Private Client Group

Options Strategy Guide

MF Global SM

A basic guide to trading options on futures contracts

Futures and options trading involves significant risk of loss and may not be suitable for everyone.

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PART 1 – The Basics of Options Trading

Introduction

We'd all like to trade by buying commodities, stocks, real estate or options at the lows and selling at the highs. The problem, of course, is that we can't be sure where the highs or lows are, or when they will appear. But that's the key everyone is looking for; that "Black Box" system that will positively, surely, always pick the highs and lows. Does the system exist? Probably not. But options exist, and options allow you to control many trading and pricing variables that may change the odds of success on any given trade. And options can do something else for you, too. Options can put financial leverage to work for you. What's leverage? Leverage is the ability to control large dollar amounts of a commodity with a comparatively small amount of capital. Remember, leverage can work for or against you.

Puts and calls. We've all heard of them, but not many investors or traders know much about them or how to profit by their use. You or someone you know may have bought an option and watched it waste away and eventually expire worthless, concluding that options don't work. But they do work, and work well, for those who understand when and how to use options to their advantage. Trading options is a business and learning the fundamentals of that business can help turn you into a winning options trader.

The first part of this book deals with the basics of trading options, while the second part explores option pricing theory and the third part applies those basics and theories to actual trading situations. Just keep in mind that trading options is a zero sum game, which means that each dollar made by someone is matched by a dollar lost by someone else. Options can and do offer the opportunity for wildly successful trading results, but can also lead to real character-building lessons in how not to trade the markets. Again, trading options is a business. Learn all you can about that business, about defining and limiting risk, about moving pricing variables to your side of the table. Concentrate on being moderately successful before going for one of those wildly successful trades and perhaps you might be one of the fortunate individuals who can avoid a character-building situation.

What Is An Option

What is an option? It is simply the right, but not the obligation, to buy or sell something at a predetermined price within a specified time period. A ***CALL*** gives the buyer the right to ***BUY*** an asset, while a ***PUT*** gives the buyer the right to ***SELL*** an asset. An option buyer is paying for the right to make a choice sometime in the future on whether he wants to complete the transaction at the agreed upon terms, or just walk away from the deal.

Calls ... The Right to Buy

As an example, assume that during July gold is selling at $260 per ounce. You think that inflation might explode early in the fall, pushing gold prices sharply higher. On the other hand, you think that if the inflationary scenario does not come true then gold prices could remain at $260 or even move lower. You could buy 100 ounces of gold for $26,000 ($260.00 per ounce X 100 ounces), but you would have to pay for storage,

insurance and interest on the $26,000. And what if gold prices fell? You'd lose money and still have to pay storage, insurance and interest. What about an option? You check the financial section of the newspaper and see that you can buy a gold call option with the following characteristics:

Contract size	**100 ounces**
Expiration date	**November**
Strike price	**$275**
Cost of option	**$220 ($2.20 per ounce)**

For $220 you can buy an option that gives you the right to buy 100 ounces of gold at $275 per ounce four months from now. You buy the option and wait to see what happens. Let's examine the possible outcomes:

Inflation rears up and gold moves to $300 per ounce. You exercise your option and buy 100 ounces of gold at $275 per ounce, sell it for $300 per ounce, make $2,500 less the $220 cost of the option, net profit of $2,280.

Inflation does nothing and gold prices drop to $230 per ounce. You let your option to buy at $275 expire worthless. You lose $220. That's it ... $220. If you had actually bought 100 ounces at $260 during July and sold for $230, your loss would have been $3,000.

Inflation rears up and gold moves to $300 per ounce. But instead of exercising the option and buying the gold at $275 per ounce, you simply sell your option and book the profit (more on this later).

Puts ... The Right to Sell

You're a farmer in the middle of Iowa and one August day you're standing on your front porch looking at 500 acres of corn, approximately 60,000 bushels, that will be harvested during October and November. On that day, corn for delivery during the harvest period is priced at $2.50 per bushel and you are concerned that prices could drop lower. You could sell the corn right now for $2.50 per bushel and deliver it at harvest time, but the weather has stressed crops through the Midwest and corn prices could increase. You want to take advantage of a price increase, but absolutely, positively must get at least $2.25 per bushel or go broke and lose the farm. What do you do? You call your broker and learn that you can buy a corn put option with the following characteristics:

Contract size	**5,000 bushels**
Expiration date	**November**
Strike price	**$2.30**
Cost of option	**$150 ($.03 per bushel)**

For $1,800 (60,000 / 5,000 = 12 options X $150 = $1,800) you now have the right to sell 60,000 bushels of corn at $2.30 per bushel in November. Subtract the $.03 per bushel you paid for the options and you have locked-in a worst case price of $2.27 per bushel. What do you do at harvest time?

