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PROFITS RUN PRESENTS


## HOW TO TRADE OPTIONS

FROM A TO Z EXPLAINED IN PLAIN ENGLISH
$\qquad$
BILL POULOS

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## Table of Contents

Introduction ..... 4
Options Basics \& Overview ..... 6
Definitions \& Examples ..... 8
Put Option ..... 8
Call Option ..... 9
Option Types ..... 10
Options Versus Stocks ..... 11
Options Language ..... 12
Assignment ..... 14
Broker Options Chains and Trading Platform ..... 15
Strategies ..... 41
Price Quotes ..... 42
Price Components ..... 44
In-the-Money (ITM) ..... 44
At-the-Money (ATM) ..... 44
Out-of-the-Money (OTM) ..... 45
Intrinsic Value ..... 45
Extrinsic (Time) Value ..... 45
The Greeks ..... 47
Delta ..... 47
Gamma ..... 49
Theta ..... 49
Vega ..... 53
Understanding Volatility ..... 54
Bringing It All Together ..... 55
Conclusion ..... 63
Options Glossary ..... 64
Ask Price ..... 64
Assignment ..... 64
At-the-Money ..... 64
Beta ..... 64
Bid Price ..... 64
Call Option ..... 64
Closing Price ..... 64
Contingent Order ..... 64
Contract Size ..... 64
Covered Call ..... 65
Credit Spread ..... 65
Delta ..... 65
Expiration Date ..... 65
Expiration Friday ..... 65
Expiration Month ..... 65
Gamma ..... 65
Implied Volatility ..... 65
In-the-Money ..... 65
Intrinsic Value ..... 65
Last Trading Day ..... 66
Limit Order ..... 66
Margin Requirement ..... 66
Market Order ..... 66
Naked Option ..... 66
Open Interest ..... 66
Option ..... 66
Option Period ..... 66
Out-of-the Money ..... 66
Put Option ..... 67
Strike Price ..... 67
Theta ..... 67
Time Decay ..... 67
Time Value ..... 67
Vega ..... 67
Volatility ..... 67

## Introduction

Anyone with a brokerage account, 401 K or IRA is most likely familiar with stocks, bonds, mutual funds and Exchange Traded Funds (ETFs), and they have most likely heard about options as well, but are not familiar with them. In fact, they probably have adopted the prevailing view that options are risky and should be avoided.

But, the truth is, with the proper education, understanding the ins and outs of options is fairly simple and trading options properly can actually be less risky than investing in or trading stocks.

Depending on your investment or trading goals, there are a variety of options strategies available, from the very basic to the more complex. But even the more complex strategies become very easy to apply with a little practice.

The analogy I always use with my students is that learning to drive a car seemed very complex at the time, especially those left hand turns. But, in no time, driving in almost any conditions became second nature, no problem at all.

Options trading is the same way and once you master a few or more of these strategies, you can apply them over and over again for life.

Some strategies allow you to profit from the directional movement of a stock, for example, without actually buying the stock, all with much less risk than had you bought the stock directly.

Other strategies allow you to protect your portfolio from the next market crash; it's like buying insurance on your portfolio. Yet other strategies allow you to collect "income" on a regular basis.

Now this is not to say that trading options is not risky, but investing in or trading stocks, bonds, ETFs and mutual funds is also risky. Because of the high degree of leverage that options offer, trading options without the proper education is, indeed, extremely risky, like driving a car with no training. However, with the proper education, trading options can actually be less risky than trading stocks.

This is why brokers and others always caution you about options with words like: "Options involve risks and are not suitable for everyone. Option trading can be
speculative in nature and carry substantial risk of loss. Only invest with risk capital." They know that without the proper education trading options is indeed very risky. And that is why most people completely miss out on the many advantages and profit potential of trading options. They never bother to get educated.

So, at a minimum, you owe it to yourself to get educated and then, from a position of strength, decide if options trading is for you. In so doing, you will become aware of a whole new world of profit potential and risk management that the best investors and traders in the world apply routinely.

Our objective in this report is to pull back the curtain and remove the mystery surrounding the world of options. We'll cover options basics in a way that will be completely understandable including the "Greeks" and other options jargon. This report will not make you an expert, but it will open the door for you and motivate you to take the next step to more advanced education on each of the options strategies available.


Good Trading,
Bill Pados
Bill Poulos
Profits Run, Inc.

## Options Basics \& Overview

Options are contracts that give the buyer the right, but not the obligation, to buy or sell an underlying stock at a specified strike price on or before a specified date. The seller incurs a corresponding obligation to fulfill the transaction, which means that they must buy or sell the underlying stock if the owner elects to exercise the option, prior to the options expiration date. The buyer pays a premium to the seller for this right.

Options that give the buyer the right to buy a stock at a given price are called "calls" and options that give the buyer the right to sell a stock at a given price are called "puts". Both calls and puts are commonly traded.

To trade options you need to open what's called a "margin account" with a broker. And while it is true that you must be a little more financially able to open up such an account (usually a $\$ 5,000$ minimum), there are many options strategies that are very low risk. Some are simple, some are relatively complex, and some options strategies are used to provide income on an ongoing basis.

Options provide very high leverage and, as long as you do not abuse that leverage, trading options properly can be less risky than trading the underlying securities directly.

To understand the basics of options, I will cover definitions, option types, options vs. stocks, options language, and then how to handle the unlikely event of assignment.

Options provide the trader or investor the opportunity to manage risk in the markets in ways not available when just buying a stock or ETF; and, as we get into this, you will see how different strategies can accomplish just that.

Options are risky? Well, they are no more risky than trading the underlying security. If done properly, options trading can actually be less risky than stock trading.

Yes, if you abuse the leverage aspects of options and put options sizes on that are too large, relative to your account size, you are going to have a problem. And it is precisely the leverage aspect of options that, when abused, causes them to be highly risky. But, like anything, if you know what you are doing, there is no need for that.

An example would be a driving analogy. If you put a kid in behind a steering wheel, driving, or attempting to drive a car down the highway, would that be risky? Boy, you bet
it would be! But if you put an adult behind the wheel, who has had proper driver's training and is properly licensed, the risk is dramatically diminished. Options is the same way, if you know what you are doing, they are no more risky than trading stocks and, indeed, can even be less risky.

Options require far less margin than buying stocks or ETFs outright. When you buy a stock or an ETF, you are going to have to put up the full amount of money; or, if you have a margin account, approximately half or $40 \%$ of the money. But, with options, it is significantly less than that. Oftentimes, $10 \%$ or $5 \%$ of the margin is required to control the same number of shares. Again, if you abuse that and overtrade, or put position sizes on that are far too large, relative to your account size, that is when you get into trouble, and there is no need for that.

The profit potential trading options can be far greater than trading stocks or ETFs. Successful options trading does require good methods to evaluate the price movements of their underlying securities. Then, given the assessment of the underlying security, you can apply the proper options strategy.

So there are two parts to this:

1. Understanding options and the various options strategies
2. Having a method, or methods, to evaluate the likely direction of the stock, ETF, or index for which you will be trading the options

So you need both of those. But, if you are trading stocks, you need that anyway. You are not just going to go in and put orders in blindly; you are going to go in and trade according to what your assessment is of the market or likely market direction.

## Definitions \& Examples

Okay, let's get into basic definitions. There are two types of options: Puts and Calls.

## Put Option

A put option is a contract between two parties to exchange a stock at a strike price by a predetermined date. One party, the buyer of the put, has the right, but not an obligation, to sell the stock at the strike price by the future date. While the other party, the seller of the put, has the obligation to buy the stock from the buyer of the put, at the strike price, if the buyer exercises the option.

For example, if a stock is trading at $\$ 50$, and you think it is going to go down to $\$ 40$, you might buy a $\$ 45$ put option for, say, $\$ 0.20$. If the stock did drop to $\$ 40$, that would allow you to sell the stock at $\$ 45$, even though it is valued at $\$ 40$, netting you a $\$ 4.80$ profit on each share. On the other hand, the person who sold you the put would be obligated to buy the stock from you at $\$ 45$, at a loss of $\$ 4.80$. If the stock never drops below $\$ 45$ by the expiration date, the put expires worthless, and the put buyer is out $\$ 0.20$ and the put seller keeps the $\$ 0.20$.


## Call Option

A call option is a contract between two parties to exchange a stock at a strike price by a predetermined date. One party, the buyer of the call, has the right, but not an obligation, to buy the stock at the strike price by the future date. While the other party, the seller of the call, has the obligation to sell the stock to the buyer at the strike price if the buyer exercises the option.

