

Notes on Option Strategies

Source --

1. <https://www.coursera.org/learn/derivatives-options-futures/supplement/Rnk8d/the-greeks>
2. <https://www.interactivebrokers.com/campus/trading-lessons/long-straddle/>
3. <https://www.optionseducation.org/strategies/all-strategies-en>

For Both Put and Call Options -- In the money means spot is less than strike and out of the money means spot is greater than strike

3. What is the profit on a long put at expiration which ends \$10.00 in the money for which the investor paid a premium of \$5.00?

- ☐ (\$5.00)
- ☐ \$1.00
- ☒ \$5.00
- ☐ \$10.00

✓ **Correct**

Correct. To calculate the gain on the trade, subtract the \$5.00 premium paid from the \$10.00 intrinsic value to give a profit of \$5.00.



Difference Between Intrinsic and Extrinsic Value of an Option

An option's **total price (premium)** is made up of two components: **intrinsic value** and **extrinsic value**. Here's what they mean and how they differ:

1. Intrinsic Value

- **Definition:** The value of the option if it were exercised immediately. It represents the **in-the-money** portion of the option.
- **Formula:**

- For a **call option**:

$$\text{Intrinsic Value} = \max(0, \text{Spot Price} - \text{Strike Price})$$

- For a **put option**:

$$\text{Intrinsic Value} = \downarrow \max(0, \text{Strike Price} - \text{Spot Price})$$

- **Key Characteristics:**

- **Positive or Zero:** Intrinsic value can never be negative. If an option is **out-of-the-money**, its intrinsic value is zero.
 - **Depends on Spot Price:** The intrinsic value changes with the price of the underlying asset.

2. Extrinsic Value

- **Definition:** The portion of the option's premium that exceeds the intrinsic value. It accounts for factors like time to expiration, volatility, and interest rates.
- **Formula:**

$$\text{Extrinsic Value} = \text{Option Premium} - \text{Intrinsic Value}$$

- **Key Characteristics:**
 - **Always Positive or Zero:** Extrinsic value is positive unless the option is at expiration.
 - **Time Decay:** Extrinsic value decreases as the expiration date approaches (known as **time decay**).
 - **Volatility-Dependent:** Higher implied volatility increases extrinsic value.

Example:

- **Option Premium:** \$15
- **Intrinsic Value:** \$10
 - **Extrinsic Value** = \$15 - \$10 = \$5

Feature	Intrinsic Value	Extrinsic Value
Definition	In-the-money value of the option	Value from time, volatility, and other factors
Range	≥ 0 (Positive or Zero)	≥ 0 (Positive or Zero)
Dependent On	Spot price and strike price	Time to expiration, volatility, and interest rates
At Expiration	Equal to the option's value	Becomes zero
Impact of Volatility	No impact	Increases with higher volatility

Theta

Theta describes the relationship between time and the price of an option. Theta only impacts the extrinsic value of an option. That's because intrinsic value does not erode, it only moves with a change in the underlying asset price. As an option nears expiration, Theta will become increasingly negative.

Theta Explanation

The closer an option is to expiration, the less time value (extrinsic value) remains. Theta measures the approximate decline in an option's premium due to the passage of time. In other words, it measures that rate at which an option's extrinsic value is declining.

Vega

Vega represents the change in an option's price due to a change in its implied volatility. Vega is always greatest for an "at the money" option and decreases as the underlying asset price moves increasingly "into the money" or "out of the money."

Vega Explanation

An increase in volatility of 1% will change the option's price by approximately the average of the Vega.

Putting it Together: Price Model

Now let's put it all together. Using the following assumptions, we can see the estimated value of a call option.

- Let's use a Share Price of \$35.90,
- A Strike Price of \$40.00,
- And assume an Interest Rate of 4 percent,
- Let's assume an Implied Volatility reading of 38.8% for the underlying,
- And say the option contracts has 38 days to expire 38.
- The Call Price works out to be almost 54-cents (\$0.5388).

Delta

The measure returned for Delta is 0.2214. This means that for every \$1.00 move in the underlying asset's price the option value will change by approximately 22-cents (ignoring the impact of Gamma). Alternatively, there is a 22% chance that the option will expire at or above the strike price of \$40.00.