If corn is selling at any price higher than $2.30 per bushel, you sell your corn and let the option expire (or sell the option if it still has value). If corn is priced below $2.30 per bushel, you exercise your option to sell and deliver it for $2.30 per bushel. $.03 not only gives you the right to lock-in a price, but also gives you the time to see what happens with prices.

Option Basics

One very important fact to remember is that calls and puts are completely different, separate and distinct contracts that convey completely different, separate and distinct rights. They are not opposite sides of the same transaction. A December 115.00 T-Bond call and a December 115.00 T-Bond put are totally different contracts, and one does not offset the other. Every call option has a buyer and seller. Every put option has a buyer and seller.

Different call and put options for the same stock or commodity, but with different expiration dates and different strike prices, trade simultaneously. For example, there may be CBOT® DJIA™ calls that expire in March, June, September or December. And there may be a December call with a strike price of 7800, another December call with a 7900 strike price, etc. The point is that a December 7800 call and a March 7800 call are two separate and distinct options. And a December 7800 call and a December 7900 call are two separate and distinct options.

Another important fact is that you do not have to hold an option to expiration. Options trade just like stocks, commodities and bonds. There are markets for options and their prices, trading volumes and other information can be found in the financial section of the newspaper, on the internet or by calling your broker. These contracts can be bought and sold the same way you buy and sell other financial assets. Once an option has been bought there are three ways you can get out of a position:

- ▲ ***Exercise the option***
- ▲ ***Offset the position***
- ▲ ***Let the option expire***

Exercise the option

Only the option buyer can decide to exercise an option. When an option position is exercised both the buyer and the seller of the option will be assigned a position in the underlying asset. Let's assume that you buy a September 120.00 T-Bond futures call and on the last trading day of trading for the September option prices spike higher and September T-Bonds close at 122.00. You exercise your 120.00 call and are assigned a long futures position in September T-Bonds at 120.00, which can now be sold at 122.00, $2,000 higher. The person who sold (went short) the 120.00 call is assigned a short futures position in September T-Bonds at 120.00 (see the section on writing options). Most exchanges will automatically exercise an in-the-money option at expiration.

Offset the position

This is the most common method of closing out an option position. If you bought an option initially, you close the position by selling a call or a put identical to the call or put you originally bought. The opposite is true if your original transaction was selling an option (writing an option, or going short). To close the position you buy a call or a put identical to the option originally sold. Why offset instead of exercise? By offsetting before the expiration date you'll recover the remaining time value of the option (discussed in part 2) and avoid any costs or risks associated with option exercise. Your profit or loss on the transaction is the difference between the premium paid when buying the option and premium received when selling the option, less commissions and exchange fees.

Let the option expire

Why? If the option is not in-the-money at expiration, it has no value. That is precisely why people choose to write options ... *to capture the premium and have the option expire worthless*. Option buyers paid for the right to hold their option until expiration and many choose to do so, knowing that the most they can lose on the transaction is the initial premium paid. Approximately 98% of options positions are closed out with an offsetting transaction or by letting the option expire worthless. Even options that have value are usually offset, rather than exercised, before expiration.

Writing Options ... The Right to Keep the Premium

Option buyers pay (in option terms the amount paid is called "***premium***") for the right to buy (call) or sell (put) at the strike price. Pay who? On the other side of the option buyer is the option seller, or option writer, who is the person that guarantees the buyer's rights. In return for guaranteeing the buyer's right to buy (call) or sell (put) at a predetermined price within a specified time period, the option writer gets to keep the premium paid by the buyer. That amount, the option premium, is the most money that the option writer can make on the transaction.

The option writer is not locked into holding the option he wrote until it expires or is exercised. Remember, these are trading markets and the writer can always buy an option with the same strike price and expiration date as the one he sold to offset his position, just as a trader who is short the futures or stock market can cover his short position. As an example, a trader does his technical analysis and concludes that interest rates are going up, T-Bond prices down. He initiates a short option position by selling a December T-Bond futures 120.00 call for 30/64ths, and collects the premium, $468.75. T-Bond prices do move lower and 30-days later the December T-Bond futures 120.00 call is trading at 8/64ths, $125.00. Rather than hold the position and risk prices moving up, the trader buys back his short call for $125.00 and nets $343.75 on the trade ($468.75 premium received less $125.00 premium paid).

On the other side of that short 120.00 call was an option buyer who paid $468.75 for the right to buy December T-Bond futures at 120.00. How much did he lose on the trade? We don't really know because he could have sold his long option at any time. But we do know that if he held on to the bitter end he lost his entire premium of $468.75, unless December T-Bonds finished above 120.00 on option expiration day.

Please, remember that writing options can subject the writer to mergin calls and also expose the writer to unlimited risk of loss.

Option Terminology

We've introduced several option terms already and this seems like a good place to review the terminology associated with trading options. I've attended many option seminars and there's nothing worse than sitting through one or two days of option trading theory only to end up with someone asking the question, "*What's a put?*" Obviously a failure to communicate.

