #1= strike price of low strike long put + net debit paid per share
>
> Break-even point #2 = strike price of high strike long put – net debit paid per share

Stock value at start of strategy: $42
To execute the long condor put strategy:
Buy: 32 put option for $15
Sell: 37 put option for $42
Sell: 47 put option for $625
Buy: 52 put option for $770
Result: $118 net debit

Scenario 1

Stock price at expiration: $30
32 long put and 52 long put exercised at expiration.
Profit and loss calculations:
In this case, the 37 short put and 47 short put option would be assigned, and the 32 long put and 52 long put would be exercised.

Trade transaction

Cost of the 37 short put assignment would be -$3,700 (37 stock price per share received for lower strike short put x 100 shares) + exercise price of 32 long put would be $3,200 (32 stock price per share sold at the lower strike long put x 100 shares) = -$500 loss
+ Cost of the 47 short put assignment would be -$4,700 (47 stock price per share received for high strike short put x 100 shares) + exercise price of 52 long put would be $5,200 (52 stock price per share sold at the higher strike long put x 100 shares) = $500 profit
+ Option premium received $667 ($0.42 lower strike short put premium x 100 shares + $6.25 higher strike short put premium x 100 shares)
- Option premium paid $785 ($0.15 lower strike long put premium x 100 shares + $7.70 higher strike long put premium x 100 shares) = -$118 loss

Scenario 2

Stock price at expiration: $45
32 long put option exercised at expiration.
Profit and loss calculations:
In this case, the 47 short put would be assigned, and the 52 long put option would be exercised.
Cost of the 47 short put assignment would be -$4,700 (47 stock price per share received for high strike short put x 100 shares) + exercise price of 52 long put would be $5,200 (52 stock price per share sold at the higher strike long put x 100 shares) = $500 profit
+ Option premium received $667 ($0.42 lower strike short put premium x 100 shares + $6.25 higher strike short put premium x 100 shares)
- Option premium paid $785 ($0.15 lower strike long put premium x 100 shares + $7.70 higher strike long put premium x 100 shares) = $382 profit

Scenario 3

Stock price at expiration: $53
**All options expired worthless at expiration.**
Profit and loss calculations:
In this case, all options would expire worthless.
Option premium received: ($0.42 lower strike short put premium x 100 shares) + ($6.25 higher strike short put premium x 100 shares) = $667
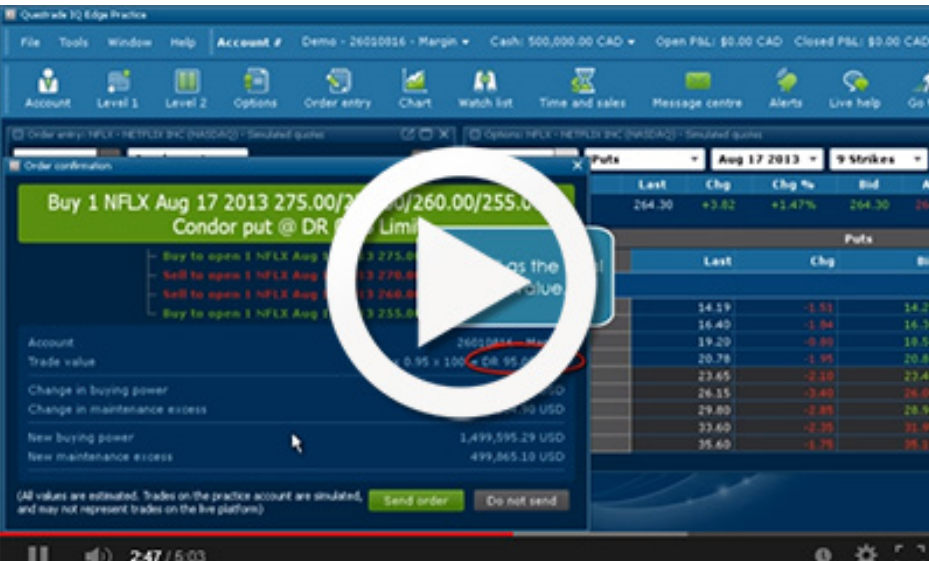– Option premium paid: ($0.15 lower strike long put premium x 100 shares) + ($7.70 higher strike long put premium x 100 shares) = $785 = -$118 loss