For example, if a stock is trading at $\$ 50$ and you think that it is going to go up to $\$ 60$, you might buy a $\$ 55$ call option for, say, $\$ 0.20$. If the stock rose to $\$ 60$, that would allow you to buy the stock at $\$ 55$, even though it is valued at $\$ 60$, netting you a $\$ 4.80$ profit on each share. On the other hand, the person that sold you the call would be obligated to sell you the stock at $\$ 55$, at a loss of $\$ 4.80$. Now if the stock never rises above $\$ 55$ by expiration date, then the call expires worthless and the call buyer is out $\$ 0.20$ and the call seller keeps the $\$ 0.20$.


## Option Types

Now let's talk about the types of options available.

You have options available for stocks, ETFs, and indexes, as well as futures, forex, and other underlying securities.

We will be focusing in on stocks, ETFs, and indexes. It is important to note that not all stocks, ETFs, and indexes have options; however, when it comes to monthly options, they are available for hundreds of stocks, ETFs, and indexes. So there are more than enough in order to trade options effectively.

Monthly options have expiration dates for different months, out into the future, and they are simultaneously available for trading. So there may be, for example, a July call option, an August call option, a September call option, a December call option, all of trading simultaneously. These monthly options expire on Saturday following the third Friday of the month; so the last trading day is the third Friday of the month.

Options with expiration dates of one year or more into the future are called LEAPS. LEAPS is an acronym that is not worth remembering, but it, essentially, means longterm options. All LEAPS expire on Saturday following the third Friday in January; so the last trading day for a LEAP would be that third Friday in January.

There are weekly options, which are newer on the scene, and these are available for over 100 stocks, ETFs, and indexes. The mechanics work the same as monthly options, except that the life of these weekly options is much shorter. These are options with expiration dates for different weeks, out into the future, and are also simultaneously available for trading. Weekly options begin trading each Thursday when the equities markets open at 9:30 a.m. Eastern Standard Time. Weekly options expire on Saturday, following the Friday of expiration week, when the equities markets close at 4:00 p.m. Eastern Standard Time. Most weekly options have a life of up to four weeks.

## Options Versus Stocks

Let's focus in now on options versus stocks.

Options will track the price movement of the underlying stock.

Options trade like stocks on the open market, although some options are very thinly traded and should generally be avoided.

Prior to expiration, options can be bought and sold when the underlying stock market is open. So you can get into and out of an options position any time the market is open. It is not necessary to hold an option position until expiration.

There is no set number of contracts available to trade for a particular option. Generally, the options market makers will make a market for whatever number of options contracts the market wants to buy and sell.

Whereas with stocks, you have a fixed number of shares available to trade. Options have a fixed life, they have an expiration date; of course, stocks do not.

Options price is based on the movement of the underlying stock price, but not entirely.

As you will see, there are two major components that determine the price of an option, called intrinsic value and extrinsic value, and we will get into that a little later.

Options can control the same number of stock shares for far less margin.

We'll get into options and stocks strategies a bit later.

## Options Language

Options has its own language and if you do not know the language, then they seem difficult to understand. But if you do know the language, then everything suddenly becomes clear. Fortunately, it is not too difficult to learn this language.

An option is defined by:

- The type of option (either a put or a call)
- The underlying security
- The strike price
- The expiration date
- The option price or premium

Typical options transactions include:

- Buy a call for a debit to your account
- Buy a put for a debit to your account
- Sell a call for a credit to your account
- Sell a put for a credit to your account

Options are traded as contracts and one option contract controls 100 shares of the underlying security.

When you buy a call to open a new position, you are entering into a contract to buy the call from the call seller. When you buy a put to open a new put position, you are entering into a contract to buy the put from the put seller.

When you sell a call to open a new position, you are entering into a contract to sell the call to the call buyer. And when you sell a put to open a new position, you are entering into a contract to sell the put to the put buyer.

Once you have opened an option position, you must do one of the following prior to expiration date:

- Sell the long call or put position to close the contract
- Buy back the short call or put position to close the contract
- Exercise the long call or put position at the strike price
- Allow the option to expire worthless if they are out of the money on expiration date

Lastly, however unlikely, you should be prepared to accept possible assignment if short a call or a put. Now this is an area that concerns many novice option traders, but that is unnecessary. Assignment does not occur very often, and, when it does, it is easily handled, as we will address shortly.

Next is the option price, or what is called the premium. This is the price, or the premium, paid or received for purchasing or selling options.

There are two components to the premium:

- Intrinsic value
- Extrinsic value (time value)

Intrinsic value is based on the difference between the strike price and the current market price of the underlying security, if favorable to the option buyer.

The extrinsic value is based on the time until expiration. As the time until expiration drops, the time value shrinks.

For example, let's say you had a call option with a 40 strike and the stock was trading at $\$ 45$. The intrinsic value of that option would be $\$ 5$, the difference between $\$ 45$ and the strike price of $\$ 40$. Let's say that option had 90 days until expiration. So, in addition to the $\$ 5$ intrinsic value, it would also have extrinsic, or time value. And with 90 days until expiration, such an option would probably have $\$ 2$ of extrinsic value, depending on the implied volatility in the option. So the total value of that option, at that point in time, might be $\$ 7$ - $\$ 5$ of intrinsic value and $\$ 2$ of extrinsic, or time value.

Now, as a buyer of a call or a put to open a new position, your risk is limited to the purchase price, no matter what happens to the underlying security. Your profit potential is theoretically unlimited.

As the seller of a call to open a new position, your risk is, theoretically, unlimited for a short call position. Why? Because the stock, or underlying security, could go to the moon, exposing you to unlimited risk. Your profit potential is limited to the credit received.

Now, as a seller of a put to open a new position, your risk is the difference between the strike price and zero, less the credit received for a short position. So if you were short a $\$ 40$ strike put option, and you received a credit of $\$ 1$ for shorting that put option, and the stock went to zero, you would lose $\$ 40$ minus the $\$ 1$, or $\$ 39$. Also, your profit potential is limited to the credit received.

So you can readily see that the way you apply various options strategies is very, very important. And again, if you do not apply them properly, you'll have a risky situation on your hands. But, if you do, then options can minimize risk, and, in fact, be less risky than trading the underlying stock or ETF.

## Assignment

Assignment happens rarely, and even more rarely with weekly options.

But, if it does happen, it is nothing to be concerned about. Do not let anyone cause you to be fearful of assignment.

If the market is in-the-money, relative to your short option, you could be assigned; meaning the holder of the put or call may exercise their option.

The broker will do this automatically and will advise you that you are being assigned.

So, in the absence of some other strategy that you may have, you simply instruct the broker, or go to the broker's online trading platform, to immediately buy back the stock shares in the case of a call assignment, or sell the stock shares in the case of a put assignment, and you will be completely out of the trade.

That's it. It's that simple!

## Broker Options Chains and Trading Platform

Let's take a look now at a typical broker option chains page and trading platform.

Virtual Option Chains for AAPL -
[ Customize [Patent Pendi

## Apple Inc

Quotes as of 6/28/2013 11:40:03 AM ET . Intraday data delayed at least 15 minutes.
Mini Options - Trade options with smaller investments in AAPL, AMZN, GLD, GOOG, and SPY
Learn More .

AAPL Expiration Months: JunWk4 | JulWk1 | JulWk2 | JulWk4 | AugWk1 | Jul13 | Aug13 | Sep13 | Oct13 | Jan14 | Apr14 | Jan15


We're looking at a quote table for Apple (AAPL) on OptionsXpress' Virtual Trading platform. It is a virtual account for you to practice with, but it looks almost identical to the live trading account. Most good brokers will have such an account for you to practice on.

In this example, Apple is trading at $\$ 394$ and this table is showing us options with strike prices around $\$ 394$, above and below.


The range that we are looking at in this table is called 'Near-The-Money'. If we wanted to see more options, we would click on 'More' within the 'Range' box and we would see even a wider range of strike prices.

Then, for 'Type', I selected 'Calls and Puts', which you can see listed in the table.


Then, for expiration, you can pick whatever you want.

Right now it is showing options expiring in July; however, if you open this window up, you can see that we have weekly options that expire in weekly increments.

Further out, we have the monthly options: August, September, October, January, April, January, then we have the LEAPS that are, at least, one year out.

We select the expiration we are interested in and then we click on 'View Chain' and that brings up the window we are looking at.

Listed is the underlying security, Apple, the last trading price, the bid they ask, the high and the low of the day, and the current volume.


