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random musings for traders at TD Ameritrade
Fall 2013



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LIKE TAPAS

SPREAD TRADING FOCUS:

34/A STRATEGY
FOR (ALMOST)
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**Popping the
Volatility Balloon**

Though volatility has become easy shorthand for trading talk, it can still be confusing. But looking at it through different lenses could clear things up.

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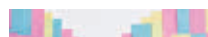
At some point in your option-trading career, you're probably going to come across Black-Scholes—the granddaddy of option-pricing formulas. So you won't mind if we beat you to the punch, and break it down in terms that should be useful.

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PLUS:
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A Quick Howdy

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edit.



Style and Substance

• That's what it's all about, right? We thought it was time to take the dense subject of volatility and option pricing theory, tone them down some, and give 'em some *thinkMoney* bling. Now before you say "Nay, can't be done!", ask yourself what you truly know about these two subjects, or rather, how much do you want to know about them? Probably not much more than what can fit into the palm of your hand. And that's the point—we'll give you the thumbnail version of what you ought to know about the two subjects.

First, you may think you understand volatility because it's now as common to hear the word dropped as much on financial TV as there are cat pictures on the internet. But

volatility can be very confusing, particularly since it exists as an abstract concept buried in an option pricing formula. You may already know that volatility can affect the price of options, but there are many ways to look at volatility that could help you become a smarter trader, beyond what you might hear every day by talking heads. Check out "Popping the Volatility Balloon," page 10.

And speaking of option pricing formulas, when was the last time you actually tried to understand what makes an option tick? Granted, dropping the phrase "Black Scholes" in just about any conversation isn't likely going to make you the life of the party. But having a foundational knowledge of this iconic

formula will make you a smarter trader. Be sure to read "It's the Math, Stupid" on page 18. Trust us, if it's all you ever read about the subject, it'll be enough.

Happy Trading!
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Transaction costs (commissions and other fees) are important factors and should be considered when evaluating any

options trade. For simplicity, the examples in these articles do not include transaction costs. At TD Ameritrade, the standard commission for online equity orders is \$9.99, online option orders are \$9.99 + \$0.75 per contract. Orders placed by other means will have higher transaction costs. Options exercises and assignments will incur a \$19.99 commission.

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TD Ameritrade won the coveted "Project of the Year" award for its thinkMoney® magazine at the Content Marketing Awards 2013, held jointly by the Content Marketing Institute and McMurtry/TMG. thinkMoney was also recognized in the categories of "Best Financial Publication," (Gold Award) "Best Overall Print Magazine," (Honorable Mention) and "Best Overall Design" (Silver award). For more information, visit www.contentmarketingawards.com

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Volatility

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VOLATILITY HAS
BECOME EASY SHORT-
HAND FOR TRADING TALK,
BUT JUST BELOW THE
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POPPING THE VOL BALLOON CAN BE CONFUSING.
YET, WHEN YOU LOOK AT
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TRUTHS START TO CLEAR
THINGS UP.

WORDS BY **MARK AMBROSE**
PHOTOGRAPH BY **FREDRIK BRODÉN**

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Volatility

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Fredrik Brodén

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TRADING AIN'T LIKE IT USED TO BE.

In the old days, the gulf between retail investors and professional traders was as wide as the Grand Canyon. If he or she traded at all, the average investor had delayed quotes (ugh), slow fills (double ugh) and couldn't even spell "volatility." The pros had a distinct advantage. Yet, thanks to leaps in retail-trading technology and education, retail traders are often playing on an even field with the pros.

One of the big changes is in retail traders' knowledge of volatility and how they use it. Many traders now monitor the CBOE Volatility Index (VIX), and try to choose the appropriate tactic for a given level of volatility. They even know what "implied volatility" (IV) is. Who's the pro now? As a result, volatility has become shorthand for trading discussions among retail investors.

This makes sense because mechanically, volatility is a by-product of price information. Implied volatility, for example, is derived from current option prices via a pricing model. In one respect, then, volatility and option price are one and the same, and volatility can

inform you about option prices. But in other respects, they're not the same. And seeing volatility and price as equal can be misleading. That's where you have to apply a different lens that will help you focus in on volatility in a different way.

VOLATILITY THROUGH YOUR TRADING CAPITAL LENS.

What tends to get the market's attention? Monster stocks over \$300 moving \$20 or more in a trading day. That can be a lot of money if you're invested in a stock like that—a \$2,000 move for 100 shares. But does that mean that all the opportunity is in high-priced stocks?

Well, \$20 moves may seem like a lot, but don't confuse dollar changes with percentage changes, which is what volatility is all about. Let's do a little math. If volatility is 20%, that means theoretically the price of the stock will be between $\pm 20\%$ from its current price 68% of the time (one standard deviation) in one year. If the current stock price is \$600, that 20% translates into $\pm \$120$. If the stock price is \$50, 20% is $\pm \$10$. Simple enough. Understand that a \$2 move in

a \$50 stock is a larger percentage change (4%) than a \$20 move in a \$600 stock (3.3%). If you invested say, \$5,000 in each trade, in this example you actually made more in the \$50 stock because you would have purchased more shares.

To take it one step further, because stock price is an important variable in any option-pricing model, the option prices on a higher-priced stock will be greater than the option prices on a lower-priced stock—volatility and all other things being equal. You'll see out-of-the-money (OTM) options on that \$600 stock that have what look like high premiums compared to the options on that \$50 stock. So, just because an option on a high-priced stock has a higher price too doesn't necessarily mean you have the potential to make more with a high-dollar move in a monster stock. In fact, it's the capital requirement on those high-priced stocks that can be the problem.

The capital requirement on a **short put**, for example, is based in part on the stock price. The higher the stock price, the larger the required capital to short a put. Are you using your trading capital efficiently if you're selling high-priced options in high-priced stocks? Not necessarily. If the options on a \$50 stock have a higher IV than the options on a \$600 stock, you might consider shorting 10 OTM puts on the \$50 stock rather than 1 OTM put on the \$600 stock. Just keep in mind there will be more transactions costs when there are more contracts involved.

In fact, for the same amount of capital required to short an option on a high-priced stock, you might consider either trading more contracts of a lower-priced stock with higher volatility, or even trade fewer contracts, require less capital, and use the rest to diversify more.

What does the lens of trading capital show? In a word, don't get seduced by big swings in high-priced stocks and option premiums.

VOLATILITY THROUGH THE RELATIVE COMPARISON

LENS. If I tell you that stock XYZ's options have an overall IV of 40% , can you tell me if that's high or low? Of course not. Not without knowing anything about the range that the volatility has had in the past, or where it is relative to other stocks in its industry sector. A lot of traders monitor the VIX, which is a measure of the IV of SPX options, and compare the IV of an individual stock's options to it. But if the VIX is 15% , does that mean that 30% vol in a stock is high, and creating opportunities? Not necessarily. You need to compare the current IV to past IV to better judge if it's high or low right now.

There are a couple of things you can look at to help you determine this on TD Ameritrade's thinkorswim® platform.

1/ Options Statistics Look under the Trade tab, in "Today's Option Statistics." (Figure 1) The Current IV Percentile shows you IV today compared to the high-and-low range for the past 12 months. A 50th percentile means IV is exactly in between the high and low values. A percentile closer to 0% means vol is low relative to where it's been in

the past 12 months. A percentile closer to 100% means vol is high relative to where it's been.

2/ thinkorswim Charts Under the Charts tab, pull up a volatility chart on a stock to show you the daily IV going back as far as seven years. (In the upper right of a chart, click Studies, then ImpVolatility in the drop-down menu.) You can see the current IV on the right hand side, and compare it to its high-and-low values for short- and long-term ranges.

VOLATILITY THROUGH A PROBABILITY LENS.

Using the probability of an option expiring in, or out of, the money to choose a trading strategy is something that many retail investors now do routinely. Yet, are equal probabilities actually equal? Thinkorswim makes finding that answer easier with the "Probability OTM" and "Probability ITM" columns on the Trade page.

For example, take two stocks, MNKY and FAHN, both trading at \$100. If the MNKY December 95 put has a 70% probability of expiring worthless, and the FAHN December 90 put also has a 70% probability of expiring worthless, that's an indication that the IV of the FAHN options is higher than the IV of the MNKY options. That's because a higher volatility implies a larger potential percentage-price change in the stock price. And the more likely the the chance a stock will make a large move, the higher the probability a further OTM strike might be in the money at expiration. (Keep in mind that probability is theoretical and isn't a guarantee of future performance.)

With a higher volatility, FAHN is more likely to rise or fall \$10 points than MNKY. And the market suggests that the price of MNKY may fluctuate less. So, the strike prices that are closer to the current stock price of MNKY may have a higher probability of expiring worthless. In this way, the volatility of different stocks translates itself into a probability. They both represent the market's estimate of how large the magnitude of the potential price changes might be in a particular stock. Because the market determines the IV, which drives the probability calculations, they are accurate inasmuch as the volatility is accurate for the stock.

THE BOTTOM LINE?

In and of itself, the volatility number of a stock, or even the market, doesn't tell the whole story. It needs to be viewed through the practical trading lenses of capital requirements, comparison, and probability. Being able to do that, coupled with measuring how high or low volatility is relative to where it's been, may help you determine both a volatility that presents potential opportunity, and a strategy that includes that volatility for your outlook on a stock.

