FUTURES OPTIONS CONTRACTS - INTRODUCTION

INTRODUCTION:

It is commonly accepted that derivatives known as options originated in England during the late 1600's with the trading of an equity option. Of course it is likely that prior to this, agreements may have existed between counter parties with components that also resembled those of modern day derivative contracts.

In 1973, Exchange traded options were introduced to North America with the formation of the Chicago Board Options Exchange. In fact the CBOE originally began by only trading Call options and it took an additional four years before it's counterpart the Put option was introduced. Agricultural futures options have become increasingly popular since they were first introduced by the CBOT in 1984 and many commodity exchanges, including the Winnipeg Commodity Exchange, now trade options as a derivative to underlying futures contracts. The following is an introduction into the basic features of what are commonly known as American Style futures options.

An option provides the purchaser with the right, but not the obligation, to buy or sell an underlying interest (in this case a futures contract) at specified price and within a set period of time. This right to buy is referred to as a Call option and the right to sell is referred to as a Put option. Where the underlying interest is represented by a futures contract, the right to buy is actually a right to be long futures contract at a specified price level. Conversely, the right to sell represents the right to a short futures position at a specified price level.

Option contracts involve both a buyer and a seller, a call option buyer has acquired the right, but not the obligation to assume a long futures position at a specific price and for a set period of time while call option seller (also known as the "Writer") is obligated, if exercised upon, to assume a short futures position at a specific price level during the set period of time.

Conversely, a put option buyer has the right but not the obligation to a short futures position at a specific price and for a set period of time, while the put option seller (also known as the Writer) is obligated, if exercised upon, to assume a long futures position at a specific price level during the set period of time.

Essentially, Put Options and Call Options make up the two distinct option contracts and since each contract requires a long and a short, there are four basic option positions. That is, Put Options and Call options are not opposite sides of the same transaction. The price level at which an underlying interest can be acquired is commonly referred to as the Strike or Exercise Price, while the time period is often referred to as the Expiration Date. The price is the amount an option buyer pays to the writer to acquire the rights associated with an option and is referred to as the Premium.

Futures options trade in a similar fashion to futures contracts, that is by open outcry or on an electronic platform. At the Winnipeg Commodity Exchange there are normally four or five delivery months of canola available for trade at any one time and strike prices of options are listed in $10.00/metric tonne increments. Option buyers generally consider ownership as a limited risk trade since they are under no obligation to acquire the underlying interest.

A review of terms covered so far include:

CALL OPTION - This instrument provides the buyer with the right, but not the obligation, to long futures position at a specified price level and during a certain timeframe.

PUT OPTION -This instrument provides the buyer with the right, but not the obligation, to short futures position at a specified price level and during a certain timeframe.

CALL OPTION BUYER -The buyer holds the right to acquire long futures position at specified price level and during the life of the contract. In essence, the buyer has the right, but not the obligation, to call the underlying asset (in this case a futures contract) from the writer (seller).

CALL OPTION SELLER - If exercised upon (called upon) by the buyer, the call writer is obligated to assume short (sell) futures position at the strike price of the option.

PUT OPTION BUYER - The buyer holds the right to acquire a short (sell position) futures position at a specified price level and during the life of the contract. In essence, the buyer has the right, but not the obligation, to put the underlying asset (in this case futures contract) to the writer (seller).

PUT OPTION SELLER -If exercised upon (called upon) by the buyer, the put writer is obligated to assume a long (buy) futures position at the strike price of the option.

STRIKE or EXERCISE PRICE -The price level at which the underlying futures may be acquired (long call or long put option) or that a writer may be assigned upon (short call or short put option).

EXERCISE DATE - The date at which an option ceases to exist.