Gamma

The Gamma reading of 0.0661 tells us that should the underlying price rise by \$1.00, then Delta will rise by approximately 6.6 cents, because of the curvature in the option's price line.

Theta

The reading of -0.0184 for Theta tells us that the value of the option contract drops approximately 1.8 cents for each day that passes.

Vega

The Vega of 0.0344 tells us that if implied volatility were to increase from 38.8% to 39.8%, then the value of the option would increase by approximately 3.4 cents.

Rho

The reading of 0.0077 for Rho tells us that if interest rates were to increase from 4% to 5%, the option's value would increase by approximately 0.77 cents.

<https://www.pyquantnews.com/free-python-resources/understanding-theta-and-time-decay-in-options>

Volatility in Options

Higher volatility raises the potential for favorable price movements, thus increasing the extrinsic value of the option. Therefore, options on highly volatile assets tend to have lower Theta values. Conversely, options on low-volatility assets have higher Theta values, leading to faster time decay.

Moneyiness

- **In-the-Money (ITM):** These options have intrinsic value and lower extrinsic value, resulting in lower Theta.
- **At-the-Money (ATM):** These options have the highest extrinsic value and Theta, leading to rapid time decay.
- **Out-of-the-Money (OTM):** These options rely entirely on extrinsic value and have higher Theta, causing their prices to decay quickly as expiration approaches.

Strategies to Manage Time Decay

Understanding Theta and time decay can significantly impact the profitability of options trades. Here are some strategies to manage time decay effectively.

Selling Options (Writing)

Selling options allows you to collect the premium upfront. As time passes, the option's price decays due to Theta. If the option expires worthless, you keep the entire premium. This strategy is effective when expecting low volatility and minimal price movement.

Calendar Spreads

A calendar spread involves buying and selling options with different expiration dates but the same strike price. Typically, you buy a long-term option and sell a short-term option. The short-term option decays faster due to higher Theta, allowing you to profit from the difference in time decay rates.

Managing Expiration Dates

Choosing the right expiration date is essential in managing time decay. If you expect significant price movement in the underlying asset, consider selecting longer-term options with lower Theta. Conversely, if you anticipate minimal price movement, shorter-term options with higher Theta may be more advantageous.

Pricing options

Earlier for fixed/floating rate Bonds we were able to price with cash flow information using no arbitrage conditions

Nonlinear payoff ... cannot price without a model for the underlying

Prices of options

we first start with a binomial lattice model (BLM) to price options and then go to geometric brownian models (BM)

- European put/call with strike K and expiration T : $p_E(t; K, T)$, $c_E(t; K, T)$
- American put/call with strike K and expiration T : $p_A(t; K, T)$, $c_A(t; K, T)$

using no arbitrage argument we construct put call parity

European put-call parity at time t for non-dividend paying stock: do any American put call parity exist?

connects european put to european call

$$p_E(t; K, T) + S_t = c_E(t; K, T) + Kd(t, T)$$

$d = 1/(1+r)$
 r = spot rate at time t , d will be compounded according to T

Trading strategy

- At time t buy European call with strike K and expiration T
- At time t sell European put with strike K and expiration T
- At time t (short) sell 1 unit of underlying and buy at time T
- Lend $K \cdot d(t, T)$ dollars up to time T

$d(t, T)$ = discount factor between t and T , think of d as equal to $1/(1+r)$

No-arbitrage argument

- Cash flow at time T : $\max\{S_T - K, 0\} - \max\{K - S_T, 0\} - S_T + K = 0$
- Cash flow at time t : $-c_E(t; K, T) + p_E(t; K, T) + S_t - Kd(t, T) = 0$

By no arbitrage condition because cash flow at $T = 0$ therefore cash flow at t should also be zero

$$P_0 + S_0 e^{-cT} = C_0 + K e^{-rT}.$$

Key Intuition

Imagine two investment strategies:

1. Buy a European Call Option and Sell a European Put Option (Same Strike and Expiration):

- Combined, these create a synthetic long position in the underlying asset, funded by borrowing the present value of the strike price (Ke^{-rT}).
- Your net position mimics holding the underlying asset.

