

The World of Options

There are infinite ways that options can be utilized in your investment portfolio. Whether you are an individual writing covered calls on 200 shares of IBM, a hedge fund manager with billions in assets that need to be protected against volatility or “tail risk,” or anywhere in between, there is a place for options in your account, period.

To get the most from the options markets, it is best to fully understand the underlying securities from which they are valued and then take on the options themselves. The trends, abnormalities, and patterns that emerge in the options markets get their cues from their underlying security. Because of this, you must never look at an option (strategy) in a vacuum.

When I was trading on the floor, I tended to end my trading day delta-neutral—or not having a “directional bet”—going into the next morning. Market makers, like I was, have to deal with a constant flow of orders without preparation. By ending delta-neutral

the previous day, I could reset and remain flexible in my strategy.

Option traders tend to have an “if, then” attitude because of our ability to be elastic with our hypothesis and adjust positions as events, news, and data change. This mind-set is usually in stark contrast to a regular stock trader, who needs to be more rigid in predictions and theses. I certainly prefer the flexibility options offer, because I still have yet to meet a person who knows exactly where a stock is going, not to mention that I always like contingency plans. As an option trader you always have the choice of getting or giving odds depending on the situation.

As a professional with a trained eye I can look at an option chain on just about any security and surmise a general hypothesis about the condition of the stock; but I am learning more and more that it’s actually easier—and more profitable in the long run—to make sense of the nuances of the underlying detail first and

KEY POINT:

Options traders can use certain strategies to take a neutral position in a stock or can employ protective tactics to increase their probability of becoming profitable, even on the fly.

use the options markets as your microscope and scalpel as opposed to your looking glass.

But we all get that wild streak from time to time. I remember looking at Apple's upside call skew in early 2011 (see Exhibit 1.1) and thinking that it might be a good idea to sell some out-of-the-money call spreads because they were so expensive. Little did I know that they had planned a conference call to announce a special dividend and the stock started screaming higher (those calls were pricey for a reason), putting me in an uncomfortable spot; always take time to do your homework!

Have a Checklist

I believe that the most effective method of trading starts with a checklist or filter of sorts that gets you to a specific quantitative, objective target on which you can add your subjective twist. Start from the outside (macro) and work inward (details of a stock's fundamentals and technicals).

Optimally, your checklist should consist of fundamental, technical, and statistical parameters that narrow your potential candidates to a manageable field.

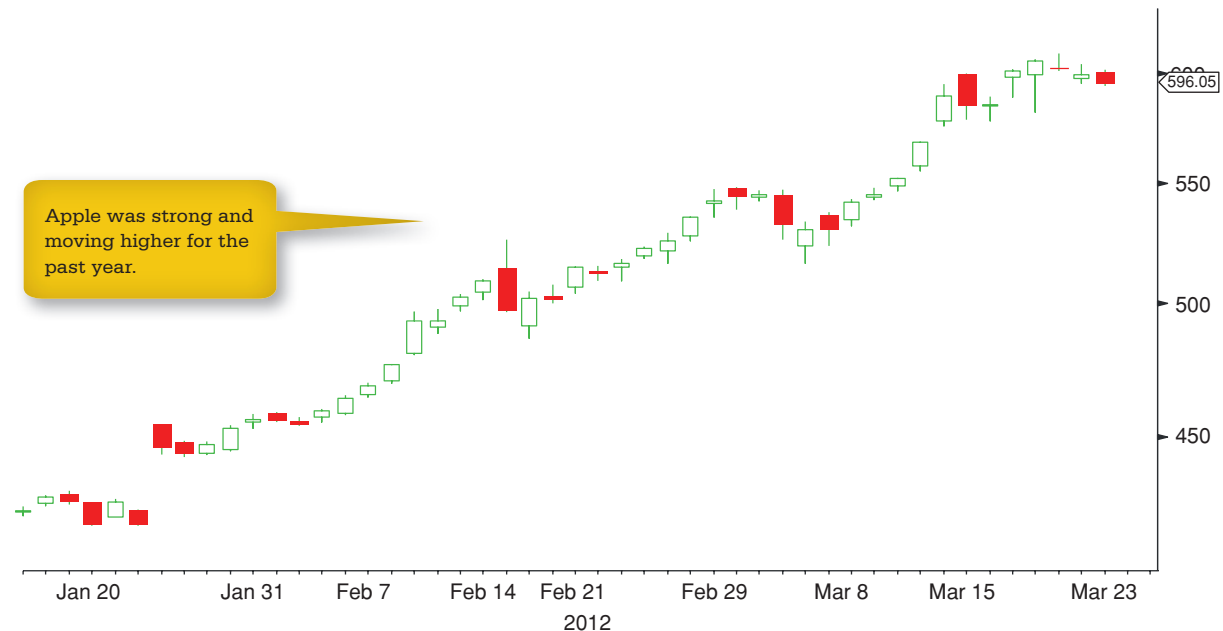


Exhibit 1.1

Bloomberg's OSRCH screen is a quick and dirty way to cut through some of the basic fundamental, technical, and statistical noise that exists. Once the noise is out of the way, you can more effectively review only the top contenders without wasting too much time on research and missing your timing.

There are many ways of finding candidates. Running scans and filters at different times will help you to screen for stocks that meet certain criteria. Another method I favor is to form a thesis around a general social, technological, political, or global trend and find the stocks that stand to benefit (or falter) from it. Form a timeline and potential path in your head of how you think these events will unfold and then overlay an option strategy on top of that thesis.

In addition to all this, when you are forming a forward thesis, consider the effects of news, earnings, macroeconomic climate, seasonal effects, and even political developments. I can't stress this enough! The emotional waves of the masses often override corporate fundamentals and technical formations at least in the short term. Don't get stuck with blinders on in your own bullish or bearish mind. It's the worst place to be.

In the longer term, earnings strength and a viable, thriving business structure with a popular good or service is what I believe motivates the markets. Most analysts, especially those using the Discounted Cash Flow (DCF) methodology and the like, agree.

The core of the options universe revolves around volatility and time. Many of the strategies, techniques, and methods I cover in this book are related to volatility/time

in some form or fashion. You must understand both the volatility of the stock and the volatility of the option or spread that you are trading. An intimate knowledge of volatility in the underlying asset and subsequent manifestation in the derivative is essential to generating consistent profits and becoming a professional trader.

We explore volatility in detail in Chapter 7 and reference it throughout this book. You also see the Bloomberg screens used to analyze it. At the end of the day, everything comes back to volatility; make its comprehension your number one priority. Just when you think you get it, you are just getting started.

The volatility conundrum haunts every good option trader. It is a question that cannot be solved, at least not fully. But you can make "realistic assumptions" about it and often that is good enough.

If you get what I am saying then you probably have some experience under your belt; if you do not, then you have a long journey ahead of you—take it slow.

Exhibit 1.2 shows the growth of puts and calls separately over the last 20 years (calls in yellow).

Options traders are growing in record numbers. Their cumulative experience and growing selection of strategies continue to increase liquidity and flexibility in the option markets, which is beneficial for all of us. See Exhibit 1.3 for totals in annual options volume. It is also the reason why indicators such as the Chicago Board Options Exchange (CBOE) put-call ratio are becoming antiquated and obsolete. I discuss this later.

Don't be a sucker—learn as much as you can before taking big risks in the option markets.

Smart Investor Tip!

The checklist is a major step in preventing mistakes and overlooking key information. It also helps with trade consistency and keeps scatterbrains like me focused.

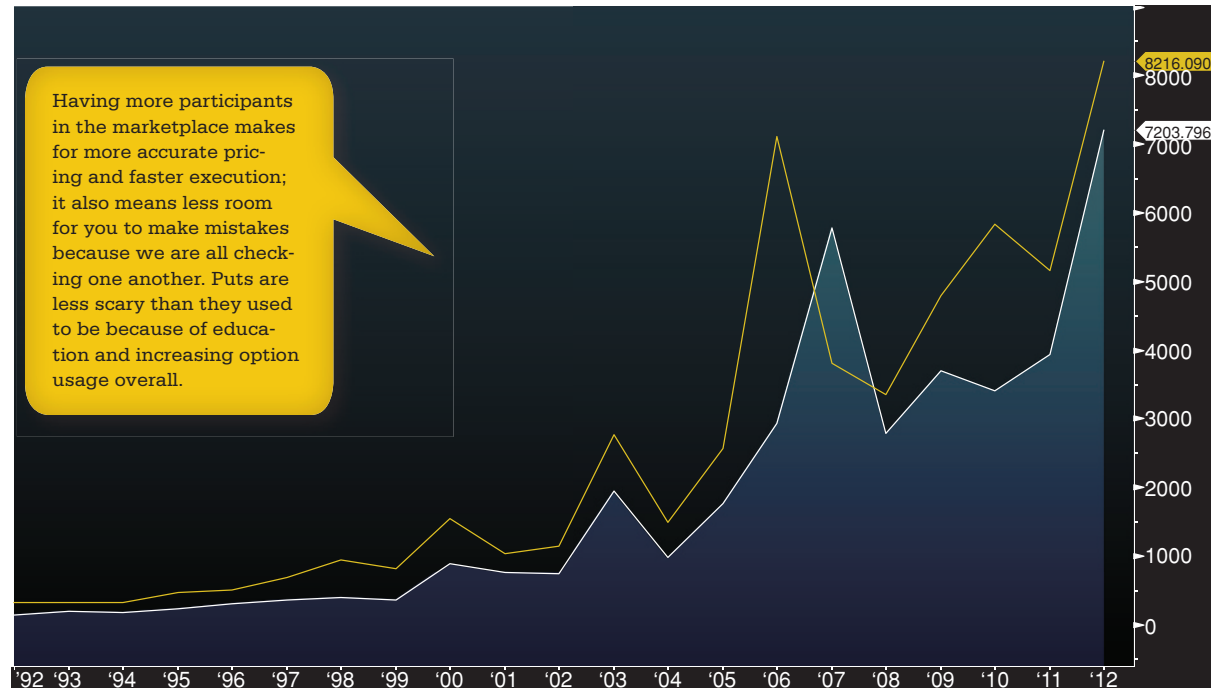
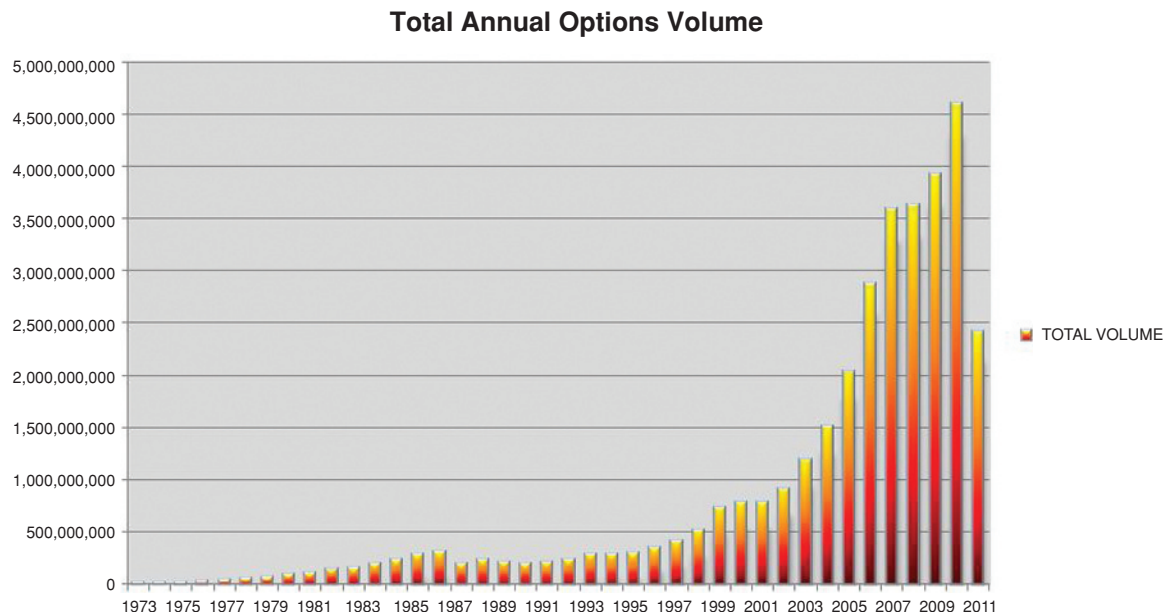


Exhibit 1.2

The Basics

Thales of Miletus used options to lock in a low and set price for olive presses ahead of Greek harvests back in 600 BC. In the 1600s, the Dojima Rice exchange, which started on the front lawn of Yodoya Keian, arguably became the world's first futures exchange.

Even though options in some form or fashion have been around for thousands of years, the modern standardized world of options came about in 1973 when the Chicago Board of Trade (CBOT) gave birth to the CBOE. The CBOE became home to the first equity and index exchange in the United States.

**Exhibit 1.3**

This was about the time the Black-Scholes model was created as a means of calculating options prices using standardized, measurable, objective integers as opposed to random price quotes that often favored the dealer, not the customer.

Prior to that, the option market was fragmented and if you wanted to buy or sell an option, you went directly to a dealer as opposed to everyone meeting on the exchange to create the most efficient price. Because of this fragmentation, there were major price discrepancies.

You see, without a standard formula there was no accurate way to price an option anyway. It was simply a random price driven market, with little rationale as to the correct price to buy or sell.

When you think about it, the underlying asset has its own set of random forces pushing and pulling on the price. Quantifying and finding a price to buy or sell an asset is hard enough. For a derivative to have no structure, you simply end up magnifying variables and making things more complicated and random.

KEY POINT:

The underlying securities themselves can also be flawed; think back to the Credit Default Swap (CDS) or Mortgage Backed Securities (MBS) vehicles.

Dealers (called *Bucket Shops*) would publish static quotes with not only wide bid-ask spreads, but prices that sometimes made no sense compared with today's pricing systems and models. This is where volatility and time come into play, but back then it didn't matter because not many people understood this. These shops operated more like horse tracks than financial firms. The dealers had a good idea about what the options were really worth and would "handicap" the prices (odds) many times in their favor. Sure people won some money from time to time, but the dealers were in control.