PREMIUMS

The option premium refers to the amount an option buyer is willing to pay to acquire the rights associated with the purchase of an option, or the amount at which a writer is willing to sell those rights. Option premiums are composed of two main components:

INTRINSIC VALUE – That portion of an option premium that is often referred to as the "in-the-money" amount and is determined as:
Put Option: Intrinsic Value = Strike price -Futures price
Call Option: Intrinsic Value = Futures price - Strike price

EXTRINSIC VALUE – Often referred to as "Time Value" this portion of the premium represents the amount by which an options premium exceeds its intrinsic value. If an option has no intrinsic value, it's premium will consist entirely of "extrinsic" or "time" value. The Time Value portion of an option will be comprised of:

Time remaining to expiration;
The risk free rate of interest;
The volatility of the underlying interest;
And, in the case of an equity option, any dividends that are payable

OPTION SPEAK

A call option is termed **"in the money"** if the corresponding futures price is greater than the call options exercise or strike price. Conversely, a put option is termed **"in the money"** if the corresponding futures price is less than the put options exercise or strike price.

A call option is termed **"out-of-the-money"** if the corresponding futures price is less than the call option exercise or strike price. Conversely a put option is termed **"out-of-the-money"** if the corresponding futures price is greater than the put option exercise or strike price.

An option is termed **"at-the-money"** if the exercise strike price is equivalent to the level of the corresponding futures.

Call Option Example:

Given a March Canola futures contract trading at $408.30/mt, the option values might look something like:

Strike Price	Total Value	= Intrinsic Value	+ Extrinsic Value	
Mar. 390 Call	$29.60	$18.30	$11.30	In-the-money
Mar. 400 Call	$23.90	$ 8.30	$15.60	In-the-money
Mar. 410 Call	$19.00	$ 0	$19.00	At-the-money
Mar. 420 Call	$15.00	$ 0	$15.00	Out-of-the-money
Mar. 430 Call	$11.50	$ 0	$11.50	Out-of-the-money

Put Option Example:

Given a November Canola futures contract trading at 394.00/mt, the option values might look something like:

Strike Price	Total Value	= Intrinsic Value	+ Extrinsic Value	
Nov. 420 Put	$29.40	$26.00	$ 3.40	In-the-money
Nov. 410 Put	$19.00	$16.00	$ 3.00	In-the-money
Nov. 400 Put	$12.00	$ 6.00	$ 6.00	At-the-money
Nov. 390 Put	$ 6.50	$ 0	$ 6.50	Out-of-the-money
Nov. 380 Put	$ 4.20	$ 0	$ 4.20	Out-of-the-money
Nov. 370 Put	$ 1.90	$ 0	$ 1.90	Out-of-the-money

NOTABLE COMMENTS:

A futures option (American Style) should always be worth its intrinsic value.
Premiums of deep-in-the-money options or those, which are predominantly intrinsic value, provide very little leverage compared to those, which are out-of-the-money.
An options extrinsic value should be viewed or considered as a lease on time as opposed to a depreciating asset.

The time value portion of an options premium will decay rapidly as the expiration date approaches. As a rule of thumb, the time value portion of an option will erode at pace that is approximately equal to the square root of time. For example, the time value portion of an option with 2 months remaining until expiration is eroding twice as fast as an equivalent option with 4 months remaining until expiration.

TRADING FUTURES OPTIONS

Futures options are traded in a similar fashion to their underlying contract and the more liquid contract the narrower the spread between the "bid" and the "ask". When an option is purchased, the buyer has three alternatives to choose from before the expiration date: The option may be offset through a closing transaction in the same manner it was purchased. In order to offset an option position, one must buy (if the option was originally sold) or sell (if the option was originally bought) an option with an identical strike price, delivery month and expiration date.

The option may be exercised, which involves acquiring the underlying futures contract. The owner of a call option will receive a long futures position in the same contract month and at the option's strike price whereas the owner of a put option will acquire a short futures position in the same contract month and at the option's strike price.

Let the option expire. All options have an expiration date and if an option has no value it will automatically expire worthless. However, buyers should be cautioned as some exchanges have automatic exercise rules on the last trading day, so they should not be ignored at expiration.

RISK VS REWARD

It is generally accepted that risk is limited on long option positions to the premium paid and unlimited on short option positions (actually, short put options have risk limited to the value of the underlying contract).

While true, certain conditions can create additional risk for option positions at expiration. Earlier we mentioned that many options might be subject to automatic exercise rules if they expire in-the-money. Therefore, it is important to understand the rules of the Exchange governing the options being traded. Furthermore, option writers or sellers may be subject to "Pin" risk at expiration. This usually occurs in volatile conditions where market dynamics force an underlying interest to settle at or close to a relevant strike price. In these conditions long option holders may elect to exercise at-the-money or close to being at-the-money options.