Long condor put payoff diagram
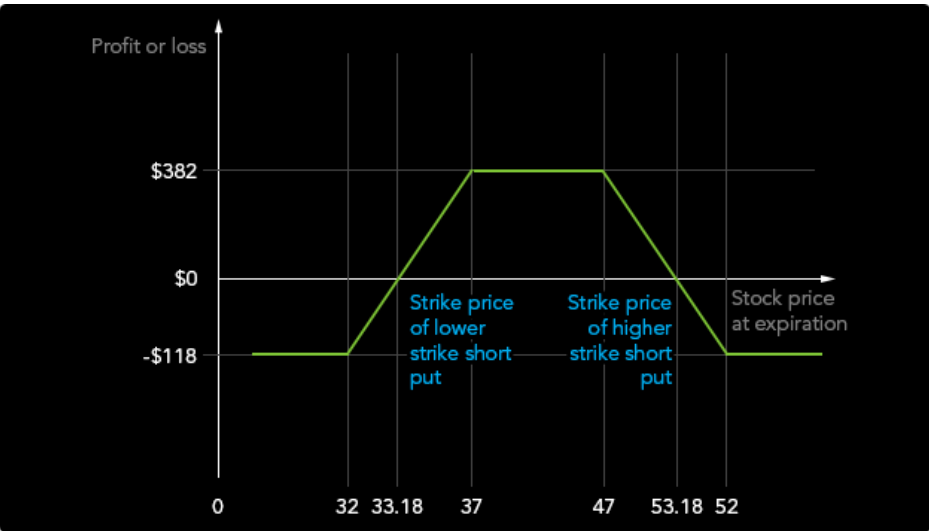
Real-world example

Learn how to set up a long condor put in IQ, and see it in action.

CHAPTER 9
IRON BUTTERFLY

An **iron butterfly** is a credit option strategy in which a trader simultaneously does the following:

- **Buys** one out-of-the-money put at a lower strike price

- **Sells** one at-the-money put

- **Sells** one at-the-money call with the same strike price as the at-the-money put

- **Buys** one out-of-the-money call at a higher strike price

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Can still profit if the stock remains stagnant

- Credit spread helps reduce the overall risk

- Maximum loss and maximum profit can be accurately estimated

Strategy downsides

- Limited profit potential from the narrow trading range made up of the two wing strike prices

- Credit received may not cover the maximum risk

Setting up the strategy

1. Buy one out-of-the-money put with a lower strike price.

2. Sell one at-the-money put.

3. Sell one at-the-money call with the same strike as the at-the-money put.

4. Buy one out-of-the-money call with a higher strike price.

At expiration, you want the stock price to close at the strike prices of the higher strike put and lower strike call.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Iron butterfly
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Iron butterfly example

Scenario

ABC shares are currently trading at $28 in March 2013, and you believe the stock will remain within a tight trading range over the next 30 days. To set up an iron butterfly strategy, you do the following:

- Buy one 22 April put for $11 ($0.11 premium x 100 shares)

- Sell one 28 April put for $141 ($1.41 premium x 100 shares)

- Sell one 28 April call for $140 ($1.40 premium x 100 shares)

- Buy one 34 April call for $8 ($0.08 premium x 100 shares)

After initiating the trade, you will receive a $262 credit.

Possible results

1. At expiration, the stock drops to $20. In this case the 22 long put and 28 short put would finish in the money. Your 28 short put would be assigned, and you will be buying 100 shares of ABC at 28. Since the current market value of ABC is at $20, you will exercise the 22 long put to sell your 100 ABC shares at $22, resulting in a $500 loss. After subtracting your initial credit of $262, your total loss would be $338.

2. Upon expiration in April, the stock continues to trade at $28. As a result, all options would expire worthless, and you would keep the entire $262 credit.

3. The stock rises from $28 to $36 at expiration, meaning the 28 call and 34 call options would finish in the money. In this case, the 28 call would be exercised by the buyer resulting you to sell short 100 ABC at $28, or -$2,800. In turn, you would exercise the 34 call option to cover your short 100 ABC at $34, resulting in a $600 loss. After applying the $262 credit you received to initially enter the trade, your total losses would be $338.

