

Welcome to the Options 101 Course!

Thanks for taking the Options 101 course. This course is designed to give you a solid foundation of basic option terms and concepts. There is a wealth of material presented in this course and you will likely need to review this material several times to firmly grasp all of the concepts.

Course works best with Adobe Reader 4.0 or higher. GET IT FREE!

If you are unfamiliar with Adobe Reader, **explore the icon buttons above**. Using the buttons you can **change magnification**, **view bookmarks** and **thumbnails**, **jump to the last page**, **search for specific words**, etc.

- Use the onscreen navigation or the Page Up and Page Down keys to navigate.
- Items that are underlined have hyperlinks within the document.
- Green text** indicates a concept of particular importance.
- Double click **Special Note!** to view pop up text.

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Why Take This Course?

Have you ever noticed how many different kinds of shoes are available? You can put all sorts of things on your feet. There are shoes for each and every sort of occasion and event: Sandals for sun-baked, summer days, snow shoes for winter wonderlands, high-heels for fancy occasions, house slippers for lounging, galoshes for spring showers, shoes for running, shoes for bowling and boots made for walking.

Many closets might argue that people own too many pairs of shoes. But, despite what closets think, there is generally a good reason for specialized shoes. Different shoes work best in different circumstances. Sandals are great, but somehow seem inappropriate in a snowstorm. Cowboy boots work well on a horse, but most people prefer to go barefoot while sleeping. (True cowboys might still wear their boots to bed.) Wearing the right shoes for the right occasion is important for the safety of your toes and the enjoyment of your endeavors.

Just as you need different shoes for different types of terrain, you need different investment strategies for different types of financial terrain. There are countless types of investments and strategies. (Investment alternatives

[Why Take This Course continued...](#)

may be more numerous than shoe varieties.) Ideally this course will help you expand your closet of investment shoes. But more importantly, it will help you to understand when to use each strategy. (Using the wrong investment strategy at the wrong time can be more risky than wearing your ballet shoes to the construction site.)

So, the objective of this course is to help you know the basic mechanics of options and when it is appropriate to use different strategies. (Basically you should know how to tie your laces and walk around). And hopefully, at the very least, this course will help you get rid of any cold feet.

Topics Covered

The Options 101 course covers the basics of buying and selling options. There is a great deal of coverage concerning the factors that influence an option's premium. The course concludes with a lengthy discussion of common spreads. Be sure to use the Bookmark Icon in the menu bar above to access the interactive Table of Contents.

Let's get on with the course!

What Is A Futures Contract?

Since this course is about options, there will be very little discussion about futures contracts. If you are new to the futures industry you should seek resources which explain futures more thoroughly. For a quick review...*A futures contract is a legally binding agreement to buy or sell something in the future at a price which is determined today.* A futures contract is legally binding, but you don't sign a legal document with lots of fine print every time you trade a futures contract. Futures contracts are generally traded on tangible goods. So, the "something" in this definition is usually a tangible good such as crude oil, currencies, the S&P 500, cattle, wheat or bonds.

The premise behind futures trading is as follows. Let's say you believe that six months from now, the price of gold will be higher than it is today. You enter into a contract to buy gold six months from today at the price it is trading at today. If four months from now the price has moved as high as you anticipated, you can simply sell back your contract at the higher price and you are relieved of any further obligations. You simply keep the profits from the difference in price. If you were wrong and the market declined, you liquidate the position (sell back your contract and relieve yourself of any further obligations) and suffer the loss resulting from the decline in prices.

What Is Selling Short?

Futures and options traders use the terms long and short. *If you are long, you have bought the instrument (futures or options). If you are short, you have sold the instrument (futures or options). So selling short in futures is when you sell a contract (without owning one) in attempt to profit on a price decline.* The common question at this point is “How can I sell something I don’t already own?” Remember in our definition, a futures contract is an agreement to buy or sell something **in the future**. *Since your obligation to sell the actual product doesn’t occur until a date in the future, you can sell a contract on paper first.* (Remember you are just agreeing to sell something in the future at a price determined today.) As long as you buy back the contract before the future date, you can exit your obligation and just realize the difference in price. Because futures contracts deal in the future, you can sell now (without owning anything) and buy back later.

One of the advantages of futures trading is that it is easy to capitalize on a price decline. You can sell short as easily as you can go long. You don’t have to wait for an up tick to sell (like stocks). Another advantage of futures is the leverage created by margin. If mishandled, leverage can also be one of the major disadvantages of futures, so a discussion of margin is in order.

What Is Margin?

Margin on futures and options contracts operates differently than margin on stocks. *Margin is in effect a good faith deposit.* You deposit roughly 5-10% of a contract's total value in your account to signify your willingness to stand good on any price movements against you. Since it is merely a deposit, *you get your margin money back after you liquidate the contract.* You are always required to keep the margin at a certain level (which varies from one commodity to another.) *So, if losses occur and your account balance drops below the margin threshold, you are required to deposit money into your account to cover the losses and to restore the margin back up to original levels. This is referred to as a margin call.* **Special Note!**

The fact that futures operate on margin makes them a highly leveraged investment (a relatively small price move can result in considerable equity swings in your account). This leverage must be closely monitored and treated with tremendous respect. Leverage can work for or against you. Now that we have briefly reviewed futures and margins, we can move on to our real topic... Options.

What Is an Option?

An option is the right, but not the obligation, to buy or sell something at a predetermined price at anytime within a specified time period.

The “Buy or Sell”

Whether you have the right to buy or to sell depends on which type of option you buy. There are two types of options: puts and calls. The purchaser of a put option has the right to **sell** the underlying commodity. The purchaser of a call option has the right to **buy** the underlying commodity. To remember the difference you can use: Put = plummeting prices, Call = climbing prices. Puts and calls are mutually exclusive. A put option **does not** offset a call option and vice versa.

If you think the price will go up, you can buy a call option.

If you think the price will go down, you can buy a put option. **Special Note!**

The “Something”

In our definition, the “something” is the underlying contract which you have the right to buy or sell. The underlying is usually either an exchange traded commodity or stock.

An option is the right, but not the obligation, to buy or sell something at a predetermined price at anytime within a specified time period.

The “Predetermined Price”

Remember in our definition, an option gives you the right to buy or sell the underlying contract at a *predetermined price*. *The specific price at which you can buy or sell the underlying is referred to as the “strike price” of the option.* Purchasing an April 76.00 call (76.00 is the strike price), gives you the right to own the April futures contract from a price of 76.00. The April 74.00 call gives you the right to own the April futures from 74.00. Logically, the 76.00 strike option is a different instrument than the 74.00 strike option.

The “Specified Time Period”

Options only have a limited life-span. The last part of our definition of an option says “a specified time period”. *The month of the option specifies when the option expires and can no longer be traded.* The “expiration date” in which the option expires is set by the commodities exchanges and differs from one commodity to another. Different month options are entirely different instruments, so a June option is a separate and distinct contract from a July option.

How Much Does an Option Cost?

The premium is the price you pay for the option. If you buy an option, you must pay some price to own it. That price is referred to as the premium. As an example, a Dec. 88.00 call (88.00 is the strike) might be trading at 2.00. This means if you wanted to buy this call, you would have to pay out 2.00 to own it. (The 2.00 is the premium.) Options are traded in an open outcry format (just like futures). Open outcry is what you see when you watch footage of the trading floor. All of the traders scream and wave their arms in apparent chaos. In reality, that chaos is an organized auction where every trader can be both the auctioneer and the buyer. The buyers bid the price they would be willing to pay for the option and sellers ask for a price at which they would be willing to sell the option. When the bid and the ask meet, a trade occurs. The premium (or cost of the option) is the only variable in most U.S. exchange traded option contracts. The commodity, type, month and strike prices are all standardized. The only negotiable term is the premium (or price). In addition to the premium, there are also commissions and fees which vary from brokerage to brokerage, but are generally from \$20 to \$100.

Option Cost (Premium) continued...

Before we move on, let's review. The premium of an option equals the cost (or price) of that option. If the premium is equal to \$500, it would cost you \$500 to buy the option. The premium is paid by the option buyer to the option seller. Premium is not to be confused with brokerage fees.

In essence when you are trading options you are really trading the premium of the option, not the underlying commodity. If you pay \$500 in premium for an option, and the premium increases to \$1200 you make \$700 (less fees). If you buy an option, it really doesn't matter what happens to the underlying contract. If the premium of the option increases you make money, if the premium decreases you lose money. (As we'll see later, you can make money even if the underlying market does not move in your favor!)

Clearly, *understanding the factors that cause premiums (the cost of options) to change is of paramount importance in option's trading.* Not only do you need to ensure that you are paying a fair price for the option initially, but you need to grasp how the option's premium (price) will react to different risk elements (time, volatility, etc.). We will spend considerable time elaborating on option premiums later in this course.

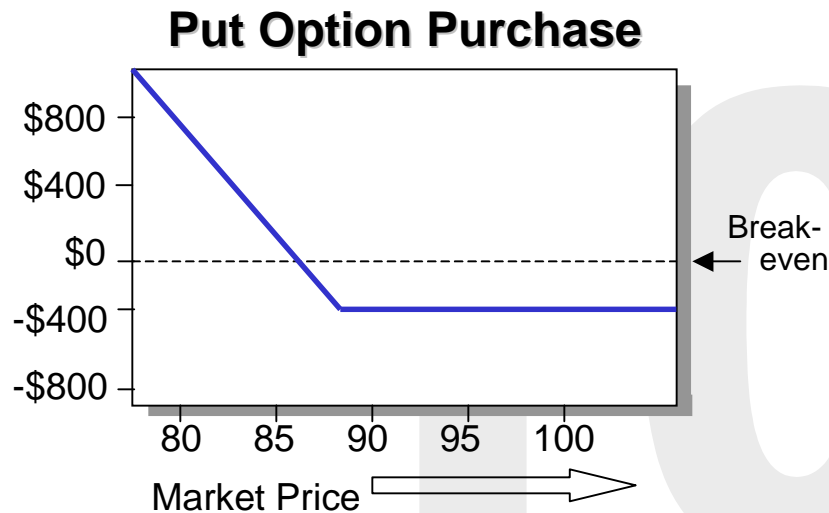
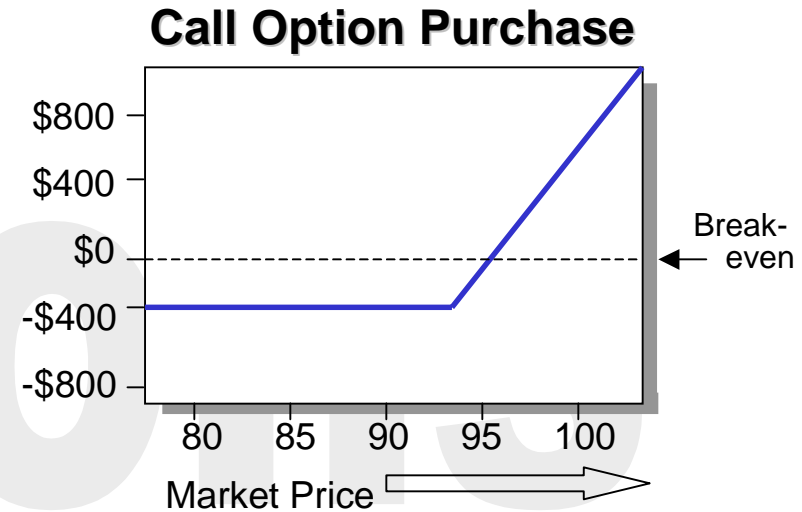
What's My Risk & Profit Potential When I Buy?

One of the major advantages of purchasing options is that your risk is limited and predetermined. *The most you can lose when you purchase an option is the amount of the premium (the price you pay for the option) plus transaction fees.* Because your risk is limited, there are no margin calls associated with buying options. Prior to initiating the option purchase, you are required to deposit the full purchase price of the option into your trading account, but there is never a call for additional money (unless you exercise your option which will be covered shortly). *Purchasing options also has unlimited profit potential.* If you buy a call, you can continue to profit as long as the price continues to climb (or until expiration). If you buy a put, you can continue to profit as long as the price continues to plummet (or until expiration). *So, when you buy an option you have limited risk, and unlimited profit potential.*

While your maximum risk stays fixed, the amount of profit or loss you would actually realize (prior to expiration) varies according to different factors such as time. (We will examine these factors shortly). In the meantime, when you are viewing graphs, like the one on the next page, you should bear in mind that the dollars of profit and loss will vary depending on whether we examine the position at expiration or at some other point in time.

Risk and Profit Potential continued...

The graph to the right depicts the profit and loss profile of a 94 strike price call option at expiration. Price of the underlying is on the horizontal axis and Profit and Loss is on the vertical axis. The break-even level is represented by the horizontal dashed line. The bend in the blue line occurs at the strike price (94). Notice if the price moves lower your loss is limited (the blue line is horizontal).



The graph on the left demonstrates the profit and loss profile of a 88 strike put option at expiration. Notice how the put option profile is a mirror image of the call. Again, the call purchase makes money if the market goes up, and buying the put makes money if it goes down. In both your risk is limited to the premium (the price of the option) plus fees.

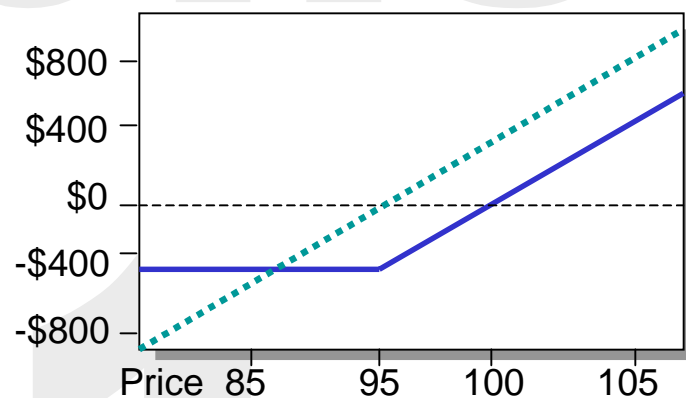
So What's the Catch?

Buying an option seems like a great deal-- limited risk and unlimited potential. If something seems too good to be true, it probably is. *The problem with option purchases is that the futures must move far enough to recoup the entire cost of the option before a profit is realized (at expiration).* Frequently, the premium is so high that it is difficult to make money.

As an example of this principle, there are two positions plotted in the graph. The first position (the blue line) is a call purchase (95 strike for a premium of 5). The second position (the green, dotted line) is the purchase of a futures. Notice that the futures purchase crosses the break-even line at 95, while the blue line (call) crosses the break-even line at 100. At the call

break-even (100), the futures purchase is already making considerable profit. (The green line is above the blue line.) *Outright option purchases are best suited for instances when a major move is anticipated. A small price move typically will not be sufficient to recoup the premium and fees paid for the option.*

Call Purchase vs. Fut.



How Do I Figure My Break-Even Point?

Let's say a market was trading at 100.00 and you felt a major price decline was imminent, so you bought a 96.00 put for a premium cost of 1.00. This means you have the right to sell a contract for 96.00. Your break-even at expiration would be 95.00 (less fees). To arrive at this break-even you take your strike price (96.00) less the premium you paid (1.00) for the option. (In the case of a call, you must add the premium to the strike price.)

Break-evens: Call = Strike price + premium + fees
Put = Strike price - premium - fees

Special Note!

The above calculation is applicable only for purchased options, when you sell options, you must subtract fees for a call and add fees for a put. More on selling options later...

How Do I Offset (or Liquidate) My Position?

There are two ways you can liquidate your position. The first is that you can call your broker and instruct him/her to “*exercise your option.*” *This means you will trade in your option position for an underlying contract from the strike price of the option.* If you exercise a Dec 72.00 call you will be given a Dec. futures contract purchased at 72.00 (even if the market is trading at 80.00 today.) If you exercise a Dec. 72.00 put, you will be given a Dec. futures contract sold at 72.00. You are typically charged an additional commission for exercising your option into a futures contract. Once you exercise your option, you have a futures contract with potentially unlimited risk, therefore margin is required on the futures. You can elect to exercise your option at any point in time prior to expiration (for most US Exchange traded options.)

Special Note!

The second way you can liquidate your position is to simply *sell back the same option contract you purchased.* So if you bought the June 96 put for a 1.00 you could simply sell the June 96 put for the current market price. If you bought the put for 1.00 and sold it for 4.00 you would have a 3.00 profit. If you bought the put for 1.00 and sold it for .25, you would have a .75 loss.

Liquidating a Position continued...

In reality, *most options are simply sold back rather than exercised*. This typically avoids an extra commission charge and margin. Just as you can exercise your option at anytime, you can also sell back your option whenever you like. (As long as it is during trading hours.) In short, options are reasonably liquid contracts. You can get in or out when you want. (There are some markets with poor option liquidity. Always check ahead of time.)

What if My Position Loses Money?

If the market moves contrary to your expectations you have two choices. You can either offset your position at a loss, (by placing an order to sell back the exact same option contract) or you can simply let your option expire worthless. *If you let the option expire, you have no further obligations. You simply lose the entire investment plus fees.* Exercising an option is usually not an alternative when the market moves away from your strike price. If you did elect to exercise the option, you would be assuming a losing position (possibly a much greater loss than what you paid out in premium). Therefore, letting the option expire worthless or offsetting the trade are normally the only viable alternatives.

What Is “Selling an Option”?

If you buy an option and then later sell it to liquidate your position, you are simply offsetting your original purchase. However, you can also place an order in which you sell an option to **initiate** a position. This is called selling (writing, or shorting) an option. *When you sell an option, you grant the right to buy or sell the underlying contract to someone else in exchange for the premium of the option.* Selling an option is basically a trade in which you try to determine where the market **will not** go (i.e. beyond the strike price). If the market doesn't move beyond the strike, you keep the entire premium paid by the option purchaser. *The maximum profit potential in selling an option is the total amount of the premium received less fees. (Maximum profits occur if the option expires worthless.) The potential risk is unlimited.*

Because the potential risk is unlimited, *selling an option is a marginable position just like a futures.* Additionally, the position is immediately marginable. This means the underlying **does not** have to move beyond the strike price before the margin calls start to occur. From the day you establish the position, as soon as the market moves against you, you can expect a margin call. **Special Note!**

Selling an Option continued...

Let's look at an example of selling an option. We'll assume you believe the market will be below 65.00 at expiration, so you call your broker and sell a 65.00 strike call option for 1.00. The purchaser pays you 1.00 for the right to be long (buy) the underlying contract from 65.00. (They believe the market will be above 65.00 at expiration.) If the market goes lower (you were right) and the market expires under 65.00, the option expires worthless and you keep the entire 1.00 premium less fees (this is the most you can make). On the other hand let's say the market rallies, and the futures are at 68.00 at expiration. The purchaser of the call elects to exercise his option. He receives a long (bought) futures contract at 65.00, and you receive a short (sold) futures contract at 65.00. Since the futures are trading at 68.00, and you sold the contract at 65.00, you are automatically losing 3.00 (68.00 - sale at 65.00). However, since you took in 1.00 for selling the option, your realized loss is 2.00 plus fees (3.00 loss - 1.00 for selling the option). If we sell a put instead of a call, you keep the entire premium as long as the market is above the strike price at expiration. If it is below, your loss would be equal to the difference between the futures price and the strike (less the premium received).

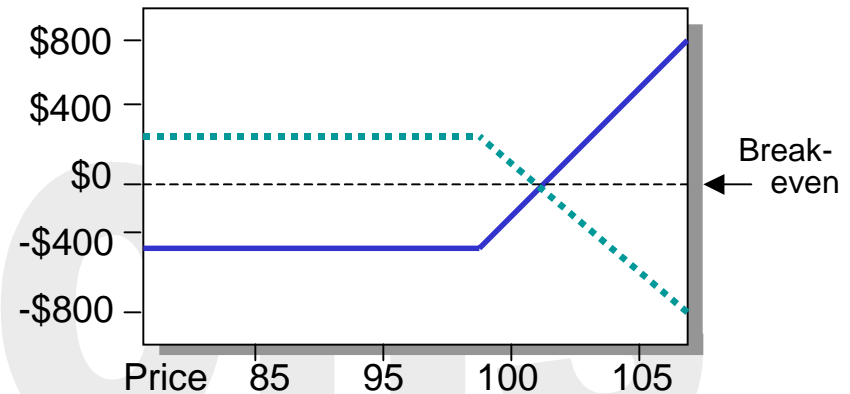
Selling a call makes money if the market stays the same or moves lower.

Selling a put makes money if the market stays at the same or moves higher.

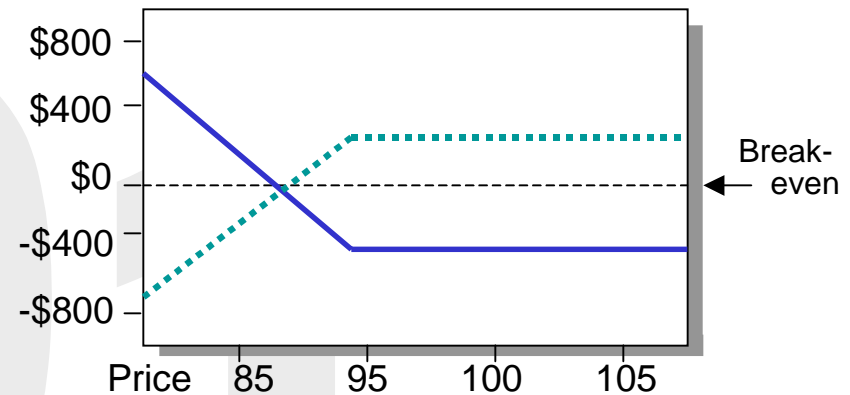
Selling an Option continued...

