

# THE EQUITY OPTIONS STRATEGY GUIDE

DECEMBER 2001

# Table of Contents

<b>Introduction</b>	<b>2</b>
<b>Option Terms and Concepts</b>	<b>4</b>
■ What is an Option?	4
■ Long	4
■ Short	4
■ Open	4
■ Close	5
■ Leverage and Risk	5
■ In-the-money, At-the-money, Out-of-the-money	5
■ Time Decay	6
■ Expiration Day	6
■ Exercise	6
■ Assignment	6
■ What's the Net?	7
■ Early Exercise/Assignment	7
■ Volatility	7
<b>Strategies</b>	<b>8</b>
■ Long Call	8
■ Long Put	10
■ Married Put	12
■ Protective Put	14
■ Covered Call	16
■ Covered Put	18
■ Bull Call Spread	20
■ Bear Put Spread	22
■ Collar	24
<b>Glossary</b>	<b>26</b>
<b>For More Information</b>	<b>28</b>

# Introduction

The purpose of this booklet is to provide an introduction to some of the basic *equity option* strategies available to option and/or stock investors. Exchange-traded options have many benefits including flexibility, leverage, limited risk for buyers employing these strategies, and contract performance guaranteed by The Options Clearing Corporation (OCC). Options allow you to participate in price movements without committing the large amount of funds needed to buy stock outright. Options can also be used to *hedge* a stock position, to acquire or sell stock at a purchase price more favorable than the current market price, or, in the case of writing (selling) options, to earn *premium* income. Options give you options. You're not just limited to buying, selling or staying out of the market. With options, you can tailor your position to your own financial situation, stock market outlook and risk tolerance.

All option contracts traded on U.S. securities exchanges are issued, guaranteed and cleared by OCC. OCC is a registered clearing corporation with the Securities and Exchange Commission (SEC) and has received a 'AAA' rating from Standard & Poor's Corporation. The 'AAA' rating relates to OCC's ability to fulfill its obligations as counterparty for options trades.

OCC is the common clearing entity for all securities exchange-traded option transactions. Once OCC is satisfied

that there are matching orders from a buyer and a seller, it severs the link between the parties. In effect, OCC becomes the buyer to the seller and the seller to the buyer. As a result, the seller can buy back the same option he has written, closing out the initial transaction and terminating his obligation to deliver the *underlying stock* or exercise value of the option to OCC; this will in no way affect the right of the original buyer to sell, hold or exercise his option. All premium and settlement payments are made to and paid by OCC.

Whether you are a conservative or growth-oriented investor, or even a short-term, aggressive trader, your broker can help you select an appropriate options strategy. The strategies presented in this booklet do not cover all, or even a significant number, of the possible strategies utilizing options. These are the most basic strategies, however, and will serve well as building blocks for more complex strategies.

Despite their many benefits, options are not suitable for all investors. Individuals should not enter into option transactions until they have read and understood the risk disclosure document, *Characteristics and Risks of Standardized Options*, which outlines the purposes and risks thereof. Further, if you have only limited or no experience with options, or have only a limited understanding of the terms of option contracts and basic option pricing theory, you should examine closely another industry document,

*Understanding Stock Options.* These documents, and many others, can be obtained from your brokerage firm or by either calling 1-888-OPTIONS or visiting [www.888options.com](http://www.888options.com). An investor who desires to utilize options should have well-defined investment objectives suited to his particular financial situation and a plan for achieving these objectives.

Options are currently traded on the following U.S. exchanges: The American Stock Exchange (AMEX), the Chicago Board Options Exchange, Inc. (CBOE), the International Securities Exchange (ISE), the Pacific Exchange, Inc. (PCX), and the Philadelphia Stock Exchange, Inc. (PHLX). Like trading in stocks, options trading is regulated by the SEC. These exchanges seek to provide competitive, liquid, and orderly markets for the purchase and sale of standardized options. It must be noted that, despite the efforts of each exchange to provide liquid markets, under certain conditions it may be difficult or impossible to liquidate an option position. Please refer to the disclosure document for further discussion on this matter.

There are tax ramifications of buying or selling options that should be discussed thoroughly with a broker and/or tax advisor before engaging in option transactions. OCC publishes another document, *Taxes & Investing: A Guide for the Individual Investor*, which can serve to enlight-

en both you and your tax advisor on option strategies and the issue of taxes. This booklet can also be obtained from your brokerage firm or by either calling 1-888-OPTIONS or visiting [www.888options.com](http://www.888options.com).

All strategy examples described in this book assume the use of regular, listed, *American-style* equity options, and do not take into consideration *margin requirements*, transaction and commission costs, or taxes in their profit and loss calculations. You should be aware that in addition to Federal margin requirements, each brokerage firm may have its own margin rules that can be more detailed, specific or restrictive. In addition, each brokerage firm may have its own guidelines with respect to commissions and transaction costs. It is up to you to become fully informed on the specific procedures, rules and/or fee and commission schedules of your specific brokerage firm(s).

The successful use of options requires a willingness to learn what they are, how they work, and what risks are associated with particular options strategies. Individuals seeking expanded investment opportunities in today's markets will find options trading challenging, often fast moving, and potentially rewarding.

# Option Terms and Concepts

## What is an Option?

Although this level of knowledge is assumed, a brief review of equity option basics is in order:

- An equity option is a contract which conveys to its holder the right, but not the obligation, to buy (in the case of a *call*) or sell (in the case of a *put*) shares of the underlying security at a specified price (the strike price) on or before a given date (expiration day). After this given date, the option ceases to exist. The seller of an option is, in turn, obligated to sell (in the case a call) or buy (in the case of a put) the shares to (or from) the buyer of the option at the specified price upon the buyer's request.
- Equity option contracts usually represent 100 shares of the underlying stock.
- *Strike prices* (or *exercise prices*) are the stated price per share for which the underlying security may be purchased (in the case of a call) or sold (in the case of a put) by the option holder upon exercise of the option contract. The strike price, a fixed specification of an option contract, should not be confused with the premium, the price at which the contract trades, which fluctuates daily.
- Equity option strike prices are listed in increments of 2½, 5, or 10 points, depending on their price level.
- Adjustments to an equity option contract's size and/or strike price may be made to account for stock splits, mergers or other corporate actions.
- Generally, at any given time a particular equity option can be bought with one of four *expiration dates*.
- Equity option holders do not enjoy the rights due stockholders – e.g., voting rights, regular cash or special dividends, etc. A call holder must exercise the option and take ownership of underlying shares to be eligible for these rights.
- Buyers and sellers in the exchange markets, where all trading is conducted in the competitive manner of an auction market, set option prices.

## Long

With respect to this booklet's usage of the word, *long* describes a position (in stock and/or options) in which you have purchased and own that security in your brokerage account. For example, if you have purchased the right to buy 100 shares of a stock, and are *holding* that right in your account, you are long a call contract. If you have purchased

the right to sell 100 shares of a stock, and are holding that right in your account, you are long a put contract. If you have purchased 1,000 shares of stock and are holding that stock in your brokerage account, or elsewhere, you are long 1,000 shares of stock.

When you are long an equity option contract:

- You have the right to exercise that option at any time prior to its expiration.
- Your potential loss is limited to the amount you paid for the option contract.

## Short

With respect to this booklet's usage of the word, *short* describes a position in options in which you have *written* a contract (sold one that you did not own). In return, you now have the obligations inherent in the terms of that option contract. If the owner exercises the option, you have an obligation to meet. If you have sold the right to buy 100 shares of a stock to someone else, you are short a call contract. If you have sold the right to sell 100 shares of a stock to someone else, you are short a put contract. When you write an option contract you are, in a sense, creating it. The writer of an option collects and keeps the premium received from its initial sale.

When you are short (i.e., the writer of) an equity option contract:

- You can be assigned an exercise notice at any time during the life of the option contract. All option writers should be aware that assignment prior to expiration is a distinct possibility.
- Your potential loss on a short call is theoretically unlimited. For a put, the risk of loss is limited by the fact that the stock cannot fall below zero in price. Although technically limited, this potential loss could still be quite large if the underlying stock declines significantly in price.

## Open

An *opening* transaction is one that adds to, or creates a new trading position. It can be either a purchase or a sale. With respect to an option transaction, consider both:

- Opening purchase – a transaction in which the purchaser's intention is to create or increase a long position in a given series of options.

- Opening sale – a transaction in which the seller’s intention is to create or increase a short position in a given series of options.