Profit and loss explained

Maximum profit

Maximum profit = net credit received

Maximum loss

Maximum loss = long call strike price – short call strike price – net credit received

Break-even at expiration

There are two break-even points at expiration:

Break-even point #1= short call strike price + net credit received per share

Break-even point #2 = short put strike price − net credit received per share

Stock value at start of strategy: $28
To execute the iron butterfly strategy:
Buy: 22 put option for $11
Sell: 28 put option for $141
Sell: 28 call option for $140
Buy: 34 call option for $8
Result: $262 net credit

Scenario 1

Stock price at expiration: $20
22 long put option exercised at expiration.
Profit and loss calculations:
In this case, both put options would expire in the money. The 28 short put option would be assigned, requiring you to purchase the stocks at a $28 short put strike price x 100 shares = -$2,800.
You would exercise the 22 long put option, allowing you to sell the stocks at a $22 long put strike price x 100 shares = $2,200.
+ Option premium received: ($1.41 short put premium x 100 shares) + ($1.40 short call premium) = $281
− Option premium paid: ($0.11 long put premium x 100 shares) + ($0.08 long call premium x 100 shares)
= $19 = -$338 loss

Scenario 2

Stock price at expiration: $28
All options expired worthless at expiration.
Profit and loss calculations:
All options would expire worthless. The trade transaction would look like this:
Option premium received: ($1.41 short put premium x 100 shares) + ($1.40 short call premium) = $281
− Option premium paid: ($0.11 long put premium x 100 shares) + ($0.08
long call premium x 100 shares) = $19 = $262 profit

Scenario 3

Stock price at expiration: $36
34 long call option exercised at expiration.
Profit and loss calculations:
In this case, the two call options would finish in the money. The 28 short call option would be assigned, requiring you to sell short the stocks at a $28 short call strike price x 100 shares = $2,800.
You would exercise the 34 long call option, allowing you to cover the short stocks at a $34 long call strike price x 100 shares = -$3,400.
+ Option premium received: ($1.41 short put premium x 100 shares) + ($1.40 short call premium) = $281
− Option premium paid: ($0.11 long put premium x 100 shares) + ($0.08 long call premium x 100 shares)
= $19 = -$338 loss

Note: commission fees are not included in the above calculations.

Iron butterfly payoff diagram
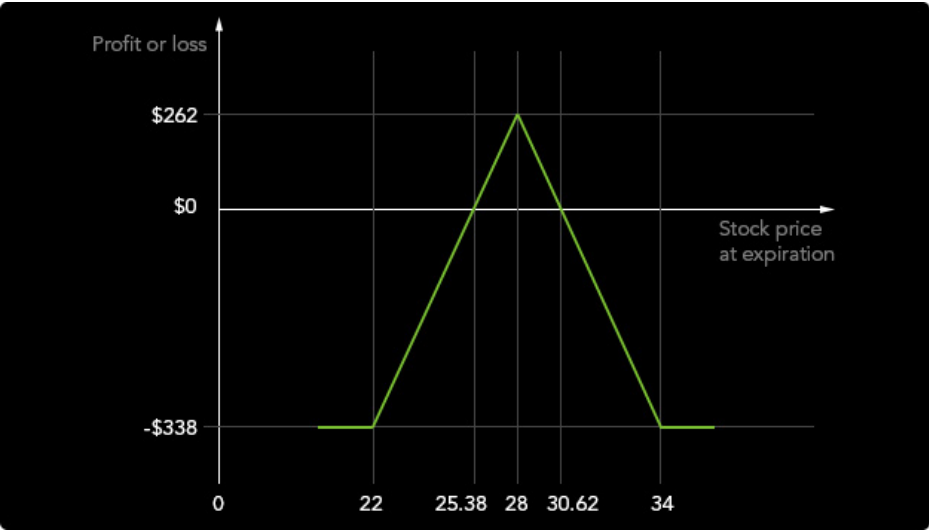
Real-world example

Learn how to set up a iron butterfly in IQ, and see it in action.

CHAPTER 10
IRON CONDOR

An **iron condor** is a credit option strategy in which a trader simultaneously does the following:

- **Buys** one out-of-the-money put
- **Sells** one out-of-the-money put with a higher strike price
- **Sells** one out-of-the-money call
- **Buys** one out-of-the-money call with a higher strike price

The difference between the call strikes must equal the difference between the put strikes, and all options must have the same expiry date.