In the following graphs, you can compare the difference between buying an option and selling an option. For both graphs, the option purchase is the blue line, and the option sale is the green, dotted line. In the Call Purchase vs. Sale graph, you can see that as the price moves lower, the call purchaser has a fixed loss, and the call seller has a fixed gain. If the price rallies substantially, the call purchaser has unlimited gains, and the call seller has unlimited losses. Both lines cross the break-even line at exactly the same point (the strike price plus the premium). In the Put Purchase vs. Sale graph you can see buying a put has unlimited downside profit potential and selling a put has unlimited downside risk.

Call Purchase vs. Sale



Put Purchase vs. Sale

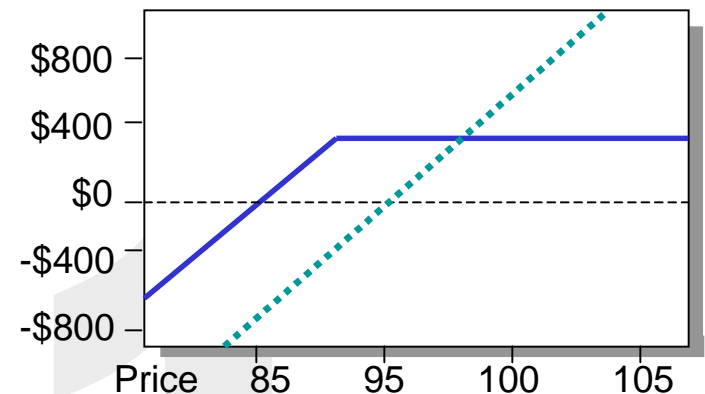


Why Would Anyone Ever Sell an Option?

When you buy an option you have limited risk, and unlimited profit potential. When you sell an option you have unlimited risk and limited profit potential. Given this profit and risk profile why would anyone ever be willing to sell an option? Insurance companies write policies in which they have limited profit potential and virtually unlimited risk. Casinos are much the same. Yet, these industries thrive. What is the secret? They lay the odds in their favor.

In the same way, selling options has a much higher probability of success than buying options. *People are willing to sell options because they believe the high probability of collecting the limited profit outweighs the potentially unlimited risk.* In fact, frequently it is the professional trader who is the primary option seller, and the uninformed public investor who is the option buyer. In the graph above, the blue line is the sale of a put, and the green, dotted line is the purchase of a futures contract. Notice that where the put crosses the break-even (85.00) the futures is losing considerably. This is a reflection of the odds being in the favor of the option seller.

Put Sale vs. Fut.



Option 101 Quizzes

As a part of the Options 101 course you will have the opportunity to test your knowledge by taking three separate quizzes. Each quiz contains ten questions pertaining to a specific section of material. At the end of the course you will also have the opportunity to take a twenty question final exam. The questions may prove difficult. (Don't expect to ace the test!)

[GO TO QUIZ #1](#)

101

What Factors Influence an Option's Premium?

Fischer Black and Myron Scholes won the Nobel Prize in economics for a formula used to compute the theoretical value of an option. Since its introduction in 1971, professional traders have used the Black and Scholes formula to determine what premium (price) they are willing to pay (or receive) for an option. According to the Black and Scholes formula *an option's premium (price) is comprised of four primary factors: interest rates, the relation of the strike price to the current price of the underlying contract, the time remaining until expiration and volatility.* When you are trading options, you are competing against professional traders who know at every minute what the theoretical value of an option is. If you are unaware of this “fair value” you can rest assured that the professional trader will take advantage of this fact. More importantly options are dynamic instruments and as these factors change, an option's premium can fluctuate greatly, thereby increasing your risk exposure or profit potential. The impact of these components (with the exception of interest rates) cannot be overemphasized.

Interest rates

Interest rates are the most stable factor in an option's value. They simply do

not fluctuate rapidly enough to make a significant difference in an option's value. Let it suffice to say that as interest rates go up, the option premiums (prices) increase.

Relation of strike price to the underlying

Before we discuss this concept it will be helpful to introduce some new terms that will further describe an option's premium. *The premium (price) of an option can be broken down into two parts: intrinsic value and extrinsic value.* Intrinsic value, is real value. *Intrinsic value is how much the futures are past the strike price of the option.* If the futures are 56.00, the 54.00 call has 2.00 of intrinsic value. If the futures rally to 58.00 the 54.00 call's intrinsic value increases to 4.00. For puts, with futures at 75.00, the 77.00 put has 2.00 of intrinsic value and the 78.00 put has 3.00 of intrinsic value.

The second part of an options premium is called extrinsic (or time) value. *Extrinsic value is the remainder of the premium that is not accounted for by intrinsic value.* If the futures are 56.00 and the 54.00 call is trading at 2.50 (the premium), there is 2.00 worth of intrinsic value and .50 worth of extrinsic value. Extrinsic value is the extra premium that is charged to account for time, volatility and directional biases.

With the futures trading at 96.10

Strike/Type	Premium	Intrinsic	Extrinsic	In/At/Out
94 call	2.57	2.10	.47	In-the-money
96 call	1.30	.10	1.20	At-the-money
98 call	.70	0	.70	Out-of-the-\$
94 put	.65	0	.65	Out-of-the-\$
96 put	1.05	0	1.05	At-the-money
98 put	2.35	1.90	.45	In-the-money

An option is considered “in-the-money” if it has intrinsic value. An option is “out-of-the-money” if it is comprised only of extrinsic value. An option is “at-the-money” if the futures is trading approximately at the strike price. In/at/out- of-the-money are common terms to describe the relation of the strike price to the underlying futures.

Obviously when buying options, you want to spend as little as possible. But cost can be deceiving. In-the-money options cost more than out-of-the-money options. However, in-the-money options usually have less extrinsic value. *Normally when you are buying options, you want to pay as little as possible in extrinsic value.* (Remember, extrinsic value is the extra premium

Premium Factors continued...

tacked on to the price to account for time, volatility and directional biases- Its perceived value rather than “real” value.) This means an in-the-money option may have higher cost but offer a better value for option purchasers.

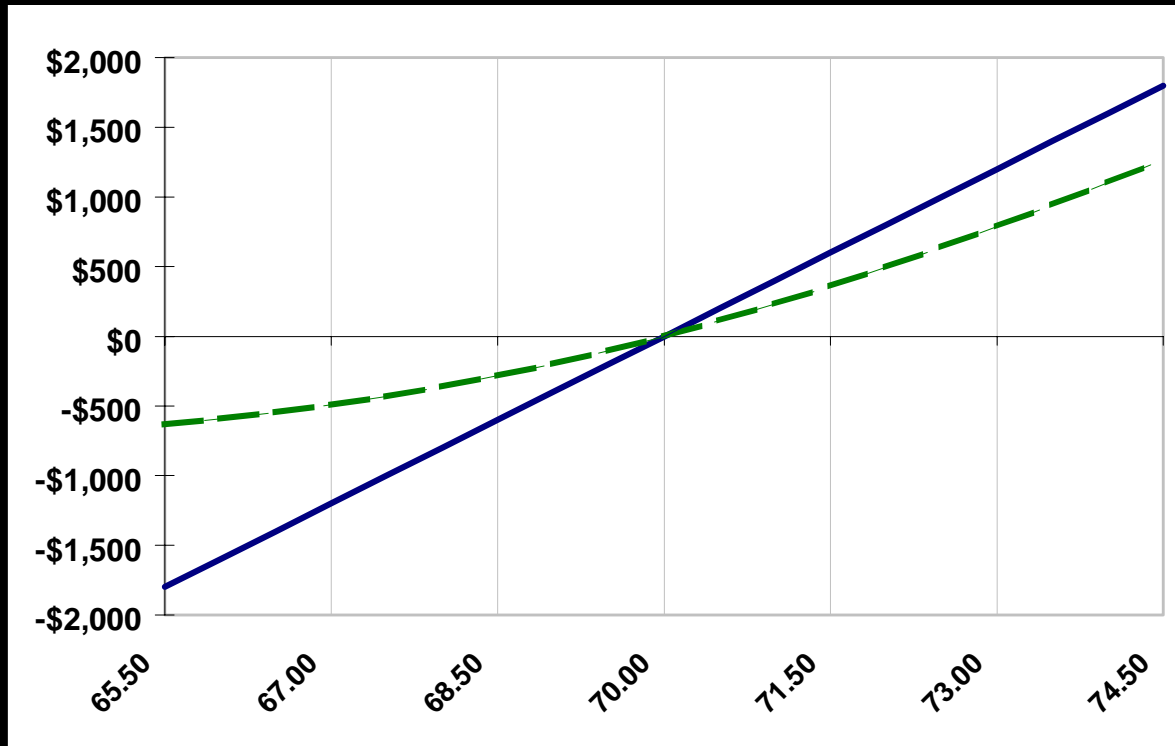
Selling options is exactly the opposite. You always want to sell something for as much money as possible. You could garner a higher selling price by writing in-the-money options. But, you would be selling all intrinsic value and almost no time value (extrinsic value). *When you are selling options, you want to receive as much extrinsic value as possible.* Therefore, when you are selling options, at-the-money and/or out-of-the-money options generally offer a better value than in-the-money options.

But how does the relation between the underlying and the strike price impact premiums? In a nutshell, *the deeper in-the-money an option becomes, the more closely the premium will mimic a futures contract.* (If the market goes up 1.00, the premium will change by almost the full 1.00.) *The further out-of-the-money an option is, the less it will move like a futures contract. Generally, you can anticipate that an at-the-money option will move at half the rate of a futures.* If the market rallies 1.00, an at-the-money call should have a .50 premium increase. **Special Note!**

Time remaining until expiration

With more time, there is more uncertainty. If you wanted to buy auto insurance to cover your car for six months, it would undoubtedly be more expensive than a policy to simply cover you for only one week. The odds are certainly greater that you could have an accident sometime in the next six months than the odds of having an accident next week. Options are the same. *If you buy an option that is nine months away from expiration, it will be more expensive than a similar option that is only thirty days from expiration.* This brings up a crucial element of options: *All options exhibit time decay and are wasting assets. In other words, as time passes, they lose value.* If you buy an option that is nine months away from expiration and hold it until there are only thirty days until expiration, there will be a significant premium loss due to time depreciation.

Time decay may be one of the two least understood dimensions of option's trading (volatility is the other). In order to give you a clear understanding of the impact of time decay, the next seven pages graphically illustrate how an option erodes over the course of time.



Price:	65.50	67.00	68.50	70.00	71.50	73.00	74.50
— (Solid Blue)	-1800	-1200	-600	0	600	1200	1800
- - - (Dashed Green)	-633	-493	-285	0	359	787	1269

Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Live Cattle Futures

Scenario 2

Buy 1 Dec 70 Call @ 2.00
B.E. 70.00

Live Cattle Option
Cost = \$800
Each 1.00 = \$400

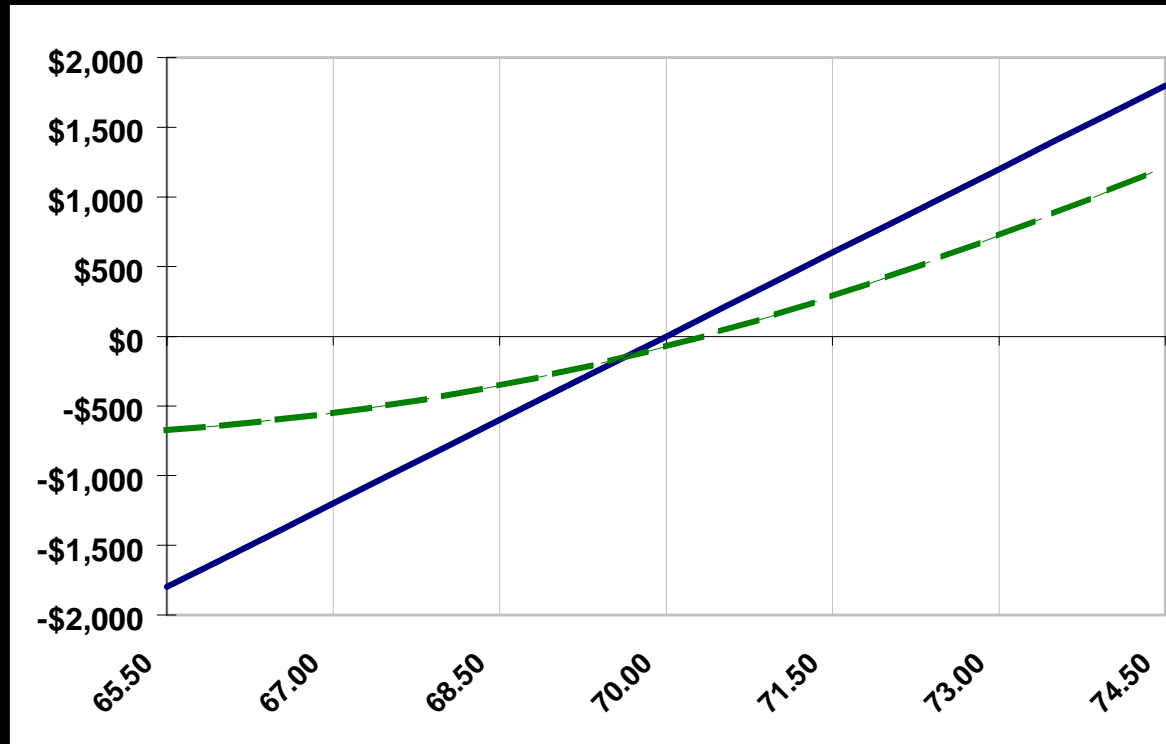
Valuation Date: 6/11

Days to expiration = 177

Start off, by using the Page Up and Down keys to view through the graphs in rapid succession. **Special Note!** Don't even bother reading the text at the bottom, just keep your eye on the call purchase (the green, dashed line). Then start over and monitor what happens to the Break-even (B.E.) and the profit and loss. The solid line is a futures purchase and is simply a point of reference.

Time Decay Demonstration-

Options 101



Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2

Buy 1 Dec 70 Call @ 2.00
B.E. 70.19

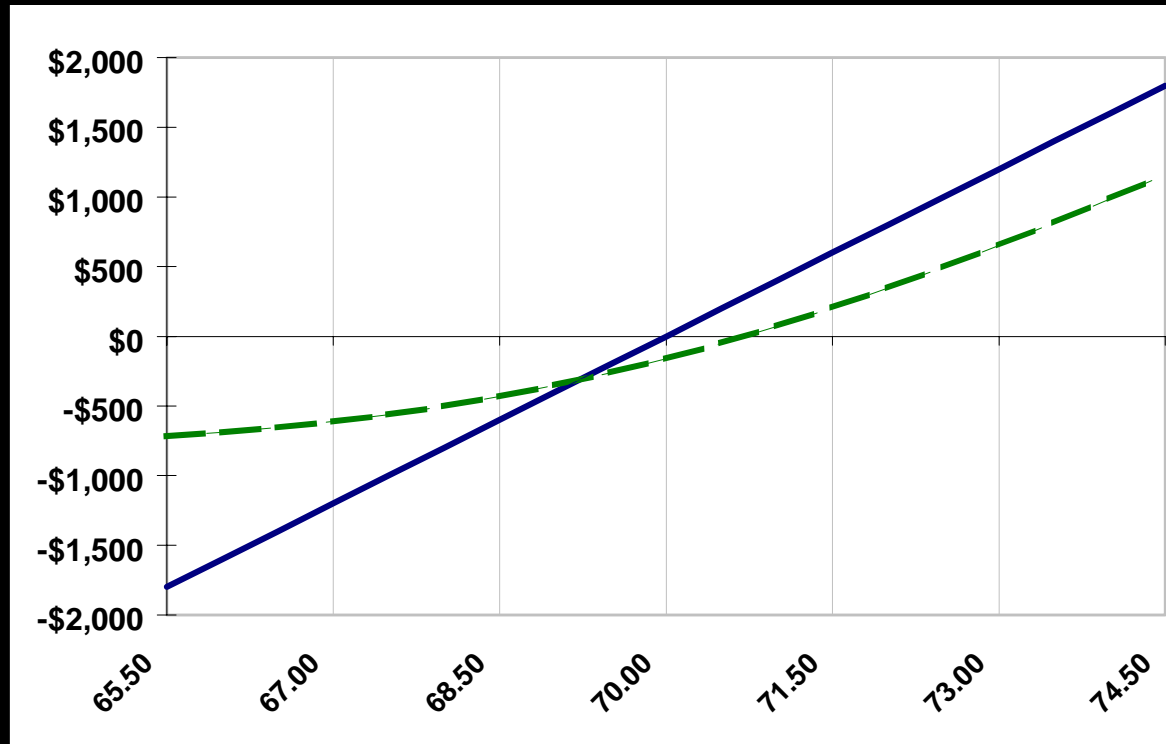
Valuation Date: 7/11

Days to expiration = 147

The change in the Valuation Date allows you to watch the passage of time. The table underneath the graph shows the amount of profit and loss the position would have at different price levels of the underlying. Notice, if the price stays at current levels (70.00) this call is already losing \$75 after only 30 days of time decay (the Valuation Date has changed from 6/11 to 7/11).

Time Decay Demonstration-

Options 101



Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2

Buy 1 Dec 70 Call @ 2.00
B.E. 70.62

Valuation Date: 8/11

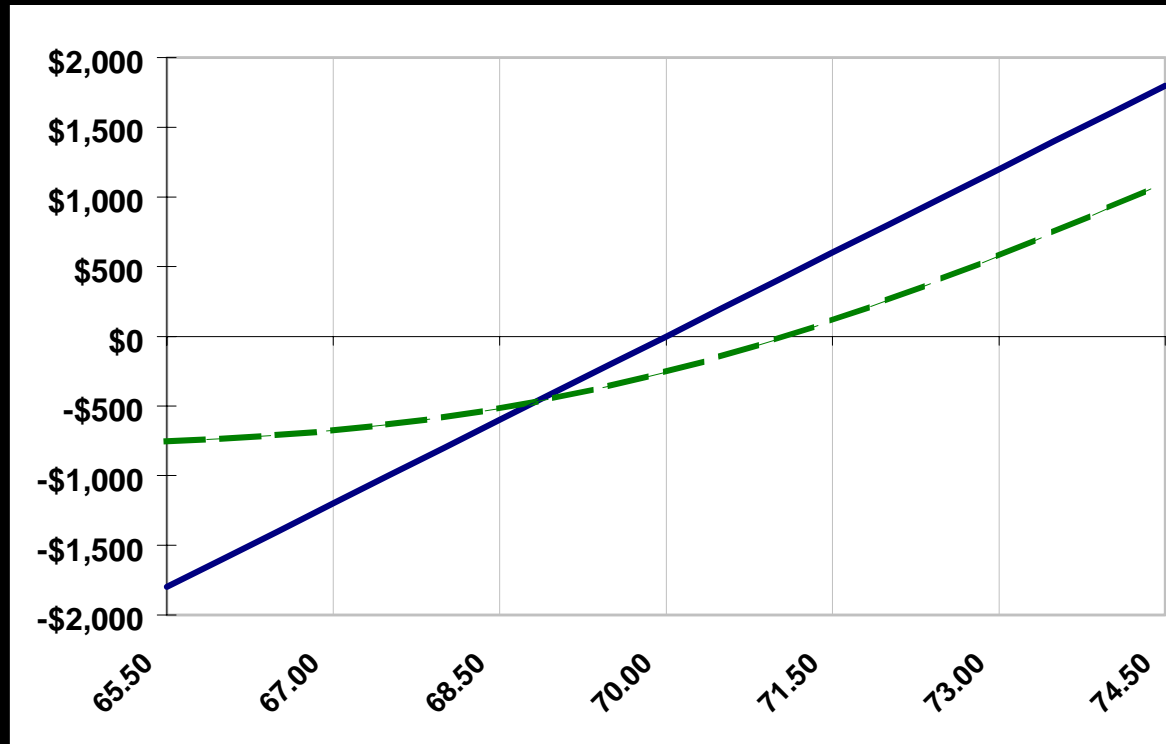
Days to expiration = 116

Price:	65.50	67.00	68.50	70.00	71.50	73.00	74.50
—	-1800	-1200	-600	0	600	1200	1800
- - -	-717	-613	-432	-161	205	652	1160

The current break-even (B.E.) of the position is shown in the right-hand column, under Scenario 2. *Notice that as time passes, the break-even for this call purchase continually climbs. To maintain profitability on the call purchase, the market must sustain a continued rally to counter the negative impact of time decay.*