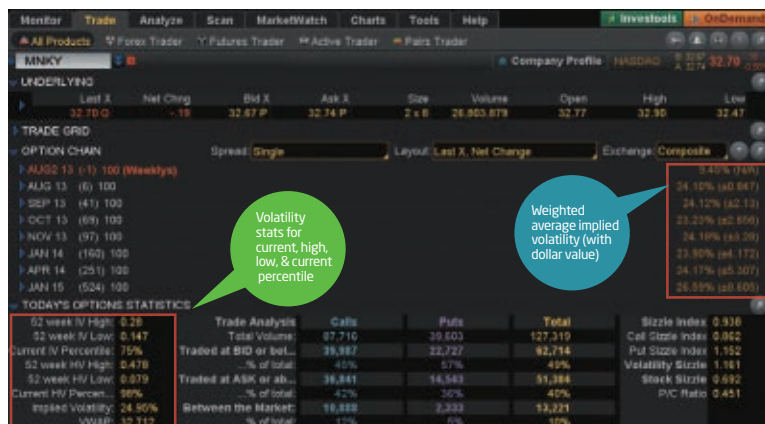


FIGURE 1: Is volatility high or low? From the Trade page of thinkorswim, you can view current volatility relative to its recent past and compare it to other expirations. *For illustrative purposes only.*

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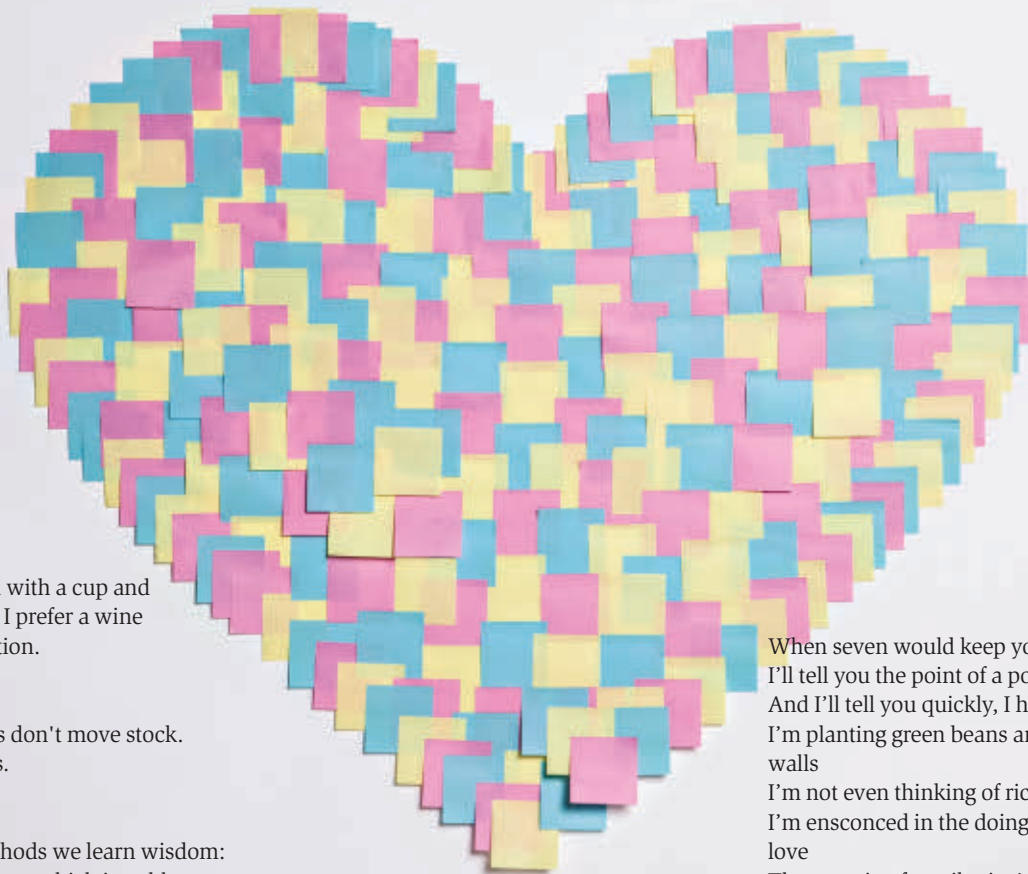


Got your own quip or pearl you'd like to share? Send your best prose to thinkmoney@tdameritrade.com.

Love Notes

Quips from the thinkorswim Chat Rooms

Photograph by **Fredrik Brodén**



• I get confused with a cup and handle pattern. I prefer a wine glass configuration.

Nicole

• Fundamentals don't move stock. Perception does.

Frank

• "By three methods we learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest."—Confucius

Isaac

• Genius has limits, stupidity has none, and my mom still says that I was adopted.

Bert

• A market order on a spread is like going into a used car lot to buy one car and trading yours in, and telling the salesman to just give you a fair price on both.

Brent

• I'd rather lose an opportunity than my account.

Sammy

• I'm about to retire. Will you supply me with a trading desk for assisted living?

Ronald

• Ever since I switched to hindsight trading, I never make a bad trade...Really a testament to this strategy.

Kenny

What's the point of a point and a half?

What's the point of a point and a half
When seven will keep you in style?
What's the use of a little sprint
When you could be running a mile?
A mile would give you riches and boats
And plenty of shoes
And lots of fur coats.
So what's the use of a point and a half

When seven would keep you in style?

I'll tell you the point of a point and a half
And I'll tell you quickly, I haven't a while.
I'm planting green beans and painting the walls

I'm not even thinking of riches at all
I'm ensconced in the doing of things that I love

That running for miles isn't one of
I don't like to spend that much time on the road

And quick little sprints bring me plenty of gold

The point that I'm making
Should be quite clear:

A point and a half adds up nicely my dear

Robin

Important Information

These comments are excerpts from emails submitted by TD Ameritrade clients, as their views and may not reflect those of TD Ameritrade. Testimonials may not be representative of the experience of other clients and are no guarantee of future performance or success.

News+Views

A hodgepodge of stuff we thought you should know.

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Fredrik Brodén

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Ask The *Suit*

A little Q&A with **Nicole Sherrod**, Managing Director, Trader Group at TD Ameritrade

Q: Suit, my son just went back to college and told me that his school is teaching on thinkorswim. Are you in many schools or is his school unique? –BOB

A: Now, Bob. This is either your first issue of thinkMoney, or (tsk, tsk) you didn't read in the last issue (Summer 2013) on page 33 where the fabulous Mary Ryan discussed TD Ameritrade U—our new initiative designed to bring paperMoney® into all major colleges and universities across the nation. We think paperMoney is a great way to teach the next generation of traders how to marry the conceptual topics they learn in class with real world application—bridging the gap between academia and reality. And it doesn't hurt that our team gets to visit college campuses and shamelessly regress to our 20s. A little something I like to call a win-win.

Q: Suit, can you share any details on new features that you're working on? –SARAH

A: In November, we'll be bringing option-chain data-field parity between Mobile Trader and thinkorswim. We will also be adding more volatility fields to mobile watch lists and positions. These are two of the most requested items on our development backlog. And while we've had an iPad version of Mobile Trader out for some time now, we've been impressed with increased sales in our Android tablet version, so we will be rolling out a new Android tablet version prior to the holiday. It's going to knock your Christmas stockings off.

Q: Hey, Suit! I'm a new customer. I've been learning to use thinkorswim® and just received my first issue of thinkMoney. It's amazing! Thank you! –JIM

A: Jim, flattery might not get you everywhere, but take a look in your account. Because it will get you free trades from your fairy thinkorswim godmaven. Thank you for the kind words. We work hard on each issue and it brings a tear to my eye that this is issue 21—my baby is now old enough to drink! I'm particularly proud of this issue because Chesley Spencer, our lead Product Manager for thinkorswim, makes his writing debut on page 10. Well, not technically. He also writes those zany Release Notes that you'll come to know and love as well. Until this issue, we haven't given him props for that.



FOLLOW THE SUIT

Read more of Nicole's musings on her own blog at tickertapemonthly.com/blog.

RIP Libor?

...or a chance
to reset critical
interest-rates

Words by
**Rachel Koning
Beals**
Illustration by
Joe Morse

industry spotlight

Death by scandal? Not so fast. Leading financial architects have scurried back to the drafting table to take another crack at Libor—the London Interbank Offered Rate. Changes are now mandatory, brought on by a still-unfolding case of alleged fraud and interest-rate rigging during the economic upswing of 2005-2007 and the ensuing 2008 collapse.

But arguably, even the most tawdry of economic transgressions can leverage a silver lining. In this period of reform, there's also a chance to update Libor as a global benchmark

whose market impact may not be fully understood.

Libor has long been the short-term reference point for roughly \$800 trillion* in global financial contracts, ranging from derivatives markets to credit cards. As the legal washout proceeds, attention has turned to the recent appointment of NYSE Euronext as Libor's new administrator. NYSE Euronext has

pledged a smooth transition and vows to rebuild trust and integrity to boost market confidence. (No smirking.)

What's next? The details are yawn-inducing but vital. The U.K.-based Wheatley Report, as well as the U.S. Commodity Futures Trading Commission, want a preference for a benchmark more closely tied to "real" transactions—meaning actual borrowing and lending between banks and not just interest-

rate quotes. And, yet to be passionately debated is a potential change in rate calculations.

Does Libor as we know it still work? That's the tougher question. Most traders want to dump Libor and create something sexy from scratch. Yet, the European Central Bank is Europe's main source of bank funding. And it could be a small nightmare to make certain changes.

MOST TRADERS WANT TO DUMP LIBOR AND CREATE SOMETHING SEXY FROM SCRATCH. YET, THE EUROPEAN CENTRAL BANK IS EUROPE'S MAIN SOURCE OF BANK FUNDING.

The biggest challenge might be migrating a massive global loan market to a new benchmark. As for regulations, is it time to adopt singular Basel rules over fragmented regulations? The "R" word might just have the last laugh.

The court cases and fines and potential mug shots will undoubtedly pack more drama. But the solutions for the little interest rate that could might prove equally fascinating. Stay tuned.

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*U.S. Commodities Futures Trading Commission data.

