# YOUR HANDBOOK TO THE INTERMEDIATE DEGREE

Motley Fool Options Whiz

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# Options Whiz: Your Handbook to the Intermediate Degree

Brought to you by **Motley Fool Options**

Dear Fellow Fools,

If you're reading this, you fall into one of two camps: Either you've completed our Basic Degree and your appetite for employing Foolish options strategies is insatiable, or you're an options veteran — the type with an iron condor printed on your calling card — and you're looking to bolster your mastery of the fundamentals. In either case, working through this Handbook to the Intermediate Degree is a great investment in your options education.

***Feeling Like a Freshman?***

The Intermediate Degree spans five lessons (lessons 1 through 4 constitute the Basic Degree), diving deep into some of the most common strategies we use at *Motley Fool Options* and pulling back the curtain on the mechanics of employing those strategies with a high rate of accuracy. If at any time you feel lost, head back to the Basic Degree (mot.ly/OptionsBasicDegree) and make sure you've mastered the basics. The best way to use options Foolishly (as a complement to your well-chosen stock portfolio) is to have a clear understanding of the risks and rewards, and appropriately, that begins at the beginning.

As a reminder, this Handbook is an organized tour through the guides and videos on the *Motley Fool Options* website (options.fool.com), with special attention called to the areas that we think are most important (highlighted in the Foolish Fundamentals sections). Each lesson has a Big Quiz at the end to test your comprehension and to make sure you're comfortable making the leap from academic exercise to real-life investing.

***Action Steps***

This Options Whiz/ handbook  puts almost everything you need in one place, but please don't let it keep you from asking questions or providing feedback on the Options Whiz. discussion board (mot.ly/OptionsUBoard). We don't want this to feel like detention — and if at any point it does, you can have fun with the other rabble-rousers undergoing the journey through Options Whiz. Here's what to do:

1. Make the commitment (five weeks — one per lesson) to getting your Intermediate Degree.
2. Check in to the Options Whiz. discussion board (mot.ly/OptionsUBoard), say hi to your classmates, and ask any questions you have along the way.

Don't be too cool for school,

Bryan Hinmon, aka Prof.42 (TMF42 on the boards)

# Lesson 5: Initiating Covered Calls

## The Goods

***Readings:***

- **Writing Covered Calls**
  http://newsletters.fool.com/50/optionsu/2009/08/10/writing-covered-calls.aspx
- **Video Extra: The Covered Call Miniseries**
  *(the first three videos)*
  http://newsletters.fool.com/50/optionsu/2010/09/24/video-extra-the-covered-call-miniseries.aspx

***Key Topics:***

- Review: What is a covered call?
- Know your tradeoff
- *MFO* covered call philosophy
- Why use covered calls?
- General covered call writing guidelines
- Learn to find covered calls

Check the Foolish Fundamentals section below for my CliffsNotes version of these key topics.

## The Foolish Fundamentals

### Review: What is a covered call?

» It's a stock and option combined position with two legs:

- Purchased stock (in 100-share increments)
- A written call option

» The strategy caps the upside of the stock in exchange for a bit of downside protection in the form of rent/income.

» If the position is established on a stock you already own, it's called a "covered call."

» If the position is established on a stock you are purchasing expressly for the combined strategy, it is called a "buy-write."

*Note: The trade command necessary to write a call option is "sell to open."*

### Know Your Tradeoff

A covered call has two potential outcomes:

1. If the stock price is higher than the strike price at expiration, the call will be exercised (we're obligated to sell our shares).
2. If the stock price is less than the strike price at expiration, the call expires worthless (we keep the option income and our shares of the stock).

*Note: The written call represents an obligation to sell the shares at expiration if the stock price is higher than the strike price at expiration.*

» **The tradeoff:** Covered call writers trade a stock's upside (beyond the strike) for option premium up front.

- The premium can be viewed as downside protection that regular stockholders wouldn't have.
- The premium can be viewed as income, a synthetic dividend of sorts.

### *Motley Fool Options'* Covered-Call Philosophy

**» Rule No. 1 of covered calls: You must be OK selling the underlying stock at the strike price.**

- If you don't want to sell the stock, don't write covered calls.

We like the buy-write mentality:

- Establish your positions with the intent of selling the shares at the strike price — you should be pleased to earn your maximum return.
- You avoid sellers remorse if you enter the position with this mentality.
- It instills a valuation and selling discipline.