### Close

A *closing* transaction is one that reduces or eliminates an existing position by an appropriate offsetting purchase or sale. With respect to an option transaction:

- Closing purchase – a transaction in which the purchaser’s intention is to reduce or eliminate a short position in a given series of options. This transaction is frequently referred to as “covering” a short position.
- Closing sale – a transaction in which the seller’s intention is to reduce or eliminate a long position in a given series of options.

*Note:* An investor does not close out a long call position by purchasing a put, or vice versa. A closing transaction for an option involves the purchase or sale of an option contract with the same terms, and on any exchange where the option may be traded. An investor intending to close out an option position must do so by the end of trading hours on the option’s last trading day.

### Leverage and Risk

Options can provide leverage. This means an option buyer can pay a relatively small premium for market exposure in relation to the contract value (usually 100 shares of underlying stock). An investor can see large percentage gains from comparatively small, favorable percentage moves in the underlying equity. Leverage also has downside implications. If the underlying stock price does not rise or fall as anticipated during the lifetime of the option, leverage can magnify the investment’s percentage loss. Options offer their owners a predetermined, set risk. However, if the owner’s options expire with no value, this loss can be the entire amount of the premium paid for the option. An *uncovered* option writer, on the other hand, may face unlimited risk.

### In-the-money, At-the-money, Out-of-the-money

The strike price, or exercise price, of an option determines whether that contract is *in-the-money*, *at-the-money*, or *out-of-the-money*. If the strike price of a call option is less than the current market price of the underlying security, the call is said to be in-the-money because the holder of this call has the right to buy the stock at a price which is less than the price he would have to pay to buy the stock in the stock market. Likewise, if a put option has a strike price that is greater than the current market price of the underlying security, it is also said to be in-the-money because the holder of this put has the right to sell the stock at a price which is greater than the price he would receive selling the stock in the stock market. The converse of in-the-money is, not surprisingly, out-of-the-money. If the strike price equals the current market price, the option is said to be at-the-money.

The amount by which an option, call or put, is in-the-money at any given moment is called its *intrinsic value*. Thus, by definition, an at-the-money or out-of-the-money option has no intrinsic value; the *time value* is the total option premium. This does not mean, however, these options can be obtained at no cost. Any amount by which an option’s total premium exceeds intrinsic value is called the time value portion of the premium. It is the time value portion of an option’s premium that is affected by fluctuations in *volatility*, interest rates, dividend amounts and the passage of time. There are other factors that give options value, therefore affecting the premium at which they are traded. Together, all of these factors determine time value.

---

#### Equity call option:

- In-the-money = strike price less than stock price
- At-the-money = strike price same as stock price
- Out-of-the-money = strike price greater than stock price

#### Equity put option:

- In-the-money = strike price greater than stock price
- At-the-money = strike price same as stock price
- Out-of-the-money = strike price less than stock price

---


$$\text{Option Premium} = \text{Intrinsic Value} + \text{Time Value}$$


---

## Time Decay

Generally, the longer the time remaining until an option's expiration, the higher its premium will be. This is because the longer an option's lifetime, greater is the possibility that the underlying share price might move so as to make the option in-the-money. All other factors affecting an option's price remaining the same, the time value portion of an option's premium will decrease (or *decay*) with the passage of time.

*Note:* This *time decay* increases rapidly in the last several weeks of an option's life. When an option expires in-the-money, it is generally worth only its intrinsic value.

## Expiration Day

The expiration date is the last day an option exists. For listed stock options, this is the Saturday following the third Friday of the expiration month. Please note that this is the deadline by which brokerage firms must submit exercise notices to OCC; however, the exchanges and brokerage firms have rules and procedures regarding deadlines for an option holder to notify his brokerage firm of his intention to exercise. This deadline, or *expiration cut-off time*, is generally on the third Friday of the month, before expiration Saturday, at some time after the close of the market. Please contact your brokerage firm for specific deadlines. The last day expiring equity options generally trade is also on the third Friday of the month, before expiration Saturday. If that Friday is an exchange holiday, the last trading day will be one day earlier, Thursday.

## Exercise

If the holder of an American-style option decides to *exercise* his right to buy (in the case of a call) or to sell (in the case of a put) the underlying shares of stock, the holder must direct

his brokerage firm to submit an exercise notice to OCC. In order to ensure that an option is exercised on a particular day other than expiration, the holder must notify his brokerage firm before its *exercise cut-off time* for accepting exercise instructions on that day.

*Note:* Various firms may have their own cut-off times for accepting exercise instructions from customers. These cut-off times may be specific for different classes of options and different from OCC's requirements. Cut-off times for exercise at expiration and for exercise at an earlier date may differ as well.

Once OCC has been notified that an option holder wishes to exercise an option, it will *assign* the exercise notice to a Clearing Member – for an investor, this is generally his brokerage firm – with a customer who has written (and not *covered*) an option contract with the same terms. OCC will choose the firm to notify at random from the total pool of such firms. When an exercise is assigned to a firm, the firm must then assign one of its customers who has written (and not covered) that particular option. Assignment to a customer will be made either randomly or on a “first-in first-out” basis, depending on the method used by that firm. You can find out from your brokerage firm which method it uses for assignments.

## Assignment

The holder of a long American-style option contract can exercise the option at any time until the option expires. It follows that an option writer may be assigned an exercise notice on a short option position at any time until that option expires. If an option writer is short an option that expires in-the-money, assignment on that contract should be expected, call or put. In fact, some option writers are assigned on such short contracts when they expire exactly at-the-money. This occurrence is generally not predictable.

To avoid assignment on a written option contract on a given day, the position must be closed out before that day's market close. Once assignment has been received, an investor has absolutely no alternative but to fulfill his obligations from the assignment per the terms of the contract. An option writer cannot designate a day when assignments are preferable. There is generally no exercise or assignment activity on options that expire out-of-the-money. Owners generally let them expire with no value.

### **What's the Net?**

When an investor exercises a call option, the net price paid for the underlying stock on a per share basis will be the sum of the call's strike price plus the premium paid for the call. Likewise, when an investor who has written a call contract is assigned an exercise notice on that call, the net price received on a per share basis will be the sum of the call's strike price plus the premium received from the call's initial sale.

When an investor exercises a put option, the net price received for the underlying stock on per share basis will be the sum of the put's strike price less the premium paid for the put. Likewise, when an investor who has written a put contract is assigned an exercise notice on that put, the net price paid for the underlying stock on per share basis will be the sum of the put's strike price less the premium received from the put's initial sale.

### **Early Exercise / Assignment**

For call contracts, owners might exercise *early* so that they can take possession of the underlying stock in order to receive a dividend. Check with your brokerage firm and/or tax advisor on the advisability of such an early call exercise. It is therefore extremely important to realize that assignment of exercise notices can occur early – days or weeks

in advance of expiration day. As expiration nears, with a call considerably in-the-money and a sizeable dividend payment approaching, this can be expected. Call writers should be aware of dividend dates, and the possibility of an *early assignment*.

When puts become deep in-the-money, most professional option traders will exercise them before expiration. Therefore, investors with short positions in deep in-the-money puts should be prepared for the possibility of early assignment on these contracts.

### **Volatility**

Volatility is the tendency of the underlying security's market price to fluctuate either up or down. It reflects a price change's magnitude; it does not imply a bias toward price movement in one direction or the other. Thus, it is a major factor in determining an option's premium. The higher the volatility of the underlying stock, the higher the premium because there is a greater possibility that the option will move in-the-money. Generally, as the volatility of an underlying stock increases, the premiums of both calls and puts overlying that stock increase, and vice versa.



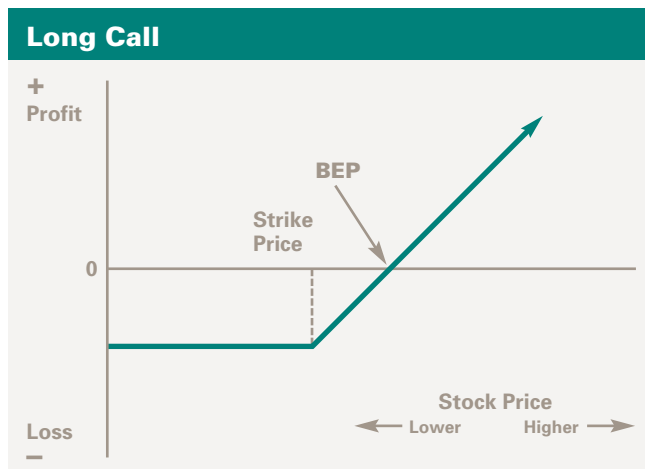
# Strategies

Each sample strategy is accompanied by a graph of profit and loss at the options' expiration. The X-axis represents the price level of an underlying stock. The Y-axis represents profit and loss, above and below the X-axis intersection respectively. Each graph will be labeled with a break-even point (BEP) for the strategy being illustrated. These graphs are not drawn to any specific scale and are meant only for an illustrative and educational purpose. In addition, each strategy includes a discussion regarding an investor's alternatives before and at expiration. The alternatives mentioned are only among the more basic possibilities. With a fuller understanding of option concepts, an investor will appreciate that alternatives available to him are many. It is beyond the scope of this booklet to make any specific recommendations as to maintaining your option positions.