IT'S THE

M A + t (H)

STUPID

AT SOME POINT IN YOUR OPTION-TRADING CAREER, YOU'RE PROBABLY GOING TO COME ACROSS BLACK-SCHOLES—THE GRANDDADDY OF OPTION-PRICING FORMULAS. SO YOU WON'T MIND IF WE BEAT YOU TO THE PUNCH, AND BREAK IT DOWN IN TERMS THAT SHOULD BE USEFUL.

WORDS BY **THOMAS PRESTON** PHOTOGRAPH BY **FREDRIK BRODÉN**



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Black Scholes
LightPhotograph by
Fredrik Brodén

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Three's Company

If Black Scholes is so hot, why does the thinkorswim platform use the binomial and the Bjerk Sund-Stensland models as well? You can see those choices on the model drop-down menu on the Analyze page. Black Scholes isn't the best for American-style options, so the binomial model was added to come up with the theoretical values and greeks for American-style options (which are the majority of the options available in the US). Plus, the binomial model is better at factoring discrete dividend payments, where Black Scholes uses a continuous yield.

But the binomial model is slow to compute because it uses an "iterative" method. When you need to calculate hundreds of greeks and option values with real-time data, binomial can get bogged down. In 2002, the Bjerk Sund-Stensland model was created. It's a closed-form model (like Black Scholes), so it's fast to compute, and it can value American-style options—which is why it's now thinkorswim's primary option pricing model.

Black
Scholes

Those two words have very nearly defined options trading for the past 40 years. Fischer Black and Myron Scholes, two University of Chicago economists, published the eponymous formula back in 1973 and nearly 500 monthly expirations later, the trading industry still relies on the formula and its variants to generate theoretical option values. The formula itself is, shall we say, a bit dense:

$$c = SN(d_1)S - Ke^{-rT} N(d_2)$$

$$d_1 = \frac{\ln\left(\frac{S}{K}\right) + \left(r + \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}}$$

$$d_2 = \frac{\ln\left(\frac{S}{K}\right) + \left(r + \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}} = d_1 - \sigma\sqrt{T}$$

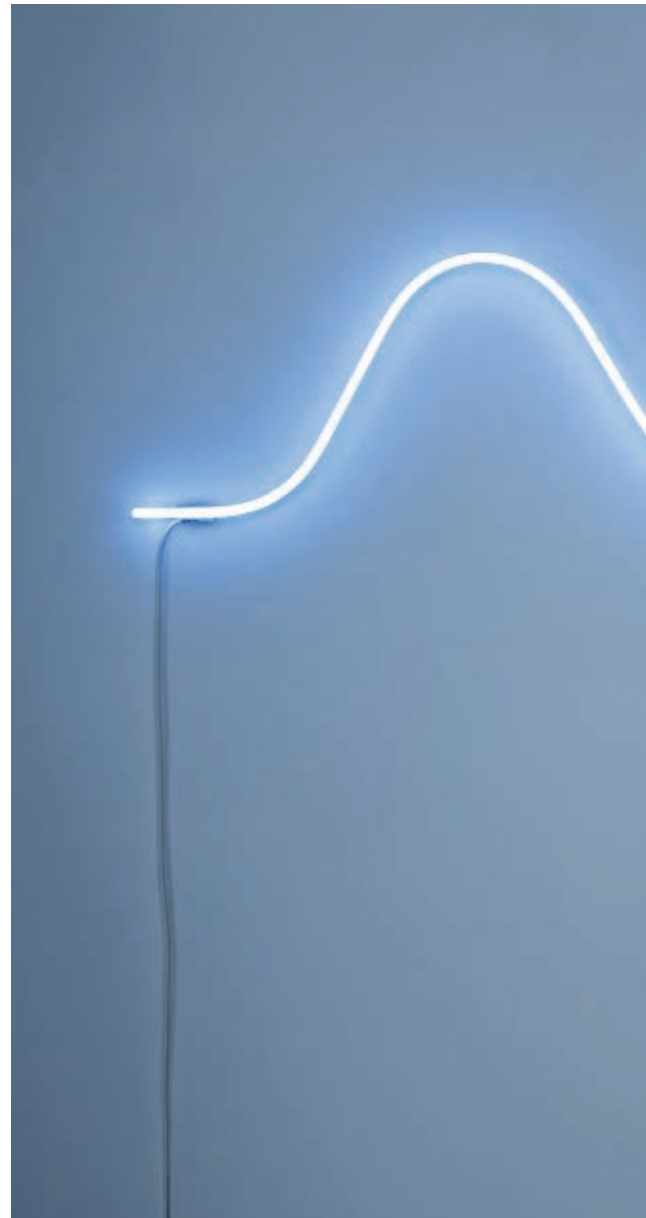
Ugh. This is part of the reason many retail traders take a pass on studying it too closely. Most of the articles about Black Scholes are written by math geeks showing off how well they can untangle that knot. And that complexity can also disguise its value.

In my case, I'm a trader, not a mathematician. So this article is going to be like a Cliff Notes breakdown. Why bother? Because knowing a bit of theory behind Black Scholes can make you a smarter trader. And this article may very well be all you'll ever need to know about it.

Now, keep in mind that I'm taking short cuts to describe the formula. There are whole books written on it by finance professors that will describe in great detail its derivation. If you're a glutton for punishment, read the books. Everybody else, read on.

DETAILS, DETAILS

The world welcomed Black Sholes because it was the first closed-form (as in "stick in the inputs and get an answer") formula to help evaluate an option. Using **put-call parity**, it was easy to value a call as long as you knew the price of the put at the same strike and price of the stock, and vice versa. But what if you didn't know the price of either the call or the put? That's



where Black Scholes came in. Drilling down, the formula requires five inputs:

1. Current stock price ("S")
2. Strike price of the option ("K")
3. The risk-free interest rate like the T-bill yield ("r")
4. Time to expiration ("T")
5. Volatility ("σ") (More on "σ" later)

The formula itself— $c = SN(d_1) - Ke^{-rT} N(d_2)$ —states that the price of a call is the value of the shares of stock that would hedge that call, minus the value of a risk-free bond equal to the strike price. Huh? Right. Well, Black Scholes values an option as a dynamic,

self-financing portfolio. Don't get hung up on that. What's more important is this:

$$d_1 = \frac{\ln\left(\frac{S}{K}\right) + \left(r + \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}}$$

What " $\ln\left(\frac{S}{K}\right)$ " does is turn the stock price S into a variable that is some percent higher or lower than the strike price K . By doing that, Black Scholes converts a stock price, which can never have a negative value, into something that can—a percentage. That's why Black Scholes uses the normal distribution—the "bell curve", a well-established statistical theory—as part of its calculation.

That percentage stock price moves up and down randomly according to this part:

$$\left(r + \frac{\sigma^2}{2}\right)T$$

The "random walk" pushes the stock price up by " r " (hey, if you invest in a risky stock, your expected return should be at least as high as the risk-free rate), plus a random impact higher or lower from volatility (" σ "). The higher the volatility, the wider the potential percent price changes beyond the risk-free rate.

Dividing by this

$$\sigma\sqrt{T}$$

converts the percentage stock price into a standard normal variable, which lets us calculate the probability that the stock will have a percentage change large enough to reach the strike price. The percentage price changes move randomly around an average value, with smaller changes more likely, and larger changes less likely.

It's not the stock price itself that's random. It's the day-to-day percentage changes that are random. The model assumes those changes are independent from one day to the next. What happened yesterday has no influence on what happens today, which has no influence on tomorrow. Specifically, no matter how many days a stock has rallied or dropped, it doesn't affect the probability of whether it will go up or down the next day.

THE PUNCHLINE FOR TRADERS

The genius of Black Scholes turned a stock into a standard normal variable that moved up and down randomly, and where the magnitude of the percentage changes was governed by volatility. So, the Black Scholes option value had no directional indication. Black Scholes didn't have any input for how bearish some analysts might be, or how bullish a chart pattern might be. It didn't care. What Black Scholes did care about is the magnitude of potential stock-price changes higher or lower.

For instance, how likely is a 1%, 2%, 5%, 10% or more price change up or down between now and the option's expiration? Stop and think about that. The Black Scholes theory that underpins so much of the

trading and investment industry doesn't actually believe there's any value in trying to determine the direction of a stock. Despite all the Wall Street analysts trying to predict stock prices, despite the various and sundry market predictions by all the talking heads on financial networks, Black Scholes simply suggests stock-price changes are random.

But while the up/down direction is random, the magnitude of price changes isn't exactly. It's volatility that gives us an idea of the probability that the stock price will change by some percentage up or down. And we can use that information to choose a strategy.

For example, selling options that are outside an expected up/down range, in a stock with a quantifiable probability of the stock not breaking through that range, is a technique often used by professional traders. They don't try to pick direction by looking at charts, financial metrics, or analyst reports. They try to guess magnitude by looking at volatility.

NOTHING'S PERFECT

Despite its longevity and power, Black Scholes does have some weaknesses. First, it only prices European-style options. It doesn't factor in the early-exercise feature of American-style options. Second, it assumes that dividends are paid at a constant rate, not once a quarter as you see in most US stocks. Third, it assumes that volatility is constant over the life of the option. Despite the limitations, its underlying assumptions are carried into most other option-pricing formulas that solve those problems, like the Bjerksund-Stensland model used for American-style options on the thinkorswim® trading platform. The Black Scholes theory is behind the probability models on the platform, too.

Does Black Scholes generate accurate theoretical option values? Yes, with one caveat. Using a single volatility for all the strike prices won't generate accurate theoretical values. The volatility skew, with higher volatilities for out-of-the-money options, reflects the market's opinion of how large the percentage-price changes of a stock price might be.