We've established that an option is a contract that gives its buyer the right, but not the obligation, to buy or sell the option's underlying asset at a predetermined price within a specified time period. A ***CALL*** is the right to BUY the asset; a ***PUT*** is the right to ***SELL*** the asset. The option buyer pays a ***PREMIUM*** (option cost) to the option ***WRITER*** (seller).

The predetermined price is called the ***STRIKE PRICE***, and the end of the specified time period (the life of the option) is called the ***EXPIRATION DATE***.

Joe is a farmer who just cut 300 acres of soybeans and now (October) has 15,000 bushels in storage. The current price for soybeans is $4.75 per bushel and Joe thinks that bean prices are going up but wants to protect himself should prices fall. He checks with his broker and learns that March soybean puts are priced as follows:

March 4.75 Put	**$.31**	**$1,550**
March 4.50 Put	**$.20**	**$1,000**
March 4.25 Put	**$.13**	**$ 650**

He buys three March $4.50 soybean puts and waits to see what happens. In this example, Joe is buying three March (Expiration Date) $4.50 (Strike Price) puts (Right to Sell) for $1,000 each, or $3,000 (Premium) paid to the Option Seller. Because soybeans are selling for $4.75 per bushel, the $4.75 put is the At-the-Money option, and the $4.50 and $4.25 puts are both Out-of-the-Money. If soybean prices drop to $4.40 per bushel, both the $4.75 and $4.50 puts will be In-the-Money. The amount by which an option is in-the-money is referred to as Intrinsic Value (more on this topic in the pricing section). If soybean prices drop to $4.00 and Joe uses his option (instead of selling it at a profit), he will Exercise the option. If prices shoot to $6.00 Joe will forget about the option and it will expire worthless.

Options in the Newspaper

SOYBEANS (CBT)
5,000 bu.; cents per bu.

Strike	Calls-Settle			Puts-Settle		
Price	Sep	Nov	Jan	Sep	Nov	Jan
400	59 1/4	67	78 1/2	3	5 1/4	6 5/8
425	39 5/8	48	57 5/8	8	11	11
450	21	32	42	16	20	20 7/8
475	12	20	29	31	33	32
500	7	13	20	51	51	47
525	5	9 1/8	14	74	71 7/8	.....

Est vol 40,000 Fr 36,023 calls 15,806 puts
Op Int Fri 219,582 calls 95,348 puts

Soybeans at the Chicago Board of Trade (CBT), 5,000 bushel contract, prices quoted in cents per bushel. Prices shown are settlement prices, the final price of the trading day. To determine the cost of an option (premium), multiply 5,000 times the price. As an example, the 475 Sep call @ 12 = $600 (5,000 X $.12).

Est vol is the estimated volume for the reported trading day, followed by the actual trade volume for the previous trading day. 40,000 estimated for Monday's trade; 36,023 calls and 15,806 puts traded on the previous Friday.

Op Int (open interest) refers to the number of contracts open (not yet offset) as of the day indicated. As of Friday, 219,582 calls and 95,348 puts remained open.

Following the stock market crash in 1987, a well-known Wall Street figure was being interviewed on television and was asked a long-winded question about what was going on. His reply, "*Prices fluctuate*." Prices do fluctuate, and there are several factors that influence the price of an option;

- ▲ ***Price of the underlying instrument***
- ▲ ***Strike price of the option***
- ▲ ***Time remaining to option expiration***
- ▲ ***Volatility***

There can be other factors, such as interest rates or dividends (in the case of equities), that weigh on options prices. But each of the four factors indicated above has a direct effect on the value of an option, causing the option to become more or less expensive as the factor changes.

Price of the Underlying Instrument and Strike Price of the Option

Assume that you are interested in buying 100 shares of the XYZ Company, but first want to see their quarterly earnings report. The stock is trading at $30 per share and there are listed call options for XYZ with strike prices at $25, $30, $35, $40, $45 and $50 per share. Which option is the most expensive, and which the least costly? The option with a strike closer to the price of the underlying instrument, referred to as the ***NEARBY*** option, will always be worth more than an option with a strike further away, referred to as the ***DEFERRED*** option.

In our example above, the $25 call is in-the-money by $5 (intrinsic value), and has all of the time and rights associated with the other options, so it is naturally the most expensive. In fact if today were the option expiration date, the $25 call would be the only one with any value at all. The others would all expire out-of-the-money, worthless. The $30 call is at-the-money and will be in-the-money before the $35 call or the other calls, making it the next most expensive. There is a better chance that it will wind up with intrinsic value than the other calls and is therefore more valuable. Even if the underlying stock shoots up to $60 per share, and all the listed calls wind up in-the-money, the lower calls will each have $5 more value than the next higher strike.