The main reasons for writing covered calls are:

1. **Income:** to generate cash on a stable stock (the "buy-write" approach)
2. **Defense:** to have downside protection on a stock you own
3. **A better sell price:** to earn an additional payment at the price you want to sell

### General Covered-Call Guidelines

*Options* generally writes covered calls for income, and as such, we look for:

- 7% to 8% return if exercised (RIE) within six months (15% annualized)
- 5% downside protection

*Note: These terms are defined in the "Learn This First" box below.*

***Tips & Tricks***

» Even though you can't spend "**annualized returns**," knowing how to calculate them makes it easier to compare options with different expiration months. For example, it's tough to say whether a 5% RIE achieved in 59 days is superior or inferior to a 7.2% RIE in 81 days. But putting those returns on equal footing, by annualizing them, makes the comparison apples-to-apples.

- Annualizing returns provides a theoretical return for the position on a 365-day basis.
- If the period in question is 30 days, annualizing the return assumes the exact same trade is put on a little over 12 times (365/30).
- If the period in question is 700 days, annualizing the return assumes the trade can be put on over one-half the time (365/700).
- We calculate "simple" annualization.
- Annualizing the RIE shows us the 365-day theoretical total return if the stock prices exceeds the strike price at expiration. Our return comes from two places: movement in the stock price (we own shares, remember), and the option yield.

» Annualized yield = option yield * (365 / # of days)

» Annualized RIE = RIE * (365 / # of days)

For example:

- A 5% RIE in 59 days, annualized = [ 0.05 * (365/59) ] = 30.9%
- A 7.2% RIE in 81 days, annualized = [ 0.072 * (365/81) ] = 32.4%

» If you're writing covered calls for defense or for a better sell price, you can accept a lower RIE and less downside protection.

*Note: These are simply guidelines. We will violate them from time to time depending on the situation (the stock in question, the thesis, and volatility), bur they are a great place to start.*

***Learn This First: Calculate Key Metrics***

Here's how you calculate the key metrics for covered calls:

| Metric | Definition | Calculation |
|---|---|---|
| Max risk or CaR * | The most you can lose | Stock price paid |
| Max option reward | The most you can earn from the option | Premium received |
| Option yield + | The maximum profit from the option leg | Max option reward / CaR |
| Break-even price | The price at which your covered call begins to lose money | Stock price – premium received |
| Downside protection | The % the stock can drop before you begin to lose money | Premium received / stock price |
| Maximum stock gain ^ | The return you'll earn on the stock if the option is exercised | Strike price – stock price |
| Return if exercised (RIE), in $ | The most you can earn from both legs (the stock and the option) combined) | Maximum stock gain + premium received |
| Return if exercised, in % | The maximum total strategy profit | RIE in $ / CaR |

** We are calculating CaR ignoring the written-call premium. If you'll remember back to Lesson 2 of the Basic Degree, when we introduced CaR, we said: "If you prefer to ignore the option premium you were paid up front in consideration of CaR, that is perfectly acceptable — a matter of choice." We are choosing to ignore the written-call premium here because we will account for it later and are trying to calculate our returns in the most conservative way possible. Because we are using CaR in the denominator of our return calculations, we'll be sure to include the written call premium in the numerator.*

*+ You can also think of this as [ call premium received / stock price ]. It is also known as the "Return if Unchanged" or RIU. It captures the part of our total return that comes from the written call.*

*^ If you write in-the-money covered calls, your maximum stock gain will be negative. If you write out-of-the-money covered calls, your maximum stock gain will be positive and a rising stock will contribute to your total returns.*

## Learn to Find Covered Calls

» A good covered call candidate meets three criteria:

1. It pays you sufficiently for selling upside (we think this is ~15% annualized RIE).
2. It doesn't expose you to extreme downside (we think ~5% downside over six months).
3. It fits your personal risk/reward preferences (this is for you to decide).

Remember, a covered call caps upside and provides only a bit of downside protection, so you should get paid sufficiently and not be exposed to extreme downside.

» What is "sufficient payment"?

- Use the guidelines above as a starting point.
- Build a table to compare different call candidates.