Then we have each of the expiration dates in order, showing first the June week four calls expiring, $6 / 28 / 13$. Then we have the July week one calls, expiring July 5 , and the week twos, expiring July 12, and so on.

| 15.00 | -2.02 | 11.15 | 1/.40 | 112 | 214 | Trade \| Detail| | 380.00 | 3.25 | - -2.25 | 3.10 | 3.25 | 385 | 1,189 | \|rade| Detan | |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13.80 | -0.08 | 13.50 | 13.70 | 25 | 148 | Trade / Detail $\Gamma$ | 385.00 | 4.10 | -0.79 | 4.45 | 4.60 | 288 | 616 | Trade \\| Detail $\Gamma$ |
| 10.35 | -0.87 | 10.30 | 10.50 | 333 | 126 | Trade / Detail $\Gamma$ | 390.00 | 8.30 | -0.25 | 6.25 | 6.35 | 333 | 584 | Trade \| Detail |
| 7.60 | -0.50 | 7.60 | 7.80 | 262 | 194 | Trade \| Detail $\Gamma$ | 395.00 | 8.85 | -0.25 | 8.50 | 8.70 | 593 | 678 | Trade \| Detail |
| 5.48 | -0.21 | 5.40 | 5.60 | 547 | 1,498 | Trade \| Detail $\Gamma$ | 400.00 | 11.42 | -0.38 | 11.30 | 11.50 | 102 | 947 | Trade I Detail $\Gamma$ |
| 3.84 | -0.41 | 3.70 | 3.85 | 346 | 355 | Trade \| Detail $\Gamma$ | 405.00 | 16.47 | +1.22 | 14.60 | 14.80 | 68 | 988 | Trade\| Detail |
| 2.50 | -0.25 | 2.51 | 2.60 | 253 | 676 | Trade I Detail $\Gamma$ | 410.00 | 17.30 | -0.72 | 18.30 | 18.60 | 52 | 859 | Trade \\| Detail |
| - | Jul13 |  |  | (21 day | expirati | ) | AAPL @ 394 |  |  |  |  |  |  | Jul13 Puts |
| 22.70 | 0 | 22.8 | 22.80 | 52 | 450 | Trade / Detail $\Gamma$ | 375.00 | 3.50 | -0.34 | 3.50 | 3.80 | 620 | 5,337 | Trade \| Detail $\Gamma$ |
| 18.90 | -0.10 | 18.75 | 19.00 | 166 | 816 | Trade / Detail $\Gamma$ | 380.00 | 4.70 | -0.40 | 4.70 | 4.80 | 1,224 | 5.452 | Trade \| Detail $\Gamma$ |
| 15.40 | -0.25 | 15.35 | 15.55 | 741 | 445 | Trade \| Detail $\Gamma$ | 385.00 | 8.25 | -0.38 | 6.25 | 6.35 | 1,888 | 4,412 | Trade\| Detail $\Gamma$ |
| 12.40 | -0.16 | 12.30 | 12.50 | 1,723 | 824 | Trade I Detail $\Gamma$ | 390.00 | 8.15 | -0.45 | 8.20 | 8.30 | 3,059 | 5,743 | Trade I Detail ${ }^{\text {P }}$ |
| 9.70 | -0.15 | 8.65 | 9.80 | 1,506 | 1,315 | Trade / Detail $\Gamma$ | 395.00 | 10.55 | -0.45 | 10.50 | 10.65 | 1,148 | 3,909 | Trade I Detail |
| 7.50 | -0.05 | 7.40 | 7.50 | 2,387 | 7,293 | Trade \| Detail $\Gamma$ | 400.00 | 13.15 | -0.65 | 13.25 | 13.40 | 1,888 | 13,518 | Trade I Detail $\Gamma$ |
| 5.65 | -0.15 | 5.55 | 5.65 | 828 | 3,089 | Trade I Detail $\Gamma$ | 405.00 | 18.64 | -0.26 | 16.35 | 16.55 | 114 | 3,375 | Trade I Detail $\Gamma$ |
| 4.00 | -0.28 | 4.05 | 4.20 | 1,880 | 8,102 | Trade \| Detail $\Gamma$ | 410.00 | 20.08 | $+0.13$ | 19.85 | 20.10 | 218 | 10,926 | Trade \\| Detail $\Gamma$ |
| - | JulWk4 | Calls |  | explires | 26/2013 |  | AAPL @ 394 |  |  |  |  |  |  | JulWk4 Puts |
| 31.95 | 0 | 25.85 | 27.80 | 00 | 18 | Trade I Detail $\Gamma$ | 375.00 | 7.14 | +0.04 | 7.10 | 7.30 | 39 | 272 | Trade \| Detail |
| 20.75 | $-3.25$ | 22.75 | 23.15 | 05 | 44 | Trade / Detail $\Gamma$ | 380.00 | 8.65 | -0.28 | 8.70 | 8.95 | 30 | 338 | Trade \| Detail $\Gamma$ |
| 18.85 | -2.25 | 18.60 | 20.00 | 12 | 22 | Trade I Detail $\Gamma$ | 385.00 | 10.85 | +0.40 | 10.55 | 10.80 | 128 | 211 | Trade \| Detail |
| 17.05 | -0.01 | 18.80 | 17.10 | 165 | 58 | Trade \| Detail $\Gamma$ | 390.00 | 12.75 | -0.13 | 12.65 | 12.90 | 108 | 638 | Trade \\| Detail $\Gamma$ |
| 14.85 | +0.09 | 14.30 | 14.50 | 29 | 136 | Trade \| Detail $\Gamma$ | 395.00 | 15.10 | -0.37 | 15.10 | 15.25 | 36 | 387 | Trade \| Detail |
| 12.50 | +0.45 | 11.85 | 12.15 | 285 | 3,308 | Trade \| Detail $\Gamma$ | 400.00 | 18.00 | +0.20 | 17.70 | 18.05 | 60 | 3,444 | Trade I Detail $\Gamma$ |
| 10.35 | +0.15 | 9.80 | 10.10 | 11 | 387 | Trade I Detail $\Gamma$ | 405.00 | 20.71 | +0.57 | 20.65 | 21.00 | 03 | 524 | Trade I Detail $\Gamma$ |
| 8.20 | -0.05 | 8.10 | 8.35 | 35 | 582 | Trade / Detail $\Gamma$ | 410.00 | 24.25 | +0.97 | 23.70 | 24.35 | 20 | 335 | Trade \| Detail $\Gamma$ |
| - | AugWk | Calls |  | explires | 2/2013 |  | AAPL @ 394 |  |  |  |  |  |  | AugWk1 Puts |
| 0 | 0 | 26.80 | 28.25 | 00 | 0 | Trade / Detail $\Gamma$ | 375.00 | 8.50 | +1.10 | 7.95 | 8.10 | 01 | 15 | Trade \| Detail |
| 0 | 0 | 23.70 | 24.05 | 00 | 0 | Trade \| Detail $\Gamma$ | 380.00 | 9.60 | +0.15 | 9.60 | 9.75 | 19 | 7 | Trade\| Detail |
| 20.90 | -0.30 | 20.65 | 20.80 | 22 | 2 | Trade I Detail $\Gamma$ | 385.00 | 11.55 | -0.05 | 11.45 | 11.60 | 121 | 17 | Trade \\| Detail |

If we scroll down, you can see the third week of July coincides with the monthly July call, expiring the third Friday of the month. Then we have the July week four calls, the August week one calls, and on it goes.

Virtual Option Chains tor AAPL -
Apple Inc


And if we wanted to take a look at, let's say, the October options for Apple, scroll down and select 'Oct13' and then click on 'View Chain'.

:omments on our new Virtual Trading platform? Let us know.
lock Trading: This is an educational tool. Significant differences exist between real trading and virtual trading

That brings up the October calls and puts that expire the third Friday in October, 112 days until expiration.

For these October options, you see the strike price listed here for each option, as well as the pricing for the calls on the left and the pricing for the puts on the right.

So, for example, you'll see the $\$ 375$ October call option, is trading at $\$ 33.05$ bid and $\$ 33.30$ ask.

We will get into the details of bid ask and these other terms a little bit later. But, for now, I just want you to get a feel for what these quote tables look like.


So the last trade was at $\$ 31.60$, but if you were to enter a trade now, it would be somewhere in this range here, $\$ 33.05$ to $\$ 33.30$.

Moving to the right, you'll see the volume and the open interest. The open interest is the number of contracts that are currently open for this option.

If you wanted to trade that option, you simply click on 'Trade'. That would bring up the order window, which we will do in a moment.


If you want more detail on the option, you just mouse over 'Detail' and that brings up what are called the Greeks that we will be talking about later on.

So everything you need to know about this particular option is available to you on this option chains page.