*Note:* Net profit and loss amounts discussed in the following strategy examples do not include taxes, commissions or transaction costs in their formulations.

## Long Call

Purchasing calls has remained the most popular strategy with investors since listed options were first introduced. Before moving into more complex bullish and bearish strategies, an investor should thoroughly understand the fundamentals about buying and holding call options.



**Market Opinion?**  
**Bullish to very bullish.**

**When to Use?**  
**Bullish Speculation**

This strategy appeals to an investor who is generally more interested in the dollar amount of his initial investment and the leveraged financial reward that long calls can offer. The primary motivation of this investor is to realize financial reward from an increase in price of the underlying security. Experience and precision are key to selecting the right option (expiration and/or strike price) for the most profitable result. In general, the more out-of-the-money the call is the more bullish the strategy, as bigger increases in the underlying stock price are required for the option to reach the break-even point.

**As Stock Substitute**

An investor who buys a call instead of purchasing the underlying stock considers the lower dollar cost of purchasing a call contract versus an equivalent amount of stock as a form

of insurance. The uncommitted capital is “insured” against a decline in the price of the call option’s underlying stock, and can be invested elsewhere. This investor is generally more interested in the number of shares of stock underlying the call contracts purchased than in the specific amount of the initial investment – one call option contract for each 100 shares he wants to own. While holding the call option, the investor retains the right to purchase an equivalent number of underlying shares at any time at the predetermined strike price until the contract expires.

*Note:* Equity option holders do not enjoy the rights due stockholders – e.g., voting rights, regular cash or special dividends, etc. A call holder must exercise the option and take ownership of the underlying shares to be eligible for these rights.

### Benefit?

A long call option offers a leveraged alternative to a position in the stock. As the contract becomes more profitable, increasing leverage can result in large percentage profits because purchasing calls generally requires lower up-front capital commitment than an outright purchase of the underlying stock. Long call contracts offer the investor a predetermined risk.

### Risk vs. Reward?

---

**Maximum Profit:** Unlimited

**Maximum Loss:** Limited  
Net Premium Paid

**Upside Profit at Expiration:**

**Stock Price at Expiration – Strike Price – Premium Paid**  
Assuming Stock Price Above BEP

---

Your maximum profit depends only on the potential price increase of the underlying security; in theory, it is unlimited. At expiration an in-the-money call will generally be worth its intrinsic value. Though the potential loss is predetermined and limited in dollar amount, it can be as much as 100% of the premium initially paid for the call. Whatever your motivation for purchasing the call, weigh the potential reward against the potential loss of the entire premium paid.

### Break-Even Point (BEP) at Expiration?

---

**BEP: Strike Price + Premium Paid**

---

Before expiration, however, if the contract’s market price has sufficient time value remaining, the BEP can occur at a lower stock price.

### Volatility?

---

**If Volatility Increases: Positive Effect**  
**If Volatility Decreases: Negative Effect**

---

Any effect of volatility on the option’s total premium is on the time value portion.

### Time Decay?

---

**Passage of Time: Negative Effect**

---

The time value portion of an option’s premium, which the option holder has “purchased” by paying for the option, generally decreases, or decays, with the passage of time. This decrease accelerates as the option contract approaches expiration.

### Alternatives before expiration?

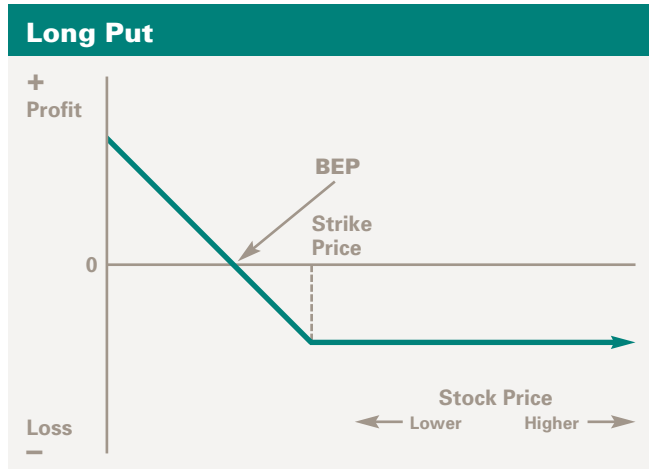
At any given time before expiration, a call option holder can sell the call in the listed options marketplace or exercise the option to close out the position. This can be done to either realize a profitable gain in the option’s premium, or to cut a loss.

### Alternatives at expiration?

At expiration, most investors holding an in-the-money call option will elect to sell the option in the marketplace if it has value, before the end of trading on the option’s last trading day. An alternative is to exercise the call, resulting in the purchase of an equivalent number of underlying shares at the strike price.

# Long Put

A long put can be an ideal tool for an investor who wishes to participate profitably from a downward price move in the underlying stock. Before moving into more complex bearish strategies, an investor should thoroughly understand the fundamentals about buying and holding put options.



**Market Opinion?**  
Bearish.

## When to Use?

Purchasing puts without owning shares of the underlying stock is a purely directional strategy used for bearish speculation. The primary motivation of this investor is to realize financial reward from a decrease in price of the underlying security. This investor is generally more interested in the dollar amount of his initial investment and the leveraged financial reward that long puts can offer than in the number of contracts purchased. Buying puts can also be used as an alternative to selling stock short.

Experience and precision are key in selecting the right option (expiration and/or strike price) for the most profitable result. In general, the more out-of-the-money the put purchased is the more bearish the strategy, as bigger decreases in the underlying stock price are required for the option to reach the break-even point.

## Benefit?

A long put offers a leveraged alternative to a bearish, or “short sale” of the underlying stock, and offers less potential risk to the investor. As with a long call, an investor who purchased and is holding a long put has predetermined, limited financial risk versus the unlimited upside risk from a short stock sale. Purchasing a put generally requires lower up-front capital commitment than the margin required to establish a short stock position. Regardless of market conditions, a long put will never require a margin call. As the contract becomes more profitable, increasing leverage can result in large percentage profits.

## Risk vs. Reward?

---

**Maximum Profit:** Limited Only by Stock Declining to Zero

**Maximum Loss:** Limited

Premium Paid

---

**Maximum Profit at Expiration:**

**Strike Price – Stock Price at Expiration – Premium Paid**

Assuming Stock Price Below BEP

---

The maximum profit amount can be limited by the stock’s potential decrease to no less than zero. At expiration an in-the-money put will generally be worth its intrinsic value. Though the potential loss is predetermined and limited in dollar amount, it can be as much as 100% of the premium initially paid for the put. Whatever your motivation for purchasing the put, weigh the potential reward against the potential loss of the entire premium paid.

## Break-Even Point (BEP) at Expiration?

---

**BEP: Strike Price – Premium Paid**

---

Before expiration, however, if the contract's market price has sufficient time value remaining, the BEP can occur at a higher stock price.

## Volatility?

---

**If Volatility Increases: Positive Effect**  
**If Volatility Decreases: Negative Effect**

---

Any effect of volatility on the option's total premium is on the time value portion.

## Time Decay?

---

**Passage of Time: Negative Effect**

---

The time value portion of an option's premium, which the option holder has "purchased" when paying for the option, generally decreases, or decays, with the passage of time. This decrease accelerates as the option contract approaches expiration. A market observer will notice that time decay for puts occurs at a slightly slower rate than with calls.