What if the price of XYZ shares falls to $10 per share? All the calls will lose value, but the lower strike options will still be worth more than the higher strikes because, if there is time left until option expiration, there is a better chance that the closer strike will wind up in-the-money.

Time Remaining to Option Expiration

We've all heard the expression that "*time is money*," and with options "*time value*" is indeed a valuable commodity. If you buy an option that is not in-the-money, no intrinsic value, the entire premium is being paid for time value.

Assume that early in January gold was selling for $300 per ounce, and you bought a December $325 call for $400 premium. During the year the price of gold never moved; it remained at $300 each and every day. What would your call be worth in July? What would it be worth in September? What would its value be in late November, the day before option expiration? Certainly not as much as it was worth back in January, when you had all year to make a decision. Options are "*wasting assets*," which means that the value of an option declines over time. Theoretically, the time value of a one-year option should be reduced by 1-365th each day. In practice, the time value declines at an accelerating rate as the expiration date approaches.

It is this "*wasting effect*" (referred to as ***TIME DECAY***) that works for option writers, who collect premium and get to keep all of it if the option expires worthless. Many novice traders will buy an option and forget about it because they have no financial exposure beyond the initial premium paid. They hold the option and wind up taking the maximum loss when it loses all time value and expires worthless. Even if the option winds up with intrinsic value, the time value portion of the premium is lost.

Understanding Volatility

Time value includes another pricing variable called volatility, which measures how much the underlying instrument's price is likely to change over time, regardless of direction. The more volatile the underlying market the greater the chance that an option could move into the money. As a result, option sellers demand higher premiums for options with higher volatility.

There are two types of volatility that weigh on option pricing. One is historical volatility, which is a statistical measure of how fast the underlying instrument has been changing in price. Historical volatility can be calculated by a standard formula for any given time period. The other is implied volatility, which is the market's calculation of what will happen to prices in the future. Not whether prices will move higher or lower, but what the magnitude of the moves might be.

Traders can look at volatility from a historical perspective and compare it to current volatility "*implied*" by today's option price to guide them when buying or selling options. What has been the volatility of a market during the past year, or six-months? If historical volatility is 10% and current implied volatility is much lower, say 5%, you probably would not want to be an aggressive option seller because option premiums are not as high as they would be normally. In fact, volatility increases can be very strong and can move option premium sharply higher in a relatively short period of time. Extremely low volatility can often signal an explosive move in one direction or another, and option traders can position themselves to take advantage of the situation.

You don't need an opinion on price direction to profit from a change in volatility. As an example, assume that current implied volatility for soybeans is extremely low. You don't have any idea whether prices will move higher or lower, but feel confident that volatility will spike up to historical levels. What to do? Buy calls and buy puts. That position will make money if volatility spikes higher in the near term (before time decay erodes premium) no matter which way prices move. In fact, there have been occasions when both the call and the put moved higher simultaneously as volatility pushed premiums higher.

Taking Advantage of Option Price Influences

By understanding the influences on option premium you can structure trades that will give you an edge. Consider four different ways to establish a bullish position:

- ▲ ***Buy calls***
- ▲ ***Establish a call debit spread***
- ▲ ***Sell puts***
- ▲ ***Establish a put credit spread***

All four are bullish positions but have sharply different risk/reward characteristics and should be employed depending on various pricing factors.

Buy Calls

By going long a call (buying a call) you are paying a premium which will erode over time (time decay), and if implied volatility is high it will erode as well. This is the position favored by novice traders and the one that loses most often because of the factors mentioned. You can be right the market (bullish) and wind up losing money as the value of your option erodes. To make money going long calls you need to be right in your price assessment, and the price move higher must occur soon. Even if implied volatility is very low when you buy the option you can still lose money because of time decay. This position gives you unlimited profit potential with limited risk (the premium paid plus commissions and fees).

Establish a Bull Debit Spread

Also referred to as a vertical bull call spread, you buy a call at or near the money, and sell a call with a higher strike. This position is utilized when you are bullish the market and implied volatility is relatively high. The trade will work well if volatility spikes upward or prices move higher in the near term, but it will suffer from time decay. This position gives you limited profit potential and limited risk (the premium paid plus commissions and fees).

Again, option premium contains time value and the purchaser of an option is buying a "*wasting asset*," something that is going to lose value over time. Low volatility offers the opportunity to profit from a long option trade, however the trader should know when to liquidate his position before time decay erodes premium. If you are buying out-of-the–money options you must have almost perfect timing to make money. The leverage is huge, but the chances of being successful are slim.

Sell Puts

If you are bullish and implied volatility is high you can sell (short) puts, capture the premium and let time decay work for you. The biggest problem with this position is that it has unlimited risk, and we do not recommend it for anyone but the most seasoned traders.