Jesse Livermore (*Reminiscences of a Stock Operator*, 1923) made a killing with options because he had the uncommon knowledge about how to derive their value. Perhaps he had a knack for knowing which way the market was moving, too, because the Bucket Shops banned him when he won so much money; he was certainly the exception.

Exhibit 1.4 shows the early twentieth century, which was no doubt the dark ages of the option markets.

But even in the early 1970s, trading and quote technology was still in its infancy. Quotes for options and commodity prices were updates on chalkboards such as the one you see in Exhibit 1.5 in 1971 at the CBOT.

Option prices were still slow to update and the markets were wide and illiquid in many cases.

Fast-forward 40 years and the technology has advanced by an order of magnitude that even Gordon E. Moore could have never imagined. The advantage now lies in knowing behavior and strategy, and having the

ability to analyze and execute quickly and efficiently. These tools are at *everyone's* disposal.

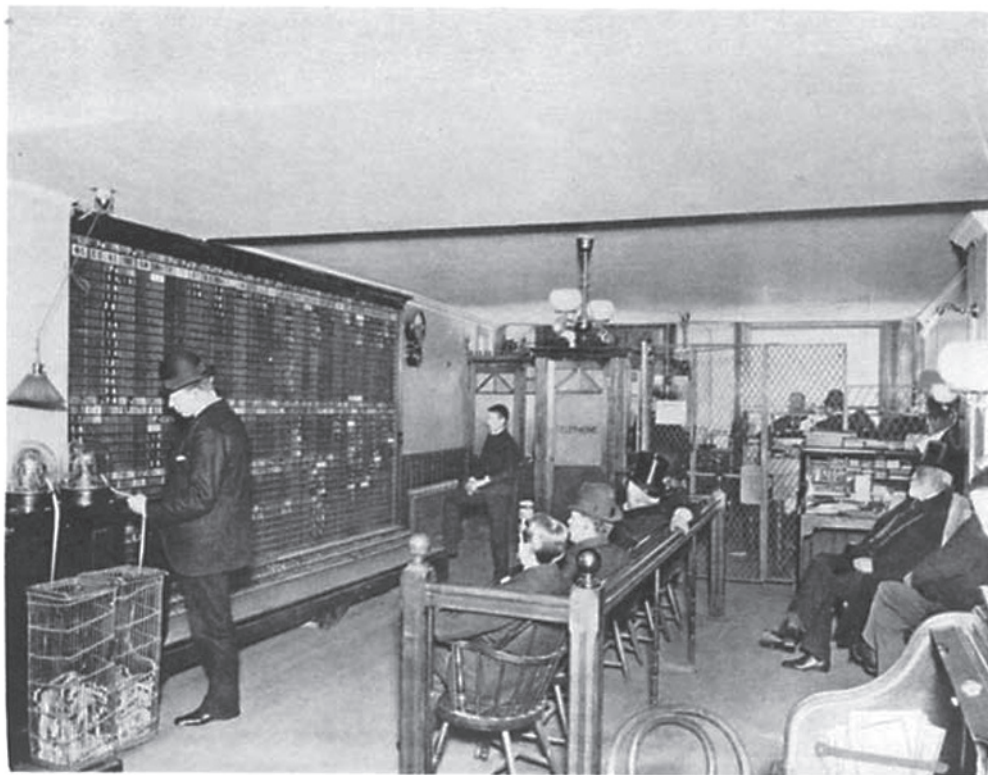
These strengths can lie in the hands of anyone working from just about anywhere in the world. As a "market taker" (which is what most of you are) you may not get certain small perks that a "market maker" (MM) gets in terms of leverage and rebates on short stock positions, but you are at parity, if not advantaged in comparison. Trust me. (I will explain why, showing how being an MM can leave you exposed to smart money.)

Routing and Handling of Orders

Because options are traded separately from their underliers, there is no need to have both the stock and option trade at the same place or even on the same exchange. Like stocks, options trade on several exchanges, which are somewhat linked together when it comes to disseminating prices.

This can be good and bad when it comes to getting executions in the options that you trade.

One detriment is that exchanges do *not* share orders with one another! If you send an order to buy calls on the Philadelphia Stock Exchange (PHLX) they are not going to be filled at the International Stock Exchange (ISE) unless PHLX sends the order away. The exchanges do, however, have rules that help ensure the best pricing for the customer. If one exchange is priced better than another, the exchange with the order needs to either fill it at the better price or send it away! See Exhibit 1.6.



CLEMENT, PARKER & COMPANY.

Exhibit 1.4

One of the biggest “problems” with completely electronic exchanges is the handling of spread orders. When you send a two-, three-, four- or more legged spread to a certain exchange, it may not be represented in the best way possible to market participants as it would be in a physical crowd.

Exchanges like the ISE disseminate data as quickly as possible and market makers use different types of software interfaces to see and trade on that data.

In other words, if you are trying to buy an iron condor that has a market of \$1 to \$2 and you are bidding

**Exhibit 1.5**

Source: Pat Arnow Photography, arnow.org.

\$1.80, your order may not be filled, even though it should be. Sometimes you may even bid the full \$2 and not see your order filled on the spot, because of the varying prices of each individual option and the way the orders are presented to market makers. In theory,

as technology improves so does execution speed and efficiency, but highly efficient markets also mean that the market makers are less willing to make errors themselves or stick their necks out just to get an order completed. So be wary when using AON (all or none)

C

IBM US Equity 95 Templates 96 Actions 97 Expiry Option Monitor: Implied Vols

IBM 1195.31 3.91 2.0428% 195.31 / 195.33 Hi 195.81 Lo 192.41 Volm 2715977 HV 18.79 91) News (CN)

Calc Mode Center 195.60 Strikes 5 Exch US Composite 92) Next Earnings(EM) 07/18/12 C

295) Center Strike 296) Calls/Puts 297) Calls 298) Puts 299) Term Structure

Calls						Puts					
Ticker	Bid	Ask	Last	IVM	DM	Ticker	Bid	Ask	Last	IVM	DM
21 Jul 12 (22d); CSize 100; R 0.23											
1) IBM 7/21/12 C195	3.80	3.90	3.94	19.66	.52	1) IBM 7/21/12 P195	3.45	3.50	3.50	19.42	-
2) - IBM 7/21/12 C195 (A)	3.80	3.90	3.80	19.66	.52	2) - IBM 7/21/12 P195 (A)	3.45	3.55	3.55	19.51	-
3) - IBM 7/21/12 C195 (B)	3.80	3.95	3.60	19.80	.52	3) - IBM 7/21/12 P195 (B)	3.45	3.60	3.70	19.64	-
4) - IBM 7/21/12 C195 (I)	3.80	3.90	3.70	19.66	.52	4) - IBM 7/21/12 P195 (I)	3.45	3.55	3.45	19.51	-
5) - IBM 7/21/12 C195 (O)	3.80	3.90	3.90	19.66	.52	5) - IBM 7/21/12 P195 (O)	3.45	3.55	3.38	19.51	-
6) - IBM 7/21/12 C195 (P)	3.80	3.90	3.90	19.66	.52	6) - IBM 7/21/12 P195 (P)	3.45	3.55	3.45	19.51	-
7) - IBM 7/21/12 C195 (Q)	3.80	3.90	3.85	19.66	.52	7) - IBM 7/21/12 P195 (Q)	3.45	3.50	3.50	19.42	-
8) - IBM 7/21/12 C195 (W)	3.80	3.90	3.94	19.66	.52	8) - IBM 7/21/12 P195 (W)	3.45	3.55	3.90	19.51	-
9) - IBM 7/21/12 C195 (X)	3.80	3.95	3.80	19.85	.52	9) - IBM 7/21/12 P195 (X)	3.45	3.55	3.60	19.51	-
10) - IBM 7/21/12 C195 (Z)	3.80	3.90	2.80	19.66	.52	10) - IBM 7/21/12 P195 (Z)	3.40	3.55	3.55	19.42	-
18 Aug 12 (50d); CSize 100; Div 0.85 USD; R 0.31											
11) IBM 8/18/12 C185	12.20	12.40	12.15	21.16	.78	1) IBM 8/18/12 P185	2.32	2.35	2.31	21.30	-
12) IBM 8/18/12 C190	8.40	8.50	8.50	19.64	.67	2) IBM 8/18/12 P190	3.50	3.60	3.55	19.65	-
13) IBM 8/18/12 C195	5.15	5.25	5.30	18.17	.52	3) IBM 8/18/12 P195	5.40	5.50	5.33	18.20	-
14) IBM 8/18/12 C200	2.79	2.81	2.86	17.03	.36	4) IBM 8/18/12 P200	8.10	8.20	8.00	16.99	-
15) IBM 8/18/12 C205	1.29	1.33	1.32	16.27	.21	5) IBM 8/18/12 P205	11.60	11.75	12.10	15.97	-
20 Oct 12 (113d); CSize 100; Div 0.85 USD; R 0.54											
16) IBM 10/20/12 C185	14.60	14.80	14.55	21.38	.69	6) IBM 10/20/12 P185	4.90	5.05	5.15	21.53	-

93) Default color legend

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2012 Bloomberg Finance L.P.
SN 268301 H279-942-2 29-Jun-12 14:03:34 CDT GMT-5:00

The Level 2 screen for IBM shows the different exchanges' bids and offers for each option represented by different letters (in parentheses).

Exhibit 1.6

orders or if you need to get into or out of a position in between the markets. There is nothing worse than a partial fill where you tried to save a couple of pennies, but end up losing thousands. It has happened to me many times, trust me.

When it comes to executing spreads effectively, there are three things you need:

1. An understanding of the theoretical value and risk of the options themselves.

In the early days, IBM would have had its options listed on only one exchange. Since one exchange controlled all the order flow and, in some respects, implied volatility and pricing, it could easily alter pricing by making adjustments to this model.

1) Actions		2) Strategies		3) Str. Notes		4) Data & Settings		5) Help		Option Valuation	
84) FI Leg		85) Solve For		86) Refresh		7) Add to Portfolio		87) Matrix Pricing		89) Trade	
Underlying	IBM US Equity	IBM		Trade	06/29/12	14:10					
Price	195.37	USD		Settle	06/29/12						
Net Option Values											
Price (Total)	1,138.16	Currency	USD	Vega	11.85	Time value	101.16				
Price (Share)	11.3816	Delta (%)	82.97	Theta	-6.63	Gearing	17.17				
Price (%)	5.8257	Gamma (%)	4.2583	Rho	6.68	Break-Even (%)	0.52				
American Vanilla ... Leg 1											
Style	Vanilla	Dividend yield	1.000%								
Exercise	American	Borrow cost	0.000%								
Call/Put	Call										
Direction	Buy										
Strike	185.00										
Strike % Money	5.31% ITM										
Shares	100.00										
Expiry	07/20/12 15:15										
Time to expiry	21 01:05										
Model	BS - continuous										
Volatility	24.538%										
Forward	Carry	195.2787									
USD Rate	MMkt	0.224%									
7) Option Pricing 8) Scenario Graph 9) Scenario Table 10) Volatility Data											

Exhibit 1.7

2. The ability to watch the underlying instrument's price change.
3. An understanding of how various changes in market conditions are affecting your spread's value (skew, option pricing model, etc.).

These three things are an integral part of being an effective order execution trader. It can also save you money and reduce risk. See Exhibit 1.7.

At the end of the twentieth century, the options markets began to change again with the introduction of multiple listings, where a company's options were now listed on more than one exchange. This enabled investors to trade options just about anywhere they wanted. But more important, this created competition among exchanges to earn business through cheaper transaction prices and tighter bid-ask spreads.

Initially, it was a war over technology and liquidity—who could provide the fastest, most liquid markets with the best price. Exchanges were sometimes paying to have orders routed through their systems. Even today, there are still multiple exchanges trading and flourishing, although many exchanges have either closed for good or have changed the way they conduct business to keep up with the times. There are currently eight exchanges where options can be traded, all of which are fighting for your business. The days of the pit trader (my former profession) are numbered, if not already gone entirely.

Higher volume and concentrated order flow naturally improves prices, so I would expect further consolidation within the exchanges to the extent that the Securities and Exchange Commission (SEC) and other regulatory bodies will allow.

The Options Exchanges

There are agreements that some brokers have with certain exchanges to send them order flow, which may or may not be to your advantage. There is little you need to do as a retail trader to most efficiently execute your orders. As a professional, you may develop relationships with certain exchanges or even specialists to get your orders executed efficiently and at the best price.

Bloomberg has a platform (as do some brokers) that allows you to “shop” off floor liquidity providers for options and spreads if you trade in size. This may help you to execute large trades at one price.

List of Exchanges and Their Acronyms

AMEX	American Stock Exchange, housed on the NYSE
BOX	Boston Stock Exchange
CBOE	Chicago Board Options Exchange
ISE	International Stock Exchange
BATS	BATS Exchange founded in June 2005 as an ECN (electronic communication network)
PCST	Pacific Coast Stock Exchange, absorbed by NYSE (see Exhibit 1.8)
PHLX	Philadelphia Stock Exchange, part of Nasdaq OMX
NASDAQ OMX	Nasdaq Options Market

Each of the exchanges disseminates quotes dynamically throughout the day, which are determined both electronically and via open outcry.

Note that some exchanges may have higher bids or lower offers with more or less size (number of contracts). This means that they may be better buyers or sellers at any given moment or that you are seeing standing customer limit orders. This again may also be related to different market maker positions. If the bid or offer size tends to follow the price, it's most likely a market maker leaning one way or the other. If the size of the market doesn't move when the price moves, you may have a standing order on the specialist's books.

Smart Investor Tip!

As a general rule, your broker will typically route your order to the best-priced exchange, or that exchange will match the best price.