2. Directly Buy the Underlying Asset:

- Simply hold the asset outright.

Since both strategies yield the same outcome at expiration, their costs should be the same. This parity ensures no arbitrage.

Basic Bull Market Option Strategies

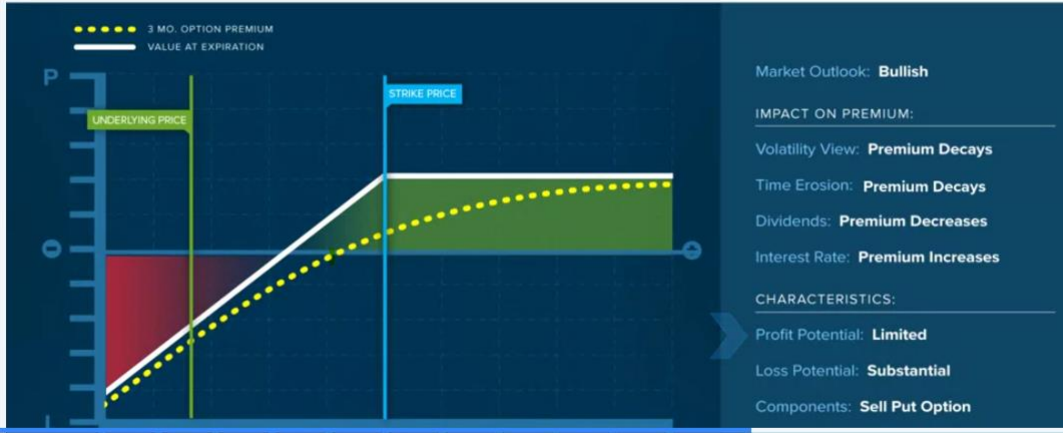
<https://www.optionseducation.org/strategies/bullish-outlook>

Buy a call



Sell a Put

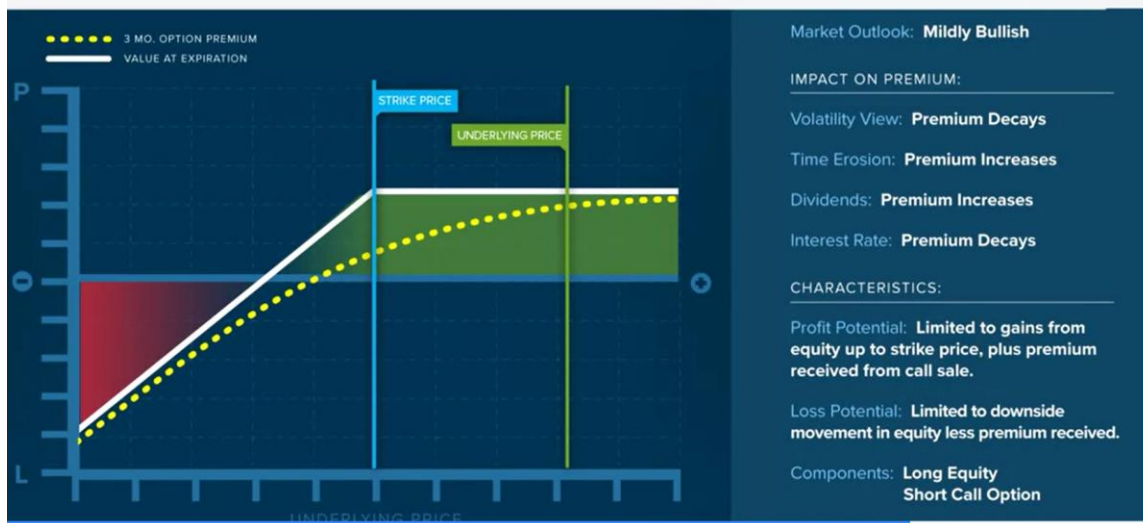
Options: Short Put



Options involve risk and are not suitable for all investors. For more information read the Characteristics and Risks of Standardized Options. 1.25x

Covered Call - It should be noted that the combined position has a similar profile to that of a short put.