***Tips & Tricks***

» Try building this table — or one similar to it — to compare call options of different strikes and expirations. Find any that meet the *Motley Fool Options* guidelines and use those as a starting point for choosing your covered call. Match the best option choice with your expectations for the underlying stock.

| | April | April | April | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $34 | $35 | $36 | $34 | $35 | $36 |
| Stock price | $33.75 | $33.75 | $33.75 | $33.75 | $33.75 | $33.75 |
| Call price | $1.18 | $0.75 | $0.45 | $1.95 | $1.50 | $1.10 |
| Days to expiration | 52 | 52 | 52 | 115 | 115 | 115 |
| CaR | $33.75 | $33.75 | $33.75 | $33.75 | $33.75 | $33.75 |
| Maximum option reward | $1.18 | $0.75 | $0.45 | $1.95 | $1.50 | $1.10 |
| Option yield | 3.5% | 2.2% | 1.3% | 5.8% | 4.4% | 3.3% |
| Annualized yield | 24.5% | 15.6% | 9.4% | 18.3% | 14.1% | 10.3% |
| Break-even price | $32.57 | $33 | $33.30 | $31.80 | $32.25 | $32.65 |
| Downside protection | 3.5% | 2.2% | 1.3% | 5.8% | 4.4% | 3.3% |
| Maximum stock gain | $0.25 | $1.25 | $2.25 | $0.25 | $1.25 | $2.25 |
| RIE, $ | $1.43 | $2 | $2.70 | $2.20 | $2.75 | $3.35 |
| RIE, % | 4.2% | 5.9% | 8.0% | 6.5% | 8.1% | 9.9% |
| Annualized RIE | 29.7% | 41.6% | 56.2% | 20.7% | 25.9% | 31.5% |

***QUICK CHECK***

Before moving on, you should be able to answer these questions:

Question: Which call options in the table above meet both the *MFO* guidelines (annualized RIE >15% and downside protection >5%)?

Answer: Only one does. The June $34 calls offer a 20.7% annualized RIE and 5.8% downside protection.

*Note: While the annualized RIEs for every other covered call are higher, none of them offer sufficient downside protection. We own shares in 100-share blocks, so our first priority should be guarding against a material decline.*

Question: Calculate the CaR, annualized option yield and Downside Protection for the June $34 call options in the table above.

Answer:

- CaR = stock price | -$33.75 (the most we can lose)
- RIE $ = Max stock gain + premium received | [($34-$33.75) + $1.95 = $2.20] | RIE% = RIE $ / CaR | [$2.20/$33.75 = 6.5% | .065 * (365/115) = 20.7%]
- Downside Protection = Premium Received / Stock Price | $1.95 / $33.75 = 5.8%

***What kind of stock makes a good candidate?***

» Look for "fairly valued" stocks — ones that trade near your estimate of intrinsic value.

- An over-valued stock may fall more than you're paid (exposing you to too much downside).
- An under-valued stock may appreciate rapidly past the strike price (in which case, writing the call is much inferior to simply holding the stock).

» When in doubt, go with "boring and bloated" versus "ga-ga growth."

- Of course, option premiums are generally better on growth names than they are on stable companies.
- The important thing is to know the underlying stock and take an appropriate stance.

# The Big Quiz

You've read. You've reviewed. But have you learned? It's time for an options party — a knowledge festival — to check in on what you've been learning. Below are some questions, and a real-world assignment, for you to use as a measuring stick. Further below are the answers. We work on the honor system here, so check yourself after you've given the Big Quiz the "old college try."

Questions? Come see us on the Options Whiz. discussion board: http://boards.fool.com/1321/options-options-u-119968.aspx

## QUESTIONS

1. Fill in the blanks with the following answer choices: "covered call" or "buy-write":

   a. To execute a _____ options strategy, you sell one covered call for every 100 shares of stock that you already own. b. To execute a _____ options strategy, you purchase shares of a company in 100-share blocks and simultaneously sell an equivalent number of covered call options on that stock.

2. State the No. 1 Rule of Covered Calls.

3. Multiple choice: In *Motley Fool Options*, the predominant reason we use a covered-call option strategy is to generate income. Which of the following definitions captures this "income" mindset best?

   a. We try to generate sufficient returns by earning cash on a fairly-priced stock (using the "buy-write" mentality).

   b. We try to acquire income to protect from a reasonable decline in the stock's price.

   c. We try to earn an additional payment for selling a stock at a price we're happy with.

4. Generically, *Options* offers two guidelines for finding covered calls: We must be paid sufficiently and offered sufficient downside protection. Quantify these two guidelines.

5. It's important to remember to view a position's profitability in terms of total returns (don't focus on profits on a per-leg basis). Calculate the return if exercised (%) on a buy-write on **GameStop** (NYSE: GME), assuming a stock price of $19.78, and April $20 calls, trading for $0.72.