Ticker	Bid	Ask	Last	IVM	DM
1) IBM 7/21/12 C195	3.80	3.90	3.94	19.66	.52
2) - IBM 7/21/12 C195 (A)	3.80	3.90	3.80	19.66	.52
3) - IBM 7/21/12 C195 (B)	3.80	3.95	3.60	19.66	.52
4) - IBM 7/21/12 C195 (I)	3.80	3.90	3.70	19.66	.52
5) - IBM 7/21/12 C195 (O)	3.80	3.90	3.90	19.66	.52
6) - IBM 7/21/12 C195 (P)	3.80	3.90	3.90	19.66	.52
7) - IBM 7/21/12 C195 (Q)	3.80	3.90	3.85	19.66	.52
8) - IBM 7/21/12 C195 (W)	3.80	3.90	3.94	19.66	.52
9) - IBM 7/21/12 C195 (X)	3.80	3.95	3.80	19.85	.52
10) - IBM 7/21/12 C195 (Z)	3.80	3.90	2.80	19.66	.52

If you were to notice that the PHLX is a better seller of a group of calls when compared to theoretical value, it might be an indication that the market makers have an overly long position or a bearish bias. Here they are all lined up nicely.

Exhibit 1.8

KEY POINT:

While the option is trading, you have the right to buy or sell it as long as you have the money.

DEFINITION:**Standardized**

Standardized means that the trading rules and strike prices are guaranteed by the Options Clearing Corporation (www.occ.com).

A stock that trades more than 1 million shares a day on average and is a member of the S&P 500 will generally have ample liquidity for you to get into and out of positions up to 50 contracts fairly easily. But there are still many thinly traded securities that you will struggle with to get executed. If you notice bid-ask spreads of \$1 or more on a stock that is \$50 or less and the stock has volume less than 750,000 shares traded on average a day, it might be best to avoid that all together. See Exhibit 1.9.

Standardized

Listed options contracts are **standardized**. If you are buying or selling an option, the Options Clearing Cor-

poration ensures that your counterparty will perform its obligations.

The OCC, along with clearinghouses like Goldman Sachs and even the Chicago Mercantile Exchange (which is both an exchange and a clearinghouse), reduce counterparty risk in options trading.

So if you buy a call and the stock goes up \$100, that contract will still be good for sale even though the seller who originally did the trade with you may be in some serious financial pain. Understand that you will seldom be buying an option from and selling it back to the same person; the fluid markets move money around quite efficiently.

ATK US \$ ↑ 50.64 +2.46 Z50.63 / 50.65N 2x5																			
At 14:23 d Vol 282,957 0 49.18T H 50.66N L 48.96B Val 14.164M																			
ATK US Equity 95 Templates 90 Actions 97 Expiry Option Monitor: Eqty/Indx Trading																			
ALLIANT TECHSYS 150.64 2.46 5.1059% 50.63 / 50.65 Hi 50.66 Lo 48.96 Volm 282457 HV 31.10 91News (CN)																			
Calc Mode Center 50.65 Strikes 10 Exch US Composite 92Next Earnings(EM) 08/03/12 E																			
295) Center Strike 296) Calls/Puts 297) Calls 298) Puts 299) Term Structure																			
Calls										Strike									
Ticker	BSize	Bid	Ask	ASize	BASp	Volm	OInt			Ticker	BSize	Bid	Ask	ASize	BASp	Volm	OInt		
21 Jul 12 (22d); CSize 100; R 0.23										10	21 Jul 12 (22d); CSize 100; R 0.23								
1) ATK 7 C30	21	18.80	20.90	10	2.10					30.00	41) ATK 7 P30		.15	247	.15				
2) ATK 7 C35	51	14.50	16.00	31	1.50					35.00	42) ATK 7 P35		.15	105	.15				
3) ATK 7 C40	52	9.60	10.80	51	1.20					40.00	43) ATK 7 P40		.15	264	.15				
4) ATK 7 C45	290	4.90	5.80	205	.90	2	16			45.00	44) ATK 7 P45	393	.05	.10	530	.05	20		
5) ATK 7 C50	145	1.35	1.50	204	.15	20	184			50.00	45) ATK 7 P50	73	.70	1.35	106	.65	41		
6) ATK 7 C55			.15	406	.15		87			55.00	46) ATK 7 P55	51	4.20	5.50	102	1.30			
7) ATK 7 C60			.15	207	.15					60.00	47) ATK 7 P60	10	9.10	11.20	20	2.10			
8) ATK 7 C65			.15	207	.15					65.00	48) ATK 7 P65	20	13.50	16.80	20	3.30			
9) ATK 7 C70			.15	247	.15					70.00	49) ATK 7 P70	10	18.50	21.70	31	3.20			
10) ATK 7 C75			.15	247	.15					75.00	50) ATK 7 P75	10	23.50	26.80	31	3.30			
18 Aug 12 (50d); CSize 100; R 0.31										10	18 Aug 12 (50d); CSize 100; R 0.31								
11) ATK 8 C30	21	18.30	21.60	72	3.30		5			30.00	51) ATK 8 P30		.15	127	.15				
12) ATK 8 C35	31	13.30	16.50	21	3.20					35.00	52) ATK 8 P35		.10	428	.10		12		
13) ATK 8 C40	153	9.20	10.90	51	1.70	1	2			40.00	53) ATK 8 P40	307	.05	.15	218	.10	43		
14) ATK 8 C45	103	5.60	6.20	40	.60	5	2			45.00	54) ATK 8 P45	252	.35	.50	231	.15	188		
15) ATK 8 C50	516	2.20	2.30	175	.10	37	117			50.00	55) ATK 8 P50	92	1.55	2.45	317	.90	35		
16) ATK 8 C55	475	.40	.50	110	.10		219			55.00	56) ATK 8 P55	51	4.60	5.20	106	.60	4		
17) ATK 8 C60			.15	127	.15		116			60.00	57) ATK 8 P60	22	8.50	11.70	31	3.20			
18) ATK 8 C65			.10	120	.10		145			65.00	58) ATK 8 P65	10	13.50	16.80	20	3.30	5		

Low volume and/or volatility can lead to wide bid-ask spreads. Abnormal spreads as expressed in Exhibit 1.9 can hinder or even prohibit you from making consistent profits.

Exhibit 1.9

If you buy a put and the stock drops to a nickel from \$100, the person who originally sold you that put may have bought it back from someone else when the stock started to drop, or that original trader was short stock and was selling puts to collect some extra income. The bottom line is that as long as the stock is

still trading on a major exchange, the options should be trading as well, which means that you can enter or exit your position as you see fit. I will get into what happens during expiration later, because there are nuances to each and every strategy and security that can help or harm you if you don't know them.

DEFINITION: Employee stock options

Employee stock options, which you may hear about in the news or even receive from the company you work for, are call options that are not traded on an exchange. There are some similarities, but generally speaking stock options given by a company are illiquid and not tradable or standardized like the equity options listed on exchanges. They can be turned into stock and dilute the outstanding shares of a company.

Puts and Calls

There are only two types of options: puts and calls. All the spreads and strategies that have ever been created are simply combinations of one, two, or more of these options.

You must thoroughly understand the basic fundamentals, behavioral characteristics, and laws surrounding both types of options. In a perfect world, I would not bend on this. I know that many newbies just learn calls or puts enough to either be dangerous to themselves or slightly successful, but you are doing yourself a great disservice if you don't understand all the basics of both types.

That includes risk, Greeks, direction, margin requirements, behavior, credit versus debit, and their general behavior in the marketplace.

There are five basic components that make up an options price:

1. Stock price
2. Strike price
3. Interest rate
4. Dividend
5. Implied volatility

From these inputs, we can determine an option's theoretical value at any point in time on any security.

The OVME screen allows you to synthetically value any option on any security by plugging in the factors above.

In a more advanced scenario, this screen can be used to simulate different market changes (like dividends, stock price and volatility) and monetary factors influencing your trade over time, such as changing interest rates. You can also analyze more complicated spreads, which I discuss in later chapters.

In later chapters I also discuss the Greeks, forward prices, different pricing models, and volatility, which all play a role in finding the theoretical value of an option. Many times they can explain any abnormalities you may find when comparing calls and puts in the same class or series.

Here you can see how these factors influence option prices.

Let's take a look at the basics of pricing, trading, and execution in a real-life scenario. (See Exhibit 1.10.)

The Options Monitor (OMON) is easiest way to view option prices on any option-able security. This screen can be fully customized, so you can view a plethora of data points and measurements. I prefer to keep it limited to the following fields in the option chains (see Exhibit 1.11):

- Strike
- Bid
- Ask
- Mark
- Theoretical val
- Implied vol (theoretical change)

IBM US \$ Mkt P 186.91/187.12P 2x3 DELAYED Vol 7,525									
1) Actions ▾ 2) Strategies ▾ 3) Str. Notes ▾ 4) Data & Settings ▾ 5) Help ▾ Option Valuation									
84) FI Leg ▾ 85) Solve For ▾ 86) Refresh 87) Add to Portfolio 88) Matrix Pricing 89) Trade ▾									
Underlying		IBM US Equity			IBM	Trade		11/17/11 08:51	
Price		187.00			USD	Settle		11/18/11	
Net Option Values									
Price (Total)		1,985.42		Currency	USD	Vega	78.92	Time value	1,785.42
Price (Share)		19.8542		Delta (%)	55.95	Theta	-2.12	Gearing	9.42
Price (%)		10.6172		Gamma (%)	1.5084	Rho	88.84	Break-Even (%)	9.55
Single Leg ▾		Leg 1							
Ticker		IBM US 1/19/13 ...			Dividend yield	1.000%			
Style		Vanilla ▾			Borrow cost	0.000%			
Call/Put		Call ▾							
Direction		Buy ▾							
Strike		185.00 ▾							
Strike % Money ▾		1.07% ITM							
Contracts		1.00							
Expiry		01/18/13 16:15 ▾							
Time to expiry		428 07:24							
Model		Trinomial ▾							
Vol Custom ▾		24.000%							
Forward Carry ▾		186.447							
USD Rate Semi ▾		0.750%							
7) Option Pricing 8) Scenario Graph 9) Scenario Table 10) Volatility Data									

Using the trinomial model, the OVME says that the IBM 185 call expiring 428 days from today is worth \$19.85.

Exhibit 1.10

- Delta
- Gamma
- Theta
- Vega

You can also see the basic pricing and analysis I need to begin my study. If I were to buy the IBM December 180 calls, what price would I have to pay? How many contracts could I theoretically buy at that

price? What exchange would I get executed on? Who would route my order to the proper exchange?

Make sure that you can answer these questions before moving on!

Remember that puts and calls can be bought or sold, just like stocks. But unlike stocks, the bid-ask spread of an option can and often will be fairly wide, with the average spread coming in around 10 cents (\$0.10) or so. High volume, low volatility, and lower

IBM US \$ 195.25 +3.85 Z195.25/195.27T 3x2											
At 14:26 d Vol 3,064,322 O 194.55T H 195.81Z L 192.41D Val 596.598M											
IBM US Equity 95 Templates 90 Actions 97 Expiry Option Monitor: Greeks Mid											
IBM 195.25 3.85 2.0115% 195.25 / 195.27 Hi 195.81 Lo 192.41 Volm 3064322 HV 18.68 91 News (CN)											
Calc Mode Center 195.15 Strikes 6 Exch US Composite 92 Next Earnings(EM) 07/18/12 C											
295) Center Strike 296) Calls/Puts 297) Calls 298) Puts 299) Term Structure											
Calls											
	Strike	Ticker	ThPx	sIVM	Bid	IVat	Ask	Last	DM	GM	VM
6 21 Jul 12 (22d); CSize 100; R 0.23											
11	185.00	IBM 7/21/12 C185	11.28	23.73	11.15	10.26	11.40	11.55	.84	.0222	.1180
21	190.00	IBM 7/21/12 C190	7.17	21.63	7.10	5.26	7.25	7.30	.71	.0338	.1613
31	195.00	IBM 7/21/12 C195	3.83	19.70	3.80	.26	3.85	3.75	.52	.0431	.1867
41	200.00	IBM 7/21/12 C200	1.61	18.31	1.60		1.61	1.59	.30	.0406	.1645
51	205.00	IBM 7/21/12 C205	.53	17.65	.52		.54	.53	.13	.0256	.1029
61	210.00	IBM 7/21/12 C210	.17	18.16	.17		.18	.17	.05	.0121	.0520
6 18 Aug 12 (50d); CSize 100; Div 0.85 USD; R 0.31											
11	185.00	IBM 8/18/12 C185	12.23	21.00	12.15	10.26	12.30	12.15	.78	.0207	.1211
21	190.00	IBM 8/18/12 C190	8.37	19.50	8.30	5.26	8.45	8.40	.67	.0270	.1571
31	195.00	IBM 8/18/12 C195	5.15	18.12	5.10	.26	5.20	5.20	.52	.0324	.1810
41	200.00	IBM 8/18/12 C200	2.76	16.95	2.74		2.77	2.76	.36	.0317	.2644
51	205.00	IBM 8/18/12 C205	1.28	16.16	1.25		1.30	1.30	.21	.0254	.2060
61	210.00	IBM 8/18/12 C210	.53	15.78	.53		.55	.55	.10	.0162	.1345
6 20 Oct 12 (113d); CSize 100; Div 0.85 USD; R 0.54											
11	185.00	IBM 10/20/12 C185	14.60	21.19	14.50	10.26	14.70	14.55	.70	.0160	.3773
21	190.00	IBM 10/20/12 C190	11.13	20.13	11.05	5.26	11.20	11.18	.61	.0181	.4121
31	195.00	IBM 10/20/12 C195	8.07	19.08	8.00	.26	8.15	8.25	.52	.0197	.4287
41	200.00	IBM 10/20/12 C200	5.53	18.09	5.45		5.60	5.50	.42	.0201	.4204
51	205.00	IBM 10/20/12 C205	3.55	17.25	3.50		3.60	3.65	.31	.0191	.3841
61	210.00	IBM 10/20/12 C210	2.13	16.54	2.09		2.17	2.14	.22	.0166	.3237
6 19 Jan 13 (204d); CSize 100; Div 1.70 USD; R 0.78											
11	185.00	IBM 1/19/13 C185	17.52	21.61	17.40	10.26	17.65	16.60y	.65	.0120	.5245
21	190.00	IBM 1/19/13 C190	14.28	20.80	14.15	5.26	14.40	11.49y	.59	.0130	.5573
31	195.00	IBM 1/19/13 C195	11.33	19.99	11.25	.26	11.40	11.37	.52	.0139	.5756

Exhibit 1.11

priced stocks will generally have tight bid-ask spreads and thinly traded, high volatility, high price stocks will tend to have options with wide spreads, sometimes greater than \$1. See Exhibit 1.12.