When evaluating an option strategy the maximum risk, reward and breakeven levels should be taken into consideration. Long call option strategies have unlimited reward while breakeven levels are calculated by adding the premium paid to the positions exercise price. Conversely, short call option strategies have limited reward (limited to the premium received) and a breakeven that is calculated by adding the premium received to the short call options strike price.

Long put option strategies have a maximum reward equivalent to the value of the underlying contract. The breakeven price is calculated as the options exercise price minus the premium paid. Short put option positions have limited reward (limited to the premium received) and a breakeven price that is calculated by subtracting the premium received from the short put options strike price. The risk/reward and breakeven levels of strategies that involve in option-spread strategies will be covered in a future article.

The following summarizes some of the objectives of traders who implement strategies using options.

Objectives of a buyer of Call options for risk management:

To participate in a dramatic rise in the futures market after the sale of the corresponding cash commodity.

To fix a future price on production inputs (i.e. - a processing mill establishes a long (buy) hedge).

To cover a short position by buying "protective" calls (synthetic puts).

Speculative objectives of a buyer of Call options:

To participate in a dramatic rise in commodity futures prices.

To gain leverage -Leverage is decreased when in the money calls are bought, as there is a closer "one-for-one" correlation between a move in the underlying market price and a move in the call market price.

To avoid the risk of margining futures – Long options have a fixed price risk as opposed to long futures positions therefore they may provide an opportunity for portfolio diversification.

Long Call Option Characteristics

Risks	-	Limited to the premium paid
Maximum Reward	-	Unlimited
Break Even Price	=	Option Strike Price + Premium Paid

Objectives of the buyer of put options for risk management:

To protect a long position in an underlying commodity.

To lock in a floor price on production or anticipated production.

Speculative objectives of the buyer of Put options:

To participate in a dramatic decrease in commodity futures prices.

To avoid the risk of margining futures and allow for diversification opportunities.

Long Put Option Characteristics

Maximum Risk	-	Limited to the premium paid
Maximum Reward	-	Limited to the Strike Price less the premium paid
Break Even Price	=	Option Strike Price – Premium Paid

Objectives of Put Option writers (sellers):

To obtain premium income.

Writes puts in anticipation of owning the underlying commodity below the prevailing market price.

Maximum Risk	=	Put Strike Price - Put Premium Received
Maximum Reward	=	the Premium Received
Break Even Price	=	Put Strike Price - Put Premium Received

Objectives of Call Option writers (sellers):

To obtain premium income.

Writes calls in anticipation of selling the underlying commodity above the prevailing market price.

Maximum Risk	-	Unlimited
Maximum Reward	=	the Premium Received
Break-Even Price	=	Call Strike Price + Call Premium Received

The Right Option for You!

One of the most commonly asked questions of option traders is, "which is the best option to select and does it have good value"? Option strategies can be implemented for a variety of reasons and there is no hard and steadfast rule for selecting a particular option strike. However, intuitive traders will select an option that provides good leverage potential with even a small move in the underlying contract. Some variables to consider when implementing an option strategy include:

Market Sentiment
Time Remaining to Expiry
Liquidity of Selected Option
A Strike Price Close to the Underlying Market Price
The *Delta of the selected option

*Delta is the symbol representing the ratio of an option premium with respect to a change in price of the underlying contract. For example, an option with a delta of .25 (25%) can be expected to have its value change by approximately 25% on a 100-point move in the underlying contract. Delta also has several other uses and all of the "Greeks" will be covered in a future article.

A combination of the above on an at-the-money option or a close-to-the-money option will usually provide good leverage with even just a moderate price move.

Option writers need to be especially aware of the time remaining to expiry and to recognize that acceleration of time value decay reaches a critical point anywhere from 30 to 60 days prior to expiration. Writers may find that shorter-term options have a more rapid rate of time decay, which can work to their advantage.

This completes the third document of a series in Futures and Futures Options Trading – please see related articles located in our website at: www.union-securities.com/futures.