Establish a Put Credit Spread

Also known as a vertical bull put spread, you sell puts at-the-money or near-the-money, and buy puts out-of-the-money. The position yields net premium, takes advantage of high volatility and carries limited risk. The puts will lose value if you are correct in your bullish market assessment; they will lose value from time decay and from the erosion of high volatility. This position carries limited profit potential and limited risk, the same risk/reward characteristics as the bull debit spread.

Four different positions, all bullish, to take advantage of different volatility scenarios and establish different risk/reward characteristics. By taking the time to compare current implied volatility to historical volatility, and structuring your position to take advantage of the situation, you can improve greatly the chances that your trade will be profitable.

Volatility Revisited

Changes in implied option volatility can dramatically affect option prices, and astute traders avoid purchasing overpriced options for speculation. Sometimes option prices get "*pumped up*" ahead of critical reports as professional market makers, generally option sellers, increase premiums to defer risk ahead of uncertainty in the markets. Speculators who want to
purchase premium in anticipation of a bullish report often pay dearly for the trade.

In the fall of 1998 implied volatility for Lean Hog options moved to multi-year highs before the United States Department of Agriculture Hogs & Pigs report at the end of September. The report was somewhat bearish but traders had already discounted the news and hog prices rallied sharply for several days following the report. Traders who bought calls ahead of the report should have profited handsomely, but because they "*paid up*" for their calls that's not what happened.

On the first day of trading following release of the USDA report December hog futures rallied 103 points, but out-of-the-money December calls actually went down. The December 4500 calls lost 7 points that day, and lost another 5 points the next day even though December futures rallied 25 points. Futures rally 128 points over 2 days while calls lose 12 points. This is a great example of why buying overpriced premium can prove disappointing. You were right the market but lost money anyway as volatility value collapsed and pushed premium lower. Being aware of implied volatility and using the appropriate strategy is very, very important.

When is it Best to Buy Options?

Volatility Trade

The best time to buy an option, or an option spread, is when volatility is very low and you expect a strong price move or volatility increase before time decay erodes the option's value. While the buyer of an option acquires several rights, the buyer must understand that the option is a wasting asset that is declining in value. A long option position must work quickly, and volatility plays are generally short duration trades initiated because of a temporary market aberration.

When volatility is low and you expect it to increase, without making a guess on market direction, buy both calls and puts (a *strangle* or *straddle*). If you're right and volatility premium does increase, either the calls or the puts will increase in value (sometimes both) and you will be able to liquidate the position at a profit.

As an example, you note with interest that T-Bonds have been trading in a narrow range for several weeks awaiting a major policy move by the Fed. T-Bond implied volatility, usually 11%, is currently below 7%. You don't have any idea what the Fed will do, so you aren't bullish or bearish, but you know that the market will make a strong move one way or the other. You decide to execute a volatility trade by buying a strangle (a call and a put with different strikes). You buy 1 December 120.00 T-Bond call and 1 December 110.00 T-Bond put at total premium of 1 28/64ths, $1,437.50. Your best result will occur if there is a strong market move one way or the other. Option volatility premium will increase sharply in either case.

A week later T-Bond prices make a strong move higher following a speech by Alan Greenspan, and volatility spikes above 11%. Option premium soars, and you liquidate your position at 3 21/64ths, $3,328.12, a profit of $1,890.62.

Option	Bought		Sold	
Dec 120 Bond Call	50/64ths	$781.25	2 25/64ths	$2,390.62
Dec 110 Bond Put	42/64ths	$656.25	60/64ths	$937.50
Total for 2 Options	1 28/64ths	$1,437.50	3 21/64ths	$3,328.12

Although the trade worked well, the opportunity was there for profit beyond the $1,890.62 that was booked when the spread was liquidated. Instead of selling both the call and the put, you could have sold the call and kept the put. That way you would profit if prices dropped and the put increased in value. By selling the call you got back your original investment, $1,437.50, plus another $953.12. The put gained only $281.25 on the volatility spike because the price move was to the upside. Now, should prices drop, the put will increase in value. In this example you could risk $281.25 by keeping the put and entering an order to sell it on a stop at 42/64ths, the original purchase price. If T-Bond prices do drop, put premium will increase and you will have an opportunity to increase your profit on the trade.

When is it Best to Sell (Short) Options?

Covered Call Writing

One of the best uses of options is to write (*sell short*) calls against assets held in an investment or trading portfolio. There are three major benefits to covered call writing:

Increase income. Assume that you own 500 shares of a stock paying average dividends. The stock has been trading in the $30 to $40 per share range and you decide to generate premium income by writing (selling) calls against the shares. You sell 5 $45 3-month calls (each call represents 100 shares) at 51/4, $525 per option, $2,625 total premium paid to you.

Hedge the asset. Referring to the example above, the stock had been trading in a range of $30 to $40 per share. Assume that you had originally bought the stock at $32 and didn't want to risk more than $6 per share, placing a sell stop at $26. To the extent that you received premium of $5.25 per share for selling the calls, you would lose only $.75 per share if you sold at $26. The investment was partially hedged.