To help pinpoint an option's theoretical value and get a better sense of the true value of a particular

option, Bloomberg offers the ThPx column ("calc" mode), which uses Bloomberg's pricing models to display the theoretical value of an option. You can use this value to shave the bid-ask spread down while increasing your chances of getting filled on your single option or spread orders.

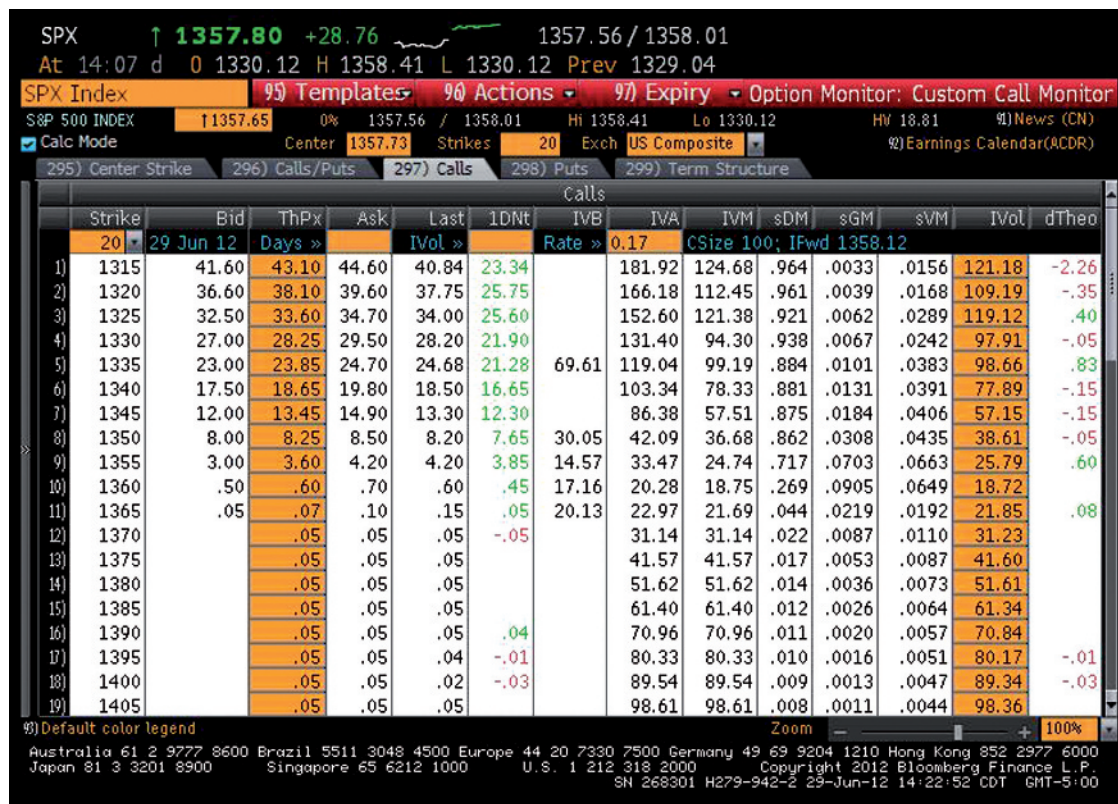


Exhibit 1.12

Essentially it's like having an inside look at what the market makers are using to find the value of an option. When you know the "market value" of something you will be able to execute your orders more ef-

ficiently and at the best price. It's almost like knowing what a group of people at an auction are willing to pay for your vehicle. If you know that the crowd will pay \$10,000 for it, why would you settle for selling it

DEFINITION:

An option "series"

An option "series" denotes options with the same strike and expiration date on a particular security, whereas an option "class" includes *all* the options, strikes, and expirations on a particular security.

			Calls		
	Ticker		Bid	ThPx	Ask
30 Dec 11		Days »	4	IVol »	
1)	SPXQ 12/30/11 C1250		18.90y	20.50	22.10y
2)	SPXQ 12/30/11 C1255		15.40y	16.80	18.20y
3)	SPXQ 12/30/11 C1260		12.40y	13.75	15.10y
4)	SPXQ 12/30/11 C1265		9.80y	10.80	11.80y
5)	SPXQ 12/30/11 C1270		7.40y	8.35	9.30y
6)	SPXQ 12/30/11 C1275		5.20y	5.90	6.60y
7)	SPXQ 12/30/11 C1280		3.70y	4.45	5.20y

Would you pay \$11.80 for the SPX 1265 calls, when you might be able to get them for \$11.20? If they are worth \$10.80 to the market maker, he probably wouldn't mind selling them for \$0.40 worth of "edge" or theoretical profit.

Exhibit 1.13

at \$9,700? The option world works the same way. Just because an option has a market of \$4 bid to \$5 ask, doesn't mean the theoretical value is always \$4.50.

Exhibit 1.13 illustrates some SPX (S&P 500 cash index) calls. Notice the ThPx value for the 1265 call. With a theoretical value, you have a guide from which to price your buy and sell orders without getting left in the dust.

Taking Value a Step Further— General Knowledge and Nomenclature

When you buy (to open) an option (paying a debit), you are said to be long that option and have rights as the owner.

When you sell (to open) an option (collecting a credit), you have a short position on or can be "short that option," and in that case you have obligations, not rights, and typically higher risk.

Calls

The scenario or risk graph illustrates the long call in the OVME screen. See Exhibit 1.14.

A call gives the owner (long-call buyer) the right, but not the obligation, to **buy** 100 shares of a stock at a specified price on or before a specified date.

As a call buyer you will always be bullish on the stock and may realize a profit if the stock rises in value, but not always.

The breakeven of a long call will almost always be greater than the underlying price because of the time value component.

Puts

The scenario or risk graph illustrates the long put in the OVME screen. See Exhibit 1.15.

A put gives the owner (long-put buyer) the right, but not the obligation to **sell** 100 shares of a stock at a specified price on or before a specified date.

Smart Investor Tip!

The "Mark" is *not* the same as the theoretical value. The Mark is generally the midpoint between the bid-ask, and it is what most brokerages use to calculate your profit/loss at the end of each day.

**Exhibit 1.14**

As a put buyer, you will always be bearish on the stock and may realize a profit if the stock falls in value.

The breakeven of a long put will almost always be *less* than the underlying price because of the time-value component.

In, At, and Out of the Money

■ In the money

In the money means that the call or put option has intrinsic or real value. In-the-money calls have

a strike price that is less than the current stock price; in-the-money puts have a strike price above the current stock price.

Deeper in-the-money calls (those with a delta of 0.70 or greater) tend to behave more like the stock, mimicking its moves with greater accuracy. (See Exhibit 1.16.)

Deep in-the-money puts (those with a delta of -0.70 to -1) tend to behave more like short stock.

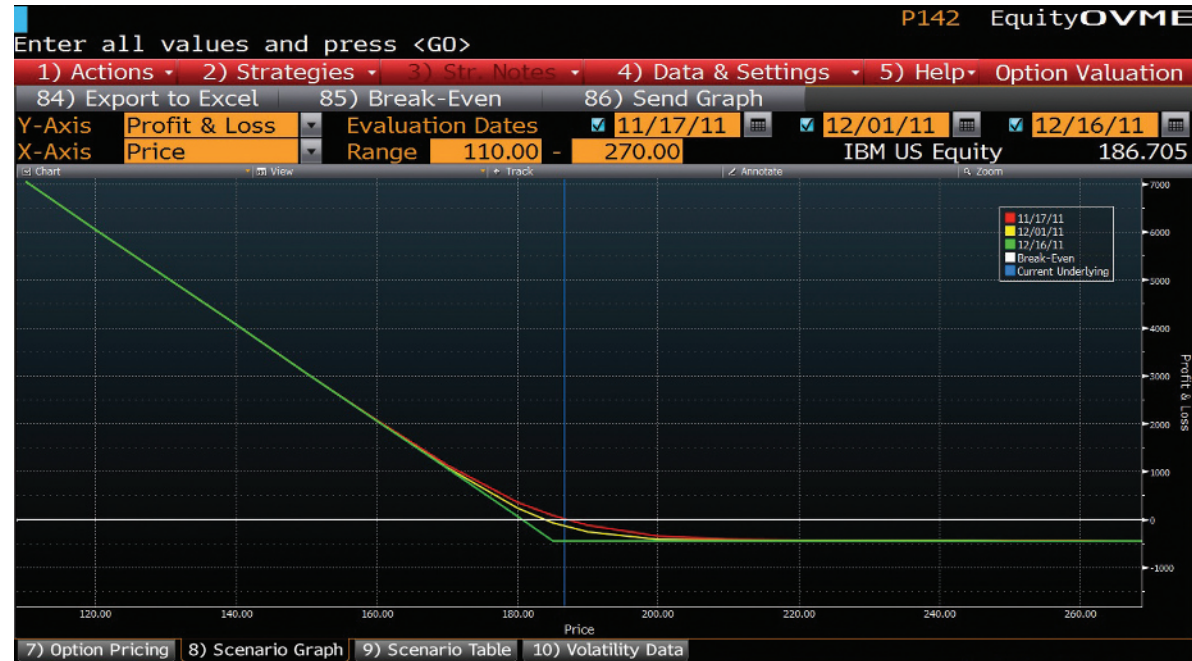


Exhibit 1.15

These options provide you with less leverage and cost more than cheaper, lower-delta options. They are a good choice if you believe that the stock will move higher or lower, but you aren't anticipating a large fast move in the stock.

They also are the least sensitive to changes in time and implied volatility on a percentage basis compared to at-the-money and out-of-the-money options. In-the-money options are more expensive than at- or out-of-the-money options.

■ At the money

These options have a strike price that is at or very close to the stock price. Typically the delta of these options is around 0.40 to 0.60 or -0.40 to -0.60 for puts. At-the-money options generally have the most amount of time value relative to other options in the chain.

Because of their high level of time value, at-the-money options have the highest time decay, or

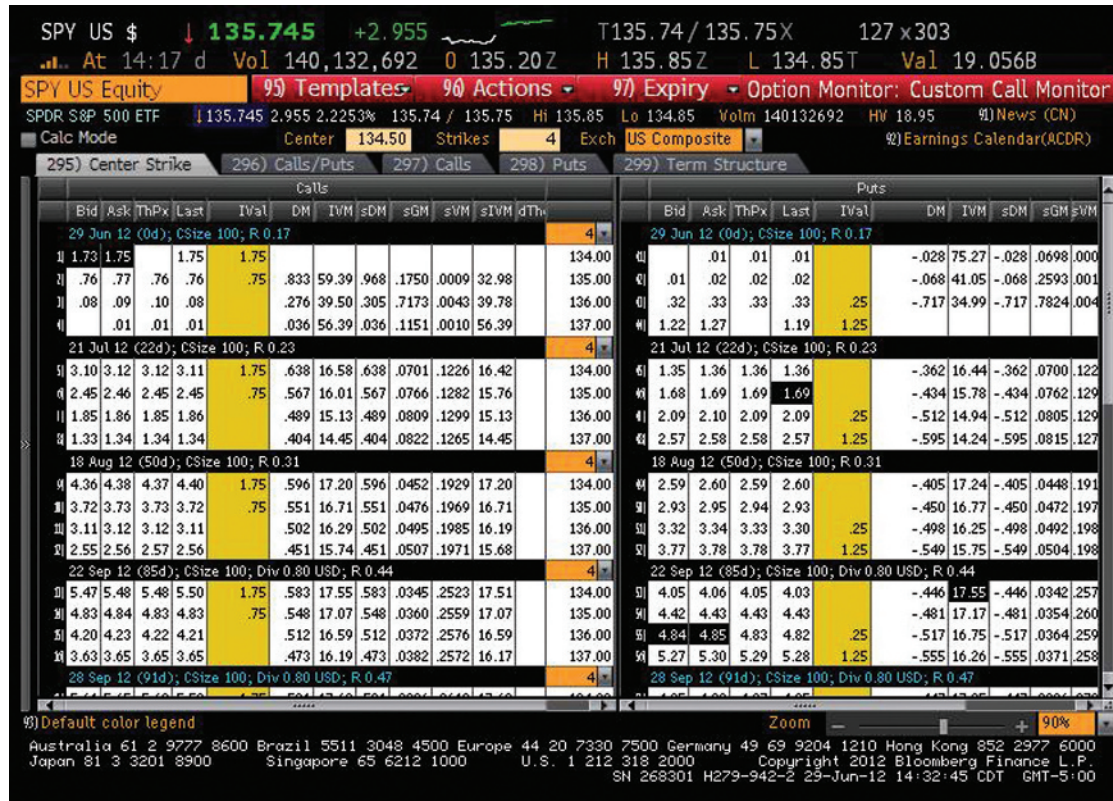


Exhibit 1.16

theta, and the most sensitivity to volatility changes, or vega, as well as changes in time. They also have the most gamma, meaning that the delta will change faster than in- or out-of-the-money options, especially as you come closer to expiration.

If you feel volatility is low and you believe that the underlying stock is going to make a very fast, big move, at-the-money options can be considered; however, remember that you will be paying the most time value and losing the most theta with

these options, so I do not typically recommend that traders *buy* options at the money.

■ Out of the money

Out-of-the-money (OTM) options are the cheapest of the three. OTM calls have a strike price that is higher than the stock price. OTM puts have a strike price that's lower than the stock price. They are comprised completely of time value with no intrinsic value at all.

Out-of-the-money options do have their place in trading and there are certain times when they are appropriate.

Buying them as a hedge, as part of a spread, or as a bonus for “extra upside” are all rationales for purchasing an OTM option.

Since they are lower in delta, OTM options tend to be less correlated with the movements of the underlying. This means that you will have to pay close attention to all the Greeks, especially time decay (theta), if you are buying them.

If you buy a 0.15 delta call, you have a 15 percent shot, statistically, of that option being worth *anything* at expiration. Anything is the key word; 0.000001 is something, and the delta is telling us that there is a 15 percent shot that this option will be worth less than zero. It is not very promising if you think about it like that. Out-of-the-money options can be used if you have a *very* strong belief that the stock will move very far, very fast. It helps to have a price target in mind and buy your call accordingly. In other words, if IBM is currently at

\$120 and you believe that it will be at \$135 in two months, then buying the \$130 call for \$0.60 might be an option for you. However, remember that it is impossible for any person to predict a stock's movement with accuracy. Just be sure that your price target is realistic, based not only on the stock's volatility history, but also on an upcoming catalyst of some sort, especially if you are making a short-term trade. (See Exhibit 1.17.)

