

PART 1

**The Foundations of
Options Trading**

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CHAPTER 1**Option Basics**

Stock options are members of a large group of varied financial instruments known as *derivatives*; that is, options are derived or based on shares of common stock or stock indexes. Unlike stock certificates, where there is a fixed number at any given point in time, option contracts are actually created as they are needed in the marketplace. One of the figures you will see in the option price chain on your broker's web site is "open interest," the number of contracts for that particular option that are outstanding at that point in time.

DEFINITIONS OF CALLS AND PUTS

A *call option* is effectively a contract giving the owner of the option the right to purchase a fixed quantity of stock within a particular period of time and at a specified price, the strike price. An example would be a December \$200 call option for Apple Computer. The owner of this option has the right to buy 100 shares of Apple Computer stock for \$200 per share anytime up until the December expiration, the Saturday following the third Friday in December.

A *put option* gives its owner the right to sell a fixed quantity of stock within a particular period of time and at a specified price. Analogous to the call option example, the December \$200 put option for Apple Computer gives the owner of this option the right to sell 100 shares of Apple Computer stock for \$200 per share anytime up until December expiration.

ARE YOU LONG OR SHORT?

In both stock and options trading, we refer to being *long* when we have purchased a security, as in: “I am long 200 shares of Apple Computer (AAPL)” or “I am long 10 contracts of the April \$200 calls for AAPL.”

Short refers to a security I have sold, so I can be short shares of AAPL stock or be short AAPL calls or puts that I have sold. When I am short stock, I have an obligation to buy the security at some future date to close the trade. The same is true when you are short options. However, with options, you may not have to close the position if the option expires worthless, but you would be wise to always remain aware of your obligations when you are short options. Many traders make it their practice to always buy back, or close, a short option position before expiration, even when it appears likely the options will expire worthless.

When we own options, we are said to be long those options, and if I have sold the options, I am said to be short those options. When I am short options, I no longer have a right to buy or sell stock as I did when I owned the options. The person who sold the call option has the obligation to sell the fixed quantity of stock at the specified price anytime before the option expires. If I sold the December \$200 call for AAPL, I have an obligation to sell 100 shares of Apple Computer if that call option is exercised against me. The option's exercise is similar to the person to whom I sold the option coming to me and saying, “Sell me 100 shares of Apple Computer for \$200 per share,” and I don't have a choice; I have an obligation when I am short options. In a similar way, if I sold the December \$200 put option for AAPL, I am obligated to purchase 100 shares of Apple Computer at \$200 per share if the put option is exercised. When I am long an option, I always have the right to exercise that option and either buy or sell the underlying stock, but it is entirely my choice. When I am short options, I am obligated to buy or sell the underlying stock if the option is exercised. I don't have a choice.

OPTION CONTRACT SIZE

Options are bought and sold as contracts that normally cover 100-share lots of stock. There are exceptions, usually created by mergers and acquisitions where two stocks were combined, and an option may cover some other number of shares of the underlying stock. When you are perusing an options chain and see an option that appears to be more expensive than you would expect, based on the other options in that chain, that option

may cover 125 shares (or some other number) rather than the standard 100 shares.

The option contract is priced on a per-share basis. For example, that Apple Computer \$200 call may be offered for sale at \$4.25. Since this contract covers 100 shares, we would pay \$425 for one contract of the Apple \$200 calls. The options contract is priced per share of the underlying stock to make it easier to see the relationship to the stock price.

IS MY OPTION IN- OR OUT-OF-THE-MONEY?

Options have a unique terminology that reflects the relationship of the option strike price to the current price of the underlying stock. If the strike price is close to the current stock price, we refer to that option (put or call) as *at-the-money* or ATM. Often, a stock price will be between strike prices, and the options on either side of the stock price will be considered ATM.

If the price of Apple Computer stock is \$210, then I could exercise my \$200 call option and buy 100 shares of Apple Computer for \$200 per share or \$20,000. I could then sell that stock in the market for \$210 and have a gross profit of \$1,000 (my net profit would depend on what I paid for the option). When the option has a net positive value if exercised, the option is said to be *in-the-money* or ITM. Call options with strike prices below the current stock price are ITM while put option prices with strike prices above the stock price are ITM.

However, if I owned the AAPL \$200 call option and the current AAPL stock price had dropped to \$198, I would not exercise the option; it wouldn't make sense to buy 100 shares of AAPL at \$200 when I could buy those shares for less money in the open marketplace. These options are called *out-of-the-money* or OTM. Call options with strike prices above the current stock price are OTM while put option prices with strike prices below the stock price are OTM.

OPTION TRADE ORDERS

Since option contracts are created on demand in the marketplace, the orders for buying and selling options are more complex than the corresponding stock orders. If a trader wishes to buy an option, she has two choices. She may enter an order with her broker, usually via a web site, to *buy to open* or *buy to close*. These are often abbreviated BTO and BTC. I enter a BTO order when I do not have a position in that option and so I am

TABLE 1.1 Option Trade Order Terminology

Option Order	Shorthand	Action	Result
Buy to open	BTO	Buys a call or a put	Creates a long position
Sell to close	STC	Sells a call or a put	Closes the long position
Sell to open	STO	Sells a call or a put	Creates a short position
Buy to close	BTC	Buys a call or a put	Closes the short position

“opening” that position. At some later date, I might want to sell those options, and I would enter a *sell to close* or STC order.

We discussed short positions earlier in this section. If I sell an option when I do not already own that option, I am entering a *sell to open* or STO order and I will be short those options once this order is filled. When I wish to close that short position, I will enter a BTC order. Table 1.1 summarizes the order terminology used for trading options.