AAPL Expiration Months: JunWk4 | JulWk1 | JulWk2 | JulWk4 | AugWk1 | Jul13 | Aug13| Sep13| Oet13 | Jan14 | Apr14 | Jan15

|  | Calls |  |  |  |  |  |  | Puts |  |  |  |  |  | $\square$ Distble Roll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Last | Chg | Bid | Ask | Vol | Opint | Action | $\triangle$ Strike ${ }^{\text {* }}$ | Last | Chg | Bid | Ask | Vol | Opint | Action |
| - | Oct13 Calls |  |  | (112 days to expiration) |  |  | AAPL @ 394.0901 |  |  |  |  |  |  | Oct13 Puts |
| 31.80 | -5.22 | 33.05 | 33.30 | 04 | 118 | Trade \| Detail $\Gamma$ | 375.00 | 17.80 | +0.60 | 16.75 | 16.95 | 33 | 2.241 | Trade / Detail |
| 30.70 | -0.30 | 30.10 | 30.30 | 18 | 528 | Trade \| Detail $\Gamma$ | 380.00 | 18.82 | -0.18 | 18.85 | 19.05 | 108 | 4.11145 | Trade \| Detail |
| 27.35 | -0.80 | 27.30 | 27.50 | 22 | 289 | Trade \| Detail $\Gamma$ | 385.00 | 21.80 | +0.37 | 21.05 | 21.25 | 48 | 1.325 | Trade \| Detail |
| 25.05 | -0.20 | 24.70 | 24.90 | 83 | 855 | Trade \| Detail $\Gamma$ | 390.00 | 23.65 | +0.05 | 23.50 | 23.65 | 43 | 2.692 | Trade \| Detail $\Gamma$ |
| 22.85 | -0.08 | 22.25 | 22.45 | 09 | 500 | Trade \| Detail $\Gamma$ | 395.00 | 28.20 | +0.10 | 28.10 | 28.20 | 89 | 3.500 | Trade I Detail $\Gamma$ |
| 20.07 | -0.46 | 20.00 | 20.20 | 179 | 3.947 | Trade \| Detail $\Gamma$ | 400.00 | 28.97 | -0.13 | 28.85 | 29.00 | 89 | 9.478 | Trade \| Detail $\Gamma$ |
| 18.50 | -0.34 | 17.95 | 18.15 | 34 | 996 | Trade \| Detail $\Gamma$ | 405.00 | 33.12 | +2.58 | 31.75 | 31.80 | 09 | 2.402 | Trade \| Detail $\Gamma$ |
| 16.49 | -0.11 | 16.05 | 16.20 | 78 | 2.613 | Trade \| Detail $\Gamma$ | 410.00 | 35.00 | +0.95 | 34.85 | 35.10 | 19 | 5.334 | Trade I Detail $\Gamma$ |

Now, likewise, for puts the same information is available. You can see, for example, the open interest for the puts is a lot higher than for the calls.

That could mean that there is a great deal more concern about protecting the down side, than there is the upside potential of the Apple stock.


If you want to look at just the calls, you can go up to 'Type', select 'Calls' and then click 'View Chain', that will bring up the call table only, excluding the puts.

| Symbol |  | Option Pricer \| Cov Calls | Stra |  |  | \| Put Spre | Call Spreads \| Collars | |  | ar Puts | len | Delta \& Imp V |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Range |  | Type |  |  | Expiration |  |  |  |
| AAPL |  | Near-th | ney |  |  | $\nabla$ |  | Oct13 |  | View Chain |
| Q Find Symbol / Futures |  | $\square$ Include Adjusted / Non-standard Options |  |  |  |  |  |  |  |  |
| Apple Inc |  |  |  |  |  |  |  |  |  |  |
| Symbol | Last | Change | Bid | Ask | High | Low | Volume |  |  |  |
| AAPL | 393.57 | -0.21 V | 393.51 | 393.60 | 385.64 | 388.87 | $6,989,885$ |  |  |  |

AAPL Options | AAPL Mini Options
AAPL Expiration Months: JunWk4 | JulWk1 | JulWk2 | JulWk4 | AugWk1 | Jul13 | Aug13 | Sep13 | Oet13 | Jan14 | Apr14 | Jan15

|  | Calls |  |  |  |  |  |  | Q $\square$ | Dissble Rell ${ }^{\text {a }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\triangle$ Strike ${ }^{\text {* }}$ | Last | Chg | Bid | Ask | Day High | Day Low | Vol |  | Action |
| October 2013 |  |  |  |  | (112 days to explration) |  |  |  |  |
| 375.00 | 31.80 | -5.22 | 32.90 | 33.15 | 32.80 | 31.45 | 04 | 118 | Detail |
| 380.00 | 30.70 | -0.30 | 29.95 | 30.20 | 30.70 | 28.43 | 18 | 528 | Detail |
| 385.00 | 27.35 | -0.80 | 27.15 | 27.40 | 27.35 | 25.85 | 22 | 289 | Detail |
| 390.00 | 25.05 | -0.20 | 24.55 | 24.80 | 25.58 | 23.50 | 83 | 855 | Detail |
| 395.00 | 22.85 | -0.08 | 22.15 | 22.35 | 22.85 | 21.00 | 08 | 590 | Detail |
| 400.00 | 20.07 | -0.48 | 19.90 | 20.10 | 21.00 | 18.75 | 179 | 3,947 | Detail |
| 405.00 | 18.50 | -0.34 | 17.85 | 18.05 | 18.50 | 16.95 | 34 | 996 | Detail |
| 410.00 | 16.48 | -0.11 | 15.95 | 16.10 | 18.81 | 14.85 | 76 | 2.813 | Detail |

omments on our new Virtual Trading platform? Let us know.

The resulting table will show you the high and the low for the day.

omments on our new Virtual Trading platform? Let us know.


Now if I wanted to look at spreads, which we'll also be talking about, let's say call spreads, go up to ‘Type’, select ‘Call Spreads’ and then click ‘View Chain’


Note: Return \% of Risk is the maximum return percentage of the maximum risk
The calculations generated on the Option Chains regarding potential investment returns are hypothetical in nature, do not refect actual investment resuls and are not guarantees of future result. The above calculations do not take into consideraton al costs. such as commissions and maroin interest which mav imoact the results shown. Data is based on current market date

That brings up the Apple call spreads, where you are buying one option and selling the other.



If you click on the plus sign, that opens it up and it shows you, for example, what the 400 call is selling at and what the 405 call is selling at.

$\qquad$

Furthermore, if you intend to put on a debit spread, you would click the radio button here for 'Debit Spread'.


| Chains |  |  |  |  |  |  |  | $\square$ Disable Rolla |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Set Interval 5 Debit Spread ${ }^{\circ}$ Credit Spread | Bid | Ask | Break Even | Max Profit | $\begin{gathered} \text { Max } \\ \text { Loss } \end{gathered}$ | Return \% of Risk |  |
|  | Call Spread Chain (Oct13) |  | (112 days to explration) |  |  |  |  |  |
| $\pm$ | Oct $380 / 375$ Call | 2.75 | 3.20 | 377.75 | \$275.00 | \$225.00 | 122.22\% | Trade I Watch I C |
| $\pm$ | Oct $385 / 380$ Call | 2.55 | 3.00 | 382.55 | \$255.00 | \$245.00 | 104.08\% | Trade I Watch I C |
| $\pm$ | Oct $390 / 385$ Call | 2.40 | 2.80 | 387.40 | \$240.00 | \$260.00 | 92.31\% | Trade I Watch I C |
| $\pm$ | Oct $395 / 390$ Call | 2.20 | 2.65 | 302.20 | \$220.00 | \$280.00 | 78.57\% | Trade I Watch I C |
| $\pm$ | Oct $400 / 395$ Call | 2.00 | 2.50 | 307.00 | \$200.00 | \$300.00 | 68.67\% | Trade I Watch I C |
| $\pm$ | Oct $405 / 400$ Call | 1.85 | 2.30 | 401.85 | \$185.00 | \$315.00 | 58.73\% | Trade I Watch I C |
| $\pm$ | Oct $410 / 405$ Call | 1.70 | 2.10 | 406.70 | \$170.00 | \$330.00 | 51.52\% | Trade I Watch I C |

Vote: Return \% of Risk is the maximum return percentage of the maximum risk.
The calculations generated on the Option Chains regarding potential investment returns are hypothetical in nature, do not refect actual investment results and are not guarantees of future


If you intended to put on a credit spread, you would click the radio button for 'Credit Spread'.

Again, we will be talking about spreads in far more detail. For now, just get used to the look and feel of this page.

Okay, lets' go back to calls and puts.