IN THE END, IF YOU BASE your trading strategies on option prices themselves, probabilities and volatility, Black Scholes has your back. It's no guarantee of profits. But you're on solid theoretical ground. Of course it helps to have the theoretical tools at your fingertips on thinkorswim so you don't need to deal with the formulas yourself. We figured out the math. Now put it to good use.

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Ask the Trader Guy

Rescuing traders,
one question at a time.

Photograph by
Fredrik Brodén



Q: Hey, Trader! I hear people talk about “gaps” in stocks. What does that mean?

A: Gaps refer to changes in a stock price that make it dramatically higher or lower than the previous day’s price. It’s kind of subjective, but most traders consider the stock to have gapped higher if, say, today’s low is higher than yesterday’s high, or gapped lower if today’s high is less than yesterday’s low.

Q: Hey, Trader! What’s a “tape reader”?

A: The term comes from the old days when traders and brokers would get quotes from a ticker tape. I suppose there are a few ways to look at it, but in my opinion, today a tape reader describes a type of trader that closely watches price action in a few markets, like the S&P 500 futures, oil, gold, bonds, or stocks that tend to be market leaders, and which tend to “pull” other stocks higher or lower. If, for example, gold, oil, and bonds are up because of fear in the marketplace, leading stocks are down, but the S&P 500 futures are up, a tape reader might

expect that the S&P 500 will move down in the near future.

Q: Hey, Trader! I really want to download the TD Ameritrade Mobile Trader® App onto my iPhone, but I want to save the disk space to take some videos at a music fest next week. What should I do?

A: Dude, Mobile Trader takes up about 12 MB. You’re telling me you’d swap 24/7 market data and account info for a grainy, dim video of a band you probably won’t care

about in 6 months? I tell you what. Load up Mobile Trader and simply enjoy the music fest without worrying about taking videos on your iPhone. Then do all your fellow fans a favor by reading out SPU quotes during the drum solos. Trust me, they’ll thank you.

Q: Hey, Trader! On the Trade page of the thinkorswim trading platform, I understand that the “Prob OTM” number is the probability that the option will

expire out of the money. But is this based on the break-even point for the option, or something else?

A: The probability numbers on the Trade page are based on the strike price of the option, not the break-even point. The “Prob. OTM” number estimates the likelihood that the stock will be above the strike price of a put, or below the strike price of a call, at expiration. If you want to evaluate the probability of the stock being above or below a

break-even point, you need to get into the Analyze page.

Q: Hey, Trader! I heard that dogs can see in color. Do you think I could train mine to bark on the green upticks and whine on the red downticks?

A: What, so you can just lie in the sun getting your belly scratched while your dog does the trading? Actually, that doesn’t sound that bad. Now, where’s my kibble?

Important Information

*For general
information,
see page 42, #1.*



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Trade
Management

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TRADING SUCCESS DOESN'T MEAN "GOING FOR BROKE," OR SEARCHING FOR THE NEXT BIG THING. IT'S MORE LIKE PACING YOURSELF AT THE HIPPEST RESTAURANT IN TOWN.

WORDS BY **MARK AMBROSE**

PHOTOGRAPHS BY
FREDRIK BRODÉN





What does grilled chicken breast with red onions and spinach in a feta-cheese béchamel have to do with an options spread? When you dine fancy, you pick a place with great food. You choose the best stuff on the menu and most importantly, you pace yourself in honor of all the treats to come.

Investing is also about digestion. And pacing. Have you ever spent days—weeks, even—researching a stock? Analyzing the financial data, the reports, the charts, searching for news, looking for the next Apple or Google* before it hits \$600 a share? Maybe you're so convinced you've found a winner, so confident it's a superior opportunity, that you sink a lot of dollars into it. And should the stock price rise, great. But what if it goes south?

So, maybe you can pick winning stocks consistently. Most people can't. Part of the reason is that efficient markets incorporate any new data into a stock price nearly instantaneously. The other reason is that most stocks are correlated with other stocks in their industry, and with larger indices. So if all stocks are dropping, your stock is probably dropping, too. With most of your money now tied up, there isn't much you can do if you spot another potential opportunity that might offset the loss of that larger investment. Just like filling up on your first course, you can invest a lot of emotion and lose too much money and time when you make one large investment. During your 5-star meal, it's small bites and careful slow going. And with investing, it's trade small, trade small, trade small.

A BIG FORMULA

The idea is that one big trade does not a big trader make. "Big" can simply mean someone who makes money trading. It could be \$500 a month or \$50,000 a year. But if trying to make a big chunk of profit in one big trade isn't smart, what is?

One potential path is placing a lot of small trades in liquid products that have a better than 50/50 chance of making money, and using a trading strategy that doesn't require days or weeks of analysis. The

goal is to create enough small profits, and manage them smartly to create a profitable portfolio over time.

Baby steps for potentially big results:

1. Find liquidity
2. Use high-probability strategies
3. Keep it small
4. Manage winners
5. Don't be afraid to lose

Find liquidity

Using our food analogy, let's start by finding the trading equivalent of a great restaurant. That would be a list of actively traded stocks and options, hopefully with narrow bid/ask spreads. With these, it's more likely to execute limit orders at a price that keeps slippage at a minimum. The less a stock or option is actively traded, the harder it is to get a good execution price.

Where to find these possible opportunities? Look at the "Penny Increment Options" list on the MarketWatch/Watch tab on

TD Ameritrade's thinkorswim® platform. (Figure 1 below)

Not every stock and index on the list has options with tight bid/ask spreads. But looking at options whose prices trade in .01 increments is a good place to start.

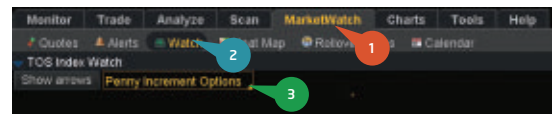


FIGURE 1: To get a list of stocks with penny-increment options on thinkorswim go to the MarketWatch tab > Watch > Show Arrows > then Penny Increment Options from the submenu. For illustrative purposes only.

Doing this gives you an idea of some of the range of stocks whose options you might consider trading.

Use high-probability strategies

Now, on to the expensive menu. Just like you can scan a great menu and find just the dishes you love, you want to quickly identify strategies that have a higher probability of making money. Whether your outlook on a stock is bullish, bearish, or neutral, there's usually a strategy that might be a tastier trade than just buying or shorting the stock. That usually means options strategies like **short puts, covered calls, short verticals, and iron condors** that have greater than 50% probability of success. You can use the tools on the thinkorswim platform like the Trade page and the Analyze page to explore these approaches. (See sidebar, "How to find greater than 50/50", next page.)

The probabilities of an option expiring in or out of the money are calculated in real time on the Trade page, while the Analyze page lets you calculate the probability that a simple or complex strategy may



How to find greater than 50/50

Here's a fast way to see the probability that an option may expire out of the money (OTM) at expiration.

1. Under the Trade tab on the thinkorswim® platform, type in a stock symbol, hit enter, and look for the option quotes.
2. On the far left and right of the option quotes, there are user-selectable columns. You might see "Last X" or "Net Change" as column headings by default. If you click on the column heading, you'll open up a menu of a list of data available for the columns.
3. Click on "Option Theoreticals & Greeks," then click on "Probability OTM". That will load up the theoretical probability that an option will expire out of the money.

See Figure 2 below. If, for example, you want to find an option that has a 70% probability of expiring worthless by a particular expiration, open up the quotes in that expiration and find the option whose "Probability OTM" is close to 70%. When trading spreads with **positive time decay**, selling this strike may create a 70% probability of a potential profit. [Just remember, that this is a probability and not a guarantee of a result.]

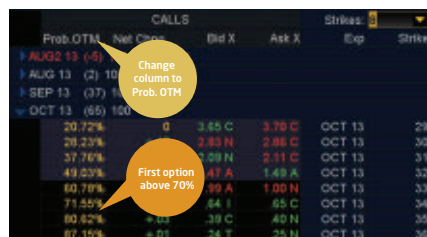


FIGURE 2: Option Chain in thinkorswim showing the probability of the calls expiring out of the money ("Prob OTM" column). For illustrative purposes only.



percentage of your overall account. (Just keep in mind that that many small trades will eat up funds via commissions and fees as well.)

Manage your winners

Just like enjoying every bite of a nice dinner, manage your winning trades strategically. Consider taking smaller, more frequent profits when they present themselves, rather than waiting for bigger profits that might not ever come. A very broad target may be taking 50% of the max possible profit if and when it's available. Of course you have to factor in the additional transaction costs. But by potentially realizing more and

smaller profits, you may sometimes reduce the number of times a winning trade turns into a loser.

Don't be afraid to lose

Finally, if you want to have a fantastic meal, you can't be afraid to try something new and run the risk you might not like it. The same is true for trading. You can't be afraid of losses. Every trader has them. Don't feel bad if a logical trade loses money. It's part of the experience. If you keep your position size small, two things happen with losing trades. First, the loss is smaller than with a larger trade. Second, you may decide to hold a smaller losing trade longer to see if the stock eventually turns into a winner. Bon Appétit!

Important Information

The probability projections in the Analyze page assume the underlying stocks follow a lognormal distribution. The results are derived using the Black-Scholes formula for delta, consisting of the current stock price, number of days in the future, current volatility of the stock, and the risk-free rate of return. Probability analysis results are theoretical in nature, not guaranteed, and do not reflect any degree of certainty of an event occurring. Be aware that assignment on short option strategies discussed in this article could lead to unwanted long or short positions on the underlying security.

be profitable at some future point. (Then, to see which strategies may work in which market, check out our Special Feature on spread trading, page 34.)

Keep it small

Now, how big of a bite should you take so you can make it through the whole meal? This is about position size—i.e., fewer contracts and a strategy with a small capital requirement. When you engage a large number of small-sized trades, each with a probability of profit greater than 50%, over time your portfolio could have a probability of profit that is very close to that of individual trades. No matter how high a single trade's probability of profit, it could still be a loser. And you don't want one trade to take you down.