## Alternatives before expiration?

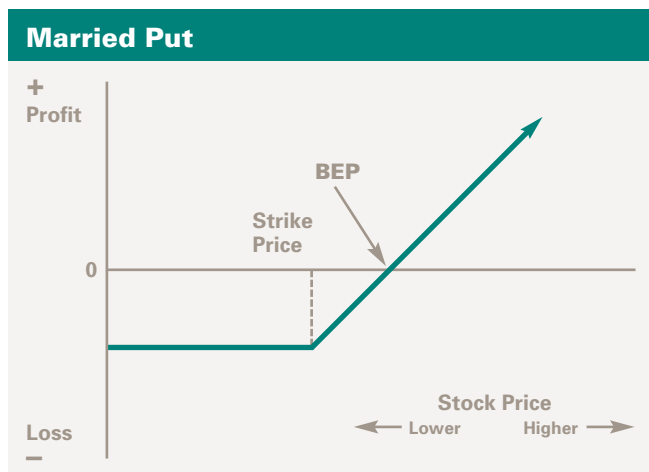
At any given time before expiration, a put option holder can sell the put in the listed options marketplace or exercise the option to close out the position. This can be done to either realize a profitable gain in the option's premium, or to cut a loss.

## Alternatives at expiration?

At expiration most investors holding an in-the-money put will elect to sell the option in the marketplace if it has value, before the end of trading on the option's last trading day. An alternative is to purchase an equivalent number of shares in the marketplace, exercise the long put and then sell them to a put writer at the option's strike price. The third choice, one resulting in considerable risk, is to exercise the put, sell the underlying shares and establish a short stock position in an appropriate type of brokerage account.

# Married Put

An investor purchasing a put while at the same time purchasing an equivalent number of shares of the underlying stock is establishing a “married put” position – a hedging strategy with a name from an old IRS ruling.



**Market Opinion?**  
Bullish to very bullish.

## When to Use?

The investor employing the married put strategy wants the benefits of stock ownership (dividends, voting rights, etc.), but has concerns about unknown, near-term, downside market risks. Purchasing puts with the purchase of shares of the underlying stock is a directional and bullish strategy. The primary motivation of this investor is to protect his shares of the underlying security from a decrease in market price. He will generally purchase a number of put contracts equivalent to the number of shares held.

## Benefit?

While the married put investor retains all benefits of stock ownership, he has “insured” his shares against an unacceptable decrease in value during the lifetime of the put, and has a limited, predefined, downside market risk. The premium paid for the put option is equivalent to the premium paid for an insurance policy. No matter how much the underlying stock decreases in value during the option’s lifetime, the investor has a guaranteed selling price for the shares at the put’s strike price. If there is a sudden, significant decrease in the market price of the underlying stock, a put owner has the luxury of time to react. Alternatively, a previously entered stop loss limit order on the purchased shares might be triggered at a time and at a price unacceptable to the investor. The put contract has conveyed to him a guaranteed selling price, and control over when he chooses to sell his stock.

## Risk vs. Reward?

---

**Maximum Profit:** Unlimited

**Maximum Loss:** Limited

$\text{Stock Purchase Price} - \text{Strike Price} + \text{Premium Paid}$

**Upside Profit at Expiration:**

$\text{Gains in Underlying Share Value} - \text{Premium Paid}$

---

Your maximum profit depends only on the potential price increase of the underlying security; in theory it is unlimited. When the put expires, if the underlying stock closes at the price originally paid for the shares, the investor’s loss would be the entire premium paid for the put.

## Break-Even Point (BEP) at Expiration?

---

**BEP: Stock Purchase Price + Premium Paid**

---

## Volatility?

---

**If Volatility Increases: Positive Effect**  
**If Volatility Decreases: Negative Effect**

---

Any effect of volatility on the option's total premium is on the time value portion.

## Time Decay?

---

**Passage of Time: Negative Effect**

---

The time value portion of an option's premium, which the option holder has "purchased" when paying for the option, generally decreases, or decays, with the passage of time. This decrease accelerates as the option contract approaches expiration. A market observer will notice that time decay for puts occurs at a slightly slower rate than with calls.

## Alternatives before expiration?

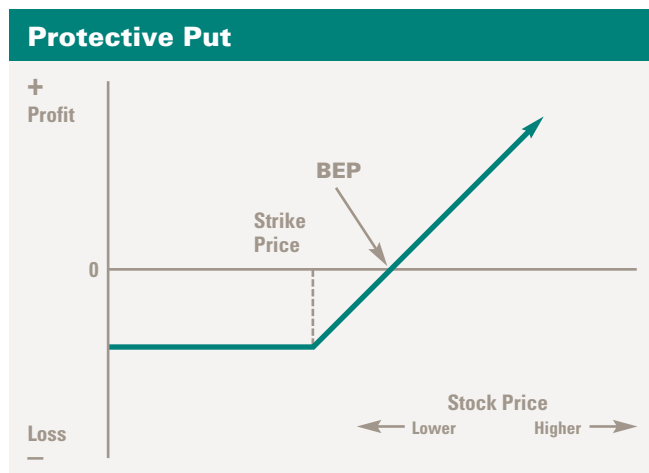
An investor employing the married put can sell his stock at any time, sell his long put or exercise his long put at any time before it expires. If the investor loses concern over a possible decline in market value of his hedged underlying shares, the put option may be sold if it has market value remaining.

## Alternatives at expiration?

If the put option expires with no value, no action need be taken; the investor will retain his shares. If the option expires in-the-money, the investor can elect to exercise his right to sell the underlying shares at the put's strike price. Alternatively, the investor may sell the put option, if it has market value, before the market closes on the option's last trading day. The premium received from the long option's sale will offset any financial loss from a decline in underlying share value.

# Protective Put

An investor who purchases a put option while holding shares of the underlying stock from a previous purchase is employing a “protective put.”



## Market Opinion?

**Bullish on the underlying stock.**

## When to Use?

The investor employing the protective put strategy owns shares of underlying stock from a previous purchase, and generally has unrealized profits accrued from an increase in value of those shares. He might have concerns about unknown, downside market risks in the near term and wants some protection for the gains in share value. Purchasing puts while holding shares of underlying stock is a directional strategy, but a bullish one.

## Benefit?

Like the married put investor, the protective put investor retains all benefits of continuing stock ownership (dividends, voting rights, etc.) during the lifetime of the put contract, unless he sells his stock. At the same time, the protective put serves to limit downside loss in unrealized gains accrued since the underlying stock’s purchase. No matter how much the underlying stock decreases in value during the option’s lifetime, the put guarantees the investor the right to sell his shares at the put’s strike price until the option expires. If there is a sudden, significant decrease in the market price of the underlying stock, a put owner has the luxury of time to react. Alternatively, a previously entered stop loss limit order on the purchased shares might be triggered at both a time and a price unacceptable to the investor. The put contract has conveyed to him a guaranteed selling price at the strike price, and control over when he chooses to sell his stock.

## Risk vs. Reward?

---

**Maximum Profit: Unlimited**

**Maximum Loss: Limited**

$\text{Strike Price} - \text{Stock Purchase Price} + \text{Premium Paid}$

**Upside Profit at Expiration:**

$\text{Gains in Underlying Share Value Since Purchase} - \text{Premium Paid}$

---

Potential maximum profit for this strategy depends only on the potential price increase of the underlying security; in theory it is unlimited. If the put expires in-the-money, any gains realized from an increase in its value will offset any decline in the unrealized profits from the underlying shares. On the other hand, if the put expires at- or out-of-the-money, the investor will lose the entire premium paid for the put.

### **Break-Even Point (BEP) at Expiration?**

---

**BEP: Stock Purchase Price + Premium Paid**

---

### **Volatility?**

---

**If Volatility Increases: Positive Effect**  
**If Volatility Decreases: Negative Effect**

---

Any effect of volatility on the option's total premium is on the time value portion.

### **Time Decay?**

---

**Passage of Time: Negative Effect**

---

The time value portion of an option's premium, which the option holder has "purchased" when paying for the option, generally decreases, or decays, with the passage of time. This decrease accelerates as the option contract approaches expiration. A market observer will notice that time decay for puts occurs at a slightly slower rate than with calls.

### **Alternatives before expiration?**

The investor employing the protective put is free to sell his stock, sell his long put or exercise his long put at any time before it expires. For instance, if the investor loses concern over a possible decline in market value of his hedged underlying shares, the put option may be sold if it has market value remaining.