An iron condor strategy can be used if you believe the stock will have low volatility up to the option expiry date.

Your market outlook

Neutral

Who should run this strategy

Advanced traders

Strategy benefits

- Can still profit if the stock remains stagnant or within a tight trading range at expiration
- Credit spread helps reduce the overall risk
- Maximum loss and maximum profit can be accurately estimated

Strategy downsides

- Can lose if the stock moves beyond the spread in either direction
- Credit received may not cover the maximum risk

Setting up the strategy

- Buy one out-of-the-money put
- Sell one out-of-the-money put with a higher strike price
- Sell one out-of-the-money call
- Buy one out-of-the-money call with a higher strike price

All options must have the same expiration. At expiration, you want the stock price to close between the short put strike and short call strike.

Option level required

To trade options within your account, your level of options trading must be approved. Option levels can be modified in myQuestrade.

Option strategy: Iron condor
Option level required: Level 3

Questrade's margin requirements

Learn more about Questrade's option margin requirements.

Iron condor example

Scenario

ABC shares are currently trading at $154 in March 2013, and you believe the stock will remain within a tight trading range over the next 30 days. To set up an iron condor strategy, you do the following:

- Buy one 144 April put for $61 ($0.61 premium x 100 shares)

- Sell one 149 April put for $124 ($1.24 premium x 100 shares)

- Sell one 159 April call for $37 ($0.37 premium x 100 shares)

- Buy one 164 April call for $8 ($0.08 premium x 100 shares)

After initiating the trade, you will be credited $92.

Possible results

1. The stock closes at $156 at expiration, meaning all options would expire worthless. As a result, you would keep the entire $92 credit as profit.

2. At expiration, the stock drops significantly to $140, meaning the 144 long put and 149 short put both expire in the money. In this case, the 149 short put would be assigned, requiring you to buy 100 ABC at $149. Since ABC is trading at $140, you will exercise the 144 long put to sell 100 ABC at $144, resulting a $500 loss. After applying the $92 credit you initially received, your total losses would be $408.

3. Upon expiration in April, the stock moves up 14 points and closes at $168, meaning the put options expire worthless. However, the 159 short call and 164 long call expire in the money. The 159 short call would be assigned, requiring you to sell short 100 ABC at $159. Since ABC is trading at $168, you will exercise the 164 long call to cover the short 100 ABC position, resulting a $500 loss. After applying the $92 credit you initially received, your total losses would be $408.

Profit and loss explained

Maximum profit

Maximum profit = option premium received

Maximum loss

Maximum loss = long call strike price – short call strike price – option premium received

Break-even at expiration

There are two break-even points at expiration:

Break-even point #1= short call strike price + option premium received per share

Break-even point #2 = short put strike price – option premium received per share

Stock value at start of strategy: $154
To execute the iron butterfly strategy:
Buy: 144 put option for $61
Sell: 149 put option for $124
Sell: 159 call option for $37
Buy: 164 call option for $8
Result: $92 net credit

Scenario 1

Stock price at expiration: $140
144 long put option exercised at expiration.
Profit and loss calculations:
The 144 long put and 149 short put both expire in the money. The 149 short put option would be assigned, requiring you to purchase the stocks at a $149 short put strike price x 100 shares = -$14,900. You would exercise the 144 long put option, allowing you to sell the stocks at $144 long put strike price x 100 shares = $14,400.
+ Option premium received: ($1.24 short put premium x 100 shares) + ($0.37 short call premium) = $161
– Option premium paid: ($0.61 long put premium x 100 shares) + ($0.08 long call premium x 100 shares) = $69 = -$408 loss

Scenario 2

Stock price at expiration: $156
All options expired worthless at expiration.
Profit and loss calculations:
All options expire worthless, and your total profit would be the initial credit you received to enter the trade.
Option premium received: ($1.24 short put premium x 100 shares) + ($0.37 short call premium x 100 shares) = $161
– Option premium paid: ($0.61 long put premium x 100 shares) + ($0.08 long call premium x 100 shares) = $69 = $92 profit