Let's say we are bullish on Apple and we think Apple is going to go up in price between now and October. Apple is currently trading at $\$ 393.85$, so we could buy the Apple stock outright, buying 100 shares at $\$ 39,385$.

|  | Option Pricer | Cov Calls | Stradiles \| Put Spr | Call Spreads | Collars | Calendar Puts | Calendar Calls | Delta \& mp Vol | Pres |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol | Range |  | Type |  |  | Expiration |  |  |  |
| AAPL | Nesr-the-Money |  | Calls And Puts | $\nabla$ |  | Oct13 | $\nabla$ | View Chain |  |
| Q Find Symbol/ Futures | $\square$ Include Adjusted/ N | Non-standar | Options |  |  |  |  |  |  |


| Apple inc |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol | Last | Change | Bid | Ask | High | Low | Volume | Chart |  |
| AAPL | 393.85 | +0.07 \# | 393.84 | 384.00 | 385.64 | 388.87 | 7,062,281 | $\bigcirc$ |  |

AAPL Options | AAPL Mini Options
AAPL Expiration Months: JunWk4 | JulWk1 | JulWk2 | JulWk4 | AugWk1 | Jul13 | Aug13 | Sep13 | Oet13 | Jan14 | Apr14 | Jan15


Or, we could buy the $\$ 395$ call, which controls 100 shares, for $\$ 22.30$ times 100 , or $\$ 2,230$. Far less money than it would take to buy the shares outright.

Let's say we wanted to go ahead and place that trade and buy one contract of the Apple $\$ 395$ call for October expiration. All we do is click 'Trade’ and that brings up the order window.
virtualtrade
© Adjust Virtual Funds / Trading Level | $\nabla_{\mathrm{L}}$

## All-In-One Trade Ticket



You can see it's preloaded for you with 'Buy To Open', October, $\$ 395$ strike, one contract.


We're going to buy it at a 'Limit' price to make sure we get the price we want.


The ask was $\$ 22.30$, but let's go in at $\$ 22.40$ to make sure we get filled.

Click 'Preview' to check the order.


It's going to cost about \$2,200 after commission. Click on 'Place Order'.


Okay, let's go look at the order status to see if we got filled.


You can see that the trade is set up to buy one at $\$ 22.40$, but the current price now has jumped to $\$ 22.45, \$ 22.70$.


So if we want to get this order filled, for sure, what we can do is click 'Modify'.

| $\text { options } \mathbf{x}$ | †1 |  | 888.280 .8020 | LIVE HELP | Exit Virtual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Account | Trade | Quotes |  |  |  |

面 All-In-One Trade Ticket
Adjust Virtual Funds / Trading Level | QL


| PRICE | LIMIT | DURATION |  | lor None |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Limit $\quad$ | 22.4 | Day Order | $\nabla$ |  |  |
| Market |  |  |  |  |  |
|  | ORDER |  |  |  |  |

Balances Positions Order Status
Account Equity $\$ 25$
Stock Buying Power \$32
Option Buying Power \$16
All-in-One Trade Ticket
makes advanced trading easy
Watch the Demo
omments on our All-In-One Trade Ticket? Let us know
here are risks associated with using advanced orders that you should understand. Learn more
trike prices noted with an asterisk (") have unique delivery terms. Please see the Options Clearing Corporation for details. onsidering Leveraged and Inverse ETFs? Learn more about the risks associated with trading these products.

Go back into the order and change this to a 'Market' order.

comments on our All-In-One Trade Ticket? Let us know
here are risks associated with using advanced orders that you should understand. Learn more
trike prices noted with an asterisk (") have unique delivery terms. Please see the Options Clearing Corporation for details.
onsidering Leveraged and Inverse ETFs? Learn more about the risks associated with trading these products.

Click preview and then place the order. Now we are paying a little bit more than we would have liked.

But, depending on your strategy and your outlook, they will help determine whether or not you want to do that.


## Virtual Order Status



| Status |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\pm$ Show All Spreads View Posit |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Order | Symbol | Description | Bid | Ask | Action | Qty | Type | Dur | Exc | Fill | Fill Time | Create / Cancel Time | Status |  |
| 38579951 | AAPL Oct13 395 Call | APPLE INC | 22.40 | 22.60 | BTO | 1 | $\underbrace{\text { Limit }}_{22.40}$ | DAY |  |  |  | $\begin{aligned} & 6 / 23 / 2013 \\ & 11: 56.15 \mathrm{AM} \end{aligned}$ | ECancellod | Trade |
| 38579999 | AAPL Oct13 395 Call | APPLE INC | 22.40 | 22.60 | BTO | 1 | Marke! | DAY |  | $22.60$ | $\begin{aligned} & 6 / 28 / 2013 \\ & 11: 56: 19 \mathrm{AM} \end{aligned}$ | $\begin{aligned} & 6 / 23 / 2013 \\ & 11: 56.15 \mathrm{AM} \end{aligned}$ | [Eilled | Trade |
| + 3191054 | AAPL | AAPL JulWhct 420 Cal ] <br> AAPL JulWk1 415 Call | 0.16 | 0.24 |  | 10/10 | $\begin{aligned} & \text { Credt } \\ & 0.54 \end{aligned}$ | GTC |  | N |  |  | $\square$ Open | Modity \| Cancel | T |
| + 3191057 | BIDU | EIDU Julvki 100 Call <br> SIDU Julvk1 97.5 Call | 0.18 | 0.23 |  | 10/10 | $\begin{aligned} & \text { Credr } \\ & 0.32 \end{aligned}$ | GTC |  |  |  |  | $\square$ Open | Modity \| Canoal | ${ }^{\text {T }}$ |
| + 3191060 | APOL | APOL JuIVK1 19 Call <br> APOL JulMk1 18.5 Cal | 0.04 | 0.08 |  | 10/10 | $\begin{aligned} & \text { Credr } \\ & 0.08 \end{aligned}$ | GTC |  |  |  |  | $\square$ Open | Modity \| Cancel | T |

Now we go and view our order status again and we see that our first order was cancelled, but our second order was filled at $\$ 22.60$.

Remember we were trying to get it at $\$ 22.40$, so we paid a little bit more for it. But, this way, we were sure to get it filled.


Now, when it is time to close that position we're in, you click on 'Trade' and it will bring up the order window again.

We, obviously, would not turn right around and sell this option just after buying it. But, let's say, for example, it is now a month or two later, we have a nice profit on it already, and we feel like we should sell our option.

We do not have to wait until the expiration, so we are going to sell it at the market.

| options XPRESS | virtualtrade |  | 8820803020 | Lvenerp | Esturame |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Account | Trade | Quote |  |  |  |

## All-In-One Trade Ticket

| AAPL | Call |  |  | Go |  |  |  | Trade Calc | Mini Pricer |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standard \| Mini |  |  |  |  |  |  |  |  |  |
| ACTION |  | MONTH |  | STRIKE |  | CALLIPUT QUANTITY |  |  |  |
| AAPL | Buy To Open $\boldsymbol{V}$ | Oct13 | - | 395 | $\checkmark$ | $\mathrm{Cal}-$ | 1 | LAST: 22.65 <br> B: 22.45 A: 22.65 |  |
| $\dagger$ Add A Leg <br> PRICE | Flesse Select Buy To Open Buy To Close Sell To Open |  |  |  |  |  |  | NBEO: B: 22.45 | 22.65 |
| Market | Sell To Close | - |  |  |  |  |  |  |  |
| $\dagger$ ADVANCED | ORDER TYPE |  |  |  |  |  |  |  |  |
| Clear |  |  |  |  |  |  |  |  | Preview |

omments on our All-In-One Trade Ticket? Let us know
here are risks associated with using advanced orders that you should understand. Learn more
trike prices noted with an asterisk (*) have unique delivery terms. Please see the Options Cleaning Corporation for details. onsidering Leveraged and Inverse ETFs? Learn more about the risks associated with trading these products.

* Adjust Virtual Funds / Trading Level | QL

| Account Equity | $\$ 25$ |
| :--- | :--- |
| Stock Buying Power | $\$ 32$ |
| Option Buying Power | $\$ 16$ |

## APPLE INC

| AAPL | $\begin{gathered} \text { Last } \\ 393.62 \end{gathered}$ | $\begin{gathered} \text { Bid } \\ 393.57 \end{gathered}$ | $\begin{array}{cc} \text { Ask } & V_{1} \\ 393.72 & 7.1 \end{array}$ |
| :---: | :---: | :---: | :---: |
| Call |  |  | Oct1: |
| Strike | Change | Last | Bid |
| 375.00 | -5.22 | 31.60 | 33.4 |
| 380.00 | -0.3 | 30.70 | 30.4 |
| 385.00 | -0.8 | 27.35 | 27.6 |
| 390.00 | -0.2 | 25.05 | 24.85 |
| 395.00 | -0.08 | 22.65 | 22.5 |
| $4 \cap ก \cap$ | - 048 | $20 ก 7$ | 202 |

When the order window comes up, we now want to select 'Sell To Close' to sell our option.


Check our order, we are going to collect $\$ 2,250$, and we are done.