Sell on the high. Referring to the example above, assume that the stock rallies to $48 per share and the option buyer exercises his $45 calls. You deliver the stock and kick yourself for selling at $45 when you could have sold at $48. In reality you sold at $50.25: you received $45 per share for the stock and $5.25 per share for the options. The option buyer should be kicking himself. He paid you $50.25 for the stock.

Volatility Trade

If low volatility signals a buying opportunity, then high volatility should alert you to option selling opportunities. Option sellers appear to be at a disadvantage because their profit potential is limited to the premium received for selling options. Worse, their risk potential is unlimited. But option sellers, who want premium to decline, profit from time decay. In fact, the option seller loses money only if the market moves sharply against his short position.

But naked option selling entails unlimited risk of loss and many traders tend to forget that fact. There are several well-know option selling programs that promote selling straddles or strangles (both puts and calls) for delta neutral positions, and while those programs may churn out small profits trade after trade, one serious loss can wipe out all the profits as well as all the traders' capital. During the stock market collapse of 1987 many floor traders, and several brokerage firms, at the Chicago Board Options Exchange (CBOE) went broke because they were short options and couldn't cover their positions. When volatility premium explodes, it does so in the shape of an inverted pyramid. That helps to explain why long volatility positions can be so rewarding.

When is it Best to Sell Credit Spreads?

Directional Trade

In this context, a credit spread involves the simultaneous purchase and sale of options.

Assume that you are bullish soybeans and want to use options to profit from a rise in soybean prices. You check implied volatility and find that it is above its usual level, which means that there is not an opportunity to go long options (remember, you buy options when volatility is low). Another way to use options to profit from a price rise

of the underlying instrument is to sell (short) puts. As prices rise, the value of the puts declines. And volatility is high, which automatically sends the message to consider selling options to take advantage of high premium. But shorting an option carries unlimited risk and a margin call. What to do?

A credit spread is the answer and this is how it works. You sell a put strike at-the-money or close-to-the-money, and at the same time buy a strike out-out-the-money. This position is called a credit spread because the premium you receive for selling the option is greater than the premium you pay for buying the other option. The difference between the premium received and the premium paid will be credited to your account.

As an example, assume that during March soybeans are trading at $5.00 per bushel and you think that prices will rally sharply over the next month. You check and find volatility to be higher than usual, signaling an options selling opportunity. You call your broker and find that an at-the-money, May $5.00 Put is selling for $.29, $1,450 (5,000 bushels X $.29), and a May $4.75 Put is selling for $.12, $600. You enter an order to sell 3 May $5.00 Soybean Puts, buy 3 May $4.75 Soybean Puts at a net price of $.17. If filled, you will receive net premium of $850 per spread, or $2,550 total for the three spreads on your order.

Buy	Sell	Net
May 4.75 Put	**May 5.00 Put**	
$.12 per bu.	**$.29 per bu.**	**$.17 per bu.**
$600 paid	**$1,450 received**	**$ 850 received**
Multiplied times 3 spreads		**$2,550 received**

You now have a bullish position, time decay and high volatility working in your favor, and $2,550 in your account. You also have the risk that your bullish assumption was wrong and prices continue to deteriorate. But instead of the unlimited risk that goes with a short options position, you have limited your risk to $.25 by buying a put and entering the trade as a spread. Yes, you are reducing your return and leverage ... *just selling the $5.00 put and keeping all of the premium would be more profitable*. But it would put you in an unlimited risk situation.

This kind of trade, a ***credit spread***, is perhaps one of the best uses of options available:

A Credit Spread Limits Your Risk. We can't stress this point enough. Limiting risk in trading situations is more important than picking a winning trade. There's always another trade, but not limiting risk can wipe you out. Always limit risk.

A Credit Spread Puts Implied Volatility in Your Favor. Instead of being on the wrong side of one of the option pricing variables, you are using it to your benefit.

A Credit Spread Puts Time Decay in Your Favor. Again, you are using an option pricing variable to your benefit. You hold a net short position which becomes more profitable as premium erodes.

A Credit Spread Gives You Choices. In our volatility trade example above, we talked about holding the long put after booking profits on the sale of the long call. Credit spreads offer a similar opportunity. In the soybean example, assume that prices did rally and you covered (bought back) your short May $5.00 Puts, but decided to hold the long $4.75 Puts. You are now long puts and subject to the effects of time erosion on premium, but the point is that you have the opportunity to make choices that could enhance profits.

When Should You Exercise an Option?

The decision to exercise at expiration of the option is clear. The call owner should exercise the option if the strike price is less than the value of the underlying asset. The option has intrinsic value, the difference between the price of the underlying asset and the strike price of the option. Conversely, the owner of a put should exercise the option if the strike price is greater than the price of the underlying asset. The intrinsic value of the put is the difference between the price of the underlying instrument and the strike price of the option.