Strike Price and Selection

The options seller is obligated to fulfill the owner's rights at **the strike price** of the option. The strike price is also called the *exercise price* and for the owner is the price at which the owner can purchase (in the case of a call) or sell (in the case of a put) the underlying security or commodity as long as that option has not expired.

There is no absolute when it comes to selecting a strike price. It will vary with the sentiments and needs of the trader. Every thesis you form, combined with the strategy and time horizon you choose will determine what strike price(s) you select. There is no one right answer.

Option Seller Commitment

An argument could be made that option sellers are going to be a bit more cautious when it comes to strike selection because the call seller must *sell* 100 shares of stock (or other security) at the strike price

DEFINITION:

The strike price

The strike price is the price at which the option owner can either buy (call) or sell (put) the underlying stock.



This option chain contains in-, at-, and out-of-the-money options. Remember that the relationship varies from puts to calls.

Exhibit 1.17

for every contract that is sold on or sometime before expiration.

The put seller must *buy* 100 shares of stock (or other security) at the strike price for every contract that is sold on or sometime before expiration.

Generally speaking, when I sell naked options, or options for which I do not own shares of the underlying stock, I am most likely doing so to establish an improved stock position (long or short) in an underlying that has elevated volatility. To sell an option naked

KEY POINT:

When you are talking options, a trader might reference a “June” option, which would expire the third Friday of June; if it were an October option then it would cease to exist on the third Friday of October, and so on. When an option expires, it is said to be at “parity,” which is essentially what it is really worth or its intrinsic value.

DEFINITION:**Expiration**

Expiration is the date and time at which that option ceases to exist.

I better damn sure have a good reason and firm thesis that backs up my willingness to take on more risk. I may also choose to sell an option naked if I am offsetting risk from another trade.

I almost always sell options with less than 30 days until expiration to limit exposure and collect theta as quickly as possible. You can examine the theta of different months, but you will learn later that time decay is not linear and what looks one way today might be very different in a week or month from now.

Expiration Date

All options (and warrants) have an expiration date and a date at which they stop trading; yes, there is a difference between the two and not all securities expire on the same cycles; check CBOE.com for most equity, index, or exchange-traded fund (ETF) product expirations or talk to your broker.

Standard equity options typically cease trading at 4 p.m. Eastern Time on the third Friday of the month and actually expire Saturday, giving you time as the owner to exercise, or if you are a seller, to be assigned. Talk to your brokers about their process and cutoff times for exercise and assignment, as it can vary.

Cash index options will cease trading at 4:15 p.m. on the third Thursday of the month and expire the following morning. Some index ETFs such as the SPY and QQQ trade until 4:15 p.m. on Friday and expire on Saturday.

On **expiration**, the option cannot be assigned or exercised. The time between when the option

stops trading and when the option expires gives the long option holder time to decide to exercise the option.

The value of an option at expiration is determined by the amount it is “in the money.” If it doesn’t have any intrinsic value it will not be worth anything on expiration, but that does not mean that it cannot be exercised.

Premium (Cost)

In essence, an option’s premium can be broken down into two separate values: intrinsic (parity or real value, related to the price of the underlying stock, index, or ETF), and time (volatility) value. Both of these values make up the total price you pay. The total premium is determined by the five factors we discussed earlier in this chapter.

Bid-Ask Spreads in All Strategies

In every trade you do, from the very basic to the very advanced, you will have to consider the risks of the bid-ask spread as part of your analysis. See Exhibit 1.18.

I like to think of the spread as another commission you have to pay to do business in options. Most traders buy on the ask and sell on the bid, which I think is *only* appropriate when you must get in at that moment in time.

You can always enter a limit order and get filled in between the market, but this is not a guarantee. Think about it like this: If you are trading a put with a bid-ask spread of \$1 (yes, there are many of those out there)

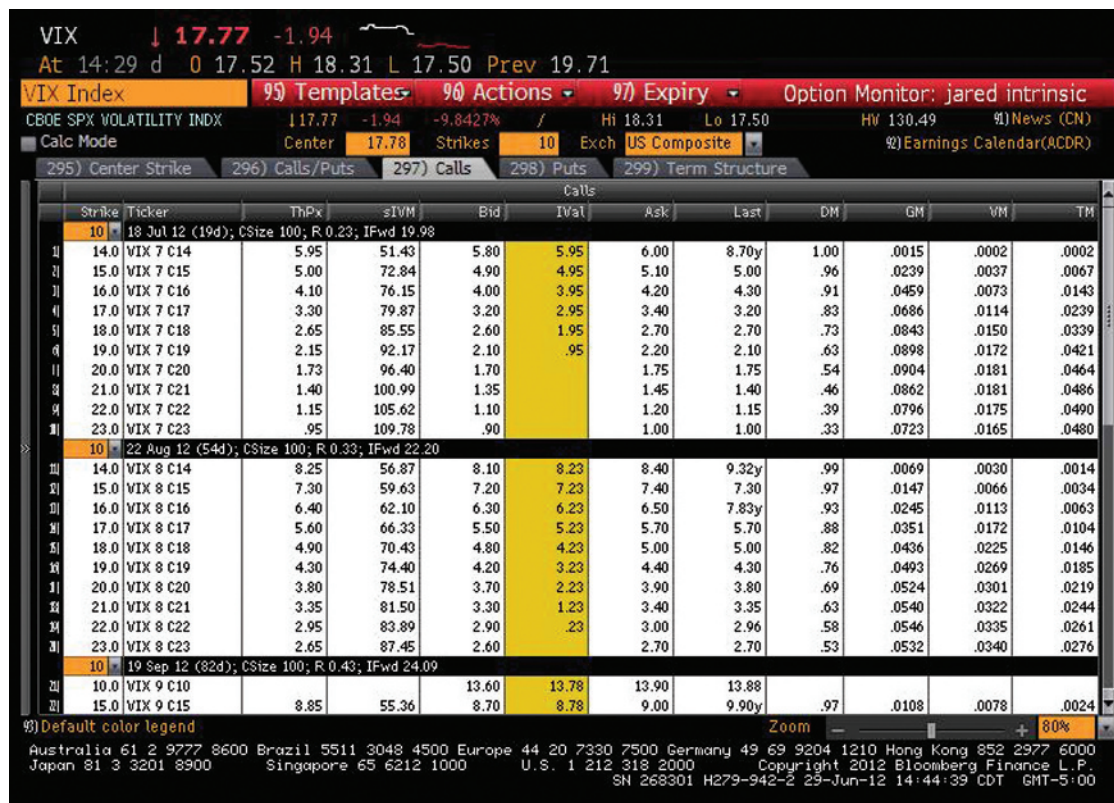


Exhibit 1.18

KEY POINT:

Spreads are usually wide for a reason. Either the stock is thinly traded, it has a high relative volatility, or it is very expensive (\$200 or more).

DEFINITION:**Intrinsic value or “real value” of that option**

Intrinsic value or “real value” of that option is what you are going to be left with on expiration.

KEY POINT:

Intrinsic value is more than just a measurement. You can think of it as the only absolute connection that the option has to the underlying. In essence the intrinsic value can be the saving grace for the beginner or a key part of the strategy for the expert.

and you buy just 10 contracts, you are immediately marked at a \$1,000 loss (excluding commission). Psychologically, the loss may be a blow for some traders. Now imagine that you bought a -0.70 delta put and the stock falls \$1, you may still be at a loss in your trade, which can certainly be disheartening—pay attention to them!

Volatile and expensive stocks are just fine to trade, but trading stocks with poor volume isn't the soundest strategy (although some more advanced traders are successful at trading low volume stocks). In my opinion, try to find options with spreads less than \$0.20, if possible. You can find these lower spreads in the bigger stock names that trade heavy volume (1mm plus), stocks like AAPL, QQQ (ETF), IBM, and others. Sometimes higher spreads will be inevitable; just be aware of them and be sure to look up and down the option chain to get an idea of the average spread size. Remember, the lower the spread, the less your immediate loss will be in a trade. I prefer to trade options with spreads less than \$0.20; however, you can choose a number that you feel comfortable with.

I am waiting for the stock to rally a bit for the perfect entry, but for demonstration's sake, I placed a limit order “buy to open” of 10 contracts at \$13.50. Remember, placing a limit order allows you to set the purchase or sale price, but not a fill. At the time I placed my bid, the asking price was \$14.50, one dollar away from my bid. I was waiting for the stock to rally (put then gets cheaper).

**Intrinsic Value
(aka Moneyness)**

In-the-money options have **intrinsic value**; out-of-the-money options do not. The amount of intrinsic value in an option is determined by the strike price of the option and the price of the underlying stock price only, plus or minus any dividends until expiration. Nothing else can influence intrinsic value.

So if you have a call option with a strike price of \$50 and the stock is at \$52, you would have \$2 of intrinsic value. Whereas the \$50 strike price put with the stock at \$52 would have *no* intrinsic value.

You can customize the OMON screen to display intrinsic value as a column. (I personally like to look at time value on my monitor, but more on that in a minute.) See Exhibit 1.19.

As a novice tactic, if you are not yet comfortable with the Greeks, consider using the intrinsic value of an option compared to its price to help select your strikes.

For example, if a \$60 call strike price were trading for 25 cents and I thought for sure the stock would be trading \$65 by the time this particular option expired, I might not even care about the other effects that are influencing the price of the option because in my case it's all about intrinsic value. My ultimate goal is to make \$4.75 on this trade. That said, don't be foolish and buy tons of cheap options thinking that they are going to jump in price.

DEFINITION: Dividends

When a company returns cash to investors in the form of a dividend, this lowers the forward price of a security and makes calls look cheap and puts expensive. Option buyers are *not* entitled to receive dividends; because of this, the price of the option is compensated.

IBM US 07/21/12 C175 \$ ↑ 20.55 +3.55 20.40 / 20.60 32 x 229 Prev 17.00
At 8:31 d OpInt 750 Vol 1 0 20.55 H 20.55 L 20.55

IBM US Equity 99 Templates 90 Actions 97 Expiry Option Monitor: jared intrinsic
IBM 1195.04 3.64 1.9018% 195.04 / 195.06 Hi 195.81 Lo 192.41 Volm 3187290 HW 18.58 91 News (CN)
Calc Mode Center 195.08 Strikes 10 Exch US Composite 92 Next Earnings(EM) 07/18/12 C

295) Center Strike						296) Calls/Puts						297) Calls						298) Puts						299) Term Structure					
						Calls												Puts											
Ticker	ThPx	Bid	Ask	IVol	TVal	Ticker	ThPx	Bid	Ask	IVol	TVal	Ticker	ThPx	Bid	Ask	IVol	TVal	Ticker	ThPx	Bid	Ask	IVol	TVal						
21 Jul 12 (22d); CSize 100; R 0.23																													
1 IBM 7/21/12 C175	20.50	20.40	20.60	20.05	55	175.00	1 IBM 7/21/12 P175	.41	.40	.42		42	2 IBM 7/21/12 C180	15.75	15.65	15.85	15.05	.80	180.00	2 IBM 7/21/12 P180	.67	.65	.68		68				
3 IBM 7/21/12 C185	11.18	11.10	11.25	10.05	1.20	185.00	4 IBM 7/21/12 P185	1.09	1.07	1.11		1.11	5 IBM 7/21/12 C190	7.08	7.00	7.15	5.05	2.10	190.00	6 IBM 7/21/12 P190	2.00	1.98	2.01		2.01				
7 IBM 7/21/12 C195	3.75	3.70	3.80	.05	3.75	195.00	8 IBM 7/21/12 P195	3.65	3.60	3.70		3.70	9 IBM 7/21/12 C200	1.59	1.58	1.59		1.59	200.00	9 IBM 7/21/12 P200	6.50	6.45	6.55	4.95	1.60				
11 IBM 7/21/12 C205	.53	.53	.54		.54	205.00	11 IBM 7/21/12 P205	10.45	10.35	10.55	9.95	.60	12 IBM 7/21/12 C210	.17	.17	.18		.18	210.00	12 IBM 7/21/12 P210	15.05	14.95	15.15	14.95	.20				
13 IBM 7/21/12 C215	.04	.04	.05		.05	215.00	13 IBM 7/21/12 P215	19.25	20.05	19.95	19.95	.10	14 IBM 7/21/12 C220	.05	.05	.05		.05	220.00	14 IBM 7/21/12 P220	23.90	25.05	24.95	24.95	.10				
18 Aug 12 (50d); CSize 100; Div 0.85 USD; R 0.31																													
1 IBM 8/18/12 C175	20.95	20.85	21.05	20.05	1.00	175.00	1 IBM 8/18/12 P175	1.06	1.05	1.07		1.07	2 IBM 8/18/12 C180	16.40	16.30	16.50	15.05	1.45	180.00	2 IBM 8/18/12 P180	1.60	1.58	1.61		1.61				
3 IBM 8/18/12 C185	12.13	12.05	12.20	10.05	2.15	185.00	4 IBM 8/18/12 P185	2.43	2.42	2.45		2.45	5 IBM 8/18/12 C190	8.30	8.25	8.35	5.05	3.30	190.00	6 IBM 8/18/12 P190	3.75	3.70	3.80		3.80				
7 IBM 8/18/12 C195	5.15	5.10	5.20	.05	5.15	195.00	8 IBM 8/18/12 P195	5.67	5.60	5.75		5.75	9 IBM 8/18/12 C200	2.79	2.78	2.80		2.80	200.00	9 IBM 8/18/12 P200	8.40	8.35	8.45	4.95	3.50				
11 IBM 8/18/12 C205	1.33	1.31	1.34		1.34	205.00	11 IBM 8/18/12 P205	11.98	11.85	12.10	9.95	2.15	12 IBM 8/18/12 C210	.57	.56	.58		.57	210.00	12 IBM 8/18/12 P210	16.27	16.15	16.40	14.95	1.45				
13 IBM 8/18/12 C215	.24	.23	.25		.25	215.00	13 IBM 8/18/12 P215	19.70	21.70	19.95	19.95	1.75	14 IBM 8/18/12 C220	.09	.06	.12		.12	220.00	14 IBM 8/18/12 P220	26.28	25.00	27.55	24.95	2.60				
20 Oct 12 (113d); CSize 100; Div 0.85 USD; R 0.54																													
1 IBM 10/20/12 C175	22.48	22.35	22.60	20.05	2.55	175.00	1 IBM 10/20/12 P175	3.02	2.98	3.05		3.05	2 IBM 10/20/12 C180	18.38	18.30	18.45	15.05	3.40	180.00	2 IBM 10/20/12 P180	3.92	3.85	4.00		4.00				

93 Default color legend Zoom 80%

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2012 Bloomberg Finance L.P.
SN 268301 H279-942-2 29-Jun-12 14:49:46 CDT GMT-5:00

Exhibit 1.20

Options will always trade for their intrinsic value plus a certain amount of time value barring any special situations such as a hard-to-borrow stock (big short interest or unshorable), put-call parity not

holding up (i.e., VIX options), or in the case of a huge **dividend** between now and expiration. All of these factors can create a scenario where an option will trade for less than intrinsic value. See Exhibit 1.20.