Now we'll go back and check the order status and you can see that we sold the option at $\$ 22.50$ and we are out of the position.

We lost $\$ 0.10$ on this transaction because we did it within a few minutes of each other and that is to be expected with options.

But you see now how easy it is to buy an option and, once you do, how easy it is to sell it.

## Strategies

There are many different option strategies, as you may know.

There are directional trades, protective trades, market-neutral, or what are called deltaneutral, trades, income trades, and many others.

Then there are short, intermediate, and long-term trades.

Which strategies are right for you?

Well, it is not necessary to master all of the option strategies to be successful. It is, however, important to match your personal lifestyle and trading goals with the appropriate options strategies.

Regardless of which strategies you choose, you also need to have good methods to identify high-probability, directional moves for the underlying security, as well as an understanding of volatility.

In general, if your method tells you the market is likely to go up, then you could consider buying calls or selling puts.

If it is going down, then you could consider buying puts or selling calls.

If the likely direction were sideways, then you could consider selling calls or selling puts. This does not mean that you would necessarily sell naked calls or puts under any market scenario; it would be very dangerous to do so. However, when combined with other options positions, selling calls or selling puts can be very effective in minimizing risk and-or maximizing profits.

Options can be used to hedge your stock positions. If you are long a stock, you could buy a put option for protection, for example. This would limit your downside risk of owning that stock. If you are short a stock, you could buy a call option for protection which would limit your upside risk of being short the stock. This is one strategy.

Another would be using options to generate income on your long-term stockholding. For example, if you are long a stock, presumably it is a blue-chip company with good earnings, growth, possible good dividend (a stock you would like to own for the long
haul), you could sell out-of-the-money calls to collect income and, at the same time, lower the effective cost basis of owning the stock.

Here is another one. Instead of buying or shorting a stock, you could buy a call or a put option to take advantage of the directional moves in the markets. Why would you do this? Because with options, you can control the same number of shares of stock for far less margin, and with far less risk, and still capture most of the profit that owning the stock would have generated.

Lastly, options can be used to profit regardless of the direction of the underlying security. There is always an options strategy to take advantage of a market that might move up a little, down a little, or sideways and profit, regardless of which of those occurs.

## Price Quotes

Price quotes are shown in terms of the 'Bid' and 'Ask', which is known as the 'Bid-Ask Spread'.

Price quotes are available on a real-time basis with most options brokerage accounts, but not all, some are delayed for up to 20 minutes. So make sure, when you are looking at your broker's options quote tables, that you know whether or not they are being shown on a real-time basis.

The ask price is the current price you would have to pay if you wanted to be relatively sure of being filled on your buy order.

The bid price is the current price you would receive if you wanted to be relatively sure of being filled on your sell order.

In other words, if you are buying at the market, you will pay the ask price.

If you are selling at the market, you will receive the bid price.

The difference between the bid and ask price is the market makers' compensation for making a market in that option.

In selecting which options to trade, look for those with a relatively narrow bid-ask spread.

On lower-priced options it might be two to three cents.

On higher-priced options, it could be as much as five to ten cents.

Along with the bid-ask price, you will want to look at:

- Volume: the total number of contracts traded that day
- Open Interest: the total number of open option contracts

Volume and open interest can impact the liquidity of the option. This means the ease of getting in and out of the trade.

While you generally want to select options with high volume, a case can be made that open interest is more important when it comes to options.

The greater the open interest, the easier it will be to get the price you want when buying or selling options.

## Price Components

With that background, let's get into option price components, which are:

- Intrinsic Value: based on the difference between the strike price and the current market price of the underlying security if favorable to the option buyer
- Extrinsic (time) Value: based on the time until expiration; as the time until expiration drops, the time value shrinks

Both of these influence the price of an option. The degree to which both influence the price of an option depends on whether an option is 'In-the-Money', 'At-the-Money', or 'Out-of-the-Money'.

## In-the-Money (ITM)

A call option is said to be in-the-money if the market price of the underlying security is greater than the strike price.

For example, a July 40 call, whose underlying security is trading at $\$ 45$, would be $\$ 5$ in-the-money.

A put option is said to be in-the-money if the market price of the underlying security is less than the strike price.

For example, a July 40 put, whose underlying security is trading at $\$ 35$ would be $\$ 5$ in-the-money.

## At-the-Money (ATM)

Next we have at-the-money options.

A call option is said to be at-the-money if the market price of the underlying security is the same, or about the same, as the strike price.

For example, a July 40 call, whose underlying security is trading at around $\$ 40$, would be at-the-money.

A put option is said to be at-the-money if the market price of the underlying security is the same or around the strike price.

For example, a July 40, put whose underlying security is trading at about $\$ 40$, would be at-the-money.

## Out-of-the-Money (OTM)

Lastly, we have out-of-the-money options.

A call option is said to be out-of-the-money if the market price of the underlying security is less than the strike price.

For example, a July 40 call, whose underlying security is trading at $\$ 38$, would be out-of-the-money.

A put option is said to be out-of-the-money if the market price of the underlying security is greater than the strike price.

For example, a July 40 put, whose underlying security is trading at $\$ 42$, would be out-of-the-money.

## Intrinsic Value

With that background, let's look at intrinsic value again.

Only in-the-money options have intrinsic value.

The intrinsic value of an in-the-money option is always the difference between the current market price of the underlying security and the strike price of the option, no matter how many days until expiration and regardless of volatility.

## Extrinsic (Time) Value

All options have extrinsic value or time value.

The extrinsic value of an option is always the difference between the current market price of the option and the intrinsic value of the option.

At-the-money and out-of-the-money options only have extrinsic value.

Extrinsic value decays over time; the less time until expiration, the lower the extrinsic value (with the same implied volatility).

Extrinsic value is a function of four variables:

- Time until expiration
- The volatility of the underlying security
- Liquidity
- Interest rate

Let's go through an example here of intrinsic and extrinsic value for an in-the-money option.

Remember our in-the-money example, a July 40 call whose underlying security is trading at $\$ 45$, would be $\$ 5$ in-the-money.

However, further assume that the option has 90 days until expiration.

The time until expiration is worth something and that something is the extrinsic value of the option, which, for our example, could be $\$ 2$.

Therefore, you would expect that our July 40 call would be trading at $\$ 7$ with the underlying security at $\$ 45$ with 90 days until expiration.

If the time until expiration was at 30 days, the extrinsic value could drop to, say, $\$ 1$ and if the underlying security were still trading at $\$ 45$, the option would now trade at $\$ 6$.

In the last 30 days until expiration, the extrinsic value will collapse rapidly to zero on expiration day. Our call option, at that point, with the underlying security still trading at $\$ 45$, would now be worth $\$ 5$ of intrinsic value and $\$ 0$ of extrinsic value.

## The Greeks

Okay, let's take a look at the Greeks:

- Delta: the change in the price of an option compared to the change in price of the underlying security
- Gamma: the change in the delta of an option relative to the change in price of the underlying security
- Theta: the change in the price of an option relative to the change in the time until expiration
- Vega: the change in the price of an option with regard to its change in volatility

The Greeks are technical measurements that quantify the various factors of affecting the risk and price of an option position.

These factors are all interrelated, so the Greeks are interrelated.

The Greeks for an option position will vary, sometimes dramatically, over time as the risk of a position varies in accordance with the option position, relative to market conditions.

At first glance, the Greeks can be intimidating. But remember that, once you learn the language, you will find them easy to understand.

Since we always want to manage risk first and foremost, it is very important to understand the Greeks at the time of entering into a position and how they will impact the position under various scenarios.

Fortunately, most good online broker trading platforms include the real-time calculations for each of the Greeks that you can access at the click of a mouse.

## Delta

Delta is the change in the price of an option compared to the change in price of the underlying security.

This is probably the most useful of the Greeks as it tells you to what extent the option position is tracking the price movement of the underlying security at any point in time.

Call option deltas are positive from 0 to 1.0 .

Put option deltas are negative from 0 to $\mathbf{- 1 . 0}$.

If a call option has a delta of +1.0 , it implies that the option price will increase dollar for dollar as the underlying security price moves higher.

If a call option has a delta, say, of +0.25 , it implies that the option price will increase by $\$ 0.25$ for each dollar that the underlying security price moves higher.

If a put option has a delta of -1.0 that implies that the option price will increase dollar for dollar as the underlying security price moves lower.

If a put option has a delta of -0.25 , it implies that the option price will increase by $\$ 0.25$ for each dollar that the underlying security price moves lower.

Now we will combine what we have learned about delta with at-the-money, in-themoney, and out-of-the-money options.

For at-the-money options, deltas are generally around + or -0.50 . This means the option price will move $\$ 0.50$ for every dollar moved in the price of the underlying security.