Now that's not to say you won't get wiped out with a series of smaller trades as you could with a few larger trades, but smaller potential losses on

many trades can keep you at the dinner table longer. Instead of doing 10 contracts each on five trades, for example, do say, two contracts each on 25 trades. And keep the amount of capital used on each trade to a small

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Associate Spotlight

A chat with a TD Ameritrade
VIP making things happen

Interview by
Kevin Lund

Illustration by
Joe Morse

spot

• Like clockwork, just about every month you're probably getting an email from us with the subject line of "The Latest Enhancements to thinkorswim." Really, this is just a formal way of saying, "Holy \$#!%, you wouldn't believe what we just came up with...again."

The man behind the prose of these brilliantly entertaining release notes, and the inexhaustible effort to put out rich, new features on thinkorswim, is Chesley Spencer, Overlord—err, Product Manager, Active Trader Group at TD Ameritrade. Chesley could be the most important TD Ameritrade associate you've never heard of. His ego is small. His impact is huge.

Chesley, how do you decide what goes into thinkorswim with each new release?

It depends. Comparing any two ideas for the platform is like comparing apples to oranges. For example, there are requirements on the Monitor page that don't have a direct business impact, but are critically important. And then there are the tools on the other pages that might help a trader make smarter decisions in today's markets.

I'm the one person who hears everything about the platform. All the client email requests come across my desk. We have internal discussions about which one is the most important. We prioritize, and go to work on what we can.

Cool as a Cat

Chesley Spencer is part geek, part poet.
And his mission is to keep thinkorswim relevant



Give It To Us

Got a dream feature you want to see in thinkorswim? Send your suggestion to thinkor-swim@tdameritrade.com.

watchlist as a scan query instead of a watchlist, it actually saves it as a "dynamic watchlist," and will update every three minutes, rather than staying static. This helps you catch intra-day opportunities as they unfold.

Over the years, there have been little "secret doorways" built into the thinkorswim platform that only a few insiders knew

How important is client feedback?

Very. Clients are so passionate, and I learn a lot from them. Hardly a day goes by where I don't learn something about thinkorswim from them.

And why is this a good thing?

Well, if I'm doing my job right, and taking everything in—i.e., these vital lessons, the client feedback, internal discussions, and my own inspirations—the new features that pour out the other end keep us relevant to our trader clients and ahead of the curve.

Which tool on the platform is your baby?

Strategy Roller® and Options Statistics are two tools for which I was chiefly responsible.

What's your favorite tool on TOS?

The dynamic watchlist and scan functionality. Most clients don't realize if you save a

about. Can you give us a clue?

Well, there's an Easter egg coming in the future. But that's all I can say. For now, take a look at the icon for the Futures Traders Tab. If you're a sci-fi geek, you should know what it is. Here's a hint: Think Delorean and the future. Picking icons was a very hard thing to do.

Now, give us something that nobody knows about.

I'm a huge nerd. (I once entered an academic decathlon in high school.) And I'm a young, male version of a "crazy cat lady." One day, my cat—LeeLoo Dallas Multi-Cat—walked through a hole in the fence at my place, came right up to me, and just sat in my lap. I spend most of my time hanging out with her.

[long, awkward pause]...Uhh... She's my muse.



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Gear Head

Our favorite gadgets you may not have heard of

gear

• When calculating risk, you can use all kinds of tools to compare a stock's current volatility to its past volatility. However, one of our favorite charting indicators in thinkorswim®—beta—allows you to compare a stock's volatility to the volatility of a market index, such as the S&P 500 (SPX), the Dow 30 (DJX), the Nasdaq 100 (NDX), or the Russell 2000 (RUT).

Consider a little refresh. Compared to the S&P 500, say a stock has a beta of 1.25, and the S&P 500 moves up 1%. So, theoretically, the stock would move up 1.25%. But you think it could be a little better—more useful. How? By creating “fast beta.”

OLD VS. NEW

The downside of using regular beta when trading shorter-term vol is that it uses a long set of price data that is unweighted, thereby considering older price movements as equally valid to more recent price movements. This discounts the possibility that current volatility might be significantly different relative to the long term. So, in effect, fast beta places more emphasis on recent price movements and requires less historical data.

Better Beta? Sure

thinkorswim's fast-beta feature serves up useful short-term possibilities



FIGURE 1: Fast beta, please When trading shorter-term volatility, the fast-beta indicator in thinkorswim Charts can provide more relevant information than regular beta. *For illustrative purposes only. Not a recommendation.*



Get the Skinny

For the latest thinkorswim toys and tools, catch the release notes at bit.ly/tosreleasenotes

better when calculating, say, a hedge on a short-term trade.

The “modified” portion that gets us to fast beta is the use of a weighted moving average instead of a simple moving average. Using a weighted moving average gives fast beta a calculation more sensitivity to recent price movements in a security, as well as in its benchmark.

Just like beta, fast beta measures the systematic risk of a security, and the sensitivity of that security's returns to market returns. As well, a benchmark “market” is selected and defined to have a fast beta equal to 1.0. Just like beta, stocks with fast beta greater than 1.0 are more volatile

The interpretation of fast beta is roughly the same as that of regular beta. But keep in mind that the time over which we measure is shorter, which might work

than the market. Whereas those with lower fast beta are less volatile. In short, if a security has a fast beta of 2, and the market is down 10%, the security is expected to be down 20%. Stocks with fast beta equal to 1.0 are said to move with the market.

HOW TO FIND IT:

- 1/ Go to the Charts tab on thinkorswim.
- 2/ Enter a symbol and press < enter > to pull up a chart.
- 3/ In the upper right, above the chart, click Studies > Add Studies > Alpha Studies > FastBeta.

The default index used to compare is SPX. However, you can choose one of the other four main indices (NDX, RUT, DJX, and Nasdaq Composite) through the “Edit Studies” under the studies menu as well.

Important Information

For general information, see page 42, #1.



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Futures 4 Fun

Futures nuggets with thinkorswim

Words by
Chesley Spencer

Product Manager,
Trader Group at TD Ameritrade

Sizing up a Futures Calendar

The nuts and bolts of futures calendar spreads are a bit different than their equity-option cousins

A FUTURES CALENDAR SPREAD HAS A pretty intimidating name. Kind of like Dick Armey. But the spread is pretty straightforward when broken down one word at a time. You may know that an options calendar spread contains two options contracts on the same underlying with different expirations. So, a futures calendar spread is a trade of two futures contracts on the same product with different expirations—one long (bought) and one short (sold).

LISTED VS. COMPOSITE SPREADS

Futures markets are much like second cousins you meet at a family reunion—good people, but a little, shall we say, different. This is particularly true for the futures spread market.

As with an options calendar, you can enter a futures calendar as a single trade, or you can “leg” into it one side at a time. With futures however, there are different

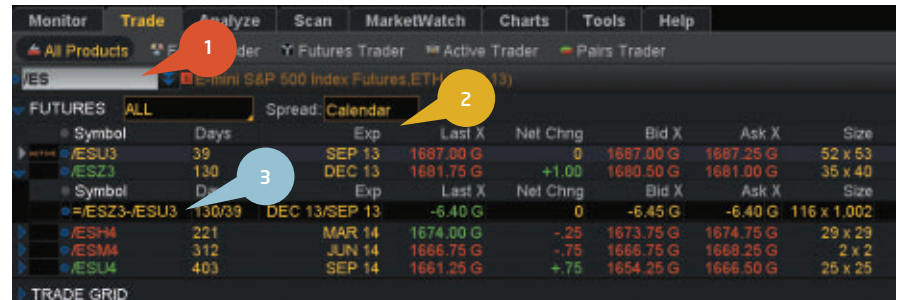


FIGURE 1: Futures calendars on thinkorswim For illustrative purposes only. Not a recommendation of a specific investment or investment strategy.

quotes for each method—the composite and the listed quote. The composite is the current ask of the long contract, minus the current bid for the short contract. And like anything else, you can get the composite manually in thinkorswim® by entering one symbol minus the other in any symbol entry box.

With futures, though, there's also a symbol and quote for listed calendar spreads that are entirely separate from the composite, and there are specific markets for trading these calendars that exist independently of individual futures markets. Most importantly, these markets take only spread orders, and quote only those spreads. But the deliverables are the same. And the quote is written the same as the composite quote, but has an “=” preceding it. (Figure 1 above).

LOCK IT UP

The easiest way to understand futures calendars is to see them for yourself in thinkorswim.

1. From the “All Products” screen on the Trade Page, enter a future in the symbol entry field
2. At the futures dropdown, select “ALL” for active contract and set the spread to “Calendar.”