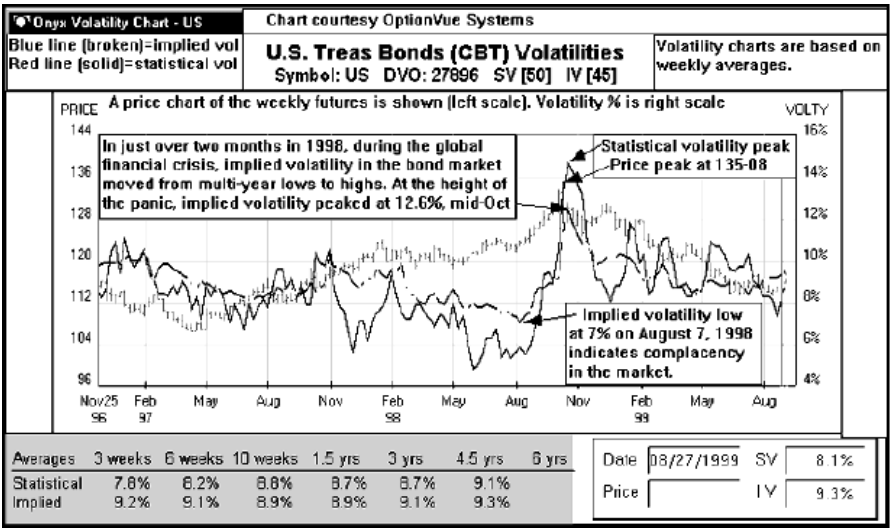
Most options listed on U.S. exchanges are American style options, which means that they can be exercised (converted to the underlying asset) on any day until the option expires. That "*exercise right*" is one of several rights held by the owner of an option. But there is no reason to exercise before expiration day because an option has time value in addition to intrinsic value; time premium that would be lost on exercise. There is no time premium left at expiration, but until then the best way to get out of a long option position is to sell the option and capture the remaining time premium.

PART 4 – VOLATILITY TRADING EXAMPLES

The concept of volatility is very important to option pricing and trading volatility can be enormously rewarding, while disregarding volatility can spell disaster for an options position. To illustrate both points we present four real-life options trading situations below, covering U.S. Treasury Bonds, Japanese Yen, Soybeans and S&P markets.

Example 1 – 1998 U.S. Treasury Bonds

During the summer of 1998, as the stock and bond markets were celebrating what was then described as "*the best of all possible worlds*" scenario, bond volatility moved to multi-year lows as shown on the chart below. Later that summer financial markets began to unravel as traders realized that economic conditions weren't as rosy as they seemed.



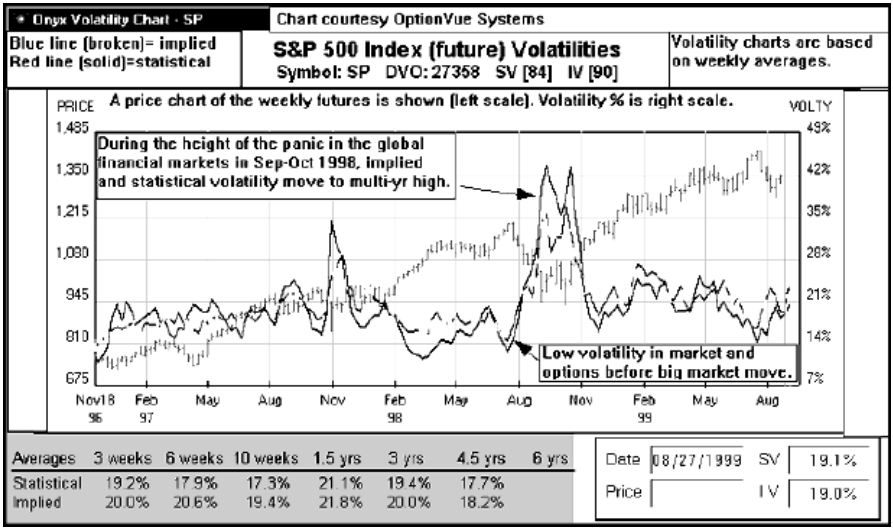
Volatility often moves in cycles, with periods of low volatility leading to more volatile periods or the reverse. T-Bond volatility started rising from the August lows and astute traders seized the opportunity to buy T-Bond option strangle positions at bargain basement premiums. At the end of the first week of August, 1998, December T-Bond futures were trading at 123-19 (123 19/32nds). The December 128 T-Bond call and the December 118 T-Bond put (a strangle) was trading at a total premium of 51/64ths, or $796.88 (51 X $15.625). The total risk of that position was limited to the $796.88 premium paid.