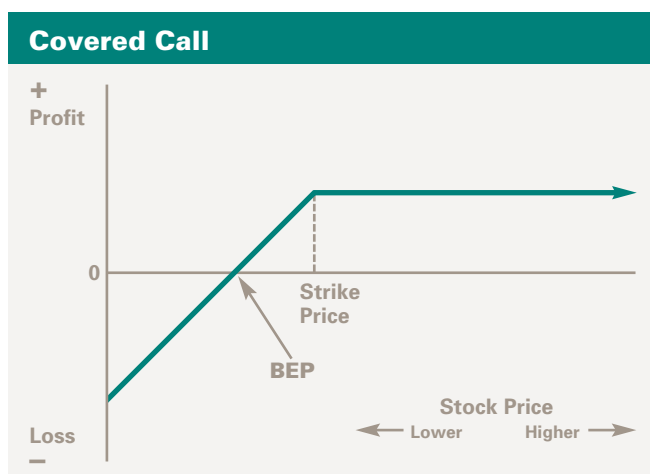
### **Alternatives at expiration?**

If the put option expires with no value, no action need be taken; the investor will retain his shares. If the option closes in-the-money, the investor can elect to exercise his right to sell the underlying shares at the put's strike price. Alternatively, the investor may sell the put option, if it has market value, before the market closes on the option's last trading day. The premium received from the long option's sale will offset any financial loss from a decline in underlying share value.



# Covered Call

The covered call is a strategy in which an investor writes a call option contract while at the same time owning an equivalent number of shares of the underlying stock. If this stock is purchased simultaneously with writing the call contract, the strategy is commonly referred to as a “buy-write.” In either case, the stock is generally held in the same brokerage account from which the investor writes the call, and fully collateralizes, or “covers,” the obligation conveyed by writing a call option contract. This strategy is the most basic and most widely used strategy combining the flexibility of listed options with stock ownership.



## Market Opinion?

**Neutral to bullish on the underlying stock.**

## When to Use?

Though the covered call can be utilized in any market condition, it is most often employed when the investor, while bullish on the underlying stock, feels that its market value will experience little range over the lifetime of the call contract. The investor desires to either generate additional income (over dividends) from shares of the underlying stock, and/or provide a limited amount of protection against a decline in underlying stock value.

## Benefit?

While this strategy can offer limited protection from a decline in price of the underlying stock and limited profit participation with an increase in stock price, it generates income because the investor keeps the premium received from writing the call. At the same time, the investor can appreciate all benefits of underlying stock ownership, such as dividends and voting rights, unless he is assigned an exercise notice on the written call and is obligated to sell his shares. There is a significant chance that an option whose underlying stock is paying a dividend may be exercised prior to expiration.

## Risk vs. Reward?

**Profit Potential: Limited**

**Loss Potential: Substantial**

### Upside Profit at Expiration If Assigned:

Premium Received + Difference (if any) Between Strike Price and Stock Purchase Price

### Upside Profit at Expiration If Not Assigned:

Any Gains in Stock Value + Premium Received

Maximum profit will occur if the price of the underlying stock you own is at or above the call option's strike price, either at its expiration or when you might be assigned an exercise notice on the call before it expires. The risk of real financial loss with this strategy comes from the shares of stock held by the investor. This loss can become substantial if the stock price continues to decline in price as the written call expires. At the call's expiration, loss can be calculated as the original purchase price of the stock less its current market price, less the premium received from initial sale

of the call. Any loss accrued from a decline in stock price is offset by the premium you received from the initial sale of the call option. As long as the underlying shares of stock are not sold, this would be an unrealized loss. Assignment on a written call is always possible. An investor holding shares with a low cost basis should consult his tax advisor about the tax ramifications of writing calls on such shares.

### **Break-Even Point (BEP) at Expiration?**

---

**BEP: Stock Purchase Price – Premium Received**

---

### **Volatility?**

---

**If Volatility Increases: Negative Effect**  
**If Volatility Decreases: Positive Effect**

---

Any effect of volatility on the option's price is on the time value portion of the option's premium.

### **Time Decay?**

---

**Passage of Time: Positive Effect**

---

With the passage of time, the time value portion of the option's premium generally decreases – a positive effect for an investor with a short option position.

### **Alternatives before expiration?**

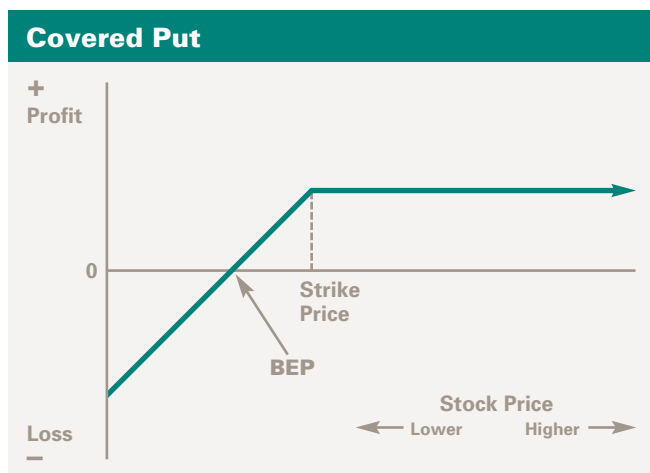
If the investor's opinion on the underlying stock changes significantly before the written call expires, whether more bullish or more bearish, the investor can make a closing purchase transaction of the call in the marketplace. This would close out the written call contract, relieving the investor of an obligation to sell his stock at the call's strike price. Before taking this action, the investor should weigh any realized profit or loss from the written call's purchase against any unrealized profit or loss from holding shares of the underlying stock. If the written call position is closed out in this manner, the investor can decide whether to make another option transaction to either generate income from and/or protect his shares, to hold the stock unprotected with options, or to sell the shares.

### **Alternatives at expiration?**

As expiration day for the call option nears, the investor considers three scenarios and then accordingly makes a decision. The written call contract will either be in-the-money, at-the-money or out-of-the-money. If the investor feels the call will expire in-the-money, he can choose to be assigned an exercise notice on the written contract and sell an equivalent number of shares at the call's strike price. Alternatively, the investor can choose to close out the written call with a closing purchase transaction, canceling his obligation to sell stock at the call's strike price, and retain ownership of the underlying shares. Before taking this action, the investor should weigh any realized profit or loss from the written call's purchase against any unrealized profit or loss from holding shares of the underlying stock. If the investor feels the written call will expire out-of-the-money, no action is necessary. He can let the call option expire with no value and retain the entire premium received from its initial sale. If the written call expires exactly at-the-money, the investor should realize that assignment of an exercise notice on such a contract is possible, but should not be assumed. Consult with your brokerage firm or a financial advisor on the advisability of what action to take in this case.

# Cash-Secured Put

According to the terms of a put contract, a put writer is obligated to purchase an equivalent number of underlying shares at the put's strike price if assigned an exercise notice on the written contract. Many investors write puts because they are willing to be assigned and acquire shares of the underlying stock in exchange for the premium received from the put's sale. For this discussion, a put writer will be considered "covered" if he has on deposit with his brokerage firm a cash amount (or other approved collateral) sufficient to cover such a purchase.



**Market Opinion?**  
Neutral to slightly bullish.

## When to Use?

There are two key motivations for employing this strategy: either as an attempt to purchase underlying shares below current market price, or to collect and keep premium from the sale of puts which expire out-of-the-money and with no value. An investor should write a covered put only when he would be comfortable owning underlying shares, because

assignment is always possible at any time before the put expires. In addition, he should be satisfied that the net cost for the shares will be at a satisfactory entry point if he is assigned an exercise. The number of put contracts written should correspond to the number of shares the investor is comfortable and financially capable of purchasing. While assignment may not be the objective at times, it should not be a financial burden. This strategy can become speculative when more puts are written than the equivalent number of shares desired to own.

## Benefit?

The put writer collects and keeps the premium from the put's sale, no matter how much the stock increases or decreases in price. If the writer is assigned, he is then obligated to purchase an equivalent amount of underlying shares at the put's strike price. The premium received from the put's sale will partially offset the purchase price for the stock, and can result in a purchase of shares below the current market price. If the underlying stock price declines significantly and the put writer is assigned, the purchase price for the shares can be above current market price. In this case, the put writer will have an unrealized loss due to the high stock purchase price, but will have upside profit potential if retaining the purchased shares.

## Risk vs. Reward?

**Maximum Profit:** Limited  
Premium Received

**Maximum Loss:** Substantial

**Upside Profit at Expiration:**  
Premium Received from Put Sale

**Net Stock Purchase Price If Assigned:**  
Strike Price – Premium Received from Put Sale

If the underlying stock increases in price and the put expires with no value, the profit is limited to the premium received from the put's initial sale. On the other hand, an outright purchase of underlying stock would offer the investor unlimited upside profit potential. If the underlying stock declines below the strike price of the put, the investor might be assigned an exercise notice and be obligated to purchase an equivalent number of shares. The net stock purchase price would be the put's strike price less the premium received from the put's sale. This price can be less than current market price for the stock when assignment is made.