Options: Covered Call





Covered Call Strategy: Overview

A **covered call** is a conservative options strategy designed to generate additional income from a stock you already own. It involves selling (or "writing") a **call option** on a stock you own while retaining ownership of the underlying stock.

How the Covered Call Strategy Works

1. Stock Ownership:

You hold a certain number of shares of a stock (e.g., 100 shares per call contract).

2. Selling a Call Option:

You sell a call option with a specified **strike price** and **expiration date**. By doing this:

- You receive a premium (income).
- You agree to sell your stock at the strike price if the option is exercised.

Payoff Scenarios

The payoff of the strategy depends on the stock price at the option's expiration:

1. Stock Price Below Strike Price:

- The call option expires worthless because the buyer won't exercise it.
- You keep the premium as income and retain the stock.

2. Stock Price Equal to Strike Price:

- The option expires worthless, and you keep the premium.
- Your stock remains in your portfolio.

3. Stock Price Above Strike Price:

- The buyer exercises the option, and you must sell the stock at the strike price.
- You gain the strike price plus the premium but lose further upside potential beyond the strike price.

Key Components of the Strategy

1. Premium Income:

The primary benefit of the strategy is earning the premium from selling the call option. This adds to your overall return.

2. Downside Protection:

The premium provides a small buffer against minor price declines in the stock.

3. Limited Upside:

You cap your potential gains at the strike price of the call option, forfeiting any profit if the stock price surges beyond the strike price.

Advantages of the Covered Call Strategy

1. Income Generation:

Selling call options provides regular income, especially in sideways markets.

2. Risk Mitigation:

The premium received acts as a partial hedge against minor stock price drops.

3. Flexibility:

Can be customized based on strike prices and expiration dates to align with your risk/reward profile.

Disadvantages of the Covered Call Strategy

1. Limited Upside:

Gains are capped at the strike price, which might be a disadvantage if the stock price surges.

2. Stock Ownership Risk:

You still bear the risk of owning the underlying stock, which can decline in value.

3. Early Assignment Risk:

The call option may be exercised early, particularly if the stock pays a dividend.

3. An investor buys shares and sells a call option \$10.00 out-of-the-money. What is the profit on a covered call strategy at expiration when the call option ends \$10.00 in-the-money for which the investor received a premium of \$5.00?

1 / 1 point

- ☐ \$10.00
- ☒ \$15.00
- ☐ \$20.00
- ☐ \$5.00

✔ Correct

Correct. The gains from a call option are the gain on the stock plus the premium received from the sale of the option. The gain on the stock in this case is \$10, since we learned that the stock was purchased when the call option was that far from the selected strike price. The call was sold at \$5 and together gives a \$15 profit.

Bull Call Spread - <https://www.interactivebrokers.com/campus/trading-lessons/bull-call-spread/>

Buy a call with a strike price near to where asset is trading at present and sell a call with a higher strike price with the same expiration

Basic Bear Market Option Strategies

<https://www.optionseducation.org/strategies/bearish-outlook>

Bear Market - Long Put

A put option allows an investor to pay a fixed premium for the right, but not the obligation, to sell an asset at a predetermined price until expiration. The long put strategy might be useful for an investor who is bearish on either the market or the price of a specific stock. Investors going long puts may profit if the price of the underlying shares falls below the combined value of the strike price and the net cost of the option. The payoff from a long put position is substantial, increasing point for point with the stock's decline if the price of the underlying shares moves lower. The loss potential is limited to the initial cost of the option. Investors face a maximum loss of the premium at any point at or above the strike price, below which point losses diminish. The value of a long put option is hurt by the passage of time and benefits from increases in volatility.

Covered Put

It is equivalent to short call - loss potential is unlimited

Loss Potential - Unlimited to upside movement in the equity minus the premium received from the sale of put option

Components - Short equity, short put option

Bear Market - Covered Put

A covered put would be considered by someone who would like to derive additional income from a short stock position. A covered put allows the investor to hold a short equity position while simultaneously receiving the premium from selling an equal amount of put options against it. The covered put writer is bearish on the stock's long-term potential but is willing to forego a stock's downside below the strike during the life of the option in order to receive the proceeds of the put premium. The covered put writer benefits from time decay, from a reduction in volatility and if the stock decreases its dividend before expiration. It should be noted that the combined position has a similar profile to that of a short call. The covered put writer remains exposed to any upside in the underlying shares, meaning his loss potential is unlimited.



