OPTIONS TUTOR

(Courtesy of the Coffee, Sugar, Cocoa Exchange)

Options trading can provide exciting opportunities. But just what are options contracts? And how do they work?

First, since options are derived from their underlying futures markets, let's quickly review the basics of futures trading.

A futures contract is a standardized, legal agreement to make or take delivery of a specified quantity and grade of a commodity at an established point in the future at an agreed upon pnce.

A contract buyer is obligated to take delivery of the commodity, while sellers are obligated to make delivery. Buyers are considered to be "long" and sellers "short".

About Options: Calls and Puts

There are two types of options: calls and puts.

A call option gives buyers the right -- but not the obligation --to purchase a futures contract at a specific price (known as the "strike price"). In other words, to acquire a "long" position in the futures market.

A put option gives buyers the right -- but not the obligation -- to sell a futures contract at a specific price. That is, to acquire a "short" position in the futures market.

Each option transaction involves two parties: a buyer and a seller. Option buyers are often referred to as option holders; sellers are referred to as option writers or grantors.

Options are identified by the futures contract delivery month, strike price, and type (call or put).

For example, in sugar, a "March 12 call" is an option to purchase a March sugar futures contract at 12.00 cents/pound.

Buyers

The buyer acquires the option rights: either the right to purchase a futures contract (calls), or the right to sell a futures contract (puts).

To obtain the rights, the buyer makes a payment to the option seller. This payment is called the "premium".

Option holders can lose no more than the premium they pay for the option. That's because an option holder is under no obligation to enter the futures market. Ifthe option never becomes profitable to exercise, an option holder can simply let the option expire worthless.

Potential gains, however, can be practically unlimited (once the premium and fees, and strike price are accounted for).

There are three ways in which option holders can exit their positions:

- selling the option back in the market;
- exercising the option and entering the futures market;
- or, letting the option expire.

Understanding Premium

The premium is the "market price" of a particular option.

Premiums are most affected by supply and demand forces. Simply stated, option premiums must be high enough to induce sellers to sell and low enough to encourage buyers to buy.

What buyers are willing to pay for a particular option and what sellers are willing to accept for granting the option are influenced by several variables including: intrinsic value, time value, volatility, and interest rates.

Intrinsic Value

If a position is profitable to exercise, it is said to have "intrinsic value".

Call options have intrinsic value if the current futures price is above the option's strike price; puts have intrinsic value if the current futures price is below the strike price.

Options with strike prices equal to current futures prices are said to be "at-the-money". Options with intrinsic value are known as "in-the-money," while "out-of-the-money" options have no intrinsic value.

Generally, an option's premium is at least equal to its intrinsic value.

Selecting an in-the-money, out-of-the-money, or at-the-money option should take into account market opinions and the ratio between risk and potential rewards. In other words, buying out-of-the-money options provides less immediate profit potential than in- or at-the-money options, but the premium outlay will not be as great.

Sellers

Options sellers grant the option rights. In return, they receive the premium payment. The premium compensates the seller for the risk of having to grant a futures position to the buyer at anytime during the option's life.

When a call is exercised, the seller obtains a short futures position and grants a long futures position to the buyer. When a put is exercised, the seller obtains a long futures position and grants a short futures position to the buyer.

Because option writers must be prepared to enter the futures market at any time prior to expiration, they are required to maintain a margin account similar to that for futures.

Option sellers cannot initiate option exercise. Sellers may offset their positions by buying back their options in the market.

Exercise

Only the buyer (holder) can exercise the option. Exercise can take place at any time prior to an option's expiration.

Most option buyers and sellers exit their positions by making an opposite (offsetting)

transaction. That is, by selling an option they had previously bought or by buying an option they had previously sold.

Option sellers should always bear in mind that an option they have sold can be exercised at any time at the option buyer's choosing.

Expiration

The day the option expires is the final day on which it may be exercised. Expiration falls on the evening of the option contract's last trading day. Ifan option expires without being exercised, its holder's rights cease to exist.

Time Valueff ime Decay

Time value is the amount buyers are willing to pay for an option based on the possibility that it will at some point become profitable to exercise.

Therefore, though an option may not have intrinsic value, it usually has some value because of the time remaining until expiration. In this case the value is referred to as extrinsic.

The premiums for at-the-money and out-of-the-money options are entirely a reflection of their time value. Inthe case of an option already in-the-money, time value is what buyers are willing to pay (over and above intrinsic value) for the time until expiration. Time value is generally at a maximum for at-the-money options.

The probability that an option will become profitable to exercise lessens considerably as expiration nears. As a result, time value erodes more rapidly -- a phenomenon known as time decay.

By using time and volatility analysis, you can examine the impact of time decay on the value of a particular option strategy at different points over its lifespan.

Delta

While premiums are influenced by changes in the underlying futures price, any given change in futures prices seldom results in an identical change in option premium. Options with different strike prices and expiration dates are affected to different degrees by a change in futures pnce.

This relative change is known as an option's "delta". Delta measures the sensitivity of option premium to movements in futures prices. It is expressed in a mathematical calculation of the change in an option's premium for a point change in the futures price, For example, if a $2 increase in the price of cocoa futures is expected to result in a $1 premium increase for a specific option, the delta is said to be 0.5.

Generally, the deeper a call or put option is in-the-money, the more it responds to futures price changes and delta moves closer to 1. Ina dynamic market, it is important to understand delta (sometimes called the "hedge ratio") in order to assess the risk exposure of an options portfolio or to assure an efficient hedging program.

Synthetic Positions

Because of the relationship between options and their underlying futures contracts, it is possible to combine options with other options or options with futures to create positions that resemble other options or future positions. These positions are called "synthetics". Each and every position, both long and short, can be constructed "synthetically".

The base equation is: long futures = long call + short put. The reason: just as a long futures contract offers unlimited profit potential when prices rise and unlimited risk when prices decline, so too would buying a call (unlimited potential in rising markets) and selling a put (unlimited risk in falling markets) with the same strike price. All other positions can be computed with simple algebra:

long call	+	short put		long futures
short call	+	long put		short futures
long put	+	long futures	=	long call
short put	+	short futures		short call
long call	+	short futures		long put
short call	+	long futures		short put

Why bother? Ifyou want a long futures position, why not simply buy a futures contract? Why go through the trouble of buying a call and selling a put?

The answer: there are times when, because of option premium mispricing, a synthetic is more attractive. Consider the following:

price of July coffee "C" futures:	125.00 cents/pound
premium of July 125 call:	4.20 cents/pound
premium of July 125 put:	4.60 cents/pound

By buying the call and selling the put, you can create a synthetic long futures position, earning a net premium of 0.40 cents/pound.

That 0.40 cents/pound of premium income effectively reduces the cost of the long July futures position to 124.60 cents/pound, compared to the 125.00 cents/pound cost of a July futures contract.

This is an exaggerated example. And, while the differences between the prices of synthetics and the "real thing" may be relatively small and short-lived, they can sometimes provide an edge for the astute trader.