## ASSIGNMENT

6. *Note: You may need to update the stock price and expiration months depending on when you work through this assignment. Be sure to choose expiration months less than 12 months out and strike prices that are at or slightly out of the money*. Jeff's original put-writing recommendation on **Synaptics** (Nasdaq: SYNA) (http://newsletters.fool.com/50/coverage/alerts/2011/01/04/write-puts-on-synaptics.aspx) makes a case for limited downside in a general sense.

   a. Fill in the blanks in the covered call comparison table by calculating all missing numbers.

   b. Call out any calls that meet the *Options* criteria. (Pricing data as of Friday, Feb. 18, 2011. Call prices are bid prices.)

   c. Choose which of the call options below looks most interesting for a new covered call trade. Justify your answer.

| | March | March | March | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $30 | $31 | $32 | $30 | $31 | $32 |
| Stock price | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 |
| Call price | $1.30 | $0.80 | $0.45 | $2.60 | $2.15 | $1.70 |
| Days to expiration | | | | | | |
| CaR | | | | | | |
| Maximum option reward | | | | | | |
| Option yield | | | | | | |
| Annualized yield | | | | | | |
| Break-even price | | | | | | |
| Downside protection | | | | | | |
| Maximum stock gain | | | | | | |
| RIE, $ | | | | | | |
| RIE, % | | | | | | |
| Annualized RIE | | | | | | |

## ANSWERS

1. Fill in the blanks:

   a. Covered call

   b. Buy-write

2. Rule No. 1 of covered calls: You must be okay selling the underlying stock at the strike price.

3. a.

4. The general *Motley Fool Options* covered-call guidelines require a 7% to 8% return if exercised (RIE) in six months or less (15% annualized) and 5% downside protection.

5. The appropriate calculations are as follows:

   a. Maximum stock gain = $20.00 - $19.78 = $0.22

   b. Maximum option gain = $0.72

   c. RIE, $ (maximum combined gain from the stock and option) = $0.22 + $0.72 = $0.94

   d. CaR = $19.78

   e. RIE, % = $0.94 / $19.78 = 4.75%

## ASSIGNMENT ANSWERS

a. The answers for the table are below. (Note: Answers will vary depending on when you work through this assignment.)

| | March | March | March | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $30 | $31 | $32 | $30 | $31 | $32 |
| Stock price | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 |
| Call price | $1.30 | $0.80 | $0.45 | $2.60 | $2.15 | $1.70 |
| Days to expiration | 27 | 27 | 27 | 118 | 118 | 118 |
| CaR | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 | $30.64 |
| Maximum option reward | $1.30 | $0.80 | $0.45 | $2.60 | $2.15 | $1.70 |
| Option yield | 4.2% | 2.6%1.5% | 1.5% | 8.5% | 7.0% | 5.5% |
| Annualized yield | 57.4% | 35.3% | 19.9% | 26.2% | 21.7% | 17.2% |
| Break-even price | $29.34 | $29.84 | $30.19 | $28.04 | $28.49 | $28.94 |
| Downside protection | 4.2% | 2.6% | 1.5% | 8.5% | 7.0% | 5.5% |
| Maximum stock gain | ($0.64) | $0.36 | $1.36 | ($0.64) | $0.36 | $1.36 |
| RIE, $ | $0.66 | $1.16 | $1.81 | $1.96 | $2.51 | $3.06 |
| RIE, % | 2.2% | 3.8% | 5.9% | 6.4% | 8.2% | 10.0% |
| Annualized RIE | 29.1% | 51.2% | 79.9% | 19.8% | 25.3% | 30.9% |

b. Three of the calls meet the *Motley Fool Options* guidelines:

- The June $30s meet both MFO guidelines, offering 8.5% downside protection and a 19.8% annualized RIE.
- The June $31s meet both MFO guidelines, offering 7.0% downside protection and a 25.3% annualized RIE.
- The June $32s meet both MFO guidelines, offering 5.5% downside protection and a 30.9% annualized RIE.

c. Your answer may vary based on your view of Synaptics shares over the time period in question. Something along these lines would be great:

*Given my high level of bullishness on Synaptics shares and the recent rising market, I'd like to maximize the gain I can earn from the shares rising. Consequently, I'm less concerned with protecting my downside in the near term, so the June $32 call options seem like a good fit with my view for Synaptics.*

# Lesson 6: Maintaining Covered Calls

## The Goods

***Readings:***

- **Rolling Covered Calls**
  http://newsletters.fool.com/50/optionsu/2010/08/27/rolling-covered-calls.aspx
- **Video Extra: The Covered Call Miniseries**
  *(the fourth — and final — video)*
  http://newsletters.fool.com/50/optionsu/2010/09/24/video-extra-the-covered-call-miniseries.aspx

***Key Topics:***

- Follow-up vocab
- The key factors to consider for follow-up action
- What to do if the stock has risen
- What to do if the stock has fallen
- The math behind covered-call follow-ups

Check the Foolish Fundamentals section below for my CliffsNotes version of these key topics.