Covered Put Strategy: Overview

A **covered put** is an options trading strategy that involves **selling a put option** while simultaneously maintaining a **short position** in the underlying stock. This strategy is used when a trader expects the stock price to decline moderately or remain flat.

How the Covered Put Strategy Works

1. Short Stock Position:

You sell shares of a stock you don't own, borrowing them from a broker. This is done with the expectation that the stock price will fall, allowing you to buy them back at a lower price for a profit.

2. Selling a Put Option:

You sell a put option on the same stock, receiving a premium. By doing this, you take on the obligation to buy the stock at the **strike price** if the option buyer exercises their option.

Payoff Scenarios

The payoff depends on the stock price at the option's expiration:

1. Stock Price Above the Strike Price:

- The put option expires worthless.
- You keep the premium as profit.
- You face a loss on the short stock position if the price rises.

2. Stock Price Equal to the Strike Price:

- The put option expires worthless.
- You keep the premium as profit.
- You break even on the short stock position.

3. Stock Price Below the Strike Price:

- The put option is exercised, and you must buy the stock at the strike price.
- You incur losses if the stock price falls significantly, as you are forced to cover your short position at a higher price.



Key Components of the Strategy

1. Premium Income:

Selling the put option generates immediate income, which helps offset potential losses on the short stock position.

2. Risk Exposure:

Losses can be substantial if the stock price rises significantly, as there is no cap on losses from the short stock position.

3. Profit Potential:

The maximum profit occurs if the stock price remains above the strike price, and you keep the premium without additional short-position losses.

When to Use the Covered Put Strategy

- **Moderately Bearish Outlook:**

You expect the stock price to decline slightly but not significantly below the strike price of the put option.

- **Income Generation:**

Selling the put option generates premium income, which offsets some of the risks of the short position.

- **Hedging a Short Position:**

The strategy provides a partial hedge for a short position by collecting premiums from selling puts.

Bear Spread Strategy: <https://www.interactivebrokers.com/campus/trading-lessons/bear-put-spread/>

Buy a put at a strike where asset is trading and sell a put with a lower strike with the same expiration

Market Neutral Strategies

<https://www.optionseducation.org/strategies/neutral-outlook?page=1>

Short Straddle

The short straddle seller is hoping for a lack of movement in the price of the underlying shares and is indifferent to direction. It is a fairly pure bet on decreasing volatility, and benefits from decay. A short straddle is created when an investor sells an equal number of calls and puts with the same strike and expiration. It may be used when investors expect a decrease in either implied volatility or in the movement of the price of the underlying equity. Profit is limited to the initial premium received, while loss is potentially unlimited. The direction of the stock does not matter to the straddle buyer as long as the movement up or down from the strike stays within the price received for the straddle. The maximum gain is the cost of the trade and occurs if the stock closes at the strike price. Time decay helps a straddle seller. The combination has two breakeven points equal to the strike price plus the cost of the trade and the strike price minus the cost of the trade. The straddle seller loses money if the underlying price exceeds a range around the strike price beyond the total premium received.