Important Information

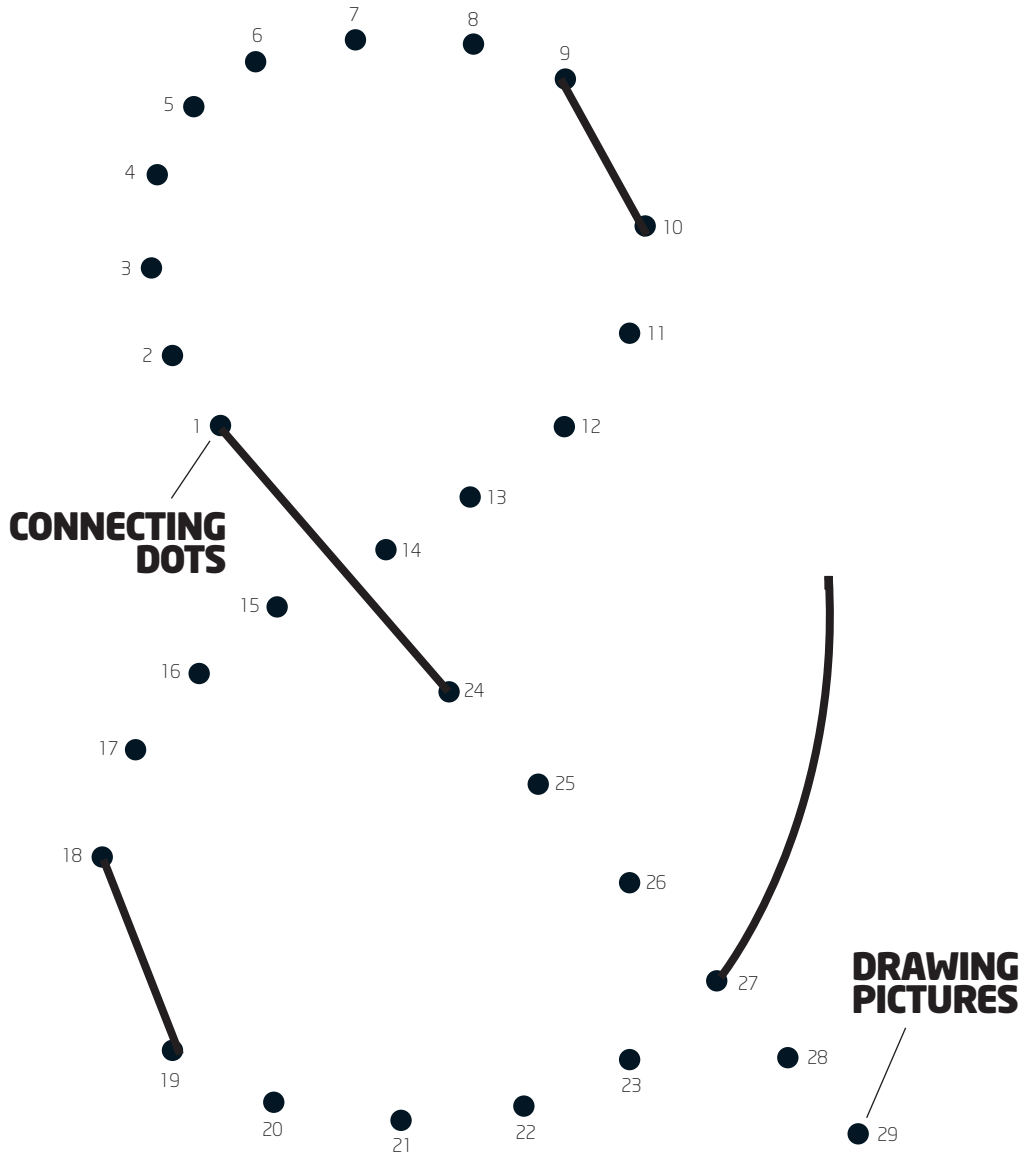
Futures trading is not suitable for all investors as the risk of loss in trading futures is substantial. Futures trading privileges are subject to TD Ameritrade review and approval. Not all account owners will qualify. Futures accounts are not protected by the Securities Investor Protection Corporation (SIPC). Equity options trading involves risks and are not suitable for all investors. Spreads and other multiple-leg option strategies can entail substantial transaction costs, including multiple commissions, which may impact any potential return.

3. Click the arrow next to your pre contract to view all of the listed spreads that include the symbol.

Futures-pairs trading provides you with the opportunity to trade based on the relationship between two securities, not trend. While it's always possible for a correlation to break down longer than capital would permit, you may find pairs trading to be a refreshing approach to trading the markets—particularly when you can't tell where the market is going.

This might seem like more trouble than it's worth. But the listed spread market generally has a smaller bid/ask spread than composite, and often has a smaller minimum tick increment as well. The magnitude of the difference varies, but can be half the width of the composite or less, in some cases. Since the overall market is narrower, that is a potential savings to you regardless of your trade's size.

The listed calendar also takes less buying power. When a calendar is routed as a single trade, the requirement includes the spread margin relief at the time the order is routed. If trading the legs in separate orders, that margin relief isn't applied until both orders have filled. Whether you're a cutting-edge scalper or humble long-term hedger, there's no reason to leave money on the table.



UNTIL NOW, WE'VE FOCUSED ON TEACHING THE FOUNDATIONAL SPREADS—VERTICALS AND CALENDARS—AND WHAT MAKES THEM TICK. BEYOND THAT, THERE'S A SPREAD STRATEGY FOR MOST SITUATIONS, DEPENDING ON WHAT THE MARKET IS TELLING YOU.

WORDS BY **THOMAS PRESTON** PHOTOGRAPH BY **FREDRIK BRODÉN**



**Special Focus:
Spreads Part 4**Photograph by
Fredrik Brodén

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OVER THE PAST THREE issues of *thinkMoney* (and many other articles through the years), we've built up your knowledge of the mechanics of spreads—verticals, calendars, and combinations of both that help you create and engage more complex strategies. This last article will help you understand in which market environments to use them. If you've followed us through these various discussions, you know that trading options is more than just being bullish or bearish or market neutral. There's volatility. Limitations on capital. Stronger or weaker directional biases. Whatever the scenario, you always have the choice of a logical option strategy that is likely to be less risky, less capital intensive, and/or have a higher probability of profit than simply buying or shorting stock.

It may have seemed like a tall order, but consider yourself officially smart about options. Now that you have the knowledge, you should be able to look at choosing a strategy as a series of binary decisions based on three primary variables:

1—Volatility: *high or low* **2—Trend:** *bull, bear, or neutral* **3—Time:** *shorter or longer term*

The following is a grid of strategies, each designed to take advantage of a combination of these three variables. Used as a reference, this might help you run through the process of making speedy trading decisions should you need or want to. While you're learning them, notice how most of them are composed of the basic vertical and calendar spreads discussed in the first two articles of this series (*Winter and Spring 2013 issues respectively*).

**"MONEY" JARGON****> Out of the money (OTM)**

An option whose strike is away from the underlying equity. For calls, it's the strike that is higher than the underlying. For puts, it's the strike that's lower.

> At the money (ATM)

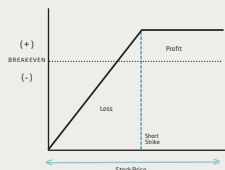
An option whose strike is the same as the price of the underlying equity.

> In the money (ITM)

An option whose strike is inside the price of the underlying equity. For calls, it's the strike that is lower than the price of the underlying equity. For puts, it's the strike that is higher.

HIGH-VOLATILITY TRADES

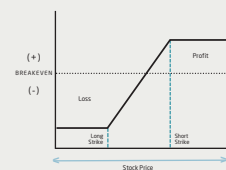
Typically, high vol means higher **out-of-the-money (OTM)** option prices, which you can take advantage of with short premium strategies. High vol lets you find further OTM options that offer high probabilities of expiring worthless and potentially higher returns on capital. Pushing short options further OTM also means that strategies have more room for the stock price to move against them before they begin to lose money. Here are a few bullish, bearish, and neutral strategies designed for high-volatility scenarios.

**BULLISH STRATEGY No. 1
SHORT NAKED PUT****STRUCTURE:** *Sell put***CAPITAL REQUIREMENT:** *higher***RISK:** *Technically defined, but very high, depending on stock price*

Consider looking for OTM options that have a high probability of expiring worthless and high return on capital. Capital requirements are higher for high-priced stocks, lower for low-priced

stocks. Account size may determine whether you can do the trade or not. You can look for expiration in the short premium "sweet spot" around 30 to 40 days out to help balance growing **positive time decay** with still-high extrinsic value. Choose a stock you're comfortable owning if the stock drops and short put is assigned. If that

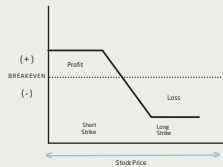
happens, you might want to consider selling calls against long stock to reduce cost basis further.

**BULLISH STRATEGY No. 2
SHORT OTM PUT VERTICAL****STRUCTURE:** *Sell put, buy lower-strike put of same expiration.***CAPITAL REQUIREMENT:** *lower, depends on difference between strikes***RISK:** *defined*

Consider using when the capital requirement of short put is too high for your account, or if defined risk is preferred. Target credit for short vertical 30% of width of strikes (i.e. \$0.30 if the strikes are \$1

apart). Consider looking for expiration in the short premium "sweet spot" around 30 to 40 days out. Create by looking for OTM put that has high probability of expiring worthless, then look at buying further OTM put to try to get target credit, typically one or two more strikes OTM.

**BEARISH STRATEGY No. 1
SHORT OTM CALL VERTICAL****STRUCTURE:** *Sell call, buy higher-strike call of same expiration***CAPITAL REQUIREMENT:** *lower, depends on difference between strikes***RISK:** *defined*

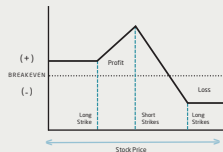


Target the credit of the trade at 30% of the difference between strikes (i.e. \$0.30 if the strikes are \$1 apart). Consider looking for expiration in the “sweet spot” around 30 to 40 days out.

Create by looking for OTM call that has high probability of expiring worthless, then look at buying further OTM call to try to get target credit, typically one or two more strikes OTM. Takes advantage of flatter vol skew on upside strikes.

BEARISH STRATEGY No. 2 LONG UNBALANCED CALL BUTTERFLY

STRUCTURE: Buy 1 call, sell 3 higher-strike calls, buy 2 higher-strike calls; strikes equidistant
CAPITAL REQUIREMENT: lower, depends on difference between long and short strikes
RISK: defined

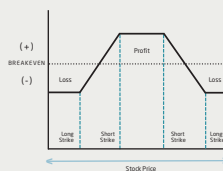


Combination of short call OTM call vertical and long at-the-money (ATM) or slightly OTM call butterfly. This should be a credit spread, where the credit from the short vertical offsets the

debit of the butterfly. This is not aggressively bearish, as max profit is achieved if stock is at short strike of embedded butterfly. But if an unbalanced call butterfly is done for credit, it should not lose money if the stock drops and the entire position expires worthless.