The loss potential for this strategy is similar to owning an equivalent number of underlying shares. Theoretically, the stock price can decline to zero. If assignment results in the purchase of stock at a net price greater than the current market price, the investor would incur a loss – unrealized as long as ownership of the shares is retained.

### **Break-Even Point (BEP) at Expiration?**

---

**BEP: Strike Price – Premium Received from Sale of Put**

---

### **Volatility?**

---

**If Volatility Increases: Negative Effect**  
**If Volatility Decreases: Positive Effect**

---

Any effect of volatility on the option's total premium is on the time value portion.

### **Time Decay?**

---

**Passage of Time: Positive Effect**

---

With the passage of time, the time value portion of the option's premium generally decreases – a positive effect for an investor with a short option position.

### **Alternatives before expiration?**

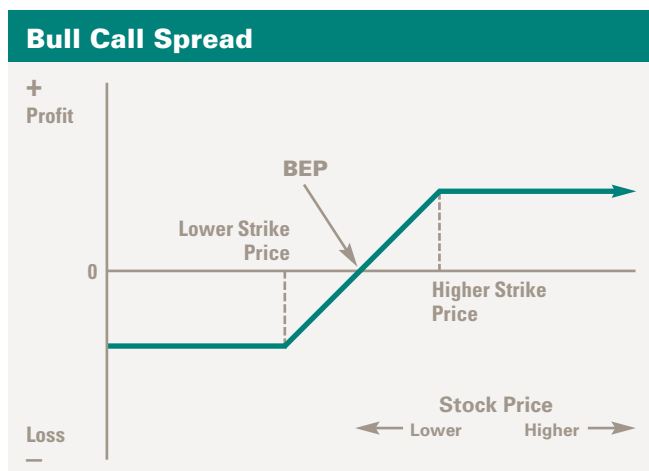
If the investor's opinion about the underlying stock changes before the put expires, the investor can buy the same contract in the marketplace to "close out" his position at a realized loss. After this is done, no assignment is possible. The investor is relieved from any obligation to purchase underlying stock.

### **Alternatives at expiration?**

If the short option has any value when it expires, the investor will most likely be assigned an exercise notice and be obligated to purchase an equivalent number of shares. If owning the underlying shares is not desired at this point, the investor can close out the written put by buying a contract with the same terms in the marketplace. Such a purchase would have to occur before the market closes on the option's last trading day, and could result in a realized loss. On the other hand, the investor is obliged to take delivery of the underlying shares at a possible unrealized loss.

# Bull Call Spread

Establishing a bull call spread involves the purchase of a call option on a particular underlying stock, while simultaneously writing a call option on the same underlying stock with the same expiration month, at a higher strike price. Both the buy and the sell sides of this spread are opening transactions, and are always the same number of contracts. This spread is sometimes more broadly categorized as a “vertical spread”: a family of spreads involving options of the same stock, same expiration month, but different strike prices. They can be created with either all calls or all puts, and be bullish or bearish. The bull call spread, as any spread, can be executed as a “unit” in one single transaction, not as separate buy and sell transactions. For this bullish vertical spread, a bid and offer for the whole package can be requested through your brokerage firm from an exchange where the options are listed and traded.



**Market Opinion?**  
Moderately bullish to bullish.

**When to Use?**  
Moderately Bullish

An investor often employs the bull call spread in moderately bullish market environments, and wants to capitalize on a modest advance in price of the underlying stock. If the investor’s opinion is very bullish on a stock it will generally prove more profitable to make a simple call purchase.

## Risk Reduction

An investor will also turn to this spread when there is discomfort with either the cost of purchasing and holding the long call alone, or with the conviction of his bullish market opinion.

## Benefit?

The bull call spread can be considered a doubly hedged strategy. The price paid for the call with the lower strike price is partially offset by the premium received from writing the call with a higher strike price. Thus, the investor’s investment in the long call, and the risk of losing the entire premium paid for it, is reduced or hedged.

On the other hand, the long call with the lower strike price caps or hedges the financial risk of the written call with the higher strike price. If the investor is assigned an exercise notice on the written call and must sell an equivalent number of underlying shares at the strike price, those shares can be purchased at a predetermined price by exercising the purchased call with the lower strike price. As a trade-off for the hedge it offers, this written call limits the potential maximum profit for the strategy.

## Risk vs. Reward?

**Upside Maximum Profit: Limited**  
Difference Between Strike Prices – Net Debit Paid

**Maximum Loss: Limited**  
Net Debit Paid

A bull call spread tends to be profitable when the underlying stock increases in price. It can be established in one transaction, but always at a debit (net cash outflow). The call with the lower strike price will always be purchased at a price greater than the offsetting premium received from writing the call with the higher strike price.

Maximum loss for this spread will generally occur as the underlying stock price declines below the lower strike price. If both options expire out-of-the-money with no value, the entire net debit paid for the spread will be lost.

The maximum profit for this spread will generally occur as the underlying stock price rises above the higher strike price, and both options expire in-the-money. The

investor can exercise the long call, buy stock at its lower strike price, and sell that stock at the written call's higher strike price if assigned an exercise notice. This will be the case no matter how high the underlying stock has risen in price. If the underlying stock price is in between the strike prices when the calls expire, the long call will be in-the-money and worth its intrinsic value. The written call will be out-of-the-money, and have no value.

### **Break-Even Point (BEP) at Expiration?**

---

**BEP: Strike Price of Purchased Call + Net Debit Paid**

---

### **Volatility?**

---

**If Volatility Increases: Effect Varies**  
**If Volatility Decreases: Effect Varies**

---

The effect of an increase or decrease in the volatility of the underlying stock may be noticed in the time value portion of the options' premiums. The net effect on the strategy will depend on whether the long and/or short options are in-the-money or out-of-the-money, and the time remaining until expiration.

### **Time Decay?**

---

**Passage of Time: Effect Varies**

---

The effect of time decay on this strategy varies with the underlying stock's price level in relation to the strike prices of the long and short options. If the stock price is midway between the strike prices, the effect can be minimal. If the stock price is closer to the lower strike price of the long call, losses generally increase at a faster rate as time passes. Alternatively, if the underlying stock price is closer to the higher strike price of the written call, profits generally increase at a faster rate as time passes.

### **Alternatives before expiration?**

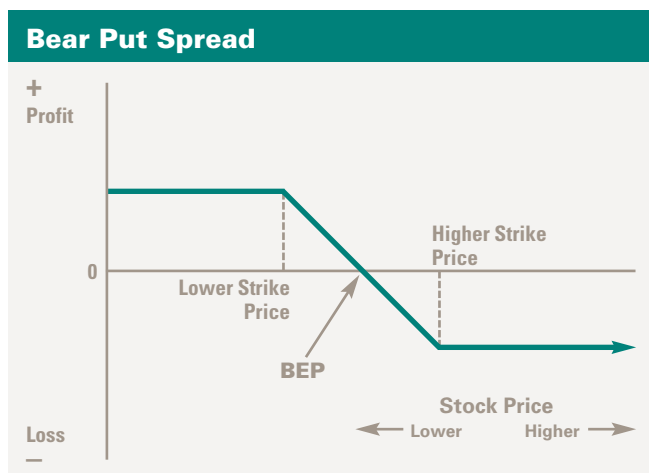
A bull call spread purchased as a unit for a net debit in one transaction can be sold as a unit in one transaction in the options marketplace for a credit, if it has value. This is generally the manner in which investors close out a spread before its options expire, in order to cut a loss or realize profit.

### **Alternatives at expiration?**

If both options have value, investors will generally close out a spread in the marketplace as the options expire. This will be less expensive than incurring the commissions and transaction costs from a transfer of stock resulting from either an exercise of and/or an assignment on the calls. If only the purchased call is in-the-money as it expires, the investor can either sell it in the marketplace if it has value or exercise the call and purchase an equivalent number of shares. In either of these cases, the transaction(s) must occur before the close of the market on the options' last trading day.