Anticipating the intrinsic value of an option at expiration based on your forward thesis of the underlying security can help you determine theoretical P&L at that time. Using the Greeks can help quantify the day-to-day influences with accuracy.

Time Value

The time value of an option is determined both by the amount of time it has until expiration and the volatility of the corresponding underlying, coupled with demand for the option(s) themselves.

All options are losing time value as they approach expiration. The speed at which they decay is not linear and is determined by several forces including changes in time, volatility, and even changes in dividends and interest rates.

Time value should be a focus when you are trading, but it is only a piece of the entire puzzle. Time value and implied volatility go hand in hand. The more volatile a stock is or is going to be, the more time value it will have.

Some beginners may separate intrinsic from time value and/or just focus on the delta of an option. As traders become more advanced they understand the need to focus on the total value of the option and how that value will morph with changes in the marketplace.

Because out-of-the-money options are *completely* comprised of time value (which will eventually dwindle to zero by expiration) they can only become

profitable on expiration if the stock moves above your break-even level, which may be much higher than the current stock price. That's not to say that they cannot gain value beforehand, but beginners who use the "stock price at expiration" trick to select strikes may find themselves frustrated.

In-the-money options prices are a combination of both intrinsic value plus time value and generally will have lower break-even points than their out-of-the-money counterparts.

The concept of time value is both objective and subjective, with a ton of gray in between. The reality is that it takes a trained eye to spot minute abnormalities in time value and take advantage of it. Time value *at that moment* is what the market believes that it should be. This doesn't mean that it's 100 percent accurate or that it won't change, because obviously it will.

What you find is that you have to layer on multiple lines of analysis to come to the best solution for your thesis. In the beginning, you may make money, but as you become more experienced, the same strategy could make you even more money (or lose less) because you have an educated eye for time value and volatility separate from what you see in the stock.

Until that time comes, simply be aware of the time value and/or implied volatility that you are buying or selling and record it in your journal or screen captures to see what you could have done differently, if anything, to improve your trades.

KEY POINT:

An option will typically trade for its intrinsic value, plus an amount of time value. Some options are comprised of completely time value (have no real value) and some may be trading for only their intrinsic value (typically these options are very deep in the money and close to expiration).

In- At- Out-of-the-Money Recap

In the money, *at the money*, and *out of the money* are terms that options traders use to express where the option strike price is in relation to the stock price. To find whether an option is in or out of the money you simply need to know if that option has intrinsic value or not. If a put is in the money the same strike call *must* be out of the money. A put and a call with the same strike can never both be in or out of the money, but they can be *at* the money, which basically means that the strike price is equal to the stock price.

- In the money—Has intrinsic value.
- Out of the money—Does *not* have intrinsic value.
- At the money—Strike price is at or very close to the stock price (may have intrinsic value or not).
- In-the-money *calls* have a *strike price* that is *below* the *stock* price.
 - If the call strike price is above the stock price, it's always out of the money.
- In-the-money *puts* have a *strike price* that is *above* the *stock* price.
 - If the put strike price is below the stock price, it's always out of the money.

I use the same example as I used earlier to determine time value. If there were a dividend, the call prices would be cheaper by the dividend amount.

ABC Stock Is \$50.

Calls

60 call \$1.50—Out of the money

50 call \$4—At the money

40 call \$11.50—In the money

Puts

60 put \$11.50—In the money

50 put \$4—At the money

40 put \$1.50—Out of the money

Options to Control Risk

All options are derivatives of an underlying asset such as a stock, ETF, bond, future, or other security. The rules that govern options prices (Greeks, pricing models, etc.) are applicable for just about every security that has options listed on them. This means that you can essentially price and trade an option on just about any security that has value (or perceived value) and another party that is willing to trade with you. If you understand how a particular asset behaves, you simply need to employ the option strategy that best suits your belief.

Generally speaking, the cost of carry and the implied volatility component of an asset are the most important variables when it comes to pricing options on securities other than vanilla equities or simple ETFs.

Compared to the underlying asset, an option can have much less risk. When you buy or short a stock, future, bond, or ETF by itself you have 100 percent of that underlier's price times the number of shares at risk at all times! You are also exposed to 100 percent of that asset's volatility and therefore its risk. By taking this action you are also limited to direction and com-

KEY POINT:

To find the amount of time value for an in-the-money option, simply subtract the amount the option is in the money from the total value of the option. For a quick and dirty method, just look at the corresponding out-of-the-money option's value.

1) Actions

2) Positions

3) View

4) Settings

99) Feedback

Option Scenario Analysis

New Portfolio

Unsaved Portfolio

< Add Position >

USD

06/29/12

2) Group By

3) Positions

3) Hedge

3) Scenario Matrix

3) Scenario Chart

[-] Portfolio Summary

IBM US equity

IBM US equity

IBM US 7/21/12 C175 equity

IBM US 8/18/12 C175 equity

IBM US 8/18/12 P175 equity

IBM US 8/18/12 C200 equity

IBM US 8/18/12 C205 equity

Position

Cost

Mkt Px

M

Delta Notional

Beta

Delta Futures

Delta

Gamma

Ivol

Vega

Rho

Thet

1,045,554

1,045,554

2.53 of SP12 Index

53.57

207

1,130.33

1,053.87

-273

100

195.28

195.28

1

19,519

.82

.05

100

0

.00

.00

.00

0

20.75

20.65

m

0

.82

0

0

29.61

.00

.00

.00

50

10.00

21.15

m

880,624

.82

2.13

4512

99

24.83

625.69

891.76

-167

5

1.04

1.025

m

-11,094

.82

-.03

-.57

11

24.89

70.61

-15.57

-17.

40

2.84

2.825

m

280,278

.82

.68

1436

245

17.19

1,060.48

324.67

-195

-30

1.32

1.34

m

-123,772

.82

-.30

-634

-148

16.46

-626.45

-146.98

107.

5) Hedge With

Instrument

SPX Index

Ticker

ESU2 Index

6) Apply Hedge

Ticker

Position

Delta Notional

Raw Beta

Totals

IBM US Equity

IBM US 8/18/12 C175 Equity

IBM US 8/18/12 P175 Equity

IBM US 8/18/12 C200 Equity

IBM US 8/18/12 C205 Equity

1,046,036.5

0.82

100.00

19528.00

0.82

50.00

881030.25

0.82

5.00

-11099.39

0.82

40.00

280406.77

0.82

-30.00

-123829.13

0.82

Delta Notional

* Raw Beta

- Target DN

Adjust Delta Notional

Mkt Px of Ticker

* Contract Size

/ Contract Val

Number of Contract

Round To

1,046,036.50

0.82

0.00

854,219.18

1,352.25

50.00

67,612.50

-12.63

-13

Exhibit 1.21

pletely sensitive to moves in the underlier. A simple example would be the purchase of 100 shares of stock at \$100. For each dollar move up or down, you are gaining or losing 100 bucks, no exceptions. See Exhibit 1.21.

Augment Risk

Options can be used to enhance, amplify, or reduce exposure to a stock's movement. They can increase or decrease your P&L (profit and loss) correlation

with the underlying asset. For most stock, index, or futures traders, options would probably be best used as a simply leveraged proxy for the underlying asset. This would simply mean buying a high delta put or call with close to the same net deltas that you would have bought in the underlying, but for a fraction of the price.

This reduces most types of risk and allows for an amplification of returns if the trade moves in your favor.

KEY POINT:

Focus not only on the option's position relative to spot, but on its break-even, delta, cost, and theta. Selecting a singular, unhedged option has everything to do with your thesis in the movement of the stock and the speed and distance at which you think it will move.

Smart Investor Tip!

Risk can be controlled by using a number of techniques and strategies with or without stock positions.

KEY POINT:

The models that professionals use to determine a theoretical value of an option at any moment in time come with a big caveat: *constant delta-neutral hedging*.

Because most nonoption investors really only have one, maybe two choices when it comes to investing direction—buy a stock long or go short—they are highly disadvantaged. In fact, shorting stock can be extremely risky and not suitable or tolerable for some, so non-option investors are extremely limited in how they can play the market.

In my first book, *Your Options Handbook*, I noted that the ability to hold a stock for an unlimited period of time doesn't benefit an investor because it doesn't force him or her to be as strict in preparation, thesis, and risk management.

Some stock traders become married to their positions, they don't have an end to the trade, they just buy it, it goes up, then they hold it, then it drops down, hold it, it becomes a horrible losing trade and they continue to hold it some more, in some cases until the stock dwindles to a fraction of where they bought it.

The missed opportunities in this sort of mind-set are enough to drive me mad! When used properly, options force traders into thinking about the future in more detail; we are also required to think about risk and reward and set a true, realistic time horizon for our trades, with a beginning, middle, and end. In most cases option traders have a more specific and what I believe to be superior plan.

With options, you can control with precision the amount of risk, and type of risk for that matter, you wish to take in any given trade in any situation. This can be achieved through a myriad of call and put

combinations, and by adjusting the number of contracts bought or sold either in balance or on a rationed basis.

I remember trading thousands of contracts an hour on the floor of the exchange and being forced into positions I did not want to be in. While this was happening, I had to be creative. I had to come up with ways to protect the bad position that I was being put in, while efficiently and quietly controlling risk. I frequently used nonstandard spreads and ratios, or looked for cheap options to buy if I needed to get long some or expensive options to sell if I needed to get short. For me, my primary objective was being able to get an "edge" (better price) to that theoretical price I discussed earlier and then manage the risk on the fly from being forced into so many positions.

For most of you, the objectives are opposite. Sure you want to get a good price for the strategy that you are using, but it's more about the movement in the underlying security that will bring you profits.

Most of you will not operate your accounts using that technique, so don't get too hung up on the whole theoretical price thing, just use it to get a good execution on entry and exit and manage your trade with the information you gather.

Remember that the word *risk* carries many meanings and can be used to describe many different areas of exposure. Think of everything that could possibly go wrong for each type of risk. Also think of every individual Greek measurement as a form of risk and be

sure that you can quantify that risk at any point during your trade.

Basics of Hedging

Hedging can be thought of as any form of risk reduction. For all traders, hedges are used to control runaway losses or simply reduce the beta of a portfolio.

When trading only stocks, risk tends to be associated with straight dollars (price) and volatility (beta, ATR, etc.). These specific risks can be partially offset by diversification, hedging with an index, or moving in and out of cash or stock positions at the appropriate times.

Hedging an equity portfolio by diversification may mitigate volatility, but if the entire market were to roll over in your long-only portfolio, chances are you will keep losing money, albeit slower than your nondiversified friends. See Exhibit 1.22.

To better balance this portfolio you might look at the correlations and beta of each stock in the portfolio to the hedging index and perhaps the weighing of the stocks in the index itself to get a more accurate relationship.

I discuss both these techniques later when I get into risk management in detail.

To make life easier for those of you who don't want to hedge with options, there is a nice feature in the OSA screen where Bloomberg can quickly figure the deltas (futures contracts or shares) of a specific index or ETF that are needed to gain the desired hedge based on the raw beta and shares of your stock positions. (See Exhibit 1.23.)

In addition, stop losses can be used to control catastrophic occurrences, but they are inefficient and useless in a gap situation, where the underlying security makes a large price move while the market is closed.

This example of a stock/futures hedge has its limits and would not necessarily protect you if one or more stocks in the portfolio were to experience a catastrophic event such as a major earnings miss, FDA denial, or bankruptcy. Again, this is why stock-only traders have far fewer "risk controls" than option traders.

A Little More Homework

Option traders have many more ways to control price and volatility risk as well as the ability to place an absolutely effective stop loss that will perform its function even in a gap scenario.

KEY POINT:

Delta is how option traders measure price risk compared to the stock. It can also be thought of as the amount of "dollars" you are long or short compared to the underlying stock.

1) Actions - 2) Positions - 3) View - 4) Settings - 99) Feedback - Option Scenario Analysis																
New Portfolio		<Untitled Portfolio>				< Add Position >		USD		08/11/12				21) Group By		
32) Hedge		33) Scenario Matrix				34) Scenario Chart										
f-1 Portfolio Summary		Position	Mkt Px	M	Cost	Total Cost	Mkt Value	P&L	Delta	Delta Notional	Gamma	Theta	Vega	Rho	IVol	Beta
IBM US Equity						113,367	113,409	42	-2	-369	119	-75.72	408.12	-127.58		
IBM US Equity						113,367	113,409	42	-2	-369	119	-75.72	408.12	-127.58		
IBM US Equity		550.00	199.29	1	199,290.00	109,610	109,610	0	550	-109,610	0	.00	.00	.00		.84
IBM US 09/22/12 P195		17.00	2,235 m		2,210.00	3,757	3,799	42	-552	-109,979	119	-75.72	408.12	-127.58	15.36	.84

Exhibit 1.22

Delta Notional	1,046,036.50
* Raw Beta	0.82
- Target DN	0.00
Adjust Delta Notional	854,219.18
Mkt Px of Ticker	1,352.25
* Contract Size	50.00
/ Contract Val	67,612.50
Number of Contract	-12.63
Round To	-13

Exhibit 1.23

To obtain these advanced risk controls, option traders must monitor a couple more indicators. The way to think about it is that trading a stock could be likened to flying a single engine Cessna, whereas a professional option trader is piloting a Gulfstream jet, which is faster, more agile, more comfortable, and able to fly above most of the weather. The trade-off is the more advanced systems that pilots would need to learn and the nuances that they would have to be aware of while in flight, or in this case, in a trade. (See Exhibit 1.24.)