Time Decay Demonstration-

Options 101



Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2

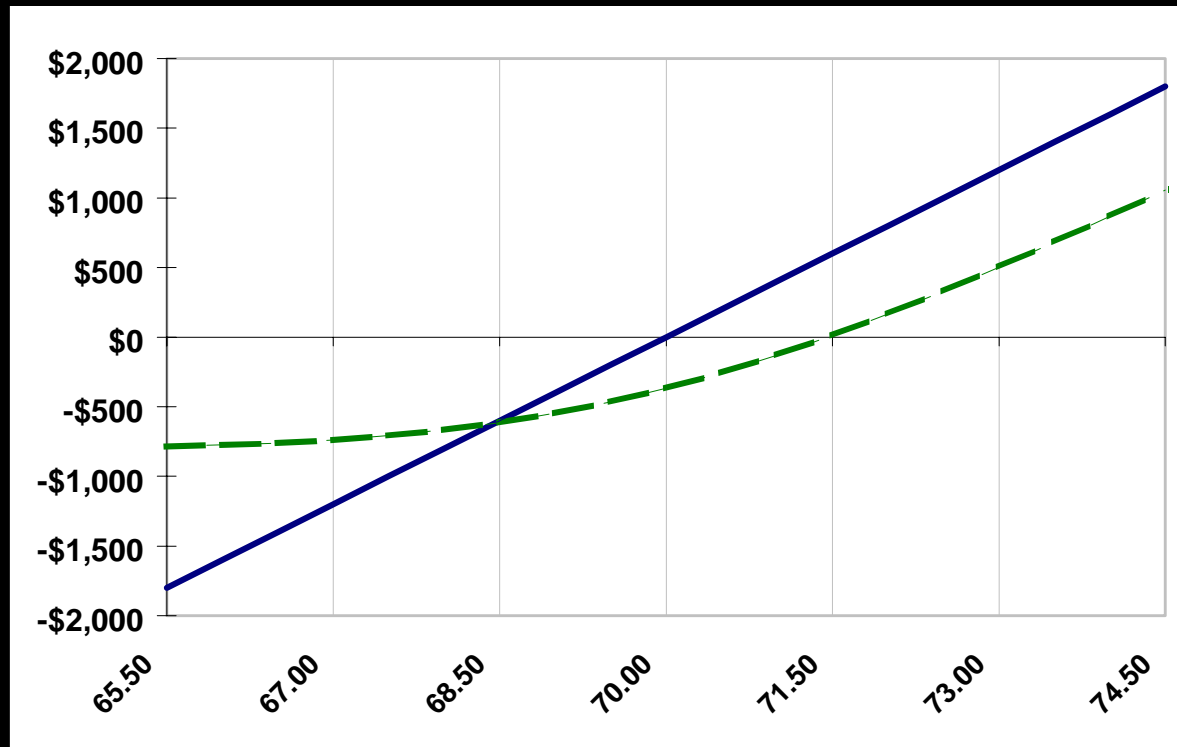
Buy 1 Dec 70 Call @ 2.00
B.E. 71.05

Valuation Date: 9/11

Days to expiration = 85

Price:	65.50	67.00	68.50	70.00	71.50	73.00	74.50
—	-1800	-1200	-600	0	600	1200	1800
- - -	-755	-676	-519	-257	113	577	1105

Ninety days have passed since the option was purchased. If the market holds at 70.00, the option is now losing \$257! *This loss occurs without the market moving either up or down and is simply a reflection of the time deterioration.*



Scenario 1 ———

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2 - - - - -

Buy 1 Dec 70 Call @ 2.00
B.E. 71.32

Valuation Date: 10/11

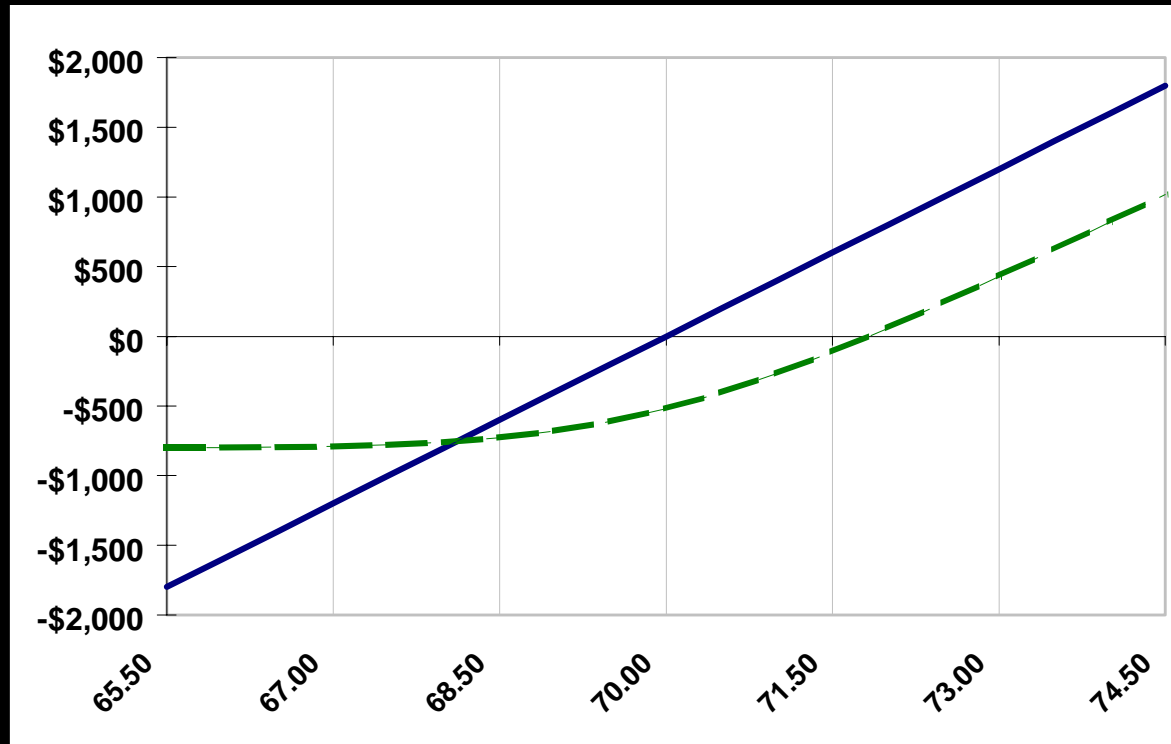
Days to expiration = 55

Price:	65.50	67.00	68.50	70.00	71.50	73.00	74.50
—————	-1800	-1200	-600	0	600	1200	1800
- - - - -	-785	-738	-614	-368	12	502	1056

At this point the break-even has increased to 71.32, an increase of over 1.32. *If you were anticipating a rally, you could have been right and still losing money!* (The market could rally nearly 1.50 and the position is barely at a break-even!) Notice how the dashed line has continually drifted lower across the full spectrum of price ranges.

Time Decay Demonstration-

Options 101



Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2

Buy 1 Dec 70 Call @ 2.00
B.E. 71.78

Valuation Date: 11/11

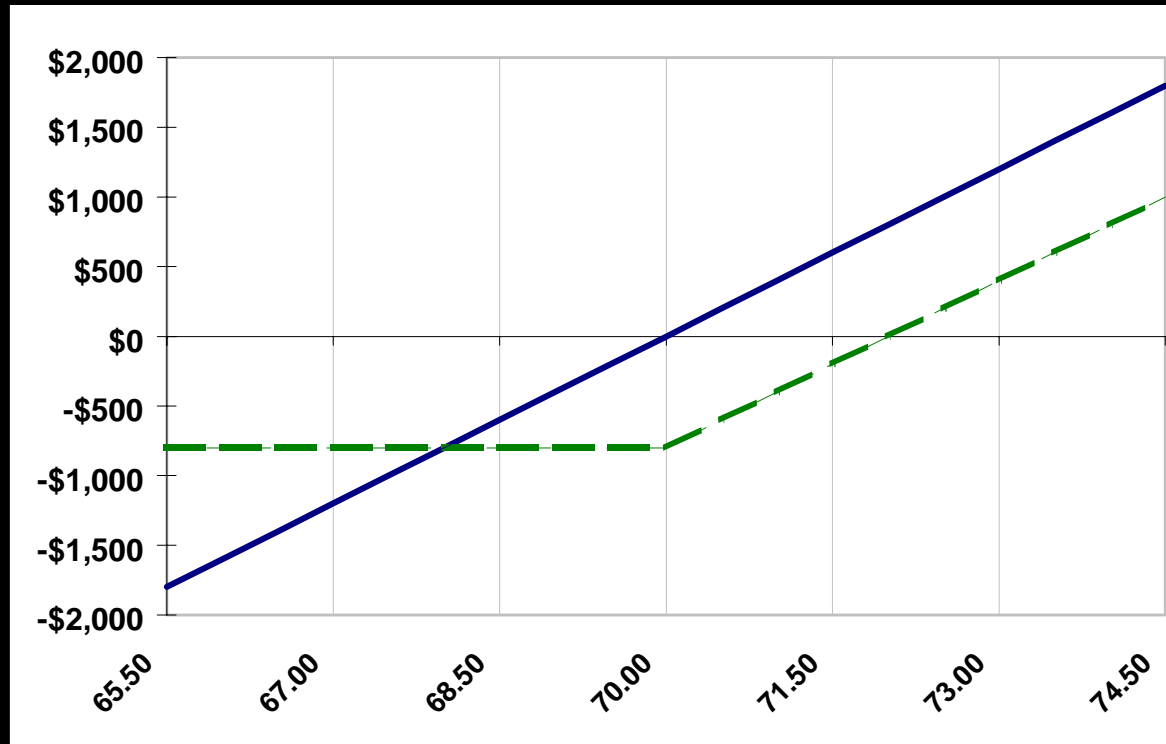
Days to expiration = 24

Price:	65.50	67.00	68.50	70.00	71.50	73.00	74.50
—	-1800	-1200	-600	0	600	1200	1800
- - -	-799	-790	-728	-520	-112	430	1018

The maximum potential loss on this call purchase is \$800 (the initial premium cost). If the market is 1.50 lower at this point, the loss would be \$728. Almost all of the extrinsic value has eroded away.

Time Decay Demonstration-

Options 101



Scenario 1

Buy 1 Dec Fut @ 70.00
B.E. 70.00

Scenario 2

Buy 1 Dec 70 Call @ 2.00
B.E. 72.00

Valuation Date: 12/05

Days to expiration = 0

This is the profit and loss profile of the call purchase at expiration (12/5). *You can see that time decay has a devastating impact on option purchases. However, realize that the seller of the option had time working for him/her.* All of the premium decay was to the advantage of the option seller. (A graphical demonstration of how the odds favor the option seller!)

**END OF TIME DECAY
SLIDE SHOW.**

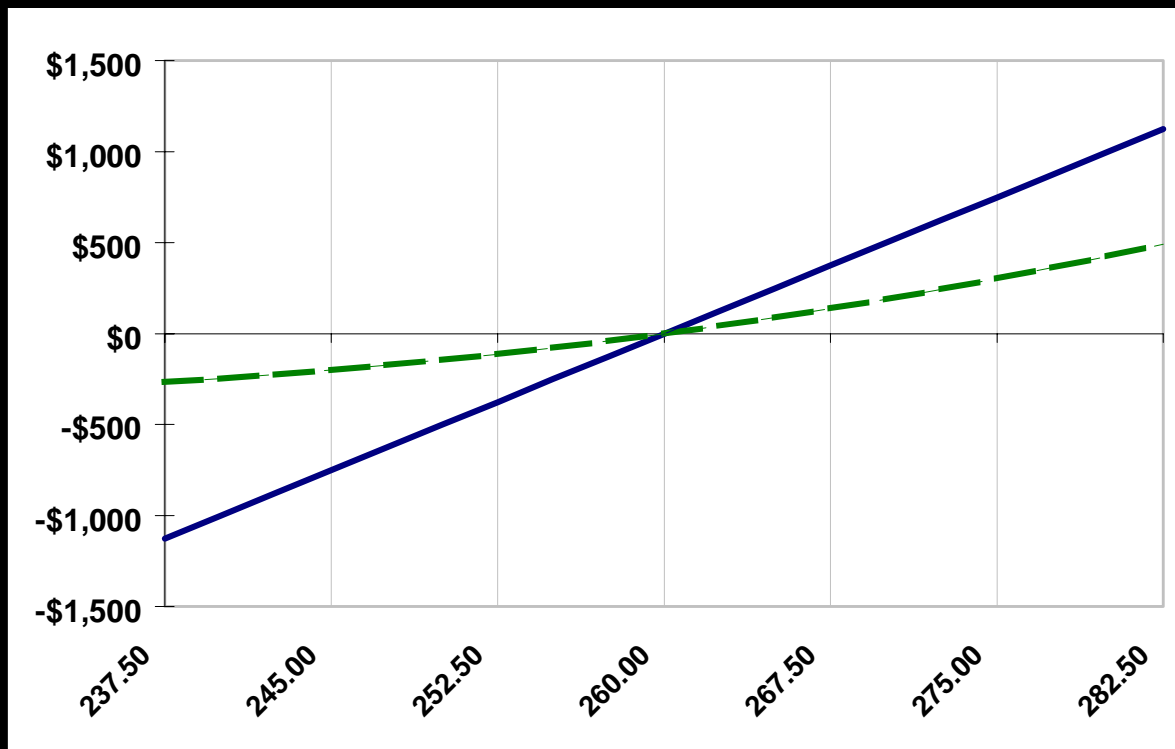
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Premium Factors continued...

Options are, in effect, a race between price and time. If the price moves faster than time expires, the option has value at expiration. If time wins the race, the option loses all of its extrinsic value and the option purchaser loses money. We know how fast time is running (24 hours per day). The only question is how fast is the price running. Volatility is the option market's attempt to answer this question.

Volatility

Volatility is simply a measure of how fast the underlying futures prices are moving. There are two basic types of volatility: historical and implied. *Historical volatility is a measure of how much the prices have been gyrating in the past. Implied volatility is the option market's guess at how volatile the prices will be in the future.* Another way to think of implied volatility is a barometer of the nervousness in the option pits. If the market anticipates wild price swings on the horizon, the traders become afraid that price will be victorious in its race against time. Therefore, they increase premiums to compensate for this perceived risk. (The risk is that option sellers will lose money, so they demand a higher selling price as a cushion against volatile prices.) *If you think volatility will go up, you should buy options. If you think volatility will go down, you should sell options.* In the next few pages, we'll demonstrate how volatility increases impact option premiums. **Special Note!**



Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
	-1125	-750	-375	0	375	750	1125
	-267	-200	-112	0	138	302	493

Scenario 1

Buy 1 Dec Fut @ 260
B.E. 260

Corn Futures

Scenario 2

Buy 1 Dec 280 Call @ 8
B.E. 260

Corn Option
Cost = \$400
Each 1.00 = \$50

Volatility Level: Current

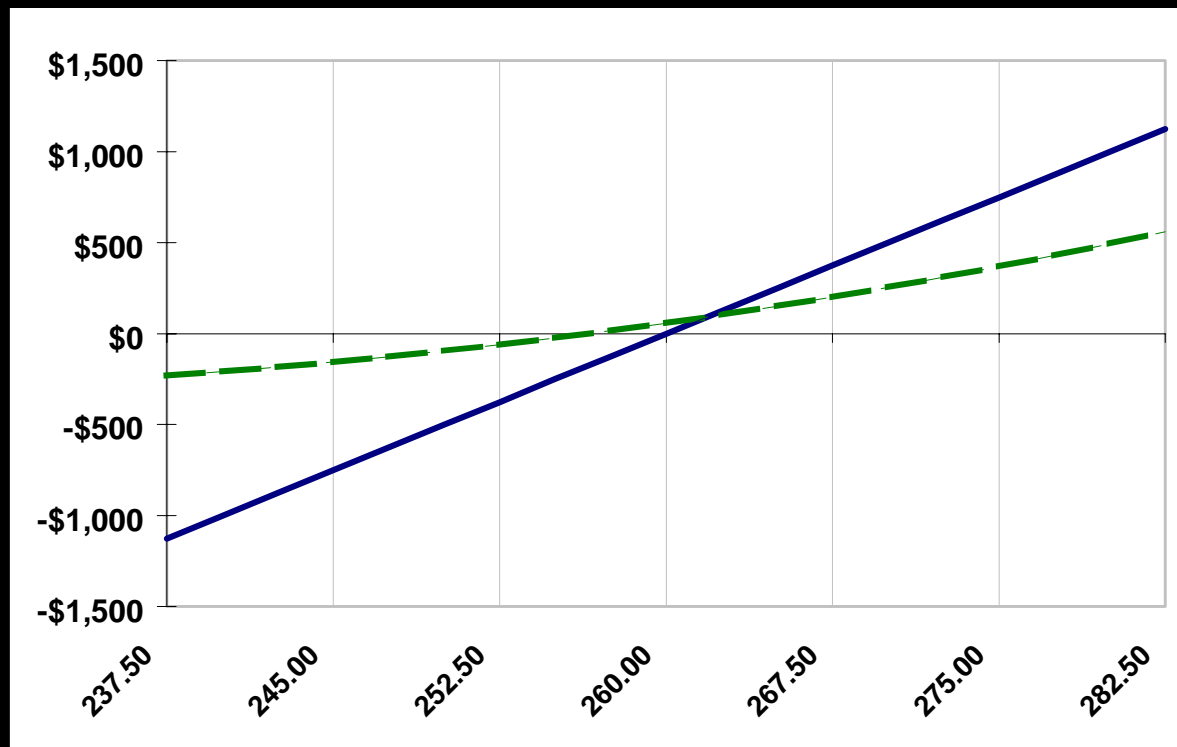
Valuation Date: 7/1

Days to expiration = 140

Again, start by running through these graphs in rapid succession, then start over and study them in greater detail. The solid line is a futures purchase and is simply a reference point. The dashed line is a call option purchase. *As volatility goes up, options increase in value (to the benefit of the option purchaser).*

Volatility Increase Demonstration

Options 101



Scenario 1

Buy 1 Dec Fut @ 260
B.E. 260

Scenario 2

Buy 1 Dec 280 Call @ 8
B.E. 255.50

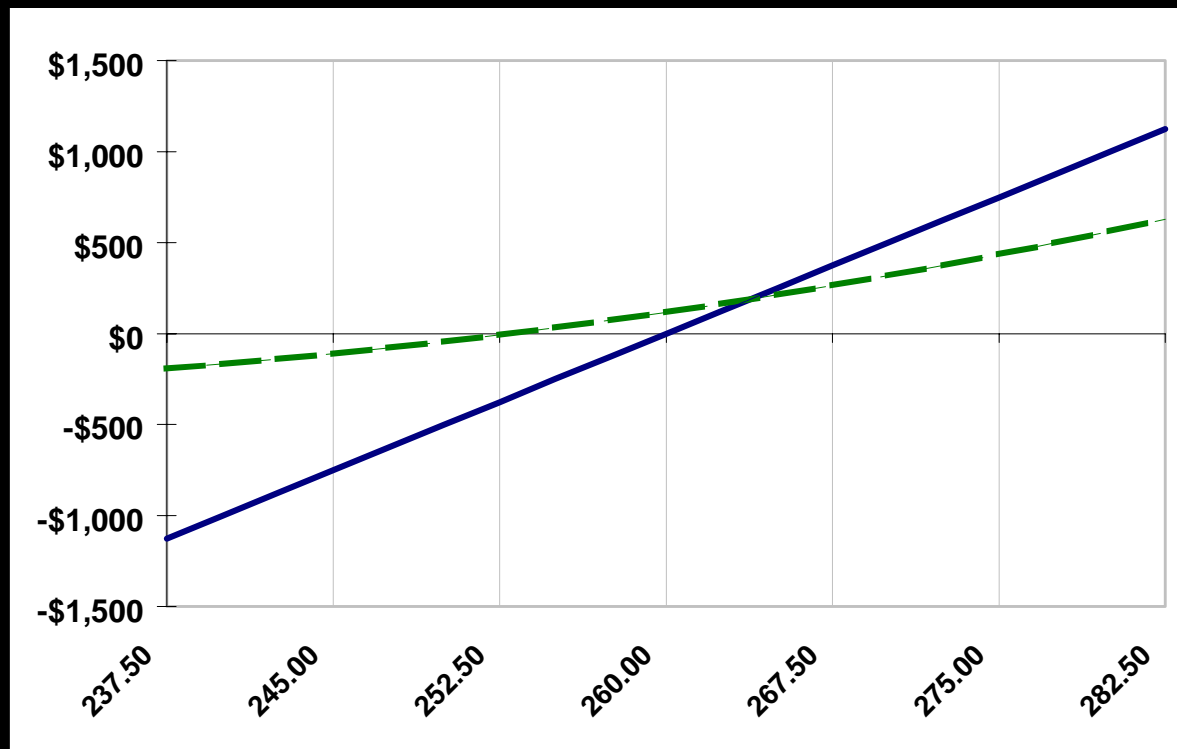
Volatility Level: Up 2%

Valuation Date: 7/1

Days to expiration = 140

Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
—	-1125	-750	-375	0	375	750	1125
- - -	-231	-156	-60	59	201	369	561

The Valuation Date for this analysis is held constant (7/1). This isolates the impact of a change in volatility. *With just a slight increase in volatility, the position already begins to be profitable at current price levels.* Notice how the break-even (B.E.) begins to slide lower.