By early October T-Bond futures prices spiked to 135-08 and volatility advanced from multi-year lows to multi-year highs, all in a period of 10 weeks. The option strangle buyers reaped huge rewards. At the height of the volatility spike, the December 128 T-Bond call and December 118 T-Bond put strangle was trading at a total premium of over $7,000. At that point experienced volatility traders began looking for strategies to sell premium and take advantage of the extremely high volatility.

Example 2 – 1998 S&P 500 Index

Many of you may be thinking that volatility spiked higher in the T-Bond example above because Bond prices moved higher. But volatility can spike up even if prices of the underlying futures contract move sharply lower. Volatility moves independently of price direction.

About the same time that T-Bond prices were low, S&P 500 volatility was low while S&P 500 prices were making a market top. At the end of July 1998, September S&P futures settled at the then high of 1193.80, while volatility moved to previous lows. The September 1300 call and September 1200 put strangle could be bought for 1030 points, $2,575 (10.3 X $250).

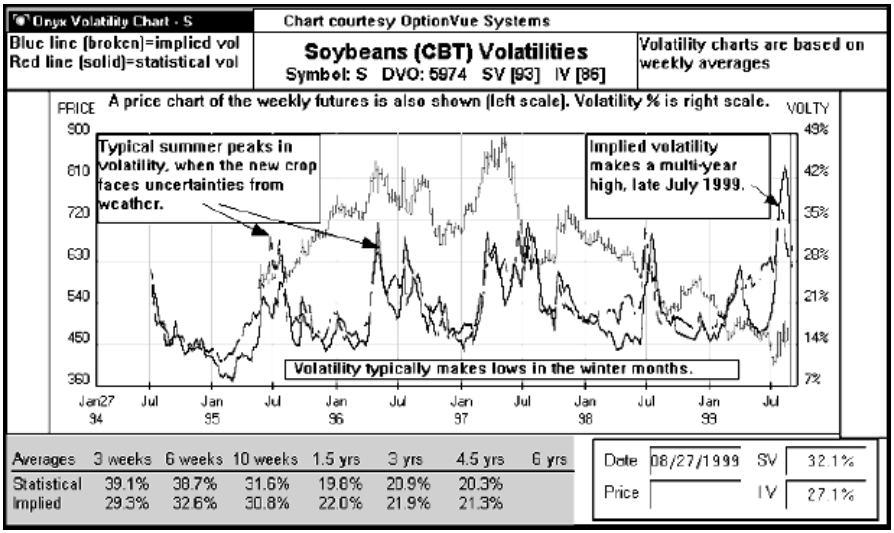


Late in July the stock market started a rapid decline as the Asian financial crisis unfolded. As the market tanked volatility skyrocketed, eventually reaching the highest levels since the mini-crash of 1987. By late August the S&P 500 index dropped to 954.00, a 20% decline. The September 1300 call and September 1200 put strangle was worth 9350 points, $23,375. Obviously a huge return on the $2,575 investment made one month earlier.

Example 3 – 1999 Soybeans

The implied volatility of options on soybeans can make dramatic moves and there is a recognized volatility cycle in grains and oilseeds that is fairly reliable and generally in line with the growing season of domestic crops. Soybean market volatility normally peaks in the late spring or early summer when weather can have the most effect on the growing crop that will not be harvested until October or November. It seems that there is a "*weather scare*" every year during the growing season, and during that time volatility can be seen as a measure of trader's emotions and market uncertainty. Even if soybean prices move higher into the fall, option volatility normally peaks during the spring-summer "*weather scare*." Traders that buy soybean option premium during the time when volatility is low can sit for weeks without much premium loss as the normal seasonal rise in volatility offsets negative time decay.

At the end of January 1999, July soybean futures were trading near $5.16 per bushel. The July 525 call and 500 put strangle was worth 36 cents, $1,837.50 (36 cents X $50). Two months later at the end of March July soybean futures were trading near $5.10 per bushel while the strangle was worth approximately 35 cents, $1,775.00. Almost 40% of the July options time value elapsed but the strangle lost only 1.25 cents, or 3% of its value. Why? Implied volatility had begun its usual seasonal rise from winter lows and by the end of March had increased by almost 6%.



Knowing the seasonal volatility pattern can also help keep you from buying option positions at the worst possible time. At the end of July 1999 soybean option volatility made multi-year highs. Futures prices had dropped to their lowest point in almost 26 years and started to recover on worries that drought could have a negative impact on the crop due for harvest during the fall of 1999. On August 4, 1999, November soybean futures closed at $4.94. The November 525 call and the November 475 put strangle was priced at 39 cents, $1,975.00. Four weeks later, on September 3, the futures market was at the same level, $495, but the strangle was priced at 24 7/8 cents, $1,243.75, a 37% drop in value. Eroding time value and a sharp drop in volatility combined to push option premiums sharply lower.

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