NEUTRAL STRATEGY No. 1 IRON CONDOR

STRUCTURE: Sell lower-strike put vertical, sell higher-strike call vertical; distance between long and short strikes same
CAPITAL REQUIREMENT: lower, depends on difference between strikes
RISK: defined

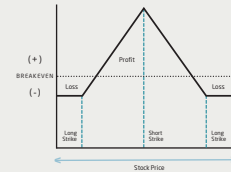


Target the credit of the trade at 35% of the difference between long and short strikes. Look for expiration in the short premium “sweet spot” around 30 to 40 days out to balance

growing positive time decay with still-high extrinsic value. Higher vol lets you find further OTM calls and puts that have high probability of expiring worthless but with high premium. Create iron condor by buying further OTM options, usually one or two strikes. Don't do for too-small credit no matter how high the probability because commissions on 4 legs can eat up most of potential profit.

NEUTRAL STRATEGY No. 2 LONG ATM CALL OR PUT BUTTERFLY

STRUCTURE: buy 1 lower-strike option, sell 2 higher-strike options, buy 1 higher-strike option; all calls or puts, all strikes equidistant
CAPITAL REQUIREMENT: lower
RISK: defined



Max profit is achieved if stock is at short middle strike at expiration. Can place short middle strike slightly OTM to get slight directional bias. Probability of profit usually under 50%

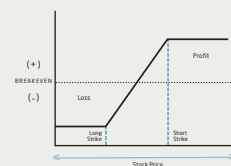
due to narrow profit range of long butterfly. High volatility keeps value of ATM butterflies lower. Butterflies expand in value most rapidly approaching expiration, so look at options 14 to 21 days to expiration. Short gamma increases dramatically at expiration (i.e., increases the magnitude of the options change in value) if the stock is at the short strike. Consider taking profit—if available—ahead of expiration to avoid butterfly turning into loser from last-minute price swing.

LOW-VOLATILITY TRADES

Lower vol usually means lower option premiums. That makes credit strategies less attractive—but all debit strategies are not created equal. Forget about straight long options for the moment. You might look for debit strategies where time decay is positive (i.e., time decay is working for, not against, your trade). Keep position size small. Add duration to strategies with further expirations to give stock some time to move in favor of the strategy. The following are some ideas for strategies designed for lower-volatility environments.

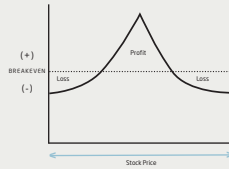
BULLISH STRATEGY No. 1 LONG ATM CALL VERTICAL

STRUCTURE: buy call one strike ITM, sell call of same expiration one strike OTM
CAPITAL REQUIREMENT: lower
RISK: defined



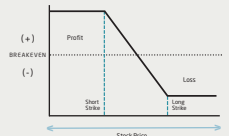
Consider creating vertical where the debit is less than the intrinsic value of the long call. That will make time decay positive for this debit position. Look at expirations 30 to 60 days out to

give position more duration. Max profit is usually achieved close to expiration, or if vertical becomes deep in-the-money (ITM). Consider taking less than max profit ahead of expiration if available.

BULLISH STRATEGY No. 2
LONG OTM CALL CALENDAR**STRUCTURE:** buy back-month OTM call, sell front-month call of same strike**CAPITAL REQUIREMENT:** lower**RISK:** defined

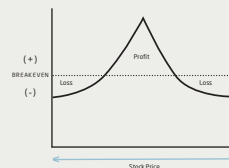
Because calendars maximize their value when the stock is at the calendar's strike price near expiration, this bullish strategy has a "up to this price, but not much more" bias. Lower vol

can make calendar debits lower. Look for short option between 25 and 40 days to expiration, and long option between 50 and 90 days to expiration. Look for calendar that can be profitable if stock stays at current price through the expiration of the front-month option and have approximately 1.5x debit price for max profit if stock is at strike price at expiration.

BEARISH STRATEGY No. 1
LONG ATM PUT VERTICAL**STRUCTURE:** buy put one strike ITM, sell put of same expiration one strike OTM**CAPITAL REQUIREMENT:** lower**RISK:** defined

You can create verticals where the debit is less than the intrinsic value of the long put. That will make time decay positive for this debit position. Look at expirations 30 to 60 days out to

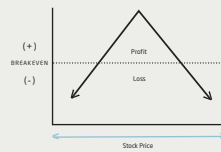
give the position more duration. Max profit is usually achieved close to expiration, or if vertical becomes deep ITM. Consider taking less than max profit ahead of expiration if it's available.

BEARISH STRATEGY No. 2
LONG OTM PUT CALENDAR**STRUCTURE:** buy back-month OTM put, sell front-month put of same strike**CAPITAL REQUIREMENT:** lower**RISK:** defined

Because calendars maximize their value when the stock is at the calendar's strike price near expiration, this bearish strategy has a "down to this price, but not much more" bias. Lower vol

can make calendar debits lower. Put calendars can

benefit from increase in vol if it increases on drop in stock price. Look for short option between 25 and 40 days to expiration, and long option between 50 and 90 days to expiration. Look for calendar that can be profitable if stock stays at current price through the expiration of the front-month option and have approximately 1.5x debit price for max profit if stock is at strike price at expiration.

NEUTRAL STRATEGY
SHORT STRADDLE**STRUCTURE:** sell ATM put, sell ATM call**CAPITAL REQUIREMENT:** high**RISK:** undefined

Shorting ATM call and put can generate large credit even in low vol, but requires greater confidence that stock price will not change much. Consider selling options closer to expiration—between 20 and 35 days—to maximize positive theta, and buying back the short strangle before expiration if profit is available.

Important Information

Spreads, Straddles, and other multiple-leg option strategies can entail substantial transaction costs, including multiple commissions, which may impact any potential return. These are advanced option strategies and often involve greater risk, and more complex risk, than basic options trades.

A covered call strategy can limit the upside potential of the underlying stock position, as the stock would likely be called away in the event of substantial stock price increase. Additionally, any downside protection provided to the related stock position is limited to the premium received. (Short options can be assigned at any time up to expiration regardless of the in-the-money amount.)

The risk of loss on an uncovered call option position is potentially unlimited since there is no limit to the price increase of the underlying security.

The naked put strategy includes a high risk of purchasing the corresponding stock at the strike price when the market price of the stock will likely be lower.

Naked option strategies involve the highest amount of risk and are only appropriate for traders with the highest risk tolerance.



SPRD

Q: How do I decide if I should be bullish, bearish or neutral?

A: That is entirely up to you. If you've found that some technical indicator, chart pattern, or fundamental analysis gives you a reliable bullish, bearish, or neutral outlook, then use it. But also use a smart strategy that takes volatility, probability, risk, and capital requirements into account. Many of the spreads outlined in this article can be profitable even if the stock does not move in the direction you believe it will. That's why I strongly suggest that you focus first on the strategy. If you find attractive bullish and bearish potential trades, then choose the bullish or bearish one depending on your directional analysis.

Q: Should I always avoid credits in low vol and debits in high vols even though I might spot an interesting opportunity?

A: Trading is rarely an either/or decision. There are times when short options look attractive despite relatively low vol, and other times where debit spreads can be a logical choice when vol is high. The smart thing to do is look at the pricing of the option strategy to see if it offers a sufficient potential profit relative to the risk in the position, as well as attractive probability of profit and return on capital no matter where the volatility.

Q: This outline gives me ideas on how to find the option spreads for opening trades, but how do I decide when to close them?

A: Because the major variables in determining a strategy's value—stock price, volatility, and time to expiration—are largely unpredictable after you open a position, it's impossible to come up with an

exit strategy that covers all contingencies. And it's always a question of "if I hold on a bit longer, can I get more profit or can I recoup some of the loss?" That said, much of position management is keeping position size small so that if you do take the max loss on a position, it does not have too great an impact on your whole account. That lets you focus on taking profits. One of the things you want to avoid is having a profitable trade turn into a loser. That can mean taking less than the max potential profit. A benchmark might be taking 50% of the max potential profit if it's available, and if it covers the cost of commissions to open and close the trade. Obviously, that means you might never have a large winning trade, but it can mean that the majority of your trades are profitable if they start out as high probability strategies.

Q: When I look for some of these spread trades, I often find them in stocks in the same sector or that have high correlations. Should I just do them all or pick one?

A: Stocks in the same industry sector often have not only their prices, but also their implied volatilities, rise and fall at the same time. You might see this in tech stocks, or oil stocks, or gold stocks, for example. Generally, if you see a bunch of the same types of trades in related stocks, you might consider just doing one—the most

attractive based on your opinion of volatility, probability, capital requirement, etc. You don't want to overweight your portfolio with positions that could all lose money if something hits a particular market or industry sector and causes all the stocks to move against your positions.

Q: Should I ever look at the weekly options, or options with less than 7 days to expiration, to find spread trades?

A: While you certainly can employ weekly options in your trading, it can be more difficult to find "bread-and-butter" spread strategies because 1) they tend to have much lower premiums than slightly longer-dated options; and 2) there isn't much time for a stock to recover if it moves against the position before the option expires. Keep an eye on weekly options, particularly if you want to trade around an earnings announcement or news event and the weeklies have higher implied vol than the other expirations.

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Capiche

Pearls from a
veteran floor trader

Words by
Kyle Murphy



SEE
GLOSSARY
PAGE 42

Behold Portfolio Margin!

Risk-based margin is both a blessing and a curse. But is it for you?