# Bear Put Spread

Establishing a bear put spread involves the purchase of a put option on a particular underlying stock, while simultaneously writing a put option on the same underlying stock with the same expiration month, but with a lower strike price. Both the buy and the sell sides of this spread are opening transactions, and are always the same number of contracts. This spread is sometimes more broadly categorized as a “vertical spread”: a family of spreads involving options of the same stock, same expiration month, but different strike prices. They can be created with either all calls or all puts, and be bullish or bearish. The bear put spread, as any spread, can be executed as a “package” in one single transaction, not as separate buy and sell transactions. For this bearish vertical spread, a bid and offer for the whole package can be requested through your brokerage firm from an exchange where the options are listed and traded.



**Market Opinion?**  
Moderately bearish to bearish.

**When to Use?**  
Moderately Bearish

An investor often employs the bear put spread in moderately bearish market environments, and wants to capitalize on a modest decrease in price of the underlying stock. If the

investor’s opinion is very bearish on a stock it will generally prove more profitable to make a simple put purchase.

## Risk Reduction

An investor will also turn to this spread when there is discomfort with either the cost of purchasing and holding the long put alone, or with the conviction of his bearish market opinion.

## Benefit?

The bear put spread can be considered a doubly hedged strategy. The price paid for the put with the higher strike price is partially offset by the premium received from writing the put with a lower strike price. Thus, the investor’s investment in the long put and the risk of losing the entire premium paid for it, is reduced or hedged.

On the other hand, the long put with the higher strike price caps or hedges the financial risk of the written put with the lower strike price. If the investor is assigned an exercise notice on the written put, and must purchase an equivalent number of underlying shares at its strike price, he can sell the purchased put with the higher strike price in the marketplace. The premium received from the put’s sale can partially offset the cost of purchasing the shares from the assignment. The net cost to the investor will generally be a price less than current market prices. As a trade-off for the hedge it offers, this written put limits the potential maximum profit for the strategy.

## Risk vs. Reward?

---

**Downside Maximum Profit: Limited**  
Difference Between Strike Prices – Net Debit Paid

**Maximum Loss: Limited**  
Net Debit Paid

---

A bear put spread tends to be profitable if the underlying stock decreases in price. It can be established in one transac-

tion, but always at a debit (net cash outflow). The put with the higher strike price will always be purchased at a price greater than the offsetting premium received from writing the put with the lower strike price.

Maximum loss for this spread will generally occur as the underlying stock price rises above the higher strike price. If both options expire out-of-the-money with no value, the entire net debit paid for the spread will be lost.

The maximum profit for this spread will generally occur as the underlying stock price declines below the lower strike price, and both options expire in-the-money. This will be the case no matter how low the underlying stock has declined in price. If the underlying stock is in between the strike prices when the puts expire, the purchased put will be in-the-money, and be worth its intrinsic value. The written put will be out-of-the-money, and have no value.

### **Break-Even Point (BEP) at Expiration?**

---

**BEP: Strike Price of Purchased Put – Net Debit Paid**

---

### **Volatility?**

---

**If Volatility Increases: Effect Varies**  
**If Volatility Decreases: Effect Varies**

---

The effect of an increase or decrease in the volatility of the underlying stock may be noticed in the time value portion of the options' premiums. The net effect on the strategy will depend on whether the long and/or short options are in-the-money or out-of-the-money, and the time remaining until expiration.

### **Time Decay?**

---

#### **Passage of Time: Effect Varies**

---

The effect of time decay on this strategy varies with the underlying stock's price level in relation to the strike prices of the long and short options. If the stock price is midway between the strike prices, the effect can be minimal. If the stock price is closer to the higher strike price of the purchased put, losses generally increase at a faster rate as time passes. Alternatively, if the underlying stock price is closer to the lower strike price of the written put, profits generally increase at a faster rate as time passes.

#### **Alternatives before expiration?**

A bear put spread purchased as a unit for a net debit in one transaction can be sold as a unit in one transaction in the options marketplace for a credit, if it has value. This is generally the manner in which investors close out a spread before its options expire, in order to cut a loss or realize profit.

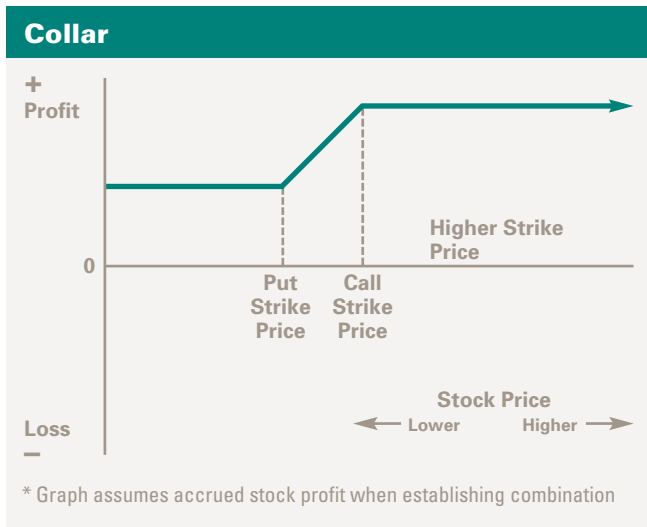
#### **Alternatives at expiration?**

If both options have value, investors will generally close out a spread in the marketplace as the options expire. This will be less expensive than incurring the commissions and transaction costs from a transfer of stock resulting from either an exercise of and/or an assignment on the puts. If only the purchased put is in-the-money and has value as it expires, the investor can sell it in the marketplace before the close of the market on the option's last trading day. On the other hand, the investor can exercise the put and either sell an equivalent number of shares that he owns or establish a short stock position.



# Collar

A *collar* can be established by holding shares of an underlying stock, purchasing a protective put and writing a covered call on that stock. Generally, the put and the call are both out-of-the-money when this combination is established, and have the same expiration month. Both the buy and the sell sides of this combination are opening transactions, and are always the same number of contracts. In other words, one collar equals one long put and one written call along with owning 100 shares of the underlying stock. The primary concern in employing a collar is protection of profits accrued from underlying shares rather than increasing returns on the upside.



## Market Opinion?

Neutral, following a period of appreciation.

## When to Use?

An investor will employ this strategy after accruing unrealized profits from the underlying shares, and wants to protect these gains with the purchase of a protective put. At the same time, the investor is willing to sell his stock at a price higher than the current market price so an out-of-the-money call contract is written, covered in this case by the underlying stock.

## Benefit?

This strategy offers the stock protection of a put. However, in return for accepting a limited upside profit potential on his underlying shares (to the call's strike price), the investor writes a call contract. Because the premium received from writing the call can offset the cost of the put, the investor is obtaining downside put protection at a smaller net cost than the cost of the put alone. In some cases, depending on the strike prices and the expiration month chosen, the premium received from writing the call will be more than the cost of the put. In other words, the combination can sometimes be established for a net credit; the investor receives cash for establishing the position. The investor keeps the cash credit, regardless of the price of the underlying stock when the options expire. Until the investor either exercises his put and sells the underlying stock, or is assigned an exercise notice on the written call and is obligated to sell his stock, all rights of stock ownership are retained. See both Protective Put and Covered Call strategies presented earlier in this booklet.

## Risk vs. Reward?

This example assumes an accrued profit from the investor's underlying shares at the time the call and put positions are established, and that this unrealized profit is being protected on the downside by the long put. Therefore, discussion of maximum loss does not apply. Rather, in evaluating profit and/or loss below, bear in mind the underlying stock's purchase price (or cost basis). Compare that to the net price received at expiration on the downside from exercising the put and selling the underlying shares, or the net sale price of

the stock on the upside if assigned on the written call option. This example also assumes that when the combined position is established, both the written call and purchased put are out-of-the-money.

---

**Net Upside Stock Sale Price  
if Assigned on the Written Call:**

Call's Strike Price + Net Credit Received for Combination  
or  
Call's Strike Price – Net Debit Paid for Combination

**Net Downside Stock Sale Price  
if Exercising the Long Put:**

Put's Strike Price + Net Credit Received for Combination  
or  
Put's Strike Price – Net Debit Paid for Combination

---

If the underlying stock price is between the strike prices of the call and put when the options expire, both options will generally expire with no value. In this case, the investor will lose the entire net premium paid when establishing the combination, or keep the entire net cash credit received when establishing the combination. Balance either result with the underlying stock profits accrued when the combination was established.

### **Break-Even Point (BEP) at Expiration?**

In this example, the investor is protecting his accrued profits from the underlying stock with a sale price for the shares guaranteed at the long put's strike price. In this case, consideration of BEP does not apply.

### **Volatility?**

---

**If Volatility Increases: Effect Varies**  
**If Volatility Decreases: Effect Varies**

---

The effect of an increase or decrease in the volatility of the underlying stock may be noticed in the time value portion of the options' premiums. The net effect on the strategy will depend on whether the long and/or short options are in-the-money or out-of-the-money, and the time remaining until expiration.