Scenario 1 —

Buy 1 Dec Fut @ 260
B.E. 260

Scenario 2 - - -

Buy 1 Dec 280 Call @ 8
B.E. 252.625

Volatility Level: Up 4%

Valuation Date: 7/1

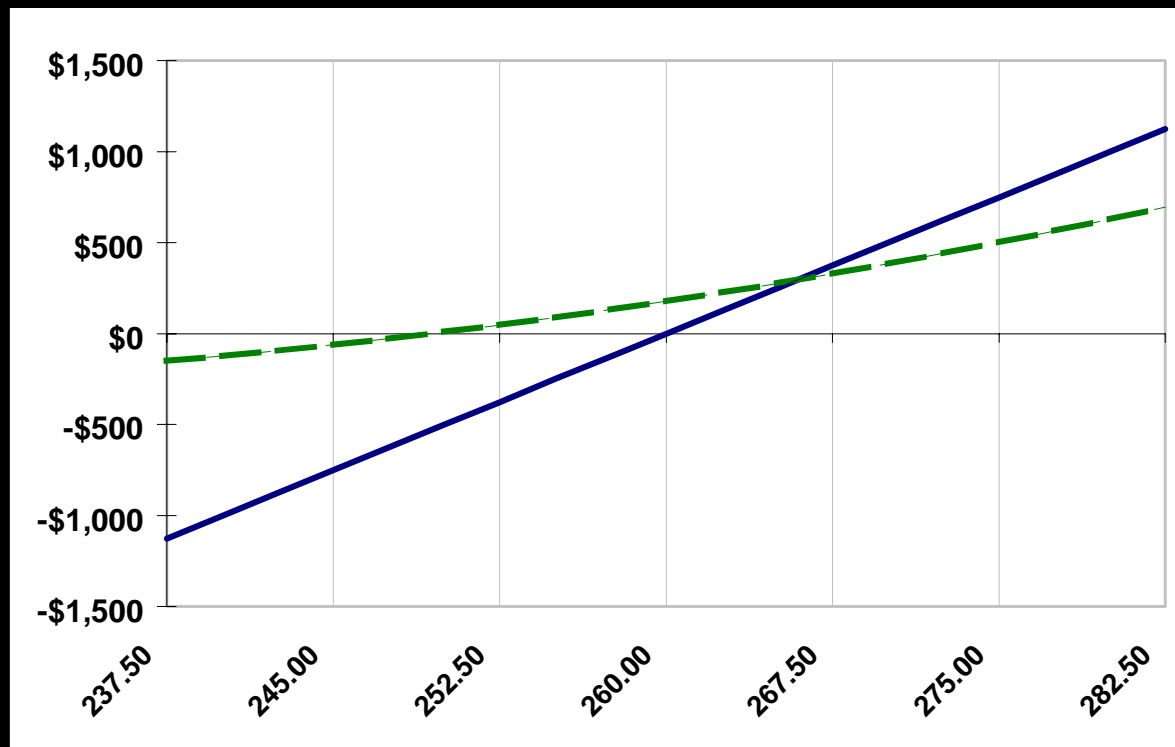
Days to expiration = 140

Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
—	-1125	-750	-375	0	375	750	1125
- - -	-192	-109	-7	118	265	436	629

If you buy an option, you want the premium to go up, so volatility increases are welcomed. If you sell an option, you want premiums to go down, so volatility increases represent risk and exposure. As you watch the profits go up, remember that those gains are losses for the option seller.

Volatility Increase Demonstration

Options 101



Scenario 1

Buy 1 Dec Fut @ 260
B.E. 260

Scenario 2

Buy 1 Dec 280 Call @ 8
B.E. 248

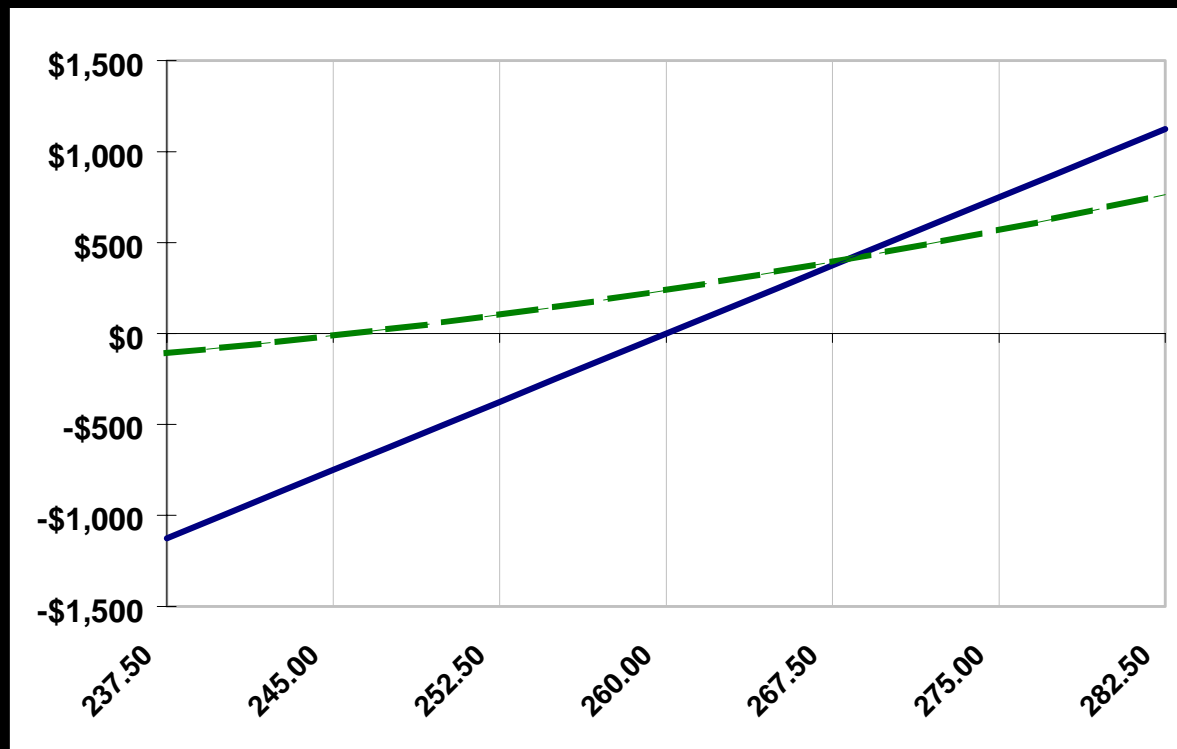
Volatility Level: Up 6%

Valuation Date: 7/1

Days to expiration = 140

Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
—	-1125	-750	-375	0	375	750	1125
- - -	-150	-61	48	178	329	502	696

Options are just like stocks or futures, you will want to buy when the premium (price) is low, and sell when the option's premium is high. *If you are buying options after a significant volatility rally, the options will be expensive (selling would be more appropriate). Buying high volatility options can prove a recipe for failure.* The odds become overwhelmingly stacked against you.



Scenario 1 —

Buy 1 Dec Fut @ 260
B.E. 260

Scenario 2 - - -

Buy 1 Dec 280 Call @ 8
B.E. 245.25

Volatility Level: Up 8%

Valuation Date: 7/1

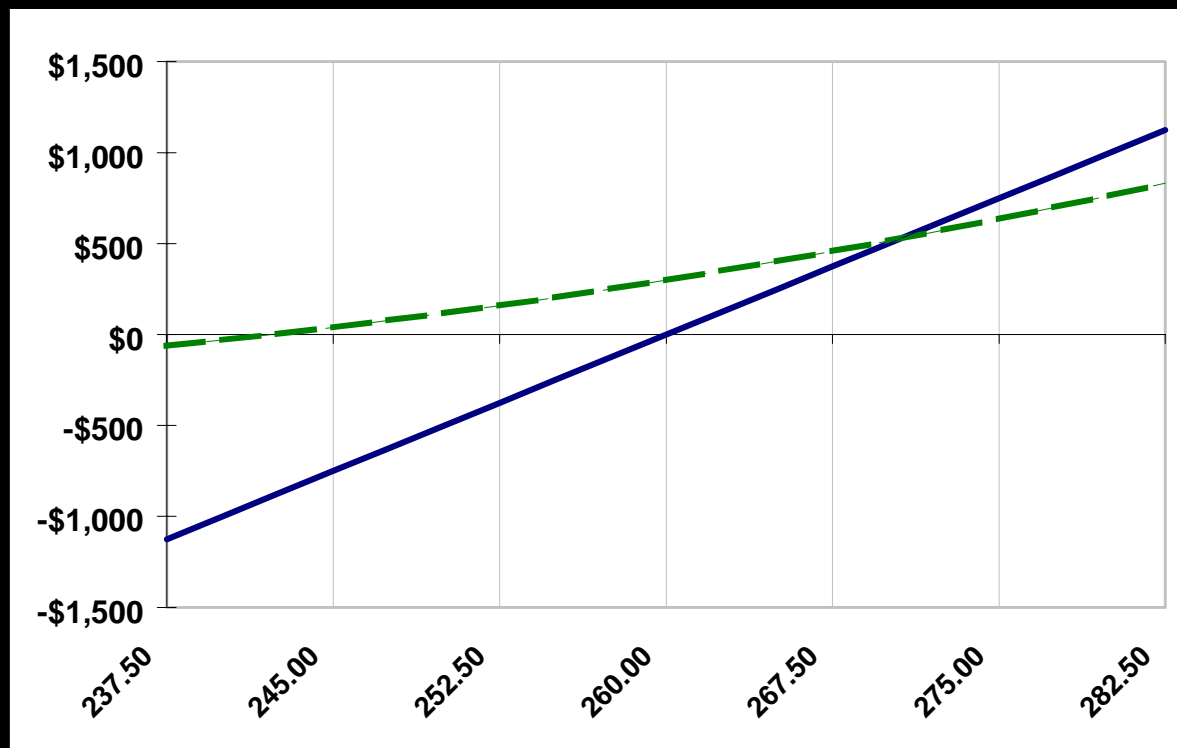
Days to expiration = 140

Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
—	-1125	-750	-375	0	375	750	1125
- - -	-107	-11	104	238	393	569	764

With a 8% increase in volatility, the break-even of this call purchase has dropped from 260 to 245.25. *If you bought the call in anticipation of the underlying contract moving higher, it is possible you could be entirely wrong and still make money because of the increase in volatility!* (The underlying could drop from 260 to 246 and you still have a profit!) **Special Note:**

Volatility Increase Demonstration

Options 101



Scenario 1

Buy 1 Dec Fut @ 260
B.E. 260

Scenario 2

Buy 1 Dec 280 Call @ 8
B.E. 240.625

Volatility Level: Up 10%

Valuation Date: 7/1

Days to expiration = 140

Price:	237.50	245.00	252.50	260.00	267.50	275.00	282.50
—	-1125	-750	-375	0	375	750	1125
- - -	-52	40	160	299	458	636	832

Volatility has seasonal trends and tendencies just like price does. It is important to know what is the seasonal volatility trend. In some markets, there is as much as a 15-20% seasonal volatility move! It is possible (and common among professionals) to construct an option position in which price of the underlying becomes irrelevant. The sole objective is to profit off of a change in volatility.

**END OF VOLATILITY
SLIDE SHOW.**

**PAGE DOWN TO CONTINUE THROUGH
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To summarize the impact of volatility: If a market becomes more volatile, it is to the benefit of someone who previously bought options and to the detriment of someone who previously sold options. Volatility varies from one market to the next. In the coffee market, it is not uncommon for volatility to double. *Buying options prior to such volatility expansion has a high probability of success. Selling options prior, is doomed to extensive margin calls and risk.* The energy and grain complexes typically have strong seasonal volatility trends. It is not uncommon to see a 20% volatility increase in these sectors. You should lean towards buying options prior to the seasonal trend, and selling options after volatility has expanded. Prior to strong seasonal volatility up-trends, you should avoid selling options.

What Creates Volatility Trends?

Seasonal volatility trends are typically caused by factors of production or consumption. The summer months in the grain markets have strong seasonal volatility trends because the crop has significant weather risk (a drought could wipe out the crops). Energies have seasonal volatility increases in the winter because cold weather can cause a sharp increase in the consumption of fossil fuels. Ironically, when do most uninformed investors want to buy options? Right in the middle of a drought scare when

the options market has already factored in a huge volatility increase! Consequently, the odds are sharply against this uninformed investor ever realizing a profit. The options they buy are extremely over-priced and ripe for a major decline in volatility. The point is this, *buying or selling options without some knowledge of the current volatility levels can be suicide.* Generally, it is not necessary to know precise volatility levels. However, *it is imperative that you are aware of approximate volatility levels.* Is volatility high, medium or low by historical standards? Is there any seasonal trend that could play a significant role in option premiums? This type of information should be easy to attain from any broker who frequently trades options.

Option Summary

If you think the market will go up, you can either:

1. Buy a futures
2. Buy a call
3. Sell a put

If you think the market will go down, you can either:

1. Sell a futures
2. Buy a put
3. Sell a call

Option Summary continued...

Buying options has limited risk, unlimited profit potential. No margin.

Selling options has unlimited risk, limited profit potential. Margin is required.

Deferred options (options with a long time until expiration) cost more than nearby options (options with a short time until expiration.) However, just because they cost more, does not mean they are a poor value.

Options that are in-the-money (have intrinsic value) cost more than options that are out-of-the-money. Again, cost is not equivalent to value.

Premiums of options that are deep in-the-money should closely mimic a futures contract. Premiums of at-the-money options should move at roughly half the rate of a futures. Out-of-the-money option premiums should move only a small percentage of the futures.

If you anticipate a volatility increase, you should lean towards buying options. If you anticipate a volatility decrease, lean towards selling options.

Because the odds are against you, consider buying options when:

1. Volatility is very low.
2. Volatility is average and you combine the option purchase with the sale of an option in a spread position.
3. Just before or during the early stages of a strong seasonal volatility up-trend.
4. Volatility is reasonably low and you anticipate a major price move.

Because the odds are in your favor, consider selling options when:

1. Volatility is high.
2. Volatility is average, and there are no foreseeable reasons to anticipate a volatility increase.
3. There is a strong seasonal volatility down-trend.

[GO TO QUIZ #2](#)

Why Trade Option Spreads?

Options are dynamic tools. You can combine puts, calls and futures to create positions which cover the full gamut of risk and profit potential. *An option spread is when you buy or sell more than one type of option contract (usually simultaneously).* **Special Note!** There are virtually hundreds of different option spreads that can be created. *There are three main reasons to consider option spreads. Using spreads you can: 1) shift risk, 2) increase the odds of success and 3) maximize returns over a given price range.*

Shifting risk

Almost without exception, all trading involves risk. The question becomes, what kind of risk are you willing to accept? If you buy futures, you accept unlimited risk of a price decline. If you buy a call, you accept time decay and volatility risk in lieu of the unlimited price risk associated with futures. It will help dramatically if you view options as instruments that simply allow you to swap between different types of risk. One benefit of spreads is they allow you to fine tune exactly how much risk you accept in different areas. The key is to shift the risk to an area in which you are more comfortable.

Increasing the odds of success

There are two main ways you can use options to increase the mathematical

Why Trade Spreads? continued...

odds of a profitable trade. The first is by taking advantage of pricing disparities between different options. Earlier in this course, we discussed how it is advantageous to buy options when volatility is low, and sell options when volatility is high. *In reality, each option carries its own individual implied volatility. This means that one strike price may be trading at a discount relative to another strike.* In other words, a 120 call may have an individual volatility of 9% and the 160 call may have an individual volatility of 18%. *By purchasing strike prices with low volatilities (i.e. the 120 call) and selling strike prices with high volatilities (i.e. the 160 call) you can capitalize on the disparity between the two strikes and increase your odds of success.* You can obtain the volatility levels of individual strikes by calling any qualified options broker.

The second way you can increase your odds of success is to simply design strategies that have the greatest concentration of profits centered over the most mathematically probable range of price outcomes. Very shortly, we will examine concrete examples of these two concepts.

Using Option Spreads to maximize returns

If you are trading, you are risking your money. Intuitively, you must always ask which strategy will yield the highest return for your money? There are

Why Trade Spreads? continued...

times when options allow for increased efficiency for each dollar invested. As an example: Lets say the Dec. S&P futures were currently trading at 943.00 and you believed that by expiration the market would decline to 925.00. If you elected to sell two futures contracts to capitalize on this potential decline, you would have to deposit over \$21,000 of margin into your trading account. If your forecast was correct, and the market declined to 925.00 you would realize \$9000 worth of profits (less fees). This results in a return on your margin money of 43%. If you elected to use option spreads, you could buy twelve of the Dec 940 puts and sell twelve of the 925 puts for a total cost of \$19,050 (less fees). (We'll soon discuss how this works.) If the market was trading at 925 or less at expiration, the option spreads would net \$25,950 (less fees). This would equate to a return of 136% on your money. For less money (\$19,050 in option premium vs. \$21,000 margin for futures) you almost triple your net profits! *Special Note!*

Short Futures Vs. Bear Put Spread

\$21,000 Margin Deposit

Sell 2 futures at 943.00

Buy 2 futures at 925.00

Profit = \$9000

Rate of return = 43%

\$19,050 Premium Cost

Buy 6 of the 940/925 put spreads for \$19,050

Liquidate at 925.00 at expiration for \$45,000

Profit = \$25,950

Rate of return = 136%

Why Trade Spreads? continued...

Additionally, since the option positions have limited risk, you don't have to worry about margin calls, or the market stopping you out just prior to a move in the direction you anticipated.

To recap, you should consider option spreads to: 1) Swap to a more desirable risk posture (i.e. swap price risk for volatility risk) 2) Increase your mathematical odds of success through disparity and probability based strategies and 3) Maximize returns over a given price range.

In building option spreads, you are only limited by your imagination. There are hundreds of possible spread combinations. After this course, you will be ready to learn more unconventional strategies and factors to consider when designing your own spreads. For now, we'll begin with a basic arsenal of four different option spread strategies. These strategies include: 1) vertical debit spreads, 2) ratio spreads, 3) straddles/ strangles and 4) synthetic futures. You will naturally increase your arsenal of strategies as your confidence and experience increases. However, these four strategies should be sufficient to allow you to find numerous trading opportunities with relatively high odds of success. (Many traders use these four strategies exclusively.) We'll begin with a discussion of vertical debit spreads.

Get Vertical! Vertical Debit Spreads

The most frequent application of a vertical debit spread is when you buy an near/in-the-money call (put) and simultaneously sell an out-of-the-money call (put). Because the near/in-the-money options will always cost more than you receive by selling the out-of-the-money option, these trades always result in a necessary cash outlay (hence the word “debit” in the title). There are two types of these trades. The bull call debit spread and the bear put debit spread. We’ll start by examining the bull call debit spread.

The Bull Call Debit Spread

Let’s say the Feb Gold contract is currently trading at 325. You are mildly bullish the Gold market, but you do not expect the market to trade above 350. If you bought 10 of the Feb 330 calls for 6.70 you would have unlimited upside potential and a total risk of \$6700 plus fees. (10 options, premium of 6.70 x \$100 per point value of Gold = \$6700). Since you don’t really believe that gold will trade above 350, you really don’t need the unlimited upside potential that the call option purchases provide. What if you could reduce your cost on the trade (and consequently reduce your total risk) and still retain the ability to make profits up to the 350 level? You would still have all the potential you desire, with less risk. Combining the 330 call purchases

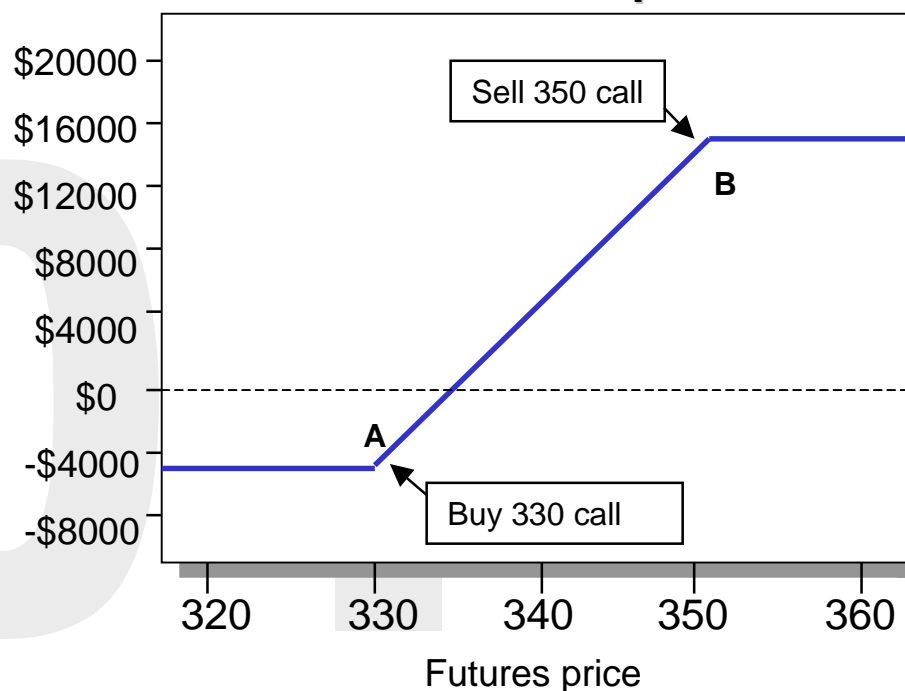
Bull Call Debit Spread continued...

with the sale of 10 of the 350 calls can accomplish this objective. (Stock traders - this concept is similar to creating a covered write, only your downside risk is limited!)

For this analysis we'll say the Feb Gold 350 calls are trading at 2.50. Selling these options would bring in \$2500 less fees (10 contracts @ 2.50 x \$100 = \$2500). This income can be applied towards the 330 call purchases. *This reduces your total cost and risk down to \$4200 less fees. By decreasing your cost from \$6700 to \$4200, you have cut your risk by 37%!* When you sell the

350 calls for 2.50, you keep the \$2500 as long as the futures are below 350 at expiration. Above 350, you lose. However, you also bought the 330 calls which have unlimited upside potential. If the market moves above 350 (point B), every dollar that the short 350 calls lose would be offset by an equal gain in the 330 calls. This is why the graph runs horizontal above this point. The 350 calls act as a ceiling to your profits.