Trade Components for Married Put	Cash Account Required Funds	TD Ameritrade Margin Account Required Funds	Portfolio Margin Required Funds
Stock	\$10,000	\$5,000	\$0
Put Option	\$300	\$300	\$300
Total Position Cost	\$10,300	\$10,300	\$10,300
Total Paid	\$10,300	\$5,300	\$300
Amount Borrowed	None	\$5,000	\$10,000

TABLE1: Portfolio Margin could provide more bang for your buck. But that leverage work both ways and you can lose money faster than you can say “margin call.” For illustrative purposes only.

Got Portfolio Margin?
Need to speak to a human about portfolio margin? Call Client Services at 866-839-1100. Or simply access our Margin Handbook at bit.ly/tdamargin.

cap.

Getting more bang for your buck is a concept most people understand. So when it comes to trading on margin—putting up a portion of the cost of an asset to control all of it—some traders like to use it to leverage their buying power. However, the “one size fits all” approach of margin may not be enough juice for some traders. Fortunately, several years ago, the SEC fine-tuned some of the rules in order to grant what’s called risk-based, or “portfolio” margin.

When you’re granted portfolio margin, the funds you’re required to allocate to your positions are no longer based on individual trade risk, but rather on total position risk. Said another way, if you make a trade that partially or wholly offsets your risk in another one of your trades, you may only have to put up enough funds to cover the net risk, as opposed to the sum of the individual risks. Consider the following:

VANILLA MARGIN

Suppose XYZ stock is currently trading for \$100 per share. In order to purchase 100 shares of XYZ with a cash account, you’d need \$10,000. However, using a standard margin of 50% (putting up 50% of the total cost of buying a stock), would require \$5,000, while you borrow the remaining

\$5,000. There is some interest tied to the amount of money you’re lent, but it’s far less than the \$5,000 that your position would otherwise require. Should the value of XYZ drop significantly, you may be asked to deposit more funds via a **margin call**.

Pretty straightforward, right? You pay according to your position risk. But now consider, in addition to buying 100 shares of XYZ stock, you also bought a 30-day XYZ 100-strike put for \$3.00 (plus transaction costs). It would make sense that your total margin requirement would increase by \$3.00, or \$300 per contract. Hence, your total margin requirement would now be \$5,300.

But let’s take a closer look at that position. The 100-strike put gives you the right to sell stock at \$100 per share. Hence, for every cent you lose when XYZ drops below \$100 per share, you make that up via real value in your put option. So, the only downside exposure you have is the premium that you paid for your put option, which in this case is \$3.00, or \$300 per contract plus transaction costs.

Traditional margin calculations would require you to put up \$5,300. That’s \$5,000 more than what you would have at risk during the life of your trade.

PORTFOLIO MARGIN: THE NET RESULT

Now, if you’re approved for portfolio margin, you only have to put up the combined position risk, which in this case would be \$300 plus interest. Essentially, this would leave you with more cash left from the com-

bined stock/put position to initiate new positions. (However, if the put is sold or expires, the regular margin requirements on the stock kick back in.) Table 1 shows a summary of how your totals would be calculated. Not all calculations work as they do in this example, but as you can see, portfolio margins allow you to keep more of your cash. This cash can remain in your account generating interest, or it can be put to use in other trades. One caveat: you’ll need at least \$125,000 to qualify for (and maintain) portfolio margining. So be sure to review TD Ameritrade’s margin rules before taking the plunge (see sidebar, above).

Important Information

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42 **gls****The Token Glossary**

• Terms you might stumble across in this issue.

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found on page:

MARGIN CALL

• A margin call is issued when your account value drops below the maintenance requirements on a security or securities due to a drop in the market value of a security or when you exceed your buying power. Margin calls may be met by depositing funds, selling stock, or depositing securities. TD Ameritrade may forcibly liquidate all or part of your account without prior notice, regardless of your intent to satisfy a margin call the interests of both parties.

found on page: **20****Put-Call Parity**

• The price relationship of puts and calls of the same class, such that a combination of these puts and calls will create the synthetic equivalent of a stock position. For example, a combination of a short 50-strike put, with a long 50-strike call of the same expiration and same underlying, has the same risk-reward profile as the underlying stock position.

12

found on page:

Implied volatility

• The market's perception of the future volatility of the underlying security, and is directly reflected in an option's premium. Implied volatility, is an annualized number expressed in percent (such as 25%), is forward-looking, and can change.

12

found on page:

VIX (CBOE Volatility Index)

• THE DE FACTO MARKET VOLATILITY INDEX USED TO MEASURE THE IMPLIED VOLATILITY OF S&P 500 INDEX OPTIONS. OTHERWISE KNOWN TO THE PUBLIC AS THE "FEAR INDEX," IT IS MOST OFTEN USED TO GAUGE THE LEVEL OF FEAR OR COMPLACENCY IN A MARKET OVER A SPECIFIED PERIOD OF TIME. TYPICALLY, AS THE VIX RISES, OPTION BUYING ACTIVITY INCREASES, AND OPTION PREMIUMS ON THE S&P 500 INDEX INCREASE AS WELL. AS THE VIX DECLINES, OPTION BUYING ACTIVITY DECREASES. THE ASSUMPTION IS THAT GREATER OPTION ACTIVITY MEANS THE MARKET IS BUYING UP HEDGES, IN ANTICIPATION OF A CORRECTION. HOWEVER, THE MARKET CAN MOVE HIGHER OR LOWER, DESPITE A RISING VIX.

found on page:

12, 36**POSITIVE-TIME DECAY**

• A position that benefits from the time decay (theta) an option experiences as time passes.

found on page:

12, 26**Short Put**

• A bullish, directional strategy with unlimited risk in which a put option is sold for a credit, without another option (of a different strike or expiration) or instrument used as a hedge. The strategy assumes that the stock will stay above the strike sold; in which case, as time passes and/or volatility drops, the option can be bought back cheaper or expire worthless, resulting in a profit.

found on page:

26**Covered Call**

• A limited-reward strategy constructed of long stock and a short call. Ideally, you want the stock to finish at or above the call strike at expiration, in which case, you'd have your stock "called away" at the short call strike. In this case, you would keep your original credit from the sale of the call as well as any gain in the stock up to the strike. Breakeven on the trade is the stock price you paid minus the credit from the call.

found on page:

26**Iron Condor**

• A defined-risk, short spread strategy, constructed of a short put vertical and a short call vertical. You assume the underlying will stay within a certain range (between the strikes of the short options). The goal: As time passes and/or volatility drops, the spreads can be bought back for less than the credit taken in or expire worthless, resulting in a profit. The risk is typically limited to the largest difference between the adjacent and long strikes minus the total credit received.

Short Vertical

• A defined-risk, directional spread strategy, composed of an equal number of short (sold) and long (bought) calls or puts in which the credit from the short strike is greater than the debit of the long strike, resulting in a net credit taken into the trader's account at the onset. Short call verticals are bearish while short put verticals are bullish. The risk in this strategy is typically limited to the difference between the strikes less the received credit. The trade is profitable when it can be closed at a debit for less than the credit received. Breakeven is calculated in a short put vertical by subtracting the credit received from the higher (short) put strike, or in the case of a short call vertical, adding the credit received to the lower (short) call strike.

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1/ GENERAL DISCLAIMER

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Trading options involves unique risks and is not suitable for all investors. Mini-options do not reduce the per share cost or price of options.

The naked put strategy includes a high risk of purchasing the corresponding stock at the strike price when the market price of the stock will likely be lower. Naked option strategies involve the highest amount of risk and are only appropriate for traders with the highest risk tolerance.

The risk of loss on an uncovered call option position is potentially unlimited since there is no limit to the price increase of the underlying security.

Naked option strategies involve the highest amount of risk and are only appropriate for traders with the highest risk tolerance.

Spreads, condors, butterflies, straddles, and other complex, multiple-leg option strategies can entail substantial transaction costs,

including multiple commissions, which may impact any potential return. These are advanced option strategies and often involve greater risk, and more complex risk, than basic options trades.

A covered call strategy can limit the upside potential of the underlying stock position, as the stock would likely be called away in the event of substantial stock price increase. Additionally, any downside protection provided to the related stock position is limited to the premium received. (Short options can be assigned at any time up to expiration regardless of the in-the-money amount.)

Be aware that assignment on short option strategies discussed in this article could lead to unwanted long or short positions on the underlying security.

Supporting documentation for any claims, comparisons, statistics, or other technical data will be supplied upon request.

4/ PROBABILITY ANALYSIS

Probability analysis results are theoretical in nature, not guaranteed, and do not reflect any degree of certainty of an event occurring. The probability projections in the Analyze page assume the underlying stocks follow a lognormal distribution. The results are derived using the Black-Scholes formula for delta, consisting of the current stock price, number of days in the future, current volatility of the stock, and the risk-free rate of return.

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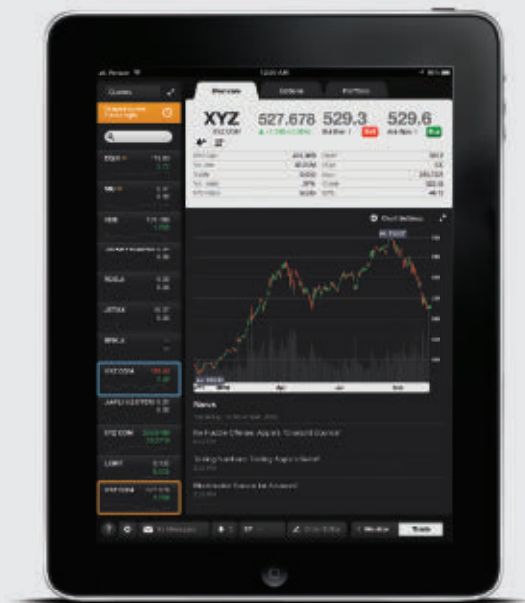
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