OPTION EXPIRATION

Equity options expire on the Saturday following the third Friday of each month. It is common to hear or read that equity options expire on that third Friday because stock options cannot be traded after the close of the markets Friday afternoon. Saturday expiration allows the brokers to perform all of the exercises, purchases, and sales of stock on Saturday before the option contracts expire at midnight. Thus, traders often refer to “expiration Friday” and speak of the options expiring on Friday because this technicality of Saturday expiration has no relevance for traders.

However, some (but not all) index options cease trading at the close on the Thursday prior to expiration and those positions are reconciled on Saturday based on the settlement price established Friday morning. For example, the Standard & Poor’s Index (SPX) options cannot be traded after the close on the Thursday before expiration, but the settlement price is established Friday morning based on the opening price of each of the 500 stocks that make up the SPX (the S&P 500). Since many stocks do not open immediately at the opening bell, the settlement price will differ from the SPX opening price Friday morning. The specifications for settlement and other characteristics of index options can be found on the web site of the exchange that creates the option. For example, the specifications of the SPX options are published on the Chicago Board Options Exchange web site, www.cboe.com.

LEAPS OPTIONS

A longer-term option was developed by the Chicago Board Options Exchange in 1990. These options are called Long-Term Equity Anticipation Securities (LEAPS). Not all stocks have options, and not all stocks with options have LEAPS. LEAPS have January expirations, and there are always two January options expirations available. For example, in June 2010, Apple Computer (AAPL) had two LEAPS options available, one expiring in January 2011, and another expiring in January 2012.

In general, LEAPS are used as surrogates for the stock itself. If one believes a stock is likely to appreciate greatly over the next year, he may buy the stock. But another trader with the same outlook for that stock could buy the LEAPS call option for a fraction of the capital required to buy the stock. There are two principal disadvantages of holding the LEAPS option instead of the stock; one is the loss of the dividends that are paid to the stockholder, and the other is the loss of value in the LEAPS option due to the passage of time. We will discuss this concept of “time decay” in Chapter 3 in more detail; for now, just realize that the price of the LEAPS option will slowly decline over time if the stock price simply trades sideways.

LEAPS are often substituted for the stock in classic stock/option strategies, such as the covered call (discussed in Chapter 5), or used to speculate on a longer-term bullish or bearish trend of a stock.

OPTION SETTLEMENT

Stock options are settled at expiration with shares of stock either being sold or purchased. If I hold a short position of three contracts of the \$520 put options for Google and GOOG closes at \$512 on the Friday of expiration week, then my option position will be exercised and 300 shares of GOOG will be purchased for my account at \$520/share; that is, the stock was “put to me.” Similarly, if I had owned five contracts of the \$500 call options and GOOG closed at \$512, I would own 500 shares of GOOG after the calls were exercised on my behalf. If I had been short the five contracts of the \$500 call options and GOOG closed at \$512, this would result in a short stock position of 500 shares of GOOG.

If I am long a call or put option, I may choose to exercise that option at any time before expiration. However, if my option is ITM by \$0.01 or more, and I do not close the position before the close of trading on expiration Friday, my broker will automatically exercise that option on my behalf on that Saturday of expiration.



By contrast, index options settle in cash. If I own five contracts of the SPX \$1,100 calls and the settlement price of SPX is determined to be \$1,142 on expiration Friday, then my account will be credited with \$21,000 ($5 \times (1142 - 1,100) \times 100$). But remember the unique settlement characteristics of many broad-based index options like SPX. They cannot be traded after the close of trading on the Thursday of expiration week, and the settlement price will be determined the following morning based on the opening price for each stock in the index.

OPTIONS CYCLES

Equity options always have options available for the current month and the following month. In addition, two more months will be available, but those two months will vary, depending on which of three option cycles your option falls within: the January, February, or March quarterly cycles. For an option in the January cycle, Table 1.2 lists Jan, Apr, July, and Oct as the months that will be used. So, in January, the Jan and Feb options (current and next month's) will be available, plus two additional months: Apr and July. By contrast, an option in the February cycle will have the following options available in January: Jan, Feb, May, and Aug. Similarly, an option in the March cycle will have the Jan, Feb, Mar, and Jun options available in January. For stocks without LEAPS options, the Jan options are added in January.

Table 1.3 illustrates how this works for a year with Apple Computer (AAPL) in the January cycle.

This is probably more detail about the option cycles than needed by the average options trader. The key information to keep in mind is that any stock options chain will always have options available for the front month, next month, and two additional months. Those additional months will vary, depending on the option cycle of which it is a member. A smaller subset will also have the LEAPS options available.

TABLE 1.2 Option Cycle Months

Option Cycle	Option Months	LEAPS
January	Jan Apr July Oct	New year added after May expiration
February	Feb May Aug Nov	New year added after June expiration
March	Mar Jun Sep Dec	New year added after July expiration

TABLE 1.3 AAPL Options Available by Month

Front Month	Next Month	Additional Months
Jan	Feb	Apr Jul
Feb	Mar	Apr Jul
Mar	Apr	Jul Oct
Apr	May	Jul Oct
May	Jun	Jul Oct
Jun	Jul	Oct Jan
Jul	Aug	Oct Jan
Aug	Sep	Oct Jan
Sep	Oct	Jan Apr
Oct	Nov	Jan Apr
Nov	Dec	Jan Apr
Dec	Jan	Apr Jul

Index options always have options available for the front month and the following month, but the availability of other options may vary with the product. The specifications for the index option of interest may be found on the web site of the exchange that creates the option. For example, on the International Securities Exchange (ISE) web site at www.ise.com, you will find the specifications for the Standard & Poor's SmallCap 600 Index options (SML). SML always has options available for the three near-term months plus three additional months from the March option cycle.

Next we will consider options pricing. How do I know if an option is expensive or a bargain?

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