### **Time Decay?**

---

**Passage of Time: Effect Varies**

---

The effect of time decay on this strategy varies with the underlying stock's price level in relation to the strike prices of the long and short options. If the stock price is midway between the strike prices, the effect can be minimal. If the stock price is closer to the lower strike price of the long put, losses generally increase at a faster rate as time passes. Alternatively, if the underlying stock price is closer to the higher strike price of the written call, profits generally increase at a faster rate as time passes.

### **Alternatives before expiration?**

The combination may be closed out as a unit just as it was established as a unit. To do this, the investor enters a combination order to buy a call with the same contract and sell a put with the same contract terms, paying a net debit or receiving a net cash credit as determined by current option prices in the marketplace.

### **Alternatives at expiration?**

If the underlying stock price is between the put and call strike prices when the options expire, the options will generally expire with no value. The investor will retain ownership of the underlying shares and can either sell them or hedge them again with new option contracts. If the stock price is below the put's strike price as the options expire, the put will be in-the-money and have value. The investor can elect to either sell the put before the close of the market on the option's last trading day and receive cash, or exercise the put and sell the underlying shares at the put's strike price. Alternatively, if the stock price is above the call's strike price as the options expire, the short call will be in-the-money and the investor can expect assignment to sell the underlying shares at the strike price. Or, if retaining ownership of the shares is now desired, the investor can close out the short call position by purchasing a call with the same contract terms before the close of trading.

# Equity Option Glossary

**American-style option:** An option contract that may be exercised at any time between the date of purchase and the expiration date. Most exchange-traded options are American-style.

**Assignment:** The receipt of an exercise notice by an option writer (seller) that obligates him to sell (in the case of a call) or purchase (in the case of a put) the underlying security at the specified strike price.

**At-the-money:** An option is at-the-money if the strike price of the option is equal to the market price of the underlying security.

**Call:** An option contract that gives the holder the right to buy the underlying security at a specified price for a certain, fixed period of time.

**Class of options:** Contracts of the same type (call or put) and style (American, European or Capped) that cover the same underlying security.

**Closing purchase:** A transaction in which the purchaser's intention is to reduce or eliminate a short position in a given series of options.

**Closing sale:** A transaction in which the seller's intention is to reduce or eliminate a long position in a given series of options.

**Collar:** See Combination.

**Combination:** A trading position involving establishment of long puts and short calls, or short puts and long calls on a one-to-one basis. The puts and calls have different strike prices, but the same expiration and underlying stock. This position is commonly referred to as a Collar.

**Covered call option writing:** A strategy in which one sells call options while simultaneously owning an equivalent position in the underlying security.

**Covered put option writing:** A strategy in which a put option is written against a sufficient amount of cash (or T-bills) to pay for the stock purchase if the short option is assigned. More commonly referred to as a cash-secured put.

**Cut-off time:** See Expiration cut-off time.

**Decay:** See Time Decay.

**Early exercise/assignment:** A feature of American-style options that allows the owner to exercise an option, and the writer to be assigned, at any time prior to its expiration date.

**Equity options:** Options on shares of an individual common stock.

**European-style option:** An option contract that may be exercised only during a specified period of time just prior to its expiration.

**Exercise:** To implement the right under which the holder of an option is entitled to buy (in the case of a call) or sell (in the case of a put) the underlying security.

**Exercise price:** See Strike price.

**Exercise cut-off time:** Other than at expiration, the time of day by which all exercise notices must be received. An individual investor must adhere to his brokerage firm's predetermined cut-off time.

**Expiration date:** The day on which an option contract becomes void. All holders of options must indicate their desire to exercise, if they wish to do so, by this date.

**Expiration cut-off time:** The time of day by which all exercise notices must be received in order to be processed at expiration. An individual investor must adhere to his brokerage firm's predetermined cut-off time.

**Hedge:** A conservative strategy used to limit investment loss by effecting a transaction which offsets an existing position.

**Holder:** The purchaser of an option.

**In-the-money:** A call option is in-the-money if the strike price is less than the market price of the underlying security. A put option is in-the-money if the strike price is greater than the market price of the underlying security.

**Intrinsic value:** The amount by which an option is in-the-money (see above definition).

**Long position:** A position wherein an investor is a net holder in a particular options series (i.e., the number of contracts bought exceeds the number of contracts sold).

**Margin requirement (for options):** The amount an option investor is required to deposit and maintain as collateral to cover a position. The margin requirement is calculated daily.

**Opening purchase:** A transaction in which the purchaser's intention is to create or increase a long position in a given option series.

**Opening sale:** A transaction in which the seller's intention is to create or increase a short position in a given options series.

**Out-of-the-money:** A call option is out-of-the-money if the strike price is greater than the market price of the underlying security. A put option is out-of-the-money if the strike price is less than the market price of the underlying security.

**Premium:** The price of an option contract, determined in the competitive marketplace, which the buyer of the option pays to the option writer for the rights conveyed by the option contract.

**Put:** An option contract that gives the holder the right to sell the underlying security at a specified price for a certain fixed period of time.

**Series:** All option contracts of the same class that also have the same unit of trade, expiration date and strike price.

**Short position:** A position wherein the investor is a net writer of a particular options series (i.e., the number of contracts sold exceeds the number of contracts bought).

**Spread:** A position consisting of two parts, each of which alone would profit from opposite directional price moves. As orders, these opposite parts are entered and executed simultaneously in the hope of (1) limiting risk, or (2) benefiting from a change of price relationship between the two parts.

**Strike price:** The stated price per share for which the underlying security may be purchased (in the case of a call) or sold (in the case of a put) by the option holder upon exercise of the option contract.

**Time decay:** A term used to describe how the time value of an option can "decay" or reduce with the passage of time.

**Time value:** The portion of the option premium that is attributable to the amount of time remaining until the expiration of the option contract. Time value is whatever value the option has in addition to its intrinsic value.

**Uncovered call option writing:** A strategy in which one writes call options while not simultaneously owning an equivalent position in the underlying security.

**Uncovered put option writing:** A strategy in which a put option is written and not collateralized with a sufficient amount of cash (or T-bills) to pay for the stock purchase if the short option is assigned.

**Underlying stock (security):** The stock (security) subject to being purchased or sold upon exercise of the option contract.

**Volatility:** A measure of the fluctuation in the market price of the underlying security. Mathematically, volatility is the annualized standard deviation of returns.

**Write/writer:** To sell an option that is not owned through an opening sale transaction. While this position remains open, the writer is subject to fulfilling the obligations of that option contract; i.e., to sell stock (in the case of a call) or buy stock (in the case of a put) if that option is assigned. An investor who so sells an option is called the writer, regardless of whether the option is covered or uncovered.

## For More Information

### **The American Stock Exchange, L.L.C.**

A Subsidiary of The Nasdaq-Amex Market Group  
An NASD Company  
86 Trinity Place  
New York, NY 10006 USA  
1-800-THE-AMEX  
(212) 306-1000  
[www.amex.com](http://www.amex.com)

### **Chicago Board Options Exchange, Inc.**

400 South LaSalle Street  
Chicago, IL 60605 USA  
1-877-THE-CBOE  
(312) 786-5600  
[www.cboe.com](http://www.cboe.com)

### **International Securities Exchange L.L.C.**

60 Broad Street  
26th Floor  
New York, NY 10004 USA  
(212) 943-2400  
[www.iseoptions.com](http://www.iseoptions.com)

### **Pacific Exchange, Inc.**

Options Marketing  
301 Pine Street  
San Francisco, CA 94104 USA  
1-877-PCX-PCX1  
(415) 393-4028  
[www.pacificex.com](http://www.pacificex.com)

### **Philadelphia Stock Exchange, Inc.**

1900 Market Street  
Philadelphia, PA 19103 USA  
1-800-THE-PHLX  
(215) 496-5404  
[www.phlx.com](http://www.phlx.com)

### **The Options Clearing Corporation**

One North Wacker Drive  
Chicago, IL 60606 USA  
1-800-537-4258  
(312) 322-6200  
[www.optionsclearing.com](http://www.optionsclearing.com)

### **The Options Industry Council**

1-888-OPTIONS  
[www.888options.com](http://www.888options.com)



THE OPTIONS  
INDUSTRY COUNCIL

1-888-OPTIONS  
[www.888options.com](http://www.888options.com)