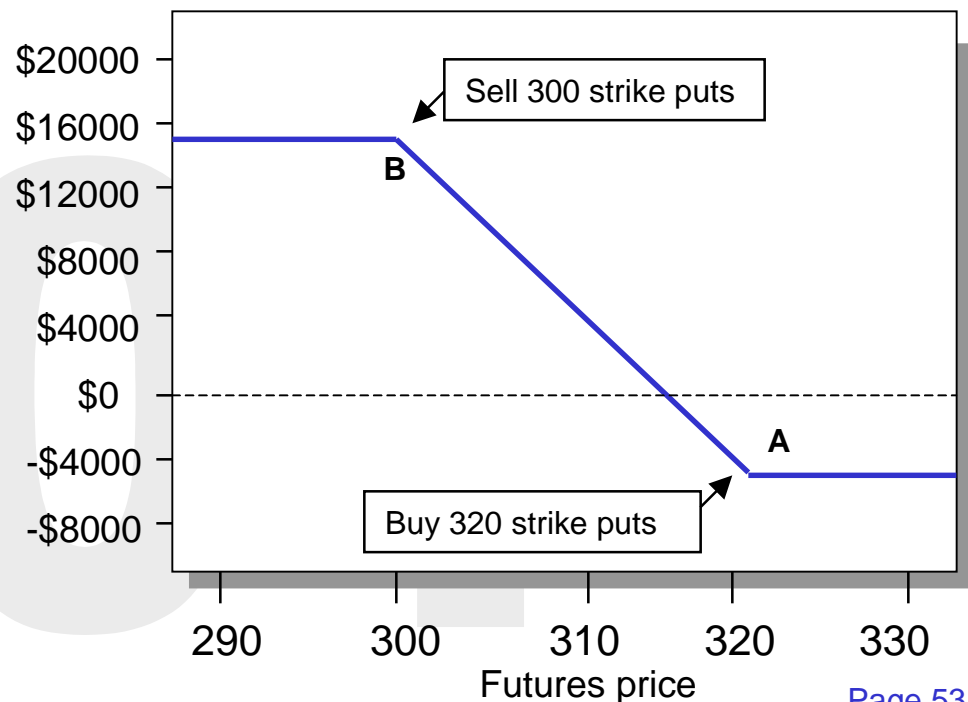
330 / 350 Bull Call Spread



The Bear Put Debit Spread

In the bear put debit spread, you expect a market decline but believe the decline will be limited in scope. *You buy an in/near-the-money put and sell an out-of-the-money put.* We'll use Gold again as our example. Again we'll assume the Feb futures are trading at 325, and you are mildly bearish the Gold. You anticipate a decline, but you have noticed substantial chart support at the 300 level, so you don't believe Gold can drop below 300. If you bought 10 of the 320 puts for 6.50 you would pay out \$6500 plus fees for the right to have unlimited profit potential below 320. However, it is not cost effective to pay for unlimited downside potential if you believe the market should only drop by .25. By selling 10 of the 300 puts for 2.40, you can reduce your total risk by \$2400 and still have the amount of profit potential you desire.

320 / 300 Bear Put Spread (debit)



Bull Call Debit Spread continued...

Vertical debit spreads typically capitalize on disparity in volatility. There is a natural tendency for the out-of-the-money options to carry a higher implied volatility than the at/in-the-money options. One reason this occurs is because the uninformed general public is often a buyer of out-of-the-money options. They look only at cost with no consideration to value. The floor traders take advantage of these naive traders by raising the price of out-of-the-money options (hence increasing volatility). *Vertical debit spreads frequently create a theoretical edge because you purchase at/in-the-money options that are cheap relative to the out-of-the-money options.* (You are buying options with low volatility and selling options with high volatility.)

Advantages	- Vertical Debit Spreads-	Disadvantages
<ol style="list-style-type: none">1. Capitalize on normal disparity between strike prices.2. Limited risk & no margin calls.3. Reduced cost over outright option purchase.4. Short option helps counter time decay.		<ol style="list-style-type: none">1. Limited profit potential.2. Some exposure to time decay.

The Free Trade

If you find a market that appears likely to break out of a sideways consolidation range, you may want to consider a variant of a vertical spread called a “free trade”. *A free trade is when you initially buy a near/at-the-money option and then wait for the market to move in your favor before you sell the out-of-the-money option.*

The objective of a free trade approach is to sell the out-of-the-money option for the same premium you paid originally for the at-the-money option. Here’s an example of how this would work. Let say you notice that the cattle market has been in a sideways consolidation for a long period of time, and you believe an upside breakout is imminent. You buy 10 of the June 68 calls for a total outlay of \$6000 and sit back and wait. Two weeks later the breakout occurs and the market rallies. You notice that the June 70 call has increased in value to \$600. By selling the 10 of the 70 calls you could take in \$6000 worth of income (less fees). Since you paid \$6000 for the 68 calls and sold the 70 calls for \$6000 how much risk would you have? Zero! You have successfully reduced your cost (and risk) to zero. The position would still realize a profit anywhere between 68.00 and 70.00, and your maximum profit of \$8000 would occur if the market was anywhere at or above 70.00 at

Free Trade continued...

expiration. You have zero cost, risk and exposure and \$8000 worth of profit potential! Better yet, the original \$6000 you invested is now liquid and could be used to establish another option purchase. Then you would have two positions for the risk and cost of one! *You should note that if the market never rallies significantly enough to complete the free trade, you are exposed to time decay risk on the original \$6000 you paid for the 68 calls.*

The free trade is an excellent approach if volatility is currently low (option premiums are cheap) and you expect a major breakout. You can use a free trade approach to build a large inventory of positions with a relatively small initial investment. Begin by completing a free trade and then look for a pullback to reinvest your initial money in an attempt to complete yet another free trade. Once that free trade is completed, look for another pullback to start again. In strong trending markets, it is not uncommon to complete three or four rounds of free trades using only the initial investment! This allows you to build a considerable inventory of positions while keeping your exposure at predefined, minimal levels throughout the process!

The Big Range! Ratio Spreads

Ratio spreads can prove profitable over an enormous price range. Because of this fact, many people advocate this strategy. One of the biggest problems with ratio spreads is *there are few instances in which they are appropriate.* However, ratio spreads are a must in every traders toolbox because of the high mathematical probabilities of success.

Call Ratio Spreads

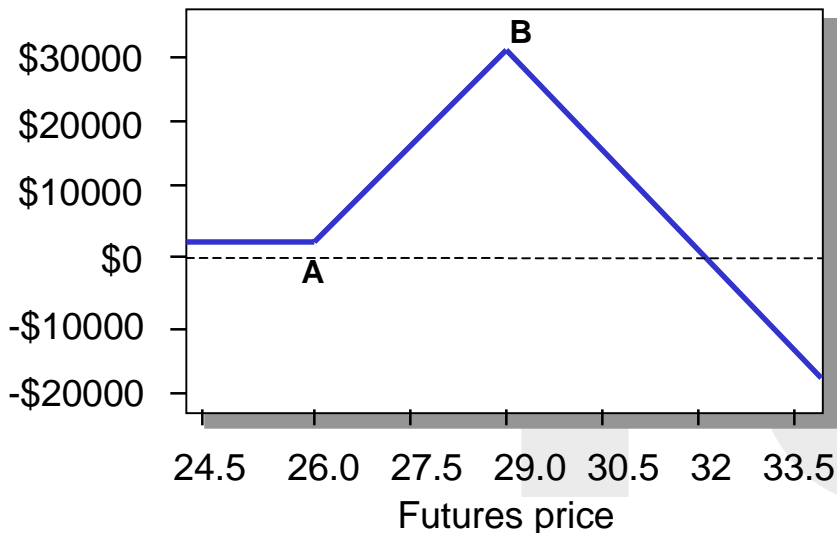
Let's say that because of a crisis in the Mid-East the January Crude Oil futures have spiked higher from \$19 a barrel to \$26 a barrel in the past few weeks and is now approaching major resistance. You anticipate the market will continue to move higher, but you don't expect the rally to continue at breakneck speeds and you are resolute in your belief that the market will eventually stall when it hits resistance. You would like to capitalize on this upside potential, but are apprehensive about assuming downside risk. (The crude oil has a history of declining every bit as fast as it rallies.) What are your alternatives? You could establish a bull call debit spread by purchasing at-the-money calls and selling a calls at a higher strike. However upon examination, you feel the cost of this scenario would be more downside risk than you would prefer. You also notice that the out-of-the-money call

Call Ratio Spreads continued...

volatilities are extremely high. Being an astute options trader, you know you want to sell options when volatility is high. This is the perfect scenario for a call ratio spread.

A ratio spread is when you buy one at/in-the-money option and sell two (or more) of the out-of-the-money options. In this example, you would buy ten of the Jan 26 strike calls for 1.50 a piece for a total outlay of \$15000 before fees. (Each point in the crude oil is worth \$10.) Simultaneously, you would sell twenty of the 29 strike calls for .85 or \$17000 total. You have paid \$15000 for the 26 calls and received \$17000 for selling the 29 calls for a net credit of \$2000 before fees. Because we established the position for a credit,

Call Ratio Spread



the position makes \$2000 anywhere below 26.00. You read that correctly. At expiration you make \$2000 anywhere from 0 to 26.00. Making \$2000 when you are wrong about market direction is not a bad outcome. (Remember you are bullish the market.) If the market rallies, your maximum profits would occur with the futures at 29.00 at expiration. Above

Call Ratio Spreads continued...

32.00 at expiration, you have losses. *This occurs because you sold two calls for every call purchased. With each successive point move above 29.00, the short calls lose twice as much as the long 26.00 strike calls make.* The reason losses don't start until 32.00 (at expiration) is because this is the point at which your losses on the short calls have entirely depleted all of the profits of your long call purchases. *This is the major drawback with ratio spreads. If the market rallies more than you anticipated, you will have losses.* This can be a very frustrating dilemma. You believe the market will move higher and establish a trade to capitalize on this event. You are correct, the market does rally. It just rallies more and faster than you anticipated, and you end up losing money. **Special Note!**

Because you are short twice as many out-of-the-money options, *ratio spreads are extremely sensitive to changes in volatility. If volatility continues to increase, losses can mount rapidly.* Remember the graph on the previous page shows the profit and loss **at expiration**. If you are one week into the trade, your profit and loss profile will look substantially different, especially if volatility has increased. (There is a time decay graph in Appendix B.) *In order for your spread to be profitable, time must pass (or volatility decline) to deteriorate the short premium.* This is why *it is advisable to have some area*

Call Ratio Spreads continued...

of key resistance you can use to force a decision to liquidate the trade at a loss. If there is no area of key resistance, you should always have a monetary stop loss point. In other words, you determine exactly how much you are willing to risk on the position. If that level is breached, you must liquidate, or losses can quickly get out of hand.

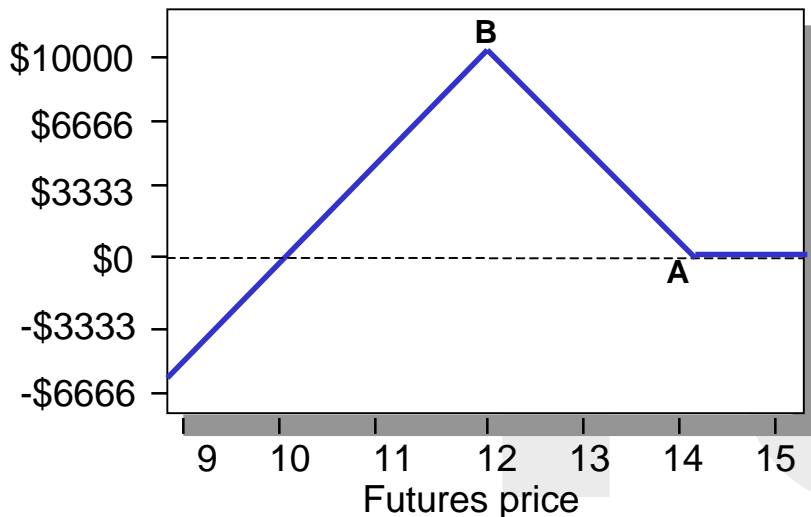
All of the drawbacks aside, ratio spreads are amazing positions. They simply give you an enormous range of profitability (particularly when you establish the position for a credit by selling more dollars worth of premium than you pay-out.) In the crude oil example just outlined, the position would have a 32.00 range of profitability! *The big range of profitability occurs because you exploit substantial disparity between option strikes. In order for a market to be a potential candidate for ratio spreads, you should see major disparity between the at/in-the-money options and the out-of-the-money options.* (A good rule of thumb is to sell options that have twice the volatility of the options you buy.) If your volatility criteria is strict, you will find few instances in which ratio spreads are suitable. But the two or three opportunities you find per year will likely have very high odds of success. **Special Note!**

Put Ratio Spreads

We'll stick with the crude oil for our evaluation of a put ratio spread. In this scenario, we'll say the Dec. crude futures plummet to \$14 a barrel. You anticipate there will still be additional price declines and would like to be in a position to participate. You decide to place a put ratio spread to capitalize on the extreme disparity that has developed between the out-of-the-money and the at-the-money strikes. You buy 5 of the Dec. 14.00 strike puts for a total outlay of \$6750, and sell 10 of the Dec 12.00 strike puts for a credit of \$7500. This results in a net credit of \$750 less fees. The position is profitable anywhere above 10.00 at expiration,

but the maximum profits of a ratio will always be achieved if the futures are trading at the strike price of the sold premium at option expiration. We sold the 12.00 strikes, so maximum profits occur with the futures at 12.00 at expiration (point B). For every point the market moves past 12.00 the short puts lose twice as much as the long puts gain. Eventually this depletes all profits from the 14.00 strike puts and a loss occurs below the 10.00 level.

Put Ratio Spread



Advantages	-Ratio Spreads-	Disadvantages
<ol style="list-style-type: none"> 1. Huge range of profitability (high odds of success). 2. Capitalize on extreme disparity between strike prices. 3. Position normally established at a credit. 4. Time decay works for you. 		<ol style="list-style-type: none"> 1. You lose if the market does better than anticipated. 2. Potential profits are limited, potential losses are unlimited. 3. Margin is required. 4. Sensitive to volatility increases.

Trade With the Odds! Straddles & Strangles

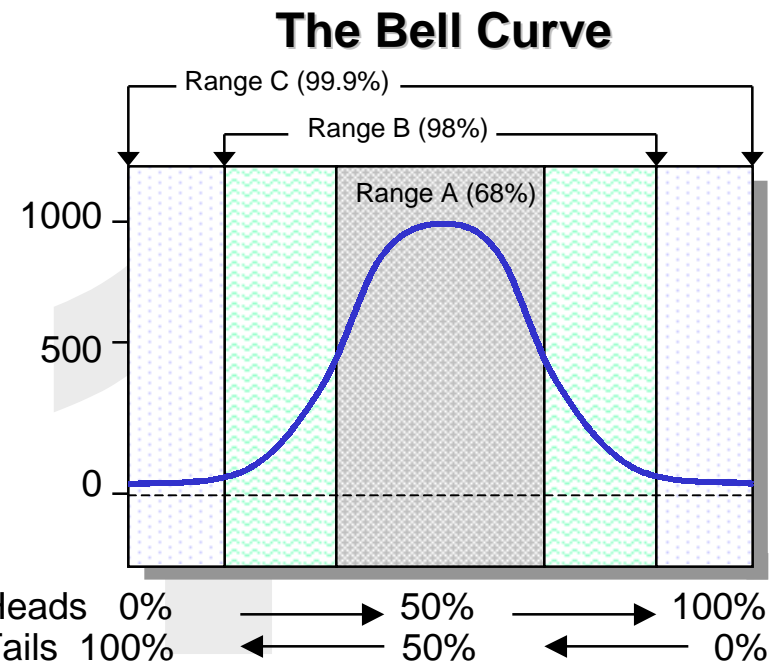
A short straddle is when you sell both a put and a call at the same strike price. A short strangle is when you sell a put and sell a call at different strike prices. Straddles and strangles are designed to make money if the market sits still. The positions lose money if there is a big move in either direction. These strategies have unlimited risk in both directions. (You can lose if the market moves too high or too low.) Despite this fact, you might consider strangles and straddles because of the high mathematical probabilities of success. Let's examine the statistical rationale that can make straddles and strangles desirable positions.

The Bell Curve

Mathematically, it has been demonstrated that market prices exhibit a close similarity to “random walk.” Random walk basically says the markets are like a coin flip. The odds are 50/50 they can go up or down. This does not diminish the fact that trends occur; it simply states that over a long enough period of time, the markets behave in a more random fashion.

A bell curve (shown below) plots the results of a series of random outcomes. (Remember the bell curve from school exams?) If you were to take a coin and flip it five times, you might get five heads and zero tails. If you flipped the coin 1000 times, it would be virtually impossible to get all heads and no tails.

On the graph, the number flips are on the vertical axis, and the percentage of heads and tails is shown on the horizontal axis. The more times you flip, the greater the odds you will have a 50/50 mix of heads and tails. Statistically it is proven that 68% of the time the outcome is within Range A, and 98% of the time the



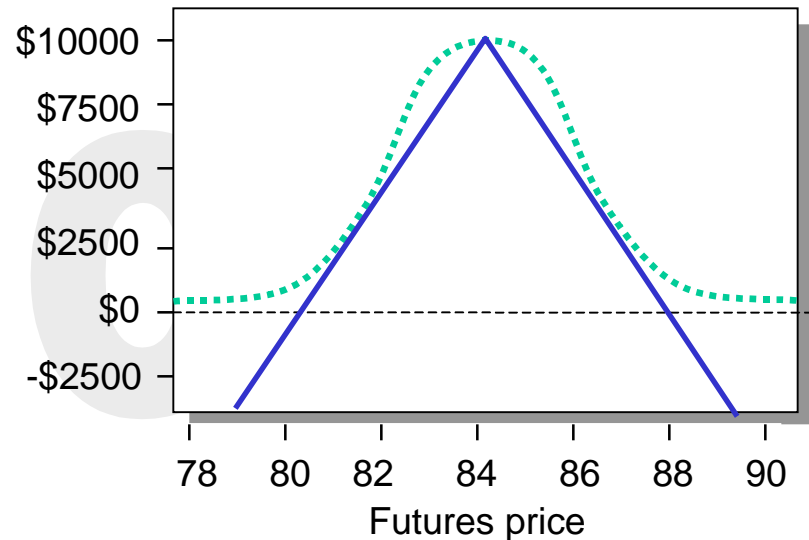
The Bell Curve continued...

outcome is within Range B (which encompasses Range A).

The relevance of the bell curve is clear. Since market prices have been shown to have a strong correlation to the bell curve, we can conclude that a desirable position would be one which has a similar profit and loss profile as the general shape of the bell curve.

The green, dotted line in the graph to the right is the bell curve. The blue line is the profit and loss profile of a short straddle at expiration. (We'll discuss straddles in detail in just a moment.) Notice how the profits of the straddle coincide with the most likely range of price outcomes? This demonstrates the primary benefit of straddles and strangles. *They are positions which have high probability of profit.* They do have their drawbacks in that profit potential is limited and potential risk is unlimited. However, it is hard to construct a position which has higher odds of success. **Special Note!**

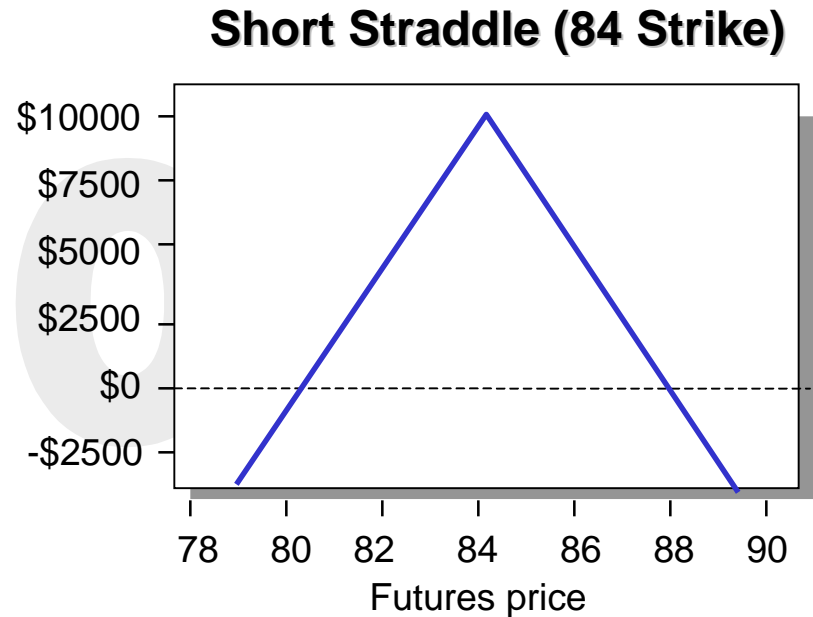
Straddle & Bell Curve



Short Straddles

It has been well documented that markets spend the majority of their time moving sideways. Strangles and straddles are designed to exploit this tendency. Thus, the elevated probability of profit on these style trades.

Let's say the Japanese Yen futures are trading at 84.00. In comparing against seasonal volatility charts, you notice that implied volatility peaks out during this timeframe and slowly erodes over the next six months. You also believe the market appears to be building into a sideways consolidation pattern. You elect to place a straddle to capitalize on the seasonal volatility downtrend and a potential sideways market. You place an order to sell two of the 84 puts and two of the 84 calls for a total premium of 4.00 points per straddle or \$10,000 total. (Each full point in the JY = \$1250.) At expiration, the position is profitable between 80 and 88. (This is the strike price of 84 +/- the 4.00 points of premium received.) Below 80 and above 88, your potential losses are unlimited. As the market moves



Short Straddles continued...

higher than 84, the put becomes profitable and the call begins to lose money so the two offset each other. (vice versa for a downward move.) If the trend continues, eventually one side begins to lose more than the other can recoup and losses accumulate. However, it is important to remember that time is on your side. With each passing day, both options lose more extrinsic value (unless volatility increases). As long as the price doesn't move faster than time decay can erode the options, the position will be profitable at expiration.