That's what this book is designed to help you with. It's the manual for all those advanced systems.

An option trader's "heads-up display" should be a combination of everything that a seasoned stock investor should use along with several other tools:

- Risk viewer
- Portfolio manager
- Strategy simulator
- Option chain
- Volatility chart
- Calendar

Bloomberg has these tools as part of their offering, so all you need now is the knowledge.

Options as a Hedge

Assume that stock traders are bullish on tech stocks and buy 100 shares of IBM for \$200, their risk is quite clear. Even if they sell 75 shares of the DIA for \$130 as a hedge, they may get minimal protection if IBM were to go bankrupt. That's an extreme example, but what if the price got cut by 20 percent?

Smart Investor Tip!

These are the basic tools that you need to manage your position effectively. You can layer on a plethora of other tools that can make your trading more productive and efficient, but when you combine these basic tools with your primary checklist to analyze whatever security you are trading, you have everything you need.

1) Actions2) Positions3) View4) Settings99) FeedbackOption Scenario Analysis

Last Loaded PortfolioJared test 1< Add Position >USD06/29/1220) Group By

31) Positions32) Hedge33) Scenario Matrix34) Scenario Chart

	Position	Cost	Mkt Px	Delta Notional	Mkt P&L	Delta Money	Delta Futures	Beta	Delta	Vega	Theta	UDelta	UGamma
[-] Portfolio Summary				1,357,850	57,920	13,578	3.97 of SPU2 Index						
AAPL US Equity				583,100	23,080	5,831		1.77		1000	.00	.00	
AAPL US Equity	1000.00	560.0000	582.80	583,100	23,080	5,831		1.77	1.03	1000	.00	.00	1.00
GOOG US Equity				579,500	29,590	5,795		1.73		1000	.00	.00	
GOOG US Equity	1000.00	550.0000	578.80	579,500	29,590	5,795		1.73	1.01	1000	.00	.00	1.00
IBM US Equity				195,250	5,250	1,953		.47		1000	.00	.00	
IBM US Equity	1000.00	190.0000	195.28	195,250	5,250	1,953		.47	.82	1000	.00	.00	1.00

53) Scenario Actions

ScenarioPrice Shift %NotionalP&L FromCost

	Px Shift %	Vol	Date	Rate	P&L	P&L %	Delta	Gamma	Theta	Vega
	Step	Flat		Flat						
			--/--/----							
I1	-20.00%	0.00	06/29/12	0.00	-214.9k	-16.90	3k	0	0	0
I2	-10.00%	0.00	06/29/12	0.00	-78.81k	-6.06	3k	0	0	0
I3	-4.00%	0.00	06/29/12	0.00	2.6k	0.20	3k	0	0	0
I4	-2.00%	0.00	06/29/12	0.00	29.74k	2.29	3k	0	0	0
I5	0.00%	0.00	06/29/12	0.00	96.88k	4.38	3k	0	0	0
I6	2.00%	0.00	06/29/12	0.00	84.02k	6.46	3k	0	0	0
I7	4.00%	0.00	06/29/12	0.00	111.16k	8.55	3k	0	0	0
I8	10.00%	0.00	06/29/12	0.00	192.57k	14.81	3k	0	0	0
I9	20.00%	0.00	06/29/12	0.00	328.26k	25.25	3k	0	0	0

This stock-only portfolio is long a ton of delta!

Exhibit 1.24

If it were a company-specific event, let's say the Dow might be down only 4 percent with the move in IBM. That means that they would lose approximately $\$40 \times 100$ or \$4,000 in their IBM positions and make about \$390 in their DIA positions.

That's a net loss of \$3,610. Was the hedge effective?

Sure, they could have sold 100 shares in the SPDR Dow Jones Industrial Average ETF (DIA), but then how are they going to make any money with IBM having a beta of 0.75? That one-to-one hedge still would have only brought in another couple hundred bucks.

Sometimes you must assume the unexpected.

If you were foolish enough to get short Apple at the beginning of the 2012 and even if you used the SPX as a one-to-one hedge, your short position in Apple just ran 50 percent, while your one-to-one SPX hedge only protected about 12 percent. Even if you used the Nasdaq as your hedge, it was only up 20 percent!

An ineffective hedge can be extremely frustrating.

More Accurate Risk Reduction

Let's go back to IBM for a second and assume that instead of trading the 100 shares of IBM and

75 shares short of DIA, I just use a basic bull-put spread in IBM.

Perhaps I could sell a 190/180 bull-put spread (which is an option strategy that bets the stock to stay above 190) for \$1.50 credit (\$8.50 is max risk). This bull-put spread caps my risk and gives me similar risk exposure, but at a much lower margin cost.

I am only trading 100 shares of IBM, so I will do one spread (because each option controls 100 shares of stock and this spread has about a 30 delta, which was the same as my hedged stock/index position).

Let's first assume IBM experiences catastrophe and drops 20 percent, which puts the shares \$40 lower, how much would I lose?

In this case, the max risk on one spread would be \$850, a far cry from the \$3,600 in the stock, but with the same delta! What's even better is that if the stock dropped, but stayed above \$190, I would still make 18 percent in my spread while the hedged stock trader would be losing.

As you can see my "probability of success" is greater using the spread, but for that advantage, I cap my return at 18 percent. This may seem like a large sacrifice, but think about it—an 18 percent move in a \$200 stock would be \$36. Chances are that IBM may not get that far in 30 days, especially given the fact that the monthly average true range (ATR) is less than \$13. The reality is that if IBM rallied 10 percent in that time, you would probably take profit on your stock position anyway.

The bull-put spread is just one of many risk reduction strategies we examine in this book.

Combining Stock and Option Hedges

You don't have to completely use either options or stock to create a hedge or reduce risk. There are many ways you can combine and harmonize stock and options together to customize a risk profile and control your risk. Strategies such as covered calls, married puts, and collars are all ways to protect long stock. Obviously you can do the same with short stock positions, just using different options. Finding the most appropriate strategy will be highly correlated with how profitable or not profitable you are in an existing position or portfolio in addition to how you want to protect yourself.

Why Doesn't Everyone Trade Options?

Options get a bad rap, mostly because they are vastly misunderstood and misused by inexperienced traders. In some cases, with certain strategies the inherent greed in most investors deters them from capping their profits and using a spread strategy; even if it increases their chances of success by tenfold, they are still reluctant because there is always that chance of striking it filthy rich on one trade. I detail all of this in later chapters and compare the different strategies and their applications.

Depending on your choice of strategy, positioning, and risk profile of the option strategy you select, you

could be knocking out singles and doubles with a high rate of success, hitting home runs that pay for all your losses and then some, or find yourself somewhere in between.

Options—Leverage and Probability

Options, unlike stocks, can allow traders to truly customize and trade in harmony with their time horizons, reduce risk, and make bets/investments with odds better than 1:1 and probability better than 50/50. If I can place a bet using a certain option strategy with an 80 percent statistical probability of winning on a company that has great fundamentals, all the while limiting my risk to just 10 percent of what I could potentially lose in the stock to achieve the same return, I would take that any day over just buying stock. See Exhibit 1.25.

What drew me to options is the fact that I can basically trade them on any company I choose, not to mention apply a strategy with a set risk, reward, and probability, and at the same time still have a major advantage over the regular stock trader. Essentially, options allow you to be “sort of right” and still make more than a comparable stock trade. And, if you were to simply follow my methods when trading long-call or long-put options, generally your cost will be about 10 to 15 percent of what you would have to pay for the stock.

As much as I loathe the markets being compared to the casino, it just so happens to be the perfect analogy.

In many respects, options markets are closely tied to the games you find on the Las Vegas Strip. The question is whether you want to be Steve Wynn or the guy who calls 1-800-GAMBLER after your pockets and bank account are finally empty.

It's important not to generalize here. Each game played in the casino has different objectives, odds, risk, costs, speed, behavior, and so on. The same is true of the markets, stocks, options, and the strategies or games you select.

I remember taking my “non-gambling” girlfriend to Las Vegas and walking the floor for hours explaining all the different games, their odds, advantages and disadvantages. What interested her more was not the games themselves, but why people choose to play certain games in certain ways.

Take roulette for example (see Exhibit 1.26).

In America, there are 38 slots on the wheel and 38 different places to lay a chip that will generally pay you 35 on your money. Right there was the casino's edge in this game, but we get to that later. Why do some people lay 35 chips on the table inside to only win 35, which would only bring them to even? Is it the fear of losing? Do they not understand the game? Maybe both? Some lay 38 chips only to win 35.

There are others who keep betting the same number or cluster on the table, hoping that that one number or small group of numbers hits eventually, trying to win before they lose it all or get into a negative position. They even look for “sticky” numbers that tend to repeat themselves.

KEY POINT:

Even selling a put or a put spread at a level at which you would not mind owning the stock is a method you can employ to lower your risk.

Here is a simple comparison of a move in IBM stock and a call option that fit my parameters; which would you want to own?



Exhibit 1.25

Then there are the statistical nuts who bet the outside, praying for black or red and doubling their bet each time they lose, praying for that mean reversion and their number to hit. The casino limits this action by capping the amount you can bet in certain areas.

Generally, most casual gamblers don't have a "system" or intimate knowledge of the game they are playing, which almost always leads to disaster.

The bet that you would take is both dependent on your personality and your knowledge of the game and opinion on where you think the ball (or trade) will land.

Double-Zero Roulette			
Bet	Pays	Probability Win	House Edge
Red	1	47.37%	5.26%
Black	1	47.37%	5.26%
Odd	1	47.37%	5.26%
Even	1	47.37%	5.26%
1 to 18	1	47.37%	5.26%
19 to 36	1	47.37%	5.26%
1 to 12	2	31.58%	5.26%
13 to 24	2	31.58%	5.26%
25 to 36	2	31.58%	5.26%
Sixline (6 numbers)	5	15.79%	5.26%
First five (5 numbers)	6	13.16%	7.89%
Corner (4 numbers)	8	10.53%	5.26%
Street (3 numbers)	11	7.89%	5.26%
Split (2 numbers)	17	5.26%	5.26%
Any one number	35	2.63%	5.26%

Exhibit 1.26

Source: www.wizardofodds.com.

While you play, the casino takes a certain percent in edge in just about every bet in the game of roulette. Think of that 5.26 percent as a commission of sorts.

In the world of options, singles, or spreads, leverage can be your best friend or worst enemy. Just like in the casino you have the ability to make a lot of money with

a little—it just depends on how much you want to win, want to spend, and what you want your likelihood of winning to be.

In the stock market, the main difference is that you have this third party (the stock), which has a mind of its own in a sense. It's kind of like playing craps but adding

weight to a specific side of the die to coax them into landing on six more often than any other number. If it weren't illegal and you could do such a thing, it would be prudent to bet on the six more often than other numbers.

I bring all this up because it's the way you should be thinking if you are going to be a true options trader. What is the probability of my being right/wrong in my trade and for that probability, what am I willing to risk?

Options strategies are universal and can be used to place “bets” on direction, time, volatility, interest rates, and so on, on just about any security in any market anytime, anywhere, no matter the situation. With them, I have much more control over the position than if I just went long or short the underlying instrument. (See Exhibit 1.27.)

Options strategies reduce volatility in your portfolio so you don't have to be a slave to the irrational crowd behavior that is often seen in the stock market. You will be able to create your own odds, which is not only empowering, but the only way you should want to trade.

Try to think outside your normal “box,” because once you learn options, you can trade just about anything that is presented to you and choose the appropriate strategy that not only truly matches your opinion on that stock but offers you a hedge against the sometimes irrational world we live in.



Video: Probability and Risk

www.wiley.com/go/BloombergVisualGuidetoFinancialMarketsVideo1.html

Options for Strategy

Your strategy should be developed through a combination of your thoughts on the underlying asset, leverage, probability, risk, protection, and anything else you deem appropriate all rolled into one. But there's an important step you shouldn't forget in your calculations.

Your research should include a realistic theoretical path that you feel the underlying security will take in the time frame you select. (This doesn't have to be perfect, just a realistic expectation.)

Building a strategy based on that and the ultimate price the security will be at the end of your time horizon enables you to make sense of your investment plan from all angles, such as volatility, risk, earnings, news, economy, and probability. This will also be the strategy that will allow you to capture the most profits.

What I mean is that you don't want to pick a strategy that will make you 20 percent on your investment if you see a high probability of the security experiencing a 70 percent drawdown before reaching your goal.

Here's what I'm talking about: Imagine that your research determined that XYZ oil and gas stock was going to finish right around \$110 on June expiration, which is in 90 days. It's currently trading at \$95. In that time frame the stock will release an earnings report and four oil and gas inventory reports . . . and there is a war brewing in the Middle East.