Short Straddle example –

- Underlying XYZ stock price: \$50.00
- Call strike price: 50.00

- Call option premium: \$5.00
- Put strike price: 50.00
- Put option premium :\$5.00
- Days to expiration: 90
- Upside Breakeven: $\$50.00 + \$5.00 + \$5.00 = \60.00 (Strike price plus premium received for call plus premium received for put option)
- Downside Breakeven: $\$50.00 - \$5.00 - \$5.00 = \40.00 (Strike price minus premium received for call minus premium received for put option)
- Profit potential: Limited to the combined premiums from both call and put or \$10.00 and occurs at the \$50.00 strike price. At that strike price, neither option has any extrinsic value nor any intrinsic value at expiration. Above the central strike price, while the put option has zero value, the call option does and begins to erode the profitability of the trade. Below the central strike price, the call has zero extrinsic value, while the put has an increasing amount as the share price declines, thus also eroding the profitability of the trade.
- Potential profit: @\$55.00 – The put option is out-the-money and has zero value. But the call option has \$5.00 value and this must be subtracted from the net premium received ($\$10.00 - \$5.00 = \$5.00$).
- @\$60.00 – The in-the-money call option now has \$10 intrinsic value is completely offsets the profitability of the trade ($\$10.00 - \$10.00 = \text{zero}$).
- @\$35.00 – At all values below the central strike price the put option has intrinsic value, and in this case is worth \$12.00 ($\$50.00 - \$38.00 = \12.00). And so the net loss from the trade is the amount of net premium minus the distance between the central strike price and the value of the shares ($\$10.00 - \$12.00 = \$2.00$).
- Maximum loss: Loss potential is unlimited to the upside, since the intrinsic call value keeps up with the rising share price penny-for-penny. Losses to the downside can be significant as the intrinsic nature of the put option matches the downside performance of the stock penny-for-penny, limited only by a zero value for the underlying share price.

Market Outlook - Neutral

Volatility View - Decreases premium

Time Erosion - Reduces premium

Dividends - Neutral

Interest Rate - Neutral

Profit Potential - Limited

Loss Potential - Substantial from short put/ unlimited from short call

Components - Sell same strike call and put option with same expiration

Underlying Stock	\$ 50.00	Underlying Stock	Call P&L	Put P&L	Total P&L
Call Strike	\$ 50.00	\$ 10.00	\$ 500	\$ (3,500)	\$ (3,000)
Premium	\$ 5.00	\$ 15.00	\$ 500	\$ (3,000)	\$ (2,500)
Put Strikes	\$ 50.00	\$ 20.00	\$ 500	\$ (2,500)	\$ (2,000)
Premium	\$ 5.00	\$ 25.00	\$ 500	\$ (2,000)	\$ (1,500)
Net Premium	\$ 10.00	\$ 30.00	\$ 500	\$ (1,500)	\$ (1,000)
		\$ 35.00	\$ 500	\$ (1,000)	\$ (500)
		\$ 40.00	\$ 500	\$ (500)	\$ -
		\$ 45.00	\$ 500	\$ -	\$ 500

Underlying Stock	\$ 50.00	Underlying Stock	Call P&L	Put P&L	Total P&L
Call Strike	\$ 50.00	\$ 10.00	\$ 500	\$ (3,500)	\$ (3,000)
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Premium	\$ 5.00	\$ 25.00	\$ 500	\$ (2,000)	\$ (1,500)
Net Premium	\$ 10.00	\$ 30.00	\$ 500	\$ (1,500)	\$ (1,000)
		\$ 35.00	\$ 500	\$ (1,000)	\$ (500)
		\$ 40.00	\$ 500	\$ (500)	\$ -
		\$ 45.00	\$ 500	\$ -	\$ 500
		\$ 50.00	\$ 500	\$ 500	\$ 1,000
		\$ 55.00	\$ -	\$ 500	\$ 500
		\$ 60.00	\$ (500)	\$ 500	\$ -
		\$ 65.00	\$ (1,000)	\$ 500	\$ (500)
		\$ 70.00	\$ (1,500)	\$ 500	\$ (1,000)
		\$ 75.00	\$ (2,000)	\$ 500	\$ (1,500)
		\$ 80.00	\$ (2,500)	\$ 500	\$ (2,000)
		\$ 85.00	\$ (3,000)	\$ 500	\$ (2,500)

1. Which are the correct breakeven prices for the underlying for a short straddle strategy at the \$100.00 strike in which the call option premium collected was \$5.50 and the put option premium was \$4.50 when the underlying traded at \$100.50?
- ☐ \$95.50 and \$105.50
 - ☐ \$96.50 and \$104.50
 - ☐ \$95.00 and \$105.00
 - ☒ \$90.00 and \$110.00

✔ Correct

Correct. To calculate the breakeven prices, all we care about are the strike prices for call and put (which for a straddle are the same) and the gross premium, which is \$10.00. The breakevens are defined as the strike plus the gross and the strike less the gross, which occur at \$110.00 and \$90.00.