What would you do if the market was at 84.00 and you wanted to place a straddle, but you would ideally like to center your profits around 86.00? The answer is simple. Just sell the 86 put and sell the 86 call. *Whatever strike price you choose to utilize in your straddle, that will be the point at which maximum profits occur.* If you want maximum profits to occur at 82.00, you simply sell the 82 put and call.

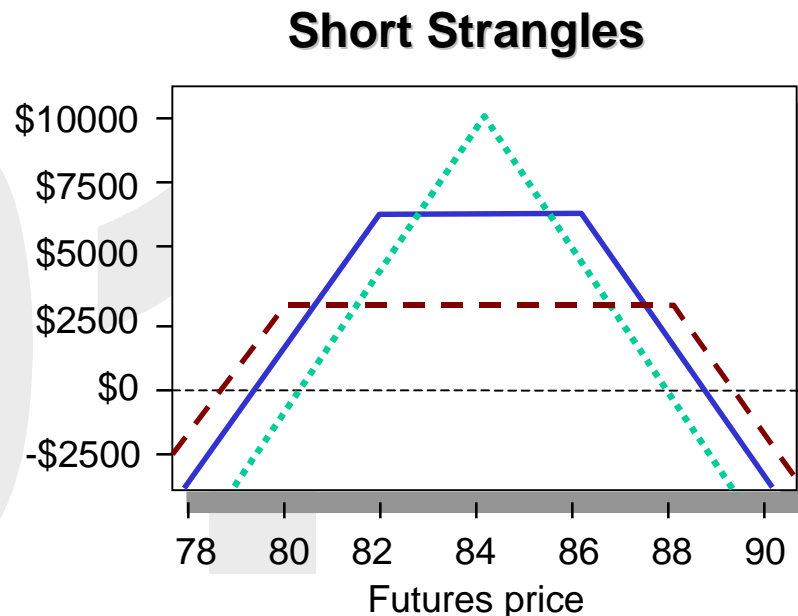
Short Strangles

Short strangles share many of the same characteristics as short straddles. *The difference is that strangles typically have a wider range of profitability, and a lower level of maximum profits. Additionally, because you sell options at different strike prices, there is a range at which your maximum profits can occur, instead of one fixed point like the straddle.* One final difference deals with volatility sensitivity. *Both straddles and strangles are extremely*

Short Strangles continued...

sensitive to volatility (both positions are helped by volatility decreases and hurt by increases). Frequently, strangles will have slightly more volatility risk. This is because the out-of-the-money options, which are normally used in a strangle, frequently carry a greater sensitivity to volatility.

Let's take the same Yen scenario we just described and consider strangles. You would use a strangle instead of a straddle if you want to have a wider range of profitability. In a strangle, you would sell two of the 82 puts and sell two of the 86 calls for 2.75 per strangle or \$6875 total. The blue line below depicts this position. The green, dotted line is the 84 straddle and is for comparison purposes. On the strangle, the downside break-even is lowered to 79.25 (82 strike less 2.75 in premium) and your topside break-even is raised to 88.75 (86 strike plus 2.75 in premium). You can see on the graph that maximum profits occur if the market is between the two strikes (82 and 86) at expiration. The red, dashed line depicts yet another strangle created by selling the 80 puts and the 88 calls. The profit potential is substantially less, but it covers an even wider range of profitability.



Straddles and Strangles continued...

Straddles and Strangles are a great weapon to have in your trading arsenal because they allow you to make money in a sideways market. Considering that most of the time markets are non-trending, this can be a substantial advantage. *Make certain that volatility is at relatively high levels (and expected to decline) before you initiate one of these strategies.* Ideally, you want to see a strong seasonal downtrend in volatility. Whether you utilize a straddle or a strangle simply depends on how tight of a range you expect the market will stay within. Whichever strategy you choose, *it is imperative to have predetermined levels at which you are willing to exit at a loss.* The potentially unlimited risk of these trades clearly spells disaster for the undisciplined trader.

Advantages	-Straddles & Strangles-	Disadvantages
<ol style="list-style-type: none">1. High probability of success.2. Works in a non-trending market (a very common occurrence).3. Position is established at a credit.4. Time decay works for you.		<ol style="list-style-type: none">1. You can lose in both directions.2. Potential profits are limited, potential losses are unlimited.3. Margin is required.4. Sensitive to volatility increases.

Do It the Options Way! Synthetic Futures

By combining options in different ways, you can do about anything. Synthetic futures use options to create a position that mimics a futures contract. You might ask why bother to create a futures using options when you can just trade the futures? The answer is that they look the same, but they are not the same. A futures contract may be more limited in follow up strategies. For example, if you own a futures and want to reduce your downside risk (and still keep all your upside potential), you can buy a put. Then if the market declines, the put will offset the losses sustained on the futures purchase. The only drawback is that it costs money to buy the put. Because you spend money on the put, your profits are reduced. As we'll soon see, synthetic futures offers a better alternative. *In short, a synthetic futures provides a more flexible platform, especially for follow-up strategies.*

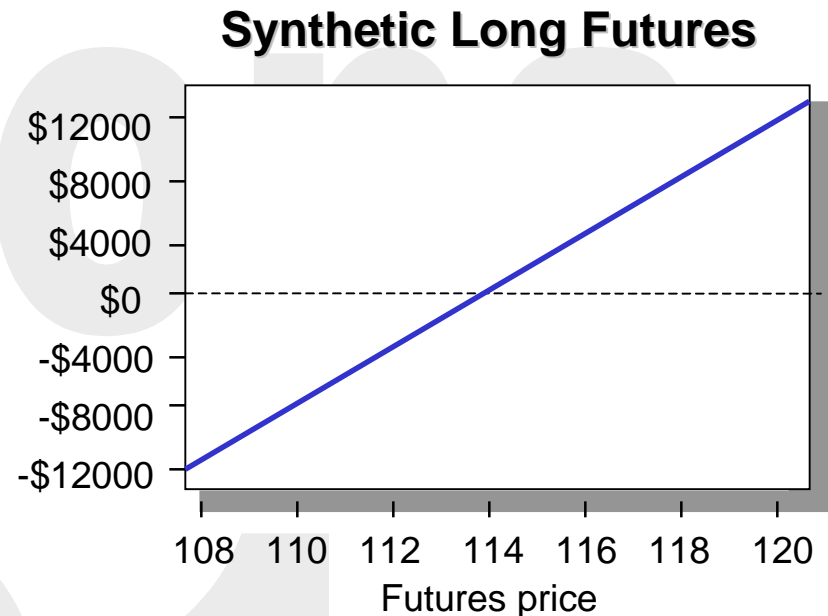
Synthetic Long Futures

To create a synthetic long futures, you buy a call and sell a put at the same strike price. If you view the position at expiration, it normally doesn't matter which strike price you use. Your profit and loss profile will be almost identical independent of the strike price. However, *the determination of which strike price to use is important when it comes to follow up strategies.* **Special Note!**

Synthetic Long Futures continued...

Let's say the March US Bonds are trading at 114. You believe that interest rates will decline so you are bullish the bond futures (there is an inverse relationship between interest rates and bond prices). Because a strong up-trend is present, you would be comfortable buying futures contracts. However, you elect to utilize a synthetic long futures for added flexibility.

You buy two of the March 116 calls for a premium of 1 40/64 per option and sell two of the March 116 puts for a premium of 3 40/64 per option. (The bond options trade in 64ths.) This results in a net credit of 2.00 per spread or \$4,000 total less fees. (Each full point in the bonds = \$1,000.) The profit and loss profile of this position (at expiration) is depicted by the blue line in the graph. *Notice how this line is exactly what you would expect with a futures purchase.* As the price increases above 114, profits increase and below 114, losses increase. Since the position has exactly the same profile as a futures contract (unlimited profits and risk), you can rightly expect that identical margin will be required.

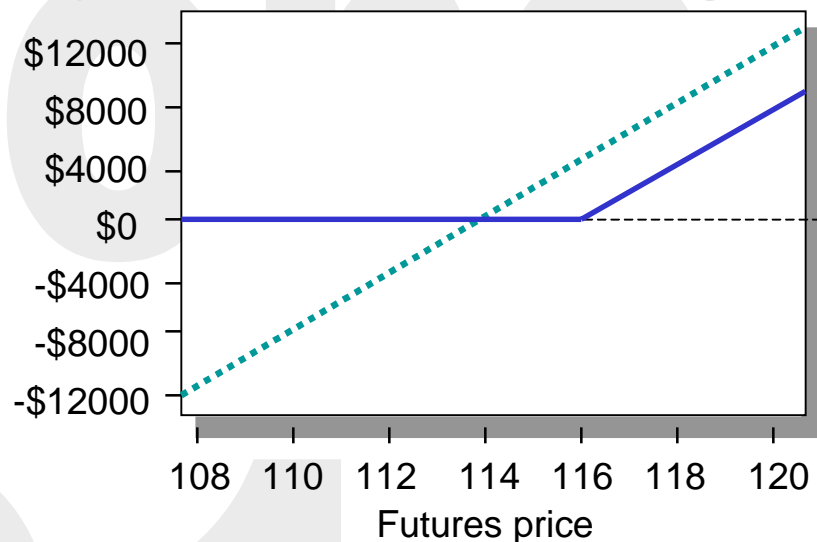


Synthetic Long Futures continued...

At this point you may ask, why the break even of this position is at 114 if we used the 116 strike prices to construct the position? The answer is that the position was initiated at a credit of 2. The break even is lowered from 116 to 114 to account for this credit.

As stated earlier, the *real advantage of synthetic futures becomes evident in follow up strategies*. We'll assume that one month has passed. The market has rallied to 116. You believe that the market will continue to rally, but are concerned that a short term correction is due. When you examine your positions, you note that the 116 puts that you sold for $3\frac{40}{64}$ are now trading at 2. If you liquidated (offset) the puts, you would realize a profit of $1\frac{40}{64}$ less fees. Your profits from the puts would be equal to the premium you paid for the 116 calls. Now you simply own calls free and clear! The net result is that you have a position with unlimited upside potential and zero downside risk! The green, dotted line shows the original position and the blue line shows the follow up. If you had simply bought futures contracts (in

Synthetic Conversion to Long Call



Synthetic Long Futures continued...

lieu of the synthetic position), you could achieve the same result by purchasing put options to cover any losses of the short futures. However, this would result in out-of-pocket cost. Using the synthetic, you achieve the result without having to spend additional money. Let's look at another follow up with a synthetic short futures.

Synthetic Short Futures

A synthetic short futures is created by purchasing a put and selling a call at the same strike. We'll stick with the bonds for this analysis. With the March bond futures trading at 114, you believe the bonds will decline to support on the charts at 110. You place an order to buy two of the 114 puts for 2 30/64 per option and sell two of the 114 calls for 2 30/64 per option. Your net cost on this position would simply be the fees required for transacting the trade. (A margin deposit is also required).

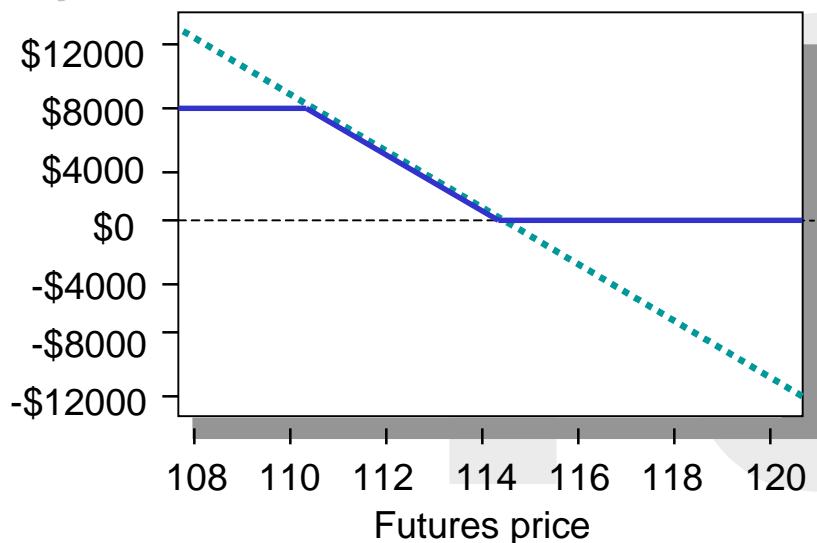
Let's say the market declines from 114 to 112 and the 114 calls you sold for 2 30/64 are trading at 1. If you take profits on these short calls, you would net 1 30/64 before fees. Since you originally paid 2 30/64 for the long puts, your cost is reduced to 1. (2 30/64 purchase price on long puts less 1 30/64 profit on short calls = 1 remaining put cost.) Now you have a position with unlimited down side profit potential and \$1000 of maximum risk (plus fees).

Synthetic Short Futures continued...

To recap, now the futures are at 112. You own two of the 114 puts with a total exposure (before fees) of \$1000 on each option. You still believe a decline to 110 is likely. However, you are concerned that the market could rally and expose you to loss on the \$2000 remaining put premium. How can you reduce your exposure yet retain your profit potential to the 110 level?

As you evaluate option premiums, you notice that the 110 strike puts are trading at 1. Selling two of the 110 puts generates \$2000 in premium. (Enough to recoup the remainder of the cost of the 114 put purchases.) This would give you two long 114 puts and two short 110 puts with zero cost (except fees) and risk! You still retain profit potential from 114 through 110!

Synthetic Conversion to Free Trade



If this position looks familiar it should. It is a variant of a bear put spread named a “free trade.” So, we started out with a synthetic short futures and ended up with a bear put free trade. This graph depicts the difference between the two. The dotted line is the original short synthetic and the blue line is the free trade follow up.

Synthetic Futures continued...

It is important to note that when you are using synthetic futures, you have increased flexibility when the market moves in your favor. You can easily convert your position to a risk free option, a free trade or a multitude of other possibilities. The synthetic futures still allows you additional flexibility when the market moves against you as well. *However, when you make a follow up because the market has moved against you, it is always a defensive follow up. Defensive follow ups typically involve increasing your cost and thereby potential risk. Offensive follow ups are usually preferable because they frequently reduce cost rather than increase cost.* Because of this fact, you may want to limit your follow ups to offensive strategies. If the market moves against you, simply treat the position as you would a futures contract and liquidate if the market moves beyond a predetermined point. This helps you avoid chasing bad money with good money. (Committing additional funds to a position that is already a loser.)

Previously, it was stated that the strike price of a synthetic futures has a bearing upon which follow up strategies you pursue. *The bigger the price move you anticipate, the more you will probably be inclined to convert the position into a risk free option (just liquidate the opposing side). In this instance, you will find it helpful to use a strike price that is slightly skewed towards your market bias.* In other words, if a market is trading a 75.00 and

Synthetic Long Futures continued...

you are bullish, consider using the 76.00 or 77.00 strike. If you were bearish, you would consider using the 74.00 or 73.00 strike. If you use this approach, you will always establish the synthetic for a credit. The credit makes it easier for you to recoup the cost of the purchased option. (You will not need as big of a move to initiate your follow up strategy.)

If you expect less of a price move, you will probably be more inclined to convert the position into a vertical spread or a free trade. In this instance, you should consider using options that are at-the-money or slightly away from your bias. If the market is trading at 75.00 and you are bullish, you would consider either the 75.00 or 74.00 strike. If you were bearish, you would consider the 75.00 or 76.00 strike. Using this approach helps you to begin profiting sooner and increases your ability to complete the vertical spread. (This is because the option you eventually sell does not have to be as far out-of-the-money).

Split Strike Synthetic Futures

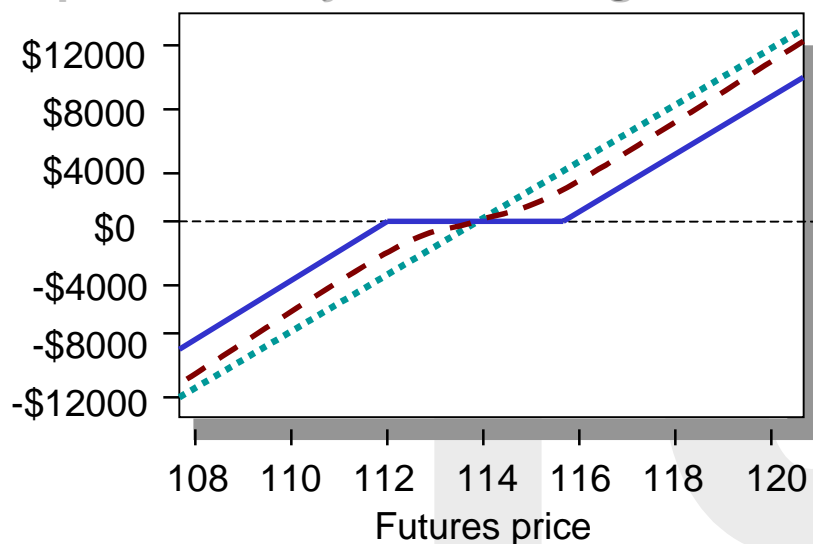
A split strike synthetic futures is a variant of a synthetic futures in which separate strike prices are utilized in constructing the position. In the bullish bond scenario we just outlined, a split strike synthetic could be created by purchasing the 116 calls and selling the 112 puts. We'll buy two of the 116

Split Strike Synthetics continued...

calls for 1.40 and sell two of the 112 puts for 1.40, or even money. (“Even money” means you take in exactly as much as you pay out, less fees.)

In the graph below you can see the difference, at expiration, between a traditional synthetic futures (the green, dotted line) and the split strike synthetic (the blue, solid line). The first noticeable characteristic of the split strike synthetic is that *between the two strike prices (112 & 116), the position has no profit or loss other than the cost of establishing the trade*. This can be advantageous if you expect the market will either stay in a trading range or break out above resistance. *If the market ends at the bottom of the trading range, the split strike has no losses, while the synthetic would have a loss. The trade off is that the market must move further before profits are realized at expiration.* In the short term, the position will more closely simulate a natural futures contract. The red, dashed line is our split strike synthetic evaluated two weeks after initiation.

Split Strike Synthetic Long Futures



If the market ends at the bottom of the trading range, the split strike has no losses, while the synthetic would have a loss. The trade off is that the market must move further before profits are realized at expiration. In the short term, the position will more closely simulate a natural futures contract. The red, dashed line is our split strike synthetic evaluated two weeks after initiation.

Split Strike Synthetics continued...

Notice how this profile (the red, dashed line) more closely resembles the pure diagonal profile you would expect in a straight futures contract. *As time passes, the position will begin to flatten out between the strike prices. The application here is that the split strike will still have profits and losses between the strike prices in the short run. Only when held to expiration does the profile turn horizontal.* Naturally, if the move you are anticipating happens quickly, you are still in a position to realize profits, and consequently you bear the risk of short term losses (and margin calls) if an adverse move occurs quickly.

Split strike synthetics also carry an advantage over traditional synthetics in that frequently there will be disparity between the put and call sectors. This means you can buy options that are cheap relative to options you sell, creating a theoretical edge. Of course this means you must be prudent in placing split strike synthetics. If you do not investigate potential disparity issues before trading, you could unknowingly buy options that are expensive relative to the options you sell and place yourself in a theoretical disadvantage.

If you wish to apply a bearish split strike synthetic, you simply buy puts and sell calls. In the previous example, you would buy the 112 puts and sell the

Split Strike Synthetics continued...

116 calls. The result would be the same position only profits would accrue below 112 at expiration and losses would occur above 116 at expiration.

All of the same follow up strategies can be used in split strike synthetics that can be used in traditional synthetic futures. Accordingly, the magnitude of the move you expect should have some bearing on the strike prices you use in constructing your position.

Advantages	-Synthetic Futures-	Disadvantages
<ol style="list-style-type: none">1. Increased flexibility over futures.2. Unlimited profit potential3. Split strike variant can capitalize on disparity and has range with minimal losses.4. Time decay is not an issue.		<ol style="list-style-type: none">1. Unlimited risk.2. Margin is required.3. High leverage position (reacts just like futures).

Now that we have covered some option spreads you can use in your trading, it is worthwhile to discuss how to place spread orders with your broker.

How Do I Place a Spread Order?

When you are trading option spreads, you have two choices. You can have the trade executed as a spread, or you can execute one leg at a time. The most conservative route is to execute the order as a spread. You simply call your broker and tell him/her you would like to place an option spread order and tell them the options and quantities you wish to trade. Then you tell them the number of points debit or credit. For example: You want to do a ratio spread buying 5 Nov. Soybean 700 calls and selling 10 Nov. Soybean 750 calls. You look at the individual prices and you notice the 700 call is trading at 19 cents and the 750 call is trading at 11 cents. On a per spread basis, this trade would be at a credit of 3 cents. (Sell 2 of the 750 calls for a total of at 22 cents premium, less purchase of 700 call for 19 = 3 cents credit.) Therefore, you would call your broker and say, “buy 5 Nov. soybean 700 calls and sell 10 Nov. soybean 750 calls for a 3 cent credit.” As another example, you want to place 10 bull call debit spreads in the June gold using the 330 call and the 350 call, and the price per spread is 4.75. You simply call your broker and say, “buy 10 June gold 330 calls and sell 10 June gold 350 calls for a debit of 4.75.” *Special Note!*

Placing Spread Orders continued...