For in-the-money options, deltas are going to be in the area of 0.60 to 1.0. The further in-the-money the option is, the higher the delta.

Deep in-the-money options, with a delta of 1.0, will track the price of the underlying security dollar for dollar.

For out-of-the-money options, the deltas are going to be in the area of 0.40 to 0.10 or even lower. The further out-of-the-money the option is, the lower the delta.

Deep out-of-the-money options, with a delta of 0.10 or even less, will not move very much in price as the underlying security price changes.

## Gamma

Gamma is the change in the delta of an option relative to the change in price of the underlying security. It is, essentially, the rate of change of the delta.

The use of gamma is more important with more complex option positions. But for basic option positions, understanding the concept of gamma is also important.

For example, as the underlying security of an at-the-money call option increases in price, the delta of that option will increase. Gamma tells you what the rate of that increase is at any point in time.

Here is another way to look at it...as the underlying security price increases, the formerly at-the-money call option now becomes an in-the-money call option, with an ever increasing delta, which causes your position to be longer and longer as the market goes up. If you were trading stock instead, it would be as if you were adding shares to your position.

## Theta

Theta is the change in the price of an option relative to the change in the time until expiration.

Theta is a very important Greek to understand because it directly impacts the extrinsic, or time value of an option. As the option moves closer to expiration, theta will increase as the time value drops.

If you are long an options position, you generally want low theta risk with options that are 90 days or more until expiration.

If you are short an options position, you generally want high theta risk with options that are 30 days or less until expiration.


This is a good time to take a look at what is known as the theta curve.

Here we have, on the vertical axis, theta, or time value. Let's not worry about the values for the moment. We just want to get the concept down here.

The horizontal axis represents the days until expiration: 30, 60, and 90 days.

You can see that, as time goes by, theta drops, or the time value of the option drops.


From 90 days until expiration (point 1), all the way up until 30 days until expiration (point 2 ), you can see time value drops slowly.

If you are long options, this is what you want, to be over here. You do not want that time value to drop.


Look what happens in the last 30 days (point 2 to point 3 ).

Time value accelerates dramatically and collapses to 0 as the options expire.

This is what you want if you are short options.

You want to be short options with 30 days until expiration to take advantage of this collapse in the time value.

Keep in mind that volatility also impacts this curve.

This curve is going to be impacted primarily by the time until expiration, but also by volatility, where it is going to shift up if volatility increases and shift down if volatility decreases.

## Vega

Vega is the change in the price of an option with regard to its change in volatility.

Vega tells you the impact on the option price for every 1 percentage point change in the implied volatility of the option.

As the volatility of the underlying security increases, the premium of the option will increase.

It is possible for a call option to lose value even though the underlying security goes up if, at the same time, the volatility of that security drops.

It is possible for a put option to lose value even though the underlying security goes down if, at the same time, the volatility of the security drops.

## Understanding Volatility

Finally, let's cover volatility.

Volatility is a very important aspect of options trading.

Volatility is generally defined as the degree to which the underlying security price fluctuates in a given time period.

A stock whose price jumps around with unusually wide-range days is going to have higher volatility than a stock which trades in a quiet, deliberate manner day to day.

High volatility means high risk, so it has a significant impact on time value.

Since at-the-money and out-of-the-money options have only time value, or extrinsic value, it is very important to understand volatility for assessing the risk of those at-themoney and out-of-the-money option positions.

When volatility is high, options prices are high and, therefore, it is not the best time to buy options because when the volatility drops, the option price will drop, as well

Conversely, when volatility is low, option prices are low and, therefore, it is a good time to buy options, with the added benefit of the option price increasing if the volatility increases.

A stock whose price jumps around with unusually wide-range days is going to have higher volatility than a stock that trades in a quiet, deliberate manner day-to-day.

Unlike what you hear in the media, volatility is not just a phenomenon of declining markets. Volatility has no market directional relationship.

There are two kinds of volatility:

- Historical: based on past price action of the underlying security
- Implied: based on the options price action as a snapshot of what the market believes about price movement

Implied volatility tends to be cyclical in nature. This means it will go from high back down to low, and then back up to high. It cycles back and forth.

## Bringing It All Together

Let's take a look at a typical broker options chain quote page again, where we will be able to see the bid-ask price, the volume, the open interest, and the Greeks for each option.


As we looked at before, this is a typical options chain quote page, again, compliments of OptionsXpress. We're going to be looking at Baidu this time.

Let's take a look at the near-the-money calls for the expiration of September 2013. At this time, this is about 80 days away from expiration.

Here you see the underlying security Baidu, the last trade, the change, the bid-ask, the high and the low for the day, and the volume, which is for the stock.

The strike prices are down the left side of the chart, which are $\$ 2.50$ apart in the case of Baidu.

Moving across the table, to the right, you see the last price, the change (from the previous day), the bid, the ask, the high of the day, the low of the day, the volume for the day, and the open interest.

You can see the open interest is the highest for the calls that are out-of-the-money, the 95.00 , the 97.50 , and the 100 s .

This does not mean anything in and of itself; however, there is a story behind that. You would have to do some research to see what it is. It could be that Baidu was recently trading in that area, and, at one time, those were at-the-money strikes. This is no longer the case because Baidu has now dropped.

Let's check out the bid-ask. Here you see for the at-the-money (the 90s) bid $\$ 6.85$ and ask $\$ 7.00$. That is a $\$ 0.15$ spread on the bid-ask. When you get up into these highdollar options, the spread is going to be in that area of $\$ 0.15$ to $\$ 0.20$.

If you were buying this option outright and you wanted to make sure you got filled, you would have to pay $\$ 7.00$.

If you were selling it to cover, you would have to accept $\$ 6.85$ in order to be sure to be filled.

If you wanted to be more aggressive, let's say you were buying, and you did not want to pay the ask, you could split the difference, $\$ 0.15$ divided by two is $\$ 0.075$. But, since you can't trade at that level, you would make it $\$ 0.10$ and you could try to buy it at $\$ 6.95$. Oftentimes, the market maker will give it to you. However, you are not assured of getting filled when you do this.

When it is time to get out of an option that you want to be out of, you want to go in and cover it at the market so you are sure to get out. When you are opening a new position, you can be more selective.

Let's take a look at the $\$ 82.50$ call. This is fairly deep in-the-money, right? The stock is trading at around $\$ 91$, so what is the intrinsic value of this option at this point? If the stock is at $\$ 91$ and the strike is at $\$ 82.50$, this is going to be $\$ 8.50$ as the difference of intrinsic value.

However, let's say the option is going for $\$ 11.50$. What is the difference? The difference is the time value. It has $\$ 11.50$ total price or total premium, of which $\$ 8.50$ is intrinsic value and $\$ 3.00$ is time value.

Going across, let's take a look at volume and open interest. There is no trading volume for the day; open interest is 152 contracts. Ideally, I like to see at least 500 open interest for monthly options, but it is not an absolute requirement. The market maker will still make the market for you.


BIDU Explration Montns: JulWk1 | JuiWk2 | JulWk4 | AugWk1 | Jul13 | Aug13 | Sep13 | Dec13 | Jan14 | Jan15


Mousing over detail, you see the Greeks come up for the $\$ 82.50$ call option expiring in September. You can see implied volatility, delta, gamma, vega, theta, and rho. Rho is interest rate related and almost a negligible factor.

You see the delta is at 0.74 . This means that, for every dollar movement of the underlying security, the option would move $\$ 0.74$. You would expect a rather high delta for an in-the-money call.


| Beidu inc |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol | Last | Change | Bid | Ask | High | Low | Volume | Chart |  |
| BIDU | 90.98 | $-1.52 \mathrm{~V}$ | 90.96 | 91.04 | 93.45 | 90.75 | 1,750,481 | $\square$ | Baidt百娄 |



Let's drop down to an out-of-the-money call, the 100.

You see the delta is only 0.32 . So the out-of-the-money call delta is far less than the in-the-money call and that's what we would expect.

What did we say about the at-the-money call? The delta is going to be around 0.50 .


| Baidu Inc |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol BIDU | $\begin{aligned} & \text { Last } \\ & 90.98 \end{aligned}$ | Change $-1.52 \mathrm{~V}$ | $\begin{gathered} \text { Bid } \\ 90.96 \end{gathered}$ | Ask $91.04$ | High <br> 93.45 | $\begin{gathered} \text { Low } \\ 90.75 \end{gathered}$ | $\begin{aligned} & \text { Volume } \\ & 1,750,481 \end{aligned}$ | Chart |  |



In this case, it is 0.56 , which is a little higher than 0.50 because the 90 strike is actually $\$ 0.98$ in-the-money, as the stock is trading at $\$ 90.98$. Again, exactly what we would expect.