Short Strangle

The short strangle is similar to the short straddle, though the strikes of the options differ. This is also a trade that benefits from decay and decreased volatility regardless of direction. Because the strike prices involved are further apart than a short straddle, there is a lower risk that this trade will cause the investor to face a loss. The lower associated risk means that the investor receives a lower premium at the outset for making the trade. As with a short straddle, profit is capped to the initial premium while loss is potentially unlimited. The short strangle makes maximum profits between the two strike prices and has two breakeven points. To the downside, the trade makes money if the stock stays above the lower strike price of the put minus the sum of the two premiums paid. To the upside the trade makes money if the stock stays below the upper strike price for the call plus the sum of the two premiums paid. Outside of these breakeven points the trade has unlimited loss potential in the event that the share price continues to increase or decrease, though the downside potential loss is limited by the fact that the share price could only fall to a minimum of zero.

Short Strangle example –

- Underlying XYZ stock price: \$80.00
- Call strike price: 85.00
- Call option premium: \$3.00
- Put strike price: 75.00
- Put option premium: \$2.50
- Days to expiration: 90
- Upside Breakeven: $\$85.00 + \$3.00 + \$2.50 = \92.50 (Call strike price plus premium received for call plus premium received for put option)
- Downside Breakeven: $\$75.00 - \$3.00 - \$2.50 = \69.50 (Put strike price minus premium received for call minus premium received for put option)
- Profit potential: Limited to the combined premiums from both call and put or \$5.50 and occurs at all points between the \$75.00 and \$85.00 strike prices. Until the upper strike price neither the call nor put has zero intrinsic value. And so, between the strikes, the investor retains both premiums. Below the strike price of the put the value of the combined premium is eaten away, as the intrinsic value of the put option increases. Conversely, above the strike price of the call, that combined premium begins to diminish as the intrinsic value of the call

increases.

- Potential profit: @\$80.00 – Both put and call options are out-the-money and each has zero value. The investor gets to keep the entire \$5.50 premium collected from the sale of each option.
- @\$60.00 – The out-the-money call option now has zero intrinsic value. However, the put option is now in-the-money by \$15.00 (\$75.00 minus \$60.00) and this must be subtracted from the combined \$5.50 premium, which leaves the investor at a total loss of \$9.50 (\$15.00 - \$5.50 = \$9.50).
- Maximum loss: Just like with a short straddle strategy, the short strangle seller faces potentially unlimited losses to the upside, since the intrinsic call value keeps up with the rising share price penny-for-penny. Losses to the downside can be significant as the intrinsic nature of the put option matches the downside performance of the stock penny-for-penny, limited only by a zero value for the underlying share price.

Underlying Stock	\$ 80.00	Underlying Stock	Call P&L	Put P&L	Total P&L
Call Strike	\$ 85.00	\$ 10.00	\$ 300	\$ (6,250)	\$ (5,950)
Premium	\$ 3.00	\$ 15.00	\$ 300	\$ (5,750)	\$ (5,450)
Put Strikes	\$ 75.00	\$ 20.00	\$ 300	\$ (5,250)	\$ (4,950)
Premium	\$ 2.50	\$ 25.00	\$ 300	\$ (4,750)	\$ (4,450)
Net Premium	\$ 5.50	\$ 30.00	\$ 300	\$ (4,250)	\$ (3,950)
		\$ 35.00	\$ 300	\$ (3,750)	\$ (3,450)
		\$ 40.00	\$ 300	\$ (3,250)	\$ (2,950)
		\$ 45.00	\$ 300	\$ (2,750)	\$ (2,450)
		\$ 50.00	\$ 300	\$ (2,250)	\$ (1,950)
		\$ 55.00	\$ 300	\$ (1,750)	\$ (1,450)
		\$ 60.00	\$ 300	\$ (1,250)	\$ (950)
		\$ 65.00	\$ 300	\$ (750)	\$ (450)
		\$ 70.00	\$ 300	\$ (250)	\$ 50
		\$ 75.00	\$ 300	\$ 250	\$ 550
		\$ 80.00	\$ 300	\$ 250	\$ 550
		\$ 85.00	\$ 300	\$ 250	\$ 550
		\$ 90.00	\$ (200)	\$ 250	\$ 50
		\$ 95.00	\$ (700)	\$ 250	\$ (450)
		\$ 100.00	\$ (1,200)	\$ 250	\$ (950)
		\$ 105.00	\$ (1,700)	\$ 250	\$ (1,450)