If you place an order as a spread, either the entire spread will be filled or nothing will be executed if the market is not trading at your price. If you try to leg into a position, it is entirely possible that you will get a fill on one side of the spread, and then the market will take off in the wrong direction and you will be unable to execute the other side of the spread. Because of this potential problem, *it is recommended that you place orders as spreads until you are extremely comfortable with the risk of options trading.* However, you should be aware that it is more difficult to obtain a fill on a spread order. This means that you will frequently have to pay a few ticks more to obtain the fill. (A tick is the smallest unit of change). Frequently, better fills can be obtained by legging into the position, however the exposure of missing one side of the trade cannot be overemphasized.

If you are trading in a liquid option market such as the bonds, eurodollar, corn, a spread order should cost only a few extra ticks. If you are in a less liquid market such as silver, cattle, and the back months in the currencies you should expect to pay 4 or more ticks to obtain a spread order. *Before trading any option, you should visit with your broker about the market liquidity.* There are some markets that are so illiquid that option spread trading should probably be avoided entirely (i.e. orange juice and coffee).

What Is the Best Strategy to Use?

At this point, it is tempting to ask, which strategy is best? The problem with this question is that there is no concrete answer. Let's get back to the original analogy with shoes. It is ridiculous to say that a specific pair of shoes are the best **for all circumstances**. What you can say is that snowshoes are preferred if you live in Antarctica. And you can say that cleats work well when you are playing football.

It is possible that you may find a specific option strategy that you like best (like a favorite pair of shoes.) But, to believe you can use that lone strategy in all circumstances would be a grave mistake. You either must limit your trading to the times when your favorite strategy is appropriate, or expand your arsenal to account for varied conditions.

If you choose to utilize different strategies, your objective is straightforward. You should strive to *find the trading approach that provides the greatest trading edge given your expectations for price, volatility and time*. There are times when an option position yields the greatest edge and there are times when futures are more appropriate. Neither is superior, they are just designed for different terrain.

Even if you were the most knowledgeable option expert alive, that knowledge would be useless without a sound trading plan for every trade. Arguably, poor money management and under-capitalization cause more trading losses than any other factor. Always build a trading plan that incorporates sound money management and then have the discipline to stick to the plan. Plan your trade and trade your plan!

That concludes Options 101, we hope you enjoyed the course. If you have grasped all the material presented, you are well on your way to a sound knowledge of options. Feel free to use this course as a study reference. And before you go, BE SURE TO CHECK OUT APPENDIX A & B. They are great trading resources! Also, after you have taken the third quiz don't forget to come back for the final exam.

[GO TO QUIZ #3](#)

[GO TO THE FINAL EXAM](#)

Glossary and Index

At-the-money A term used to describe an option which has a strike price roughly equivalent to the price of the underlying futures or sock. (*Defined: 24-25, Debits: 54, 55, Ratios: 57-58, 60-61, Misc: 45, 75)*)

B.E. See break-even

Bear Put Debit Spread A bearish option spread in which you buy a near-the-money put and sell an out-of-the-money put. The spread has limited risk and profit potential, no margin calls. (*51, 53, 73*)

Bell Curve Plots the results of a series of random outcomes. (*63, 64*)

Break-even The price at which the position is neither making nor losing money. (*12, 13, 14, 19, 20, 27, 29, 31, 37, 40, 67, exclusions*)

Brokerage commission The money paid to a futures and options broker to transact a futures or options contract. Varies, but is typically \$20 to \$100. Also see: *fees. (9, 15, 16)*

Bull Call Debit Spread A bullish option spread in which you buy a near-the-money call and sell an out-of-the-money call. The spread has limited risk and profit potential, no margin calls. (*51, 52, 54, 57, 79*)

Call The buyer of a call option has the right to buy the underlying commodity. The seller of a call option grants this right in exchange for the premium of the option. (*Defined: 7*)

Call Ratio Spread A slightly bullish option spread in which you buy a near-the-money call and sell two or more out-of-the-money calls. When established for a credit has a large range of profitability but profits are limited and potential loss is unlimited. (*57, 58, 59, 60*)

Even money In spread trading, when the total premium paid equals the premium sold, less fees. There is no premium cost other than fees. Appropriate margin may still be required. (76)

Exercise (an option) A method of offsetting an option position in which the option is exchanged for the underlying contract. The buyer of an option is the only party, which can exercise an option. Exercise can happen at any point prior to option expiration. (11, 15, 16, 18)

Expiration The date in which trading on the futures or options contract ceases. (8,11-15, 18, 22, 26, 35, 45, 59, 76, 77, exclusions)

Expire worthless When an option contract has no value (intrinsic or extrinsic) at option expiration. (16, 17)

Extrinsic value The amount of premium that is not accounted for by intrinsic value. Also known as time value. (23, 24, 25, 32, 35, 66)

Fees Generally used to signify all fees incurred in an futures or options transaction. May refer to additional fees outside of brokerage commissions. Also see: brokerage commission. (9, 10, 11, 13, 14, 16, 17)

Free Trade When you buy an option outright and wait for a favorable market move to sell an out-of-the-money option (for the same price initially paid for the near-the-money option) to create a vertical spread. Once completed a free trade has limited profit potential, zero risk and zero cost. (55, 56, 73, 74, 75)

Futures Contract A legally binding agreement to buy or sell something in the future at a price determined today. (*Basics: 4-6, Exercise: 5 & 18, Synthetics: 69-78, Misc: 20, 25, 45, 49*)

Historical volatility A measure of how much the price of the underlying contract has been gyrating in the past. (35)

Implied volatility The option market's forecast of how volatile the price of the underlying will be in the future. (35)

In-the-money A term used to describe an option that has a premium which contains intrinsic value. (*Defined: 24-25, Debits: 51 & 54, Ratios: 58 & 60, Misc: 45*)

Intrinsic value The amount the futures have moved beyond the strike price of an option. Intrinsic value can also be called real value. (23, 24, 25, 45)

Leg into a Spread To execute one side of a spread at a time, rather than executing both simultaneously. (79, 80)

Leverage When a relatively small price move can result in considerable equity swings in your account. Futures and options are highly leveraged which means there is potential for both large gains and losses. (5, 6, 78)

Liquidate To offset a position so there are no further obligations, risk or potential. (4, 6, 15, 17, 49, 60, 71, 74)

Long When you have bought the instrument (futures or options). (5, 18, 59, 61, 69-76)

Margin A good faith deposit that signifies your willingness to stand good on any price movements against you. (5, 6, 11, 15, 17, 43, 45, 54, 62, 68, 78)

Margin calls When you are required to deposit money into your account to restore the margin back up to original levels, or to cover losses. (11, 17, 43, 50, 54, 77)

Offset A method of liquidating a position in which the same contract is bought (or sold) back. Offsetting is the most common way of liquidating an option position, and can be done anytime prior to option expiration. (7, 15, 16, 17, 52, 66, 69, 71)

Open Outcry The auction system by which exchange traded futures and options contracts are executed. (9)

Option The right, but not the obligation, to buy or sell something at a predetermined price at anytime within a specified time period. (*Defined: 7*)

Option Spreads When you buy or sell more than one type of option contract (usually simultaneously) in an effort to reduce cost, reduce risk or to increase flexibility. (47-50, 78, 79)

Out-of-the-money A term used to describe an option that has a premium which is entirely composed of extrinsic value. (*Defined: 24-25, Debits: 51 & 53-55, Ratios: 57-61, Misc: 45, 67, 75*)

Premium The price (or cost) you pay for an option. (*Defined: 9-10, Buying 11-14, Selling 17-19, Factors Affecting 22-44, exclusions*)

Put The buyer of a put option has the right to sell the underlying commodity. The seller of a put option grants this right in exchange for the premium of the option. (*Defined: 7*)

Put Ratio Spread A slightly bearish option spread in which you buy a near-the-money put and sell two or more out-of-the-money puts. When established for a credit, has a large range of profitability but profits are limited and potential loss is unlimited. (61)

Ratio Spread An option spread in which you buy a near-the-money option and sell two or more out-of-the-money options. When established for a credit, has a large range of profitability but profits are limited and potential loss is unlimited. Ratio spreads are designed to capitalize on extreme disparity between strike prices. (50, 57-62, 79)

Seasonal trends (volatility) When volatility frequently trends during a specific calendar time frame. (41, 43, 44, 46, 65, 68)

Selling an Option (offset) When you have previously bought an option and liquidate the position by selling back the same contract you purchased. Also See: Offset (15,16,17)

Selling an Option (outright) When you grant the right to buy (or sell) the underlying contract to someone else in exchange for the premium of the option. Also known as writing an option. (*Defined: 17-20, Summary: 44-46, Misc: 25, 33, 35, 38, 43, exclusions*)

Selling Short (or Short) When you sell a contract futures or option (without owning one) in attempt to profit on a decline in the premium or price of the contract. (*Defined: 5, Debits: 52 & 54, Ratios: 59 & 61, Straddles: 62 & 64-67, Misc: 18, 49, 72)*

Spread Order Instructing your broker to place an options spread simultaneously rather than attempting to execute one side at a time. (78, 79, 80)

Straddle A neutral option spread in which a put and call are sold at the same strike price. A straddle has limited profit potential and unlimited risk in either direction. Straddles are designed to exploit the decaying properties of options in a sideways market. (50, 62, 64-68)

Strangle A neutral option spread in which a put and call are sold at different strikes. A strangle realizes maximum profits if the market is between the two strikes at expiration and has unlimited risk in either direction. Strangles are designed to exploit the decaying properties of options in a sideways market. (50, 62, 64-68)

Strike Price The specific price at which you can buy or sell the underlying. (*Defined: 8*)

Synthetic Futures A directionally based option position that has the same profit and loss profile as a traditional futures purchase or sale. Synthetic futures can be more flexible than traditional futures. (50, 69, 71, 74-78)

Synthetic Long Futures A synthetic long futures is created by purchasing a call and selling a put at the same strike price. It carries the same profit and loss profile as a traditional futures purchase. (69-72, 75)

Synthetic Short Futures A synthetic short futures is created by buying a put and selling a call at the same strike. It carries the same profit and loss profile as a traditional short futures. (72,73)

Synthetic Futures (split strike) A directionally based option position. A bullish split strike synthetic futures is created by buying a call and selling a put at a lower strike. A bearish split strike synthetic futures is created by buying a put and selling a call at a higher strike. The position has the same profit and loss profile as a traditional futures purchase or sale (with the exception of an area of limited profits/losses between the two strike prices). (75-78)

Time decay The gradual erosion of an option's premium over the course of time. (*Defined: 26, Graphs 27-33, Debits: 54 & 56, Ratios: 59 & 62, Straddles: 66 & 68, Misc: 35, 47, 78*)

Underlying In options, is the futures or stock contract on which the option is based. (*Defined: 7,8, Relation to premiums: 22-25, Misc: 10, 15, 17, 18, 35*)

Vertical Debit Spread An option spread created by buying a near-the-money option and selling an out-of-the-money option of the same type. Vertical Debit spreads have limited profit and loss potential. The loss is limited to the amount of cost in the trade + fees, and the profits are limited to the difference between the strike prices - cost and fees. (50-54)

Volatility A measure of how fast the underlying futures prices are moving. In this course normally refers to implied volatility. See Also: Historical volatility and Implied volatility. (*Defined: 35, Graphs: 36-42, Summary: 45 & 46, Debits: 54, 56, Ratios: 58-60, Straddles: 65-68, Misc: 22, 23, 26, 43, 44, 48, 81*)

Writing an Option See Selling an Option (outright)

Strategy Grid

The Strategy Grid provides a concise way to find an appropriate strategy for your expectations of price and volatility. Combined with the Strategy Summary, the Strategy Grid may prove an invaluable tool.

About the Strategy Grid

On the next page is a useful tool for determining which strategy to use. You will probably prefer to print this grid so that you have a quick reference (and a more legible copy). This grid only deals with strategies we have discussed in the Options 101 course. You can look to add strategies at a later point. In the meantime, *please bear in mind these grids are not intended to be comprehensive, but rather to give you a general perspective of the type of strategy that would most likely be appropriate.* This is not to say that you cannot use the same strategies in different conditions and be profitable, it simply lists what “theoretically” should be the most appropriate usage. To use the grid, you simply use the table to match your market directional and volatility bias. Then you can further differentiate by the type of profit and risk potential you are most comfortable with.

OPTIONS 101- STRATEGY GRID

	Very Bullish Price				Moderately Bullish Price				Mostly Sideways			
	U&U	U&L	L&L	L&U	U&U	U&L	L&L	L&U	U&U	U&L	L&L	L&U
Volatility Rising Sharply	Buy Fut. Synth.	Buy Calls	Bull call Free trade*			Buy Calls	Bull call Free trade*					
Volatility Rising Moderately	Buy Fut. Synth.	Buy Calls	Bull call Free trade*				Bull call Free trade*					
Volatility Uncertain Or Mixed	Buy Fut. Synth.		Bull call				Bull call					Strangles
Volatility Falling Moderately	Buy Fut. Synth.		Bull call	Sell Puts			Bull call	Sell Puts				Strangles Sell Calls Sell Puts
Volatility Falling Sharply	Buy Fut. Synth.		Bull call	Sell Puts			Bull call	Sell Puts Call Ratio				Strangles Sell Calls Sell Puts

	Very Sideways				Moderately Bearish Price				Very Bearish Price			
	U&U	U&L	L&L	L&U	U&U	U&L	L&L	L&U	U&U	U&L	L&L	L&U
Volatility Rising Sharply							Bear put Free trade*		Sell Fut. Synth.	Buy Puts	Bear put Free trade*	
Volatility Rising Moderately							Bear put Free trade*		Sell Fut. Synth.	Buy Puts	Bear put Free trade*	
Volatility Uncertain Or Mixed				Straddles			Bear put		Sell Fut. Synth.		Bear put	
Volatility Falling Moderately				Straddles Sell Calls Sell Puts			Bear put	Sell Calls	Sell Fut. Synth.		Bear put	Sell Calls
Volatility Falling Sharply				Straddles Sell Calls Sell Puts			Bear put	Sell Calls Put Ratio	Sell Fut. Synth.		Bear put	Sell Calls

U&U = unlimited profits & risk U&L = unlimited profits, limited risk L&L = limited profit & risk L&U = limited profit, unlimited risk

Green = helped by time decay

Red = hurt by time decay

***Free trades are hurt by time decay until completed**

Strategy

Summary

The Strategy Summary provides a detailed summary of each strategy discussed in the Options 101 course. These summaries should prove a useful reference as you begin to examine trading opportunities.

How to Read the Strategy Summary

The name of the strategy is on the left-hand side. A list of the different profit, loss, time and volatility profiles is included, as well as ideas on appropriate uses of the strategy. The margin label above the graph tells whether margin is required. The profit and loss is depicted on the vertical axis and the price of the underlying is on the horizontal axis. The **green, dotted line** shows the profit & loss of the position approximately 3-4 months prior to expiration. The **red, dashed line** is approximately 1 month prior to expiration and the **blue, solid line** is at expiration. The variants box list the different combinations that can be used to create the strategy. The "*" under variants indicates the most common combination. The greeks (delta, theta, gamma, vega, etc.) are presented for future reference.

Long Call

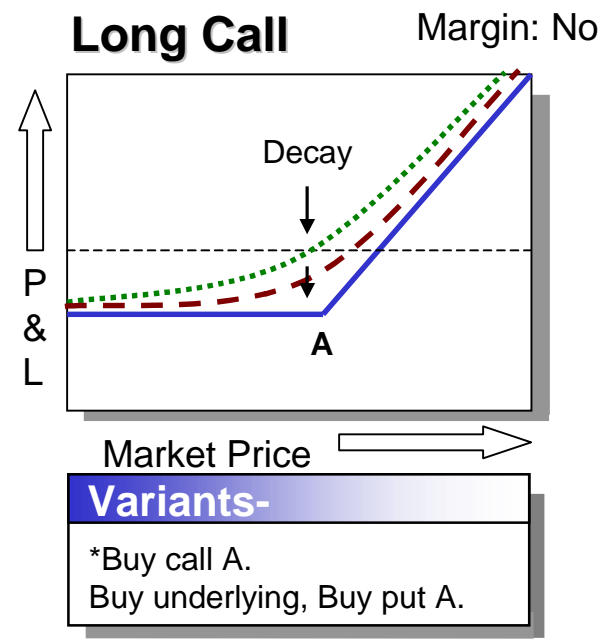
Profit Profile: Unlimited potential. Profit increases as the price of the underlying increases. At expiration, the break-even = strike price + initial premium + commissions and fees.

Loss Profile: Loss is limited to the initial purchase price plus commissions and fees. Maximum loss occurs if the underlying is at or below strike price (point A) at expiration.

Time Profile: Time hurts position. The value of the position erodes into expiration. Theta is negative (can be quite large).

Volatility Profile: Volatility increases help the position. Volatility decreases speeds premium erosion. Vega is always a positive number.

Appropriate Use: A long call should be used when you have a very bullish outlook, volatility is expected to increase and you desire a limited risk posture.



Long Call

Profit Profile: Unlimited potential. Profit increases as the price of the underlying increases. At expiration, the break-even = strike price + initial premium + commissions and fees.

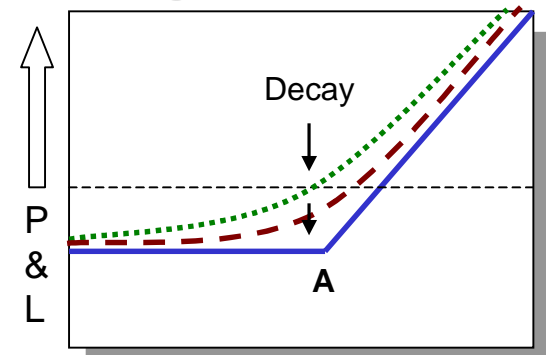
Loss Profile: Loss is limited to the initial purchase price plus commissions and fees. Maximum loss occurs if the underlying is at or below strike price (point A) at expiration.

Time Profile: Time hurts position. The value of the position erodes into expiration. Theta is negative (can be quite large).

Volatility Profile: Volatility increases help the position. Volatility decreases speeds premium erosion. Vega is always a positive number.

Appropriate Use: A long call should be used when you have a very bullish outlook, volatility is expected to increase and you desire a limited risk posture.

Long Call Margin: No



Variants-

*Buy call A.
Buy underlying, Buy put A.

Short Call

Profit Profile: Limited to the premium received less commissions and fees. Maximum profits occur at any price at or below point A (the strike price). Profit increases as the price of the underlying decreases. At expiration, the break-even = strike price + initial premium - commissions and fees.

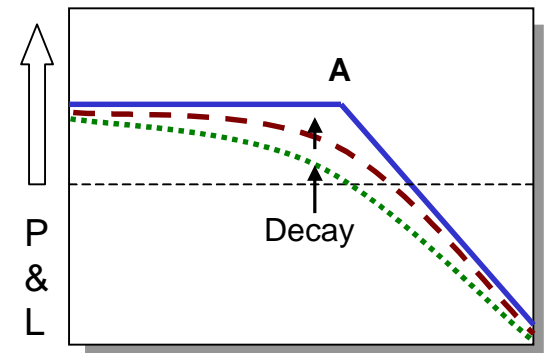
Loss Profile: Potential loss is unlimited. Loss increases as price rises. As a rule of thumb, liquidate if the premium doubles or if the underlying moves through the strike. Watch the exposure created by large negative gamma.

Time Profile: The passage of time helps the position. Theta is always positive.

Volatility Profile: Volatility increases hurt the position. Do not use when volatility is expanding or before a seasonal volatility increase. Vega is always a negative number.

Appropriate Use: When you believe a strong market rally is extremely unlikely and volatility is medium to high. Closer-to-the-money strikes represent a more bearish stance.

Short Call Margin: Yes



Variants-

*Sell call A.
Sell underlying, Sell put A.
(covered write)

Long Put

Profit Profile: Unlimited potential. Profit increases as the price of the underlying decreases. At expiration, the break-even = strike price - initial premium - commissions and fees.

Loss Profile: Loss is limited to the initial purchase price plus commissions and fees. Maximum loss occurs if the underlying is at or above strike price (point A) at expiration.

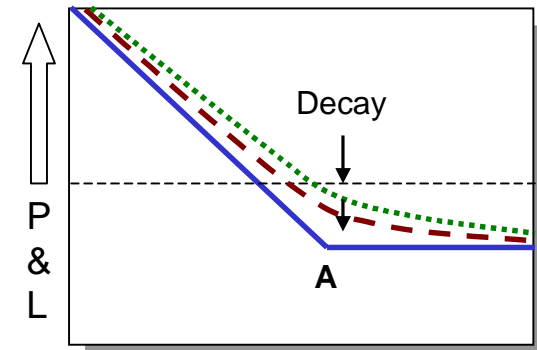
Time Profile: Time hurts position. The value of the position erodes into expiration. Theta is negative.

Volatility Profile: Increasing volatility help the position. Declining volatility hurts (vega is positive).

Appropriate Use: A long put should be used when you have a very bearish outlook and volatility is expected to increase and you desire a limited risk posture..

Long Put

Margin: No



Market Price →

Variants-

- *Buy put A
- Sell underlying, Buy call A

Short Put

Profit Profile: Limited to the premium received less commissions and fees. Maximum profits occur at any price at or below point A (the strike price). Profit increases as the price of the underlying decreases. At expiration, the break-even = strike price + initial premium - commissions and fees.