Scenario 3

Stock price at expiration: $168
164 long call option exercised at expiration.
Profit and loss calculations:
Only the call options would finish in the money. The 159 short call option would be assigned, requiring you to sell short the stocks at a $159 short call strike price x 100 shares = $15,900.
You would exercise the 164 long call option, allowing you to cover the short stocks at a $164 long call strike price x 100 shares = -$16,400.
+ Option premium received: ($1.24 short put premium x 100 shares) + ($0.37 short call premium x 100 shares) = $161

– Option premium paid: ($0.61 long put premium x 100 shares) + ($0.08 long call premium x 100 shares) = $69 = -$408 loss

Note: commission fees are not included in the above calculations.

Iron condor payoff diagram
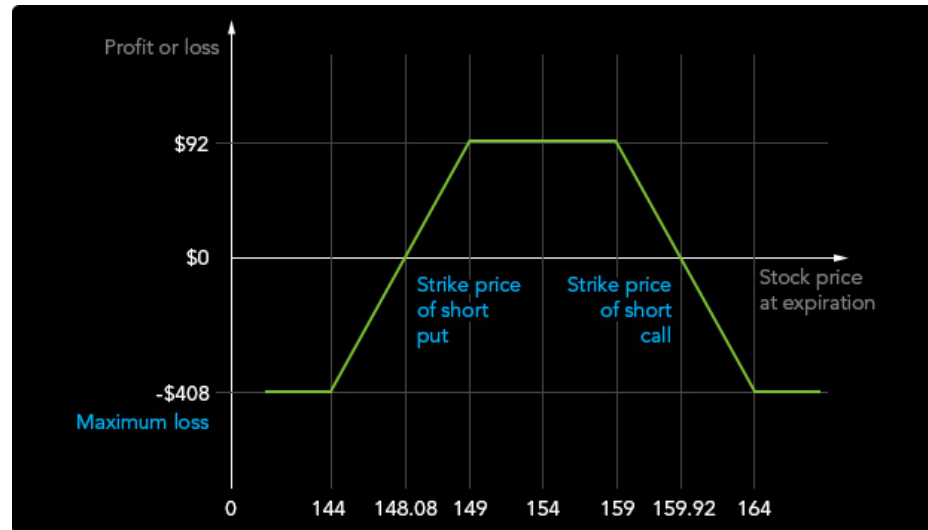
Real-world example

Learn how to set up a iron condor in IQ, and see it in action.

RISK DISCLOSURE

Transactions in Options carry a high degree of risk. Purchasers and sellers of Options should familiarize themselves with the type of Option (i.e. put or call) which they contemplate trading and the associated risks. You should calculate the extent to which the value of the Options must increase for your position to become profitable, taking into Account the premium and all transaction costs.

The purchaser of Options may offset or exercise the Options or allow the Options to expire. The exercise of an Option results either in a cash settlement or in the purchaser acquiring or delivering the underlying interest. If the Option is on a Future, the purchaser will acquire a Futures position with associated liabilities for Margin (see the section on Futures above). If the purchased Options expire worthless, you will suffer a total loss of your investment which will consist of the Option premium plus transaction costs. If you are contemplating purchasing deep out of the money Options, you should be aware that the chance of such Options becoming profitable ordinarily is remote.

Selling ('writing' or 'granting') an Option generally entails considerably greater risk than purchasing Options.

Although the premium received by the seller is fixed, the seller may sustain a loss well in excess of that amount. The seller will be liable for additional Margin to maintain the position if the market moves unfavourably. The seller will also be exposed to the risk of the purchaser exercising the Option and the seller will be obligated to either settle the Option in cash or to acquire or deliver the underlying interest. If the Option is on a Future, the seller will acquire a position in a Future with associated liabilities for Margin (see the section on Futures above). If the Option is 'covered' by the seller holding a corresponding position in the underlying interest or a Future or another Option, the risk may be reduced. If the Option is not covered, the risk of loss can be unlimited.

Certain exchanges in some jurisdictions permit deferred payment of the Option premium, exposing the purchaser to liability for Margin payments not exceeding the amount of the premium. The purchaser is still subject to the risk of losing the premium and transaction costs. When the Option is exercised or expires, the purchaser is responsible for any unpaid premium outstanding at that time.