## Virtual Option Chains for BIDU -

Customize [Patent Pending]

## Baidu Inc

Quotes as of 7/2/2013 12:52:01 PM ET . Intraday data delayed at least 15 minutes.
Mini Options - Options that deliver 10 shares instead of 100 in AAPL, AMZN, GLD, GOOG, and SPY Learn More :


If we change the view 'Type' to 'Put', it brings up the strikes for the put options. It is the same information as the call options, the bid-ask, the volume, the open interest, and the Greeks.


With the put option, the $\$ 82.50$ strike is going to be out-of-the-money, well out-of-themoney - you see the delta there is -0.27 .


BIDU Explration Months: JulWk1 | Julwk2 | JulWk4 | AugWk1 | Jul13 | Aug13 | Sep13 | Dec13 | Jan14 | Jan15


Whereas, the deep in-the-money put, the 100, delta is -0.68 , a much higher delta.

Because we are still 80 days to expiration, the delta on the 100 , in-the-money put is only -0.68 because there is still significant time value associated with that option.

|  |  | Option Pricer I Cov Calle \| |  |  | \| Put Spreads | Cal |  | \| | Collars | | \| Calendar Pute | Calendar Calle | Daita a mpp Vol | Provious |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol BIDU |  | Range <br> Near-the-Money $\checkmark$ |  | Type Puts |  | $\checkmark$ |  | $\begin{aligned} & \text { Expiration } \\ & \begin{array}{\|l\|l} \text { Jul13 } \end{array} \end{aligned}$ |  | View Chain |  |
| Q Find Symbal/ |  | $\square$ include Adjusted / Non-standard Optors |  |  |  |  |  |  |  |  |  |
| Bzidu inc |  |  |  |  |  |  |  |  |  |  |  |
| Symbol BIDU | $\begin{aligned} & \text { Last } \\ & 90.78 \end{aligned}$ | Change <br> $-1.72 \mathbf{V}$ | $\begin{gathered} \text { Bid } \\ 90.75 \end{gathered}$ | Ask <br> 90.80 | $\begin{aligned} & \text { High } \\ & 93.45 \end{aligned}$ | $\begin{aligned} & \text { Low } \\ & 90.75 \end{aligned}$ | $\begin{aligned} & \text { Volume } \\ & 1,780,680 \end{aligned}$ | Chart <br> $\square$ |  |  |  |



Let's look at the July 100 put, with 17 days until expiration.

The time value is a much smaller factor, so the delta is going to be higher, which you can see is -0.92 at this point.

When we check the time value for the 100 strike put, and the stock trading at $\$ 90.78$, the difference is $\$ 9.22$.

The option is selling at $\$ 9.30-\$ 9.45$, so you can see that almost all of the premium, at this point, is based on intrinsic value and very little time value. It is actually \$0.08-\$0.13 on the bid-ask.

You can see how time value collapses as you get closer to expiration. The delta is going to increase for that same in-the-money option as days until expiration decreases.

## Conclusion

Now that you have read this report, you are no longer unfamiliar with options.

In fact, you now possess more options knowledge than $90 \%$ of all investors and traders. You now understand the risks associated with options and how to mitigate those risks with the proper use of options leverage, along with sound risk management principles.

Think of the information in this report as Options 101. You are now qualified and ready for more advanced learning about the various options strategies, each aimed at a particular investing or trading goal. It is these options strategies that really unlock the power of options.

As with any new endeavor, practice "running the play" many times until you are completely comfortable with the mechanics of options trading. This is where you 'actionize' your learning; until then, it is just learning.

So you must take action to take advantage of your newfound knowledge. Start with a demo account or, at least, a small account to gain proficiency and then you will be ready to responsibly tap into the profit potential and risk management that options trading has to offer.

If you'd like to explore more advanced options training, we have several programs available at www.profitsrun.com.


Good Trading,


Bill Poulos
Profits Run, Inc.

## Options Glossary

## Ask Price

The price at which a seller is offering to sell an option or a stock.

## Assignment

The receipt of an exercise notice by an option writer (seller) that obligates him to sell (in the case of a call) or purchase (in the case of a put) the underlying security at the specified strike price.

## At-the-Money

An option is at-the-money if the strike price of the option is equal to the market price of the underlying security.

## Beta

A measure of how closely the movement of an individual stock tracks the movement of the entire stock market.

## Bid Price

The price at which a buyer is willing to buy an option or a stock.

## Call Option

An option contract that gives the owner the right but not the obligation to buy the underlying security at a specified price (its strike price) for a certain, fixed period (until its expiration). For the writer of a call option, the contract represents an obligation to sell the underlying product if the option is assigned.

## Closing Price

The final price of a security at which a transaction was made.

## Contingent Order

An order to execute a transaction in one security that depends on the price of another security. For example: sell the XYZ May 60 call at $\$ 2$, contingent upon $X Y Z$ stock being at or below \$59.

## Contract Size

The amount of the underlying asset covered by the option contract. This is 100 shares for 1 equity option, unless adjusted for a special event.

## Covered Call

An option strategy in which a call option is written against an equivalent amount of long stock. For example: writing 2 XYZ May 60 calls while owning 200 shares or more of XYZ stock

## Credit Spread

A spread strategy that increases the account's cash balance when established. A bull spread with puts and a bear spread with calls are examples of credit spreads.

## Delta

A measure of the rate of change in an option's theoretical value for a one-unit change in the price of the underlying stock.

## Expiration Date

The date that an option and the right to exercise it cease to exist.

## Expiration Friday

The last business day prior to the option's expiration date during which purchases and sales of options can be made. For equity options, this is generally the third Friday of the expiration month. If the third Friday of the month is an exchange holiday, the last trading day is the Thursday immediately preceding the third Friday.

## Expiration Month

The month that the expiration date occurs.

## Gamma

A measure of the rate of change in an option's Delta for a one-unit change in the price of the underlying stock.

## Implied Volatility

The volatility percentage that produces the best fit for all underlying option prices on that underlying stock.

## In-the-Money

A term used to describe an option with intrinsic value. For standard options, a call option is in-the-money if the stock price is above the strike price. A put option is in-the-money if the stock price is below the strike price.

## Intrinsic Value

The in-the-money portion of an option's premium.

## Last Trading Day

The last business day before the option's expiration date during which purchases and sales of options can be made. For equity options, this is generally the third Friday of the expiration month. If the third Friday of the month is an exchange holiday, the last trading day is the Thursday immediately preceding the third Friday.

## Limit Order

A trading order placed with a broker to buy or sell stock or options at a specific price.

## Margin Requirement

The minimum equity required to support an investment position.

## Market Order

A trading order placed with a broker to immediately buy or sell a stock or option at the best available price

## Naked Option

A short option position that is not fully collateralized if notification of assignment is received. A short call position is uncovered if the writer does not have a long stock or deeper-in-the-money long call position. A short put position is uncovered if the writer is not short stock or long another deeper-in-the-money put.

## Open Interest

The total number of outstanding option contracts on a given series or for a given underlying stock.

## Option

A contract that gives the owner the right, but not the obligation, to buy or sell a particular asset (the underlying stock) at a fixed price (the strike price) for a specific period of time (until expiration). The contract also obligates the writer to meet the terms of delivery if the owner exercises the contract right.

## Option Period

The time from when a buyer or writer of an option creates an option contract to the expiration date; sometimes referred to as an option's lifetime.

## Out-of-the Money

A term used to describe an option that has no intrinsic value. The option's premium consists entirely of time value. For standard contracts, a call option is out-of-the-money if the stock price is below its strike price. A put option is out-of-the-money if the stock price is above its strike price.

## Put Option

An option contract that gives the owner the right to sell the underlying stock at a specified price (its strike price) for a certain, fixed period (until its expiration). For the writer of a put option, the contract represents an obligation to buy the underlying stock from the option owner if the option is assigned.

## Strike Price

The price at which the owner of an option can purchase (call) or sell (put) the underlying stock. Used interchangeably with striking price or exercise price.

## Theta

A measure of the rate of change in an option's theoretical value for a one-unit change in time to the option's expiration date.

## Time Decay

A term used to describe how the theoretical value of an option erodes or reduces with the passage of time. Time decay is specifically quantified by Theta.

## Time Value

The part of an option's total price that exceeds its intrinsic value. The premium of an out-of-the-money option consists entirely of time value.

## Vega

A measure of the rate of change in an option's theoretical value for a one-unit change in the volatility assumption.

## Volatility

A measure of stock price fluctuation. Mathematically, volatility is the annualized standard deviation of a stock's daily price changes. See also Historic volatility, Individual volatility and Implied volatility.