Loss Profile: Potential loss is unlimited. Loss increases as price rises. As a rule of thumb, liquidate if the premium doubles or if the underlying moves through the strike. Consider negative gamma risk carefully.

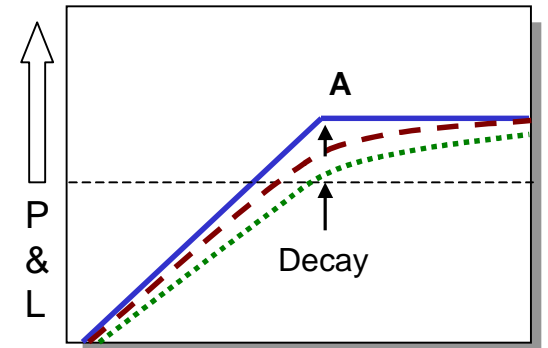
Time Profile: The passage of time helps the position. Theta is positive.

Volatility Profile: Volatility increases hurt the position. Do not use when volatility is expanding or before a seasonal volatility increase. Vega is negative.

Appropriate Use: When you believe a strong market rally is extremely unlikely and volatility is medium to high. Closer-to-the-money strikes represent a more bullish stance.

Short Put

Margin: Yes



Market Price →

Variants-

- *Sell put A
- Buy underlying, Sell call A.
(covered write)

Bull Vertical Spread

Profit Profile: Profits are limited. Maximum profits occur if the market is at point B or higher at expiration. Prior to expiration, profits will move towards the maximum level as the market moves continually higher. Initial delta is usually less than .50.

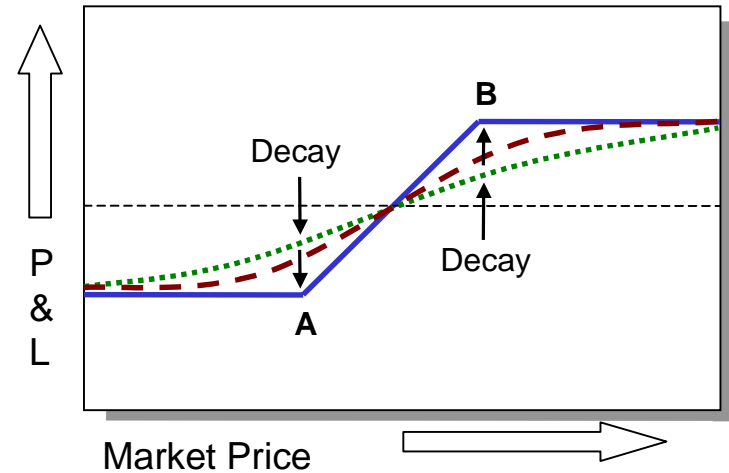
Loss Profile: Loss is limited. Maximum loss occurs if the market is at or below point A at expiration. Prior to expiration, losses will move towards the maximum level as the market moves continually lower.

Time Profile: Time decay will slightly hurt the position. As the market approaches point B, profits accelerate with the passage of time. As the market approaches point A, losses accelerate with time. Theta is usually slightly negative.

Volatility Profile: Position has a relatively neutral volatility stance. Exposure to volatility is limited to disparity between strike prices or disparity between puts and calls. Vega is usually slightly negative.

Appropriate Use: If you are slightly bullish, but do not expect a sharply higher market. The most common form of this position is a long call at point A and short call at point B. This is especially effective when the at-the-money calls are cheap relative to the out-of-the-money calls. Bull spreads are frequently implemented as a follow up technique. For instance, if you bought calls outright and a major move occurred and you felt the up-trend would likely continue but that the explosiveness of the move was over, you could sell a call at a higher strike to convert your long call into a bull spread. A common technique is to buy a call, wait for the market to rally, and then sell a call at a higher strike for the same premium paid for the initial call. If the higher strike call pays for the lower strike call, there is no cost and no risk in the position, and the initial capital is freed for new positions. This variant is called a “free trade”. This approach is especially effective in a market that is experiencing a rally in volatility. Also notice that legging into the put on the last variant is a nice way to limit your downside exposure on a covered write. After a market rally, you simply use your proceeds from the sale of a call to buy the put and limit your downside exposure.

Bull Call Debit Spread Margin: No



Variants-

- *Buy call A, Sell call B.
- Buy put A, Sell put B.
- Buy call A, Sell put B, Sell underlying.
- Buy put A, Sell call B, Buy underlying.

Bear Vertical Spread

Profit Profile: Profits are limited. Maximum profits occur if the market is at or below point A at expiration. Prior to expiration, profits will move towards the maximum level as the market moves continually downward. Initial delta is usually less than .50

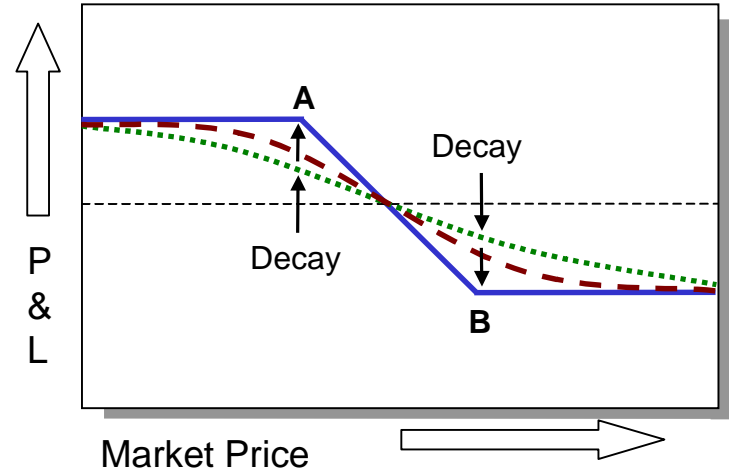
Loss Profile: Loss is limited. Maximum loss occurs if the market is at or above point B at expiration. Prior to expiration, losses will move towards the maximum level as the market moves continually higher.

Time Profile: Time decay will slightly hurt the position. As the market approaches point A, profits accelerate with the passage of time. As the market approaches point B, losses accelerate with time. Theta is usually slightly negative.

Volatility Profile: Position has a relatively neutral volatility stance. Exposure to volatility is limited to disparity between strike prices or disparity between puts and calls. Vega is usually slightly negative.

Appropriate Use: If you are slightly bearish, but do not expect a total free fall. The traditional approach is the first variant. When using this alternative, good value can be attained when there is disparity between the out-of-the-money puts and the in/at-the-money puts. (The out-of-the-money put are high priced relative to the at/in-the-money strikes.) This variant is also sometimes used as a low cost way to build a large inventory of out-of-the-money positions to leverage profits if a sustained downtrend does occur. Often the reduced cost of a vertical spread will make it a superior strategy for profit maximization, especially compared to an outright futures positions. For instance, you can easily apply a bear put spread in the S&P 500 contract for \$1,500-\$2,000 premium outlay. Meanwhile, the margin requirement for shorting one S&P futures contract may exceeds \$12,000. Buying five bear put spreads could cost less than selling one futures contract, and you still have limited risk and may actually have a bigger negative delta (The position will make money faster than an outright short futures contract.).

Bear Put Debit Spread Margin: No



Variants-

- *Sell put A, Buy put B.
- Sell call A, Buy call B.
- Sell call A, Buy put B, Buy underlying.
- Sell put A, Buy call B, Sell underlying.

Short Straddle

Profit Profile: Profits are limited. Maximum profits occur if the market is at point A at expiration. The break-even at expiration is the strike price plus and minus the net premium received. Prior to expiration, profits move towards the maximum as the market continues to hover around the strike price.

Loss Profile: Potential loss is unlimited. Losses accelerate as the market moves increasingly away from point A. Position has a very large negative gamma which must be closely monitored.

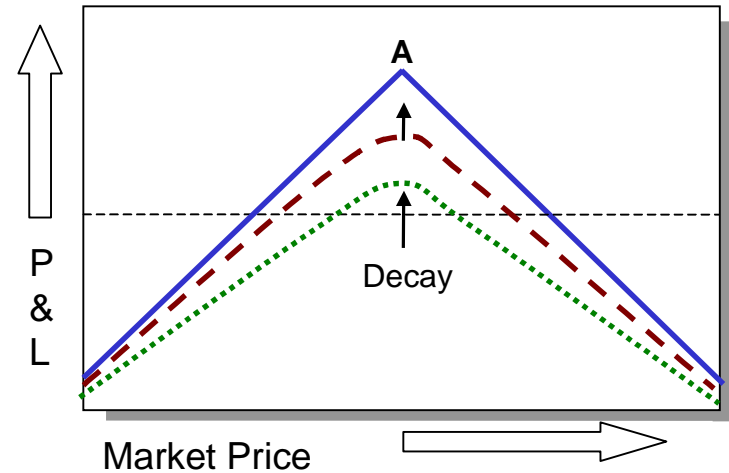
Time Profile: Position is helped dramatically by the passage of time. Time must move faster than price for profits to be realized. Theta is extremely positive.

Volatility Profile: Volatility increases wreck the position. Though not as susceptible to volatility increases as strangles, volatility trends should still be monitored throughout the duration of the position. Vega is extremely negative.

Appropriate Use: If you expect the market to move into a tight sideways consolidation and volatility increases seem a very remote possibility. Preferably, volatility should be falling rapidly. If you only expect a moderately sideways market, consider utilizing strangles instead. Due to extreme gamma exposure, consider liquidating this trade when there are 30 days or less until expiration (particularly if the market is near the strike price used to establish the trade). If you have strong technical boundaries surrounding the sideways consolidation, consider liquidating the losing side if a breakout occurs. Then you can attempt to let the winning side expire worthless to recoup any losses. If technical boundaries are not present, the use of a monetary stop is strongly suggested. As a rule of thumb, never risk more than fifty percent of the total premium received on a short straddle. Another breakout follow up possibility is to liquidate the losing side, and purchase options in the direction of the breakout to create a synthetic futures.

Short Straddle

Margin: Yes



Variants-

- *Sell call A, Sell put A.
- Sell calls A, Buy underlying.
- Sell puts A, Sell underlying.
- (All initiated to delta neutrality.)

Short Strangle

Profit Profile: Profits are limited. Maximum profits occur if the market is between strikes A and B at expiration. The position has two break-evens at expiration: Strike A less 1/2 premium received and fees and Strike B plus 1/2 premium received less fees. Prior to expiration, profits move towards the maximum as the market holds steady between strikes A & B.

Loss Profile: Potential loss is unlimited. Losses accelerate as the market moves increasingly below point A, and above point B. Position has a very large negative gamma which must be closely monitored.

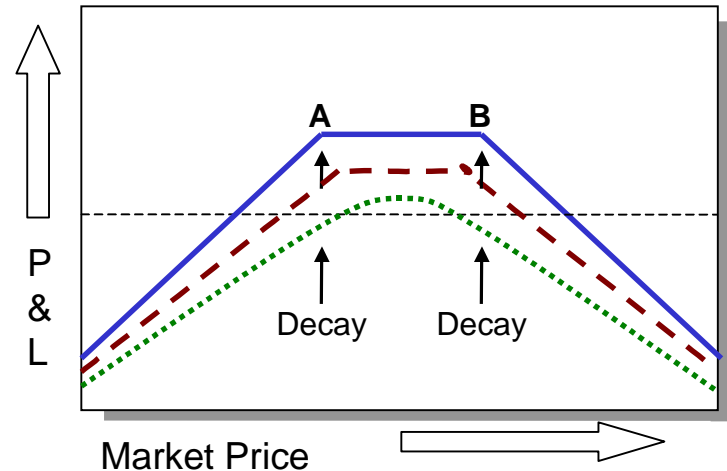
Time Profile: Position is helped dramatically by the passage of time. Time decay is the essential ingredient of profitability. Theta is extremely positive.

Volatility Profile: Typically even more sensitive to volatility increases than short straddles. In fact, of the standard option spread strategies, strangles are the most sensitive to volatility changes. Volatility must be closely monitored as Vega is extremely negative.

Appropriate Use: If you expect the market to move into a moderately sideways consolidation and volatility increases seem a very remote possibility. Preferably, volatility should be falling rapidly. If you expect a very tight sideways consolidation consider utilizing straddles instead. Due to extreme gamma exposure, consider liquidating this trade when there are 30 days or less if the market is close to either strike price A or B. If you have strong technical boundaries surrounding the sideways consolidation, consider liquidating the losing side if a breakout occurs. Then you can attempt to let the winning side expire worthless to recoup any losses. If technical boundaries are not present, the use of a monetary stop is strongly suggested. As a rule of thumb, never risk more than fifty percent of the total premium received on a short strangle. Often a move through either strike price should trigger a follow up even if a monetary stop has not been hit.

Short Strangle

Margin: Yes



Variants-

- *Sell put A, Sell call B.
- Sell call A, Sell put B.
- Sell call A, Sell call B, Buy underlying.
- Sell put A, Sell put B, Sell underlying.
- (All initiated to delta neutrality.)

Call Ratio Spread

Profit Profile: Profits are limited. Maximum profits occur if the market is at strike B at expiration. If position is initiated at a credit, a relatively small profit occurs if the market is a strike A or below at expiration. Break-even at expiration is strike price B plus the difference between B & A and plus or minus net debit or credit.

Loss Profile: Potential loss is unlimited. Losses increase as the market moves continually above the break-even. Prior to expiration, volatility increases can cause premature losses especially as the market rallies.

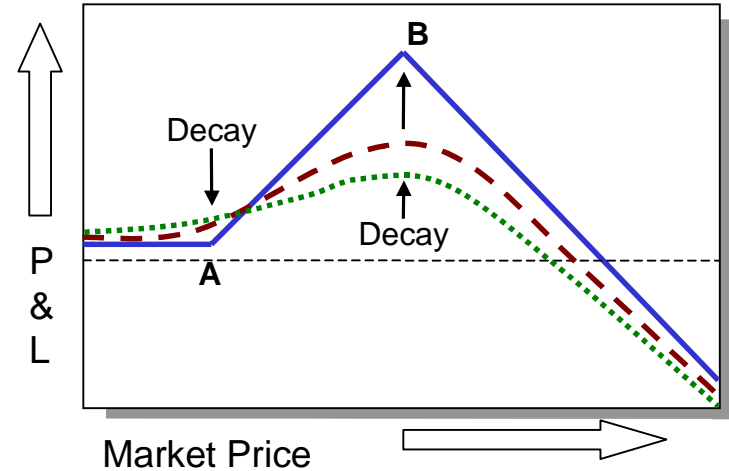
Time Profile: Although the net position is fairly neutral with respect to time, the passage of time usually helps the position in an up-trending market. This is especially true if the position is initiated at close to delta neutral. Theta is usually neutral to negative.

Volatility Profile: Position is hurt by volatility increases. When the position is normally initiated is during times of major volatility swings. Therefore, the volatility exposure is typically quite high. Vega is negative.

Appropriate Use: If you are moderately bullish, volatility is at very high levels and is expected to fall dramatically. Additionally, you should see substantial disparity between the at-the-money calls and the out-of-the-money calls. Strongly consider ratios when there is double the volatility in the sold options vs. the purchased options. Because of the potential volatility exposure and the necessity of capturing time decay in an up market, you should have a predetermined monetary or technical liquidation point. (Ideally, there will be technical resistance above the market.). If the market moves quickly through strike B and volatility has continued to increase, consider taking a loss and liquidating the position. There are times when you can simply liquidate one of the short calls at strike B and convert the position into a bull call spread. The same result can be achieved by purchasing an additional call at strike A. However, if you pursue one of these follow ups, you need to feel very confident the trend will definitely continue higher.

Call Ratio Spread

Margin: Yes



Variants-

Buy call A, Sell calls B.

Buy put A, Sell calls B, Buy underlying.
(Frequently initiated to delta neutrality.)

Put Ratio Spread

Profit Profile: Profits are limited. Maximum profits occur if the market is at strike A at expiration. If position is initiated at a credit, a relatively small profit occurs if the market is at or above strike B at expiration. Break-even at expiration is strike price A less the difference between A & B and plus or minus net debit or credit.

Loss Profile: Potential loss is unlimited. Losses increase as the market moves continually below the break-even. Prior to expiration, volatility increases can cause premature losses especially as the market declines.

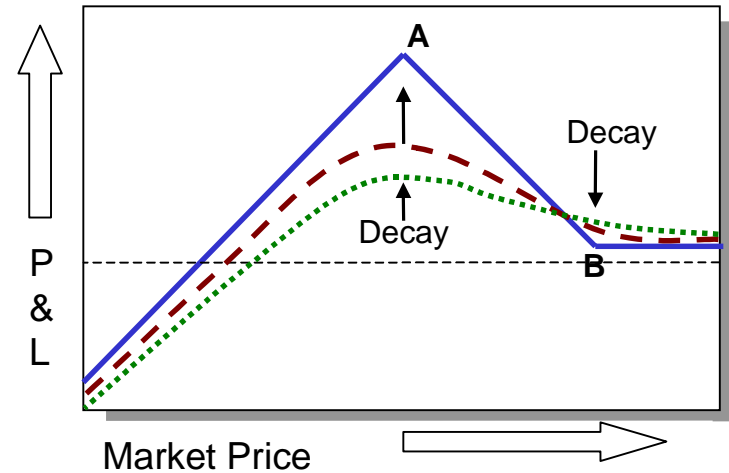
Time Profile: Although the net position is fairly neutral with respect to time, the passage of time usually helps the position in a down-trending market. This is especially true if the position is initiated at close to delta neutral. Theta is usually neutral to negative.

Volatility Profile: Position is hurt by volatility increases. When the position is normally initiated is during times of major volatility swings. Therefore, the volatility exposure is typically quite high. Vega is negative.

Appropriate Use: If you are moderately bearish, volatility is at very high levels and is expected to fall dramatically. Additionally you should see substantial disparity between the at-the-money puts and the out-of-the-money puts. Strongly consider ratios when there is double the volatility in the sold options vs. the purchased options. Because of the potential volatility exposure and the necessity of capturing time decay in a down market, you should have a predetermined monetary or technical liquidation point. (Ideally, there will be technical support below the market.) If the market moves quickly through strike A and volatility has continued to increase, consider taking a loss and liquidating the position. There are times when you can simply liquidate one of the short puts at strike A and convert the position into a bear put spread. The same result can be achieved by purchasing an additional put at strike B. However, if you pursue one of these follow ups, you need to feel very confident the trend will definitely continue lower.

Put Ratio Spread

Margin: Yes



Variants-

Sell puts A, Buy put B.

Sell puts A, Buy call B, Short underlying.
(Frequently initiated to delta neutrality.)

Synthetic Futures (split strike)

Profit Profile: Unlimited potential. Profit increases as the price of the underlying increases. If market is near strike B, the passage of time works against profits.

Loss Profile: Potential loss is unlimited. Losses increase as the market continues to decline past strike A.

Time Profile: Mixed. Time hurts position if underlying rallies, time helps position if underlying declines.

Volatility Profile: Net position is neutral with respect to volatility. Volatility risk is normally confined to disparity between puts and calls.

Appropriate Use: When you expect either a topside breakout or trading range and desire more flexibility than a futures contract affords. There is increased effectiveness when puts are expensive relative to calls.

Profit Profile: Unlimited potential. Profit increases as the price of the underlying decreases. If market is near strike A, the passage of time works against profits.

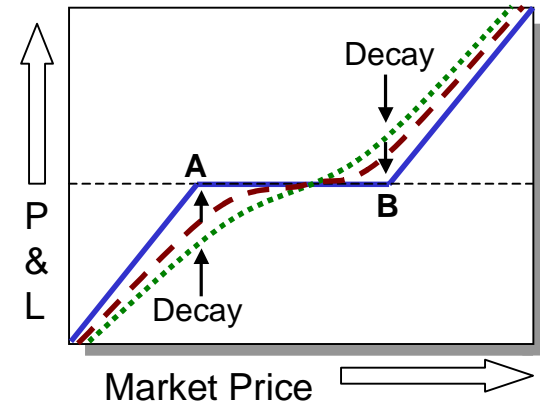
Loss Profile: Potential loss is unlimited. Losses increase as the market continues to rally past strike B.

Time Profile: Mixed. Time hurts position if underlying declines; time helps position if underlying rallies.

Volatility Profile: Net position is neutral with respect to volatility. Volatility risk is normally confined to disparity between puts and calls.

Appropriate Use: When you expect either a downside breakout or trading range, and you desire more flexibility than a futures affords. There is increased effectiveness when calls are expensive relative to puts.

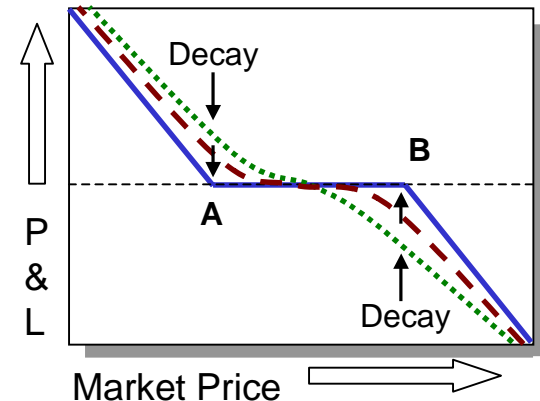
Synthetic Long Margin: Yes



Variants-

- *Sell put A, Buy call B.
- Sell call A, Buy call B & Buy underlying.

Synthetic Short Margin: Yes



Variants-

- *Buy put A, Sell call B.
- Buy put A, Sell put B & Sell underlying.