Break Out Strategy

Long Straddle -

Long Strangle - <https://www.interactivebrokers.com/campus/trading-lessons/long-strangle/>



Long Strangle Options Strategy

A **long strangle** is an options strategy used when a trader expects a significant price movement in the underlying asset but is unsure about the direction. It involves buying both a call and a put option with different strike prices but the same expiration date.

How It Works

1. Buy an out-of-the-money (OTM) call option at strike price X_1 .
2. Buy an out-of-the-money (OTM) put option at strike price X_2 , where $X_2 < X_1$.
3. Both options have the same expiration date.

Few things about Futures:

<https://www.cmegroup.com/education/courses/master-the-trade-futures/expanding-your-futures-knowledge/master-the-trade-comparing-stock-trading-with-futures-trading.html#?email=avisharma781@gmail.com>

Margin considerations — Margin is a term common to both stocks and futures, but they have significantly different connotations. When you buy stocks on margin, you put down 50% of the purchase price and borrow the other 50% and pay an interest rate. Margin with stocks requires a margin account as well. With futures, you put a small good faith deposit down (usually 2-6% of the contracts total value) and can meet that deposit with cash or treasury bills. There is no borrowing. Because of these differences, futures accounts are set up to trade futures in a way that doesn't require a separate "margin account" per se.

Minimum price fluctuations (or tick) — All stocks trade in a minimum increment of a penny (\$0.01). Apple Computer stock can move from 221.00 to 221.01...never a smaller increment. It could jump several pennies but never advance or decline by increments of less than \$0.01. Each futures contract has its own characteristic minimum fluctuation or "tick". For Gold futures, the minimum tick is .10. Since each contract confers 100 ounces of gold, that .10 tick represents \$10.00 (= 100 oz x \$.10/tick)

Selling short stocks vs. futures — Selling short is technique that allows an investor to profit from a decline in prices. Selling short reverses, the old maxim from "buy low sell high" to "sell high, buy low". Both stocks and futures allow this, but the mechanism for doing so is vastly different. With stocks, you must borrow shares, sell them and then subsequently repurchase and replace the borrowed shares (hopefully at a lower price). Stock short sellers are responsible for paying the dividends owed to the holder of the shares. With futures, no such borrowing of "shares" exists. You simply sell futures contracts if you anticipate a price drop and repurchase them at lower prices later. If the price rises, you

may be forced to liquidate or offset your position at a loss. And since futures pay no dividends, the seller of a futures contracts need not worry about dividend payments.

Primary differences at a glance

Clearly, there are some mechanical differences between transacting in the two markets. The table below summarize the primary differences between stocks and futures.

	FUTURES	STOCKS & ETFs
Accounts	Futures account needed	Trade from a securities account
Account documents	<ul style="list-style-type: none">• Account application• Risk and disclosure documents• Net-worth information• Electronic trading disclosures• Quote data fee disclosures	<ul style="list-style-type: none">• Securities account application• Margin account application (if applicable)• Net worth and income requirements• Options disclosure documents
Margin & leverage	Performance bond margin, usually 1-5% of notional amount	50% deposit 50% borrowed at broker loan rate
Exchanges	Trade on futures exchanges i.e. CME Group	Trade on stock exchanges i.e. NYSE, Nasdaq

Diversify assets	All asset classes represented Equity, FX, Interest Rates, Commodities	Listed stocks are categorized as equities. Some ETFs allow investors to gain exposure to asset classes such as IR and commodities
Regulation	Regulated by CFTC	Regulated by SEC
Ownership vs. legal contracts	Legalized contracts to buy or sell a certain amount of a commodity/instrument by a certain expiration date	Stockholders own a share in the company business
Dividends paid	No	Yes
Taxes on short term gains	60/40 rule (United States)	Ordinary income