In this complex situation, a stock trader would have no choice but to bear the full brunt of all

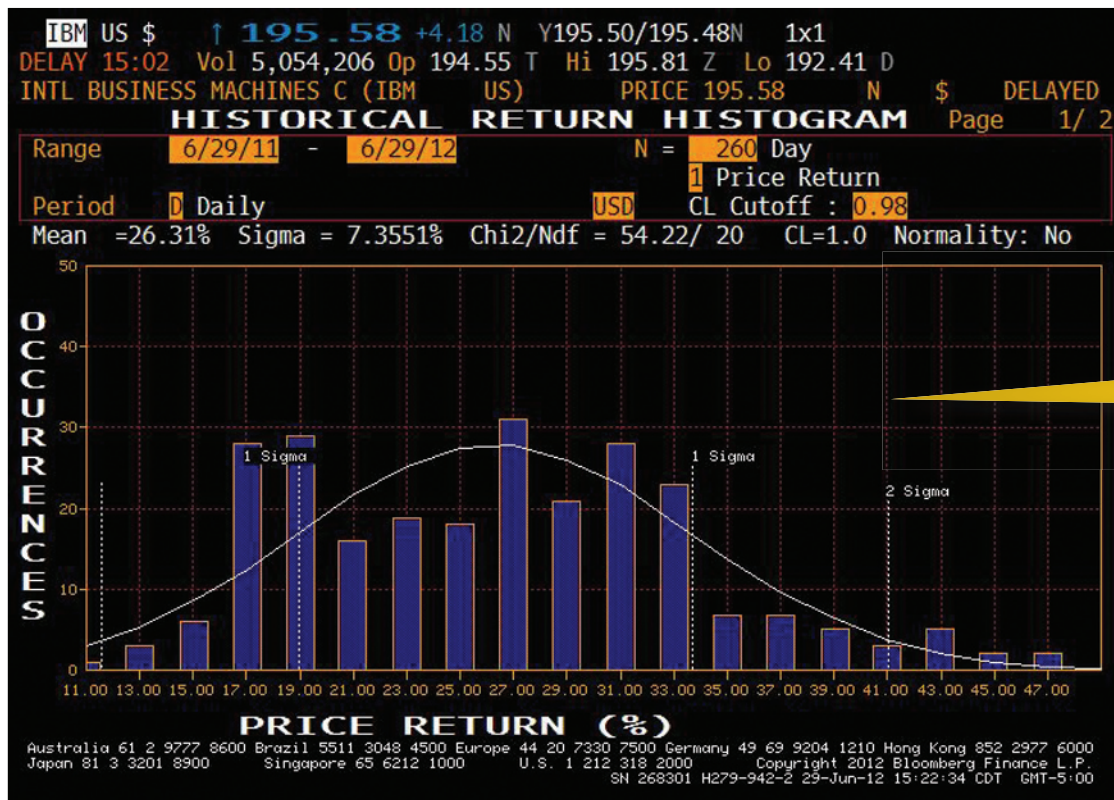


Exhibit 1.27

KEY POINT:

Try to let your market/stock thesis determine the appropriate strategy as opposed to locking yourself into one “signature” strategy. Certain market conditions are better suited for specific strategies.

those market events and their probable volatility, basically praying for the stock to get through unscathed.

As an option strategist, you have your choice of strategies that take into account all the data. You get to choose an options strategy that allows you to profit from the rise in the stock, but maybe tone down all the bumps on the road. For example, in this case, a simple in-the-money bull-call spread might help decrease all that volatility while still giving you a superior return on investment (ROI) compared to the stock.

Or if you thought it was going to be an “all or nothing” sort of event, you might position that bull-call spread out of the money, so it was much cheaper—heck, while you’re at it, if you weren’t sure about direction at all, you might combine that bull-call spread with a bear-call spread and form an iron condor.

Again, it’s all about compound thinking and getting out of your mind’s normal boundaries that have been set by years of routines, beliefs, and fears.

Technical Patterns

For this guide, I choose to focus more on techniques, strategies, and nuances of the option markets themselves. That said, all of the strategies in this guide utilize some form of technical analysis so that you can quantify volatility with price points in the stock as well as identify patterns and trends that are important to your trade.

I don’t care what you think about technicals—love ’em or hate ’em, you should at the very least take a quick glance at a chart and find some basic levels and trends.

In my 16 years trading stocks and options I have found it next to impossible to trade derivatives without having knowledge of technical and volatility trends on top of my fundamental analysis.

Technicals also narrow down the sheer number of option strategies and strikes to just one. The only strategies that might not require technical analysis are the deep-in-the-money long call and long put because they are limited in risk and tend to only have slightly worse breakevens than the stock itself.

If you are completely anti-technical for whatever reason, at least find basic support and resistance levels in a chart using major moving averages, trend lines, or other big-picture tools. See if those points coincide with the 52-week high or low as it may add more or less weight to that level and help you choose the best strategy.

Basic moving averages (levels) and the most popular indicators (MACD, Fibonacci, Bollinger bands, etc.) can also give you a reference point for your profit targets, stop losses, and, most important, to select the best strategy, strikes, and expiration.

I reference certain extremely common technical indicators throughout this book when I am discussing strategy. All of them are basic and fairly easy to learn in a short time.

In my first book, *Your Options Handbook*, I spent quite a bit of time on the subject of technicals, fundamentals, and general market and option knowledge. The book no doubt complements this guide. You can also pick up a copy of the *Visual Guide to Technical Analysis* as another reference.

The bottom line is that you should at least understand the basics!

Volume Trends

Volume is the cause and price is the effect. Think of volume as a river's current flowing into or out of a stock. If you are depending on a strong stream of current to carry your stock along the river at a certain pace and that current dries up, you may have a problem on your hands.

Just like water building up behind a dam, high levels of volume pouring into a stock can cause an explosion of price movement. If you can spot the tsunami before it hits the shore or identify an undertow you can exploit this underutilized indicator.

Consistent volume trends observed over time will help you anticipate the "real" trend in volume at the current moment in time. A rising tide on an ocean beach doesn't just flood in; it is a series of ebbs and flows that gradually move the water up the beach. (See Exhibit 1.28.)

Volume trends have gotten a bit clouded with the introduction of high frequency trading (HFT), which is basically bogus volume that is occurring

in large quantities between normal trades and prices.

You can think of HFT as an amplifier of normal variations in volume; unfortunately that amplification, like sound, can cause distortion. It takes practice to see through it all.

HFT strategies vary, but are generally favored and utilized when markets widen out and become irrational or scared. In those instances, HFT algorithms can generate tremendous profits and perhaps exacerbate price and volume movements. It can also make your analysis a bit more difficult. See Exhibit 1.29.

Obviously, volume trends are important to the downside as well, but generally volume tends to be higher when stocks are dropping because of the effects of fear, so you must account for this to an extent. Use past history to give you a sense of normal volume, but don't go back too far and be sure that you correlate news and economic events with high- or low-volume periods to normalize the data.

Volume changes influence stocks, and that means they can have a direct effect on derivatives. I am going to share a couple of volume hints and tricks to help you make the best use of this market current.

Is the CBOE Put-Call Ratio Useful or Relevant Anymore?

The CBOE.com posts put and call volume for the entire exchange, equity market, index, VIX, and the S&P

Smart Investor Tip!

Reading volume properly and understanding how to compare and contrast them to one another can be like getting a "free look" into the psyche of the market participants.

A rising volume trend in one direction or another will let you know if that stock's overall tide is rising or falling and which direction is really favored.



Exhibit 1.28



VWAP basically is the ratio of value (price) to volume; it lets you see where the bulk of trades are occurring.

Exhibit 1.29

500 specifically. Based on this overall volume, the site also displays a ratio of the puts and calls separately.

This question of its significance and usefulness is obviously debatable. My theory is that with the rise of option volume, education, and sophistication, the imbalance between call and put usage is on the decline. This means that there is more equal usage between puts and calls and they are used not only for bullish and bearish tactics, but also as parts of spreads, which may skew the data (no pun intended). All that leads to a less helpful indicator.

I took all the data from the total exchange put-call ratio since inception and you can see that the trend line shows the average increasing, which helps to prove my thesis.

But that doesn't mean the put-call ratio is completely useless. To get a more reliable signal, you can combine a low put-call ratio, decreasing volume in the SPY, DIA, QQQQ, or market as whole, and a low relative VIX (general implied volatility reading) if you are looking to identify an overbought, complacent market. Thus this takes the bearish contrarian stance or vice versa if the markets have been selling off.

Finding Abnormalities

Volume spikes in a security are often a telltale sign of an event. Usually there is a dramatic change in price during that spike, and that is the giveaway. But what if there is increased volume for no apparent reason? Or what if there is no abnormal price movement in the security itself? (See Exhibit 1.30.)

The option markets can play a vital role in identifying the bias of the abnormality (bullish or bearish) as well as gauging whether that volatility is expected to continue.

If you notice volume to be unusually high a certain day or over a short period of time, take a look at the implied volatility of the options as well as their volume. Here's why.

First, if you notice elevated volume in the stock and one or more options with volume, but no major change in the stock price or implied volatility of the option, chances are that the trade may have been previously made and simply crossed on the exchange. Professionals sometimes arrange a trade off the floor, then send it to the floor with a buyer and seller already lined up.

Shares may also change hands because one or both sides wants to remain delta-neutral (we discuss this more later) and therefore agrees to a price at which to trade the stock.

Because the trade isn't sent down as a straight buy or sell, the stock price may not be influenced.

If it has changed more than the delta says it should have and there is a spike in implied volatility, then you might have a buyer on your hands. If the option is an out-of-the-money call close to expiration and the volume is much higher than the average volume traded, it could be a sign that someone either knows something or has done some serious research to anticipate a move higher.

There are instances where the trade is simply a protective move or a hedge against a bigger position.



If you notice a big volume spike in the stock and minimal change in the stock price, but a large change (up or down) in the implied volatility combined with abnormal volume in one or more options, then there may be a large buyer or seller of that particular option executing a trade to speculate or protect a position.

Exhibit 1.30

The MOST screen is a great tool to scan for stock volume in any time frame; you can also use options volume search to scan for anomalies there.

MOST

95 Settings

96 Actions

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Most Active Securities

Equity Index

SPX

Day

Previous

Standard

Volume Average

5

Days

Interval

1 Min

Detailed

Change

Percent

News

Security

Name

Bar

Largest Volume Increase (Previous Trading Day)

51 Volume

52 Chg Up

53 Chg Down

54 Value

55 Volume Chg

56 Highs & Lows

Security	d	Last	Volume	% Vol	Security	d	Last	Volume	% Vol
1) DUKE ENERGY CO	d	23.28	2.92M	+217.85%	15) RYDER SYSTEM IN	d	35.31	378.38k	+141.96%
2) EASTMAN CHEMIC	d	49.72	1.98M	+217.10%	16) DEAN FOODS CO	d	16.77	1.09M	+141.72%
3) C.H. ROBINSON W	d	60.87	1.01M	+214.74%	17) TITANIUM METALS	d	11.19	630.08k	+140.82%
4) MICRON TECHNOL	d	6.55	12.52M	+177.89%	18) VULCAN MATERIA	d	39.89	277.19k	+139.07%
5) BEST BUY CO INC	d	22.20	4.40M	+163.08%	19) LIFE TECHNOLOGI	d	43.85	965.40k	+137.79%
6) COVIDIEN PLC	d	54.12	1.52M	+162.14%	20) LEXMARK INTERN	d	26.48	317.33k	+134.40%
7) AMERICAN ELECTR	d	40.42	1.13M	+159.96%	21) MOTOROLA SOLUT	d	47.35	565.85k	+133.66%
8) INTUITIVE SURGI	d	565.97	109.97k	+155.32%	22) ROCKWELL AUTOM	d	64.46	580.77k	+132.72%
9) FOREST LABORAT	d	35.79	722.24k	+153.24%	23) HCP INC	d	44.55	869.00k	+132.00%
10) DAVITA INC	d	97.62	350.08k	+152.78%	24) CENTERPOINT ENE	d	20.76	787.94k	+131.97%
11) SIGMA-ALDRICH	d	73.53	382.47k	+147.74%	25) HARRIS CORP	d	41.57	257.00k	+131.71%
12) AKAMAI TECHNOL	d	31.54	897.02k	+147.54%	26) BRISTOL-MYERS	d	36.05	3.34M	+131.24%
13) ALEXION PHARMA	d	103.85	655.57k	+147.21%	27) PEOPLE'S UNITED	d	11.80	1.07M	+131.06%
14) PATTERSON COS I	d	34.89	327.78k	+143.62%	28) AMGEN INC	d	74.36	1.85M	+130.73%

* News available

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SN 268301 H279-696-1 03-Jul-12 14:11:00 CDT GMT-5:00

Exhibit 1.31

At any rate, the information can be useful, especially if it is a level that you are concerned with or are hoping the stock can get to.

This technique works in both directions, with puts and calls, and is most effective when looking to identify quiet smart money trends. I usually look for minimum trades of 500 to 1,000 lots.

Be sure to scan the entire option chain in all months and strikes and look for similar volume in one or more options to help identify spreads and perhaps explain a bit more about direction. For example: You might see 5,000 of the May 50 calls being sold, which looks bearish, but if you look out in time, you might notice that 5,000 of the June 45 calls were bought. This changes the entire dynamic of the trade.

Second, if you notice a big volume spike in the stock, abnormal movement in the share price, and large changes in implied volatility coupled with abnormal volume in the options, it may also be a sign that the smart money is doing something, but also may be more reactionary than anticipatory.

In this instance, you really have to be good at identifying just normal daily noise and trading to get to the good stuff. When there is a price anomaly in a stock, stop orders and trigger orders often flood the market and that gets the attention of a bunch of active traders who just want to scalp the mean reversion or momentum. These types of traders and

their volume are typically useless for gaining any real knowledge in future direction other than a day or two out.

If the price movement is not that extreme and perhaps influenced by a broad market movement, then you might have an easier time finding the options that are being accumulated or sold and thus get an idea of the bets being made.

Scanning for Volume Anomalies

Volume anomalies can be used as a means to initiate a trade. The “MOST” screen allows you to scan the markets for abnormal options volume. (See Exhibit 1.31.)

Usually I run a generic scan for high volume relative to average volume and then filter down to industries and stocks. While I am filtering I search the news to find reasoning behind the volume. If there is no news or the news is counter to what the volume and price action are initially telling me, I start to look deeper, as those situations can often yield the best results.

Sounds counterintuitive, but here’s why it works: If the event is completely obvious, that often means that everyone is doing the obvious thing and the pros might just be selling into the euphoria or buying into the panic, which doesn’t do much for my strategies unless again I am just looking for a mean reversion intraday or swing trade.

Smart Investor Tip!

The most active options, or MOST screen, is one way to see a snapshot of where the biggest option volume is and to seek out potential trade. Big option volume should only be used as an initial catalyst or red flag to signal further research. It may help you to find volatility abnormalities or to identify buyers or sellers ahead of an event.

KEY POINT:

Big money managers often use abnormal market conditions to get into and out of their big trades. They may also use options to do so. Some use a big sell-off to accumulate shares or a rally to sell. Although it can be hard to detect all their movements, the option markets will often reveal their hand if you know what to look for.