## The Foolish Fundamentals

Ron Popeil's tagline, "Set it, and forget it," does not work for covered calls as an ongoing investment strategy. In Lesson 5, you learned that we prefer to use covered calls with a "buy-write" mentality. But even if you're simply writing call options over existing positions in your portfolio knowing how to properly follow-up as your calls near expiration is a vital skill — it allows us to adjust the risk and return profile of our position after it has been initiated.

We also think this lesson is important because it highlights the fact that you aren't locked into your position once you put it on. If things change, or you get scared, or you need some cash, knowing how to follow-up can help out. So consider this Round 2 of covered calls.

### Some Follow-Up Vocabulary

**Rolling:** The process of closing an existing written call in a covered-call position and substituting a different written call in its place.

**Roll up:** Substituting a call with a higher strike price.

**Roll down:** Substituting a call with a lower strike price.

**Roll out:** Substituting a call with a more distant expiration.

*Note: You can do a combination of these. For example, you could roll up and out, meaning that you close the existing call and write another at a higher strike and a more distant expiration month.*

**Net price:** The combined price of a two-pronged transaction. In this case, it's the combination of the cost to buy back the existing written call and the income from writing a new call.

**Net credit:** If the income from the new call exceeds the cost of closing the old call, you are paid a credit.

*Note: This indicates that you are earning additional income, lowering your break-even point and decreasing your total risk.*

**Net debit:** If the cost to close the old call exceeds the income from writing the new call, you are required to pay the difference.

*Note: This indicates that you are adding capital to the trade and raising your break-even point.*

### Key Factors to Consider for Follow-Up Action

***The three keys:***

1. Your view of the underlying stock (this will primarily guide all follow-up actions).

   a. Remember, covered calls require owning the stock.

   b. The stock still represents the downside of the strategy.

   c. Remember the 85% Guideline: Once you've earned 85% of the value of the written call, you should at least consider follow-up action — because you've earned most of the profit from the strategy, but you retain all of the risk.

2. The upside gained by rolling

3. The new breakeven (riskiness) from rolling

***Other important things to remember:***

» Remember to view all positions as a cohesive strategy — don't pay too much attention to the profits/losses on any single leg.

» Don't pay for time value.

- Here at *Motley Fool Options*, we like to write options because we get paid for selling time value.
- If you're rolling, you have to buy back your written calls, meaning you're probably paying for some remaining time value.
- When rolling, it's generally smarter to wait until expiration is close so you don't pay for too much time value.

» Look at your past actions.

- If you're constantly rolling up, ask yourself if you should have written calls on the underlying in the first place.

- Remember, we're looking for "fairly-valued" firms to use for this strategy.
- Take note in times where it would have been better to take no action, or in times when you should've rolled and didn't. Learn from these experiences.

» Beware of locking in losses.

- When you roll down, you're agreeing to sell the stock at a lower price, and are in a way "locking in a loss" equal to the difference between the price you paid for the stock and the new (lower) strike.
- Make sure you're comfortable with your stock's valuation and prospects to make sure you're rolling wisely.

» You don't have to take the same action on all of your contracts.

- Sometimes you may want to roll only part of your position and let the rest ride.
- There's no rule saying this isn't perfectly alright.

» Know your commission schedule.

- You'll probably have to pay commissions when a stock is called away.
- You'll have to pay commissions to close early too.

» Mind your trade commands.

- "Sell to open" will establish a written call.
- "Buy to close" will close an existing written call.

## What to Do If the Stock Has Risen

*Note: This means that we're making money on our covered call. But it's possible that taking follow-up action will allow us to squeeze out additional profits from our position.*

Remember, writing covered calls means you've agreed to sell the stock if it rises through your chosen strike price. Here's what you can do if that happens:

1. Do nothing.
   a. If you think the stock is overvalued after its rise, you can simply let the shares be called away and enjoy your profits.
   b. If you look into writing new options (at a higher strike or further expiration) and they don't pay us sufficiently, it may be best to simply say goodbye and let shares get called away.
   c. If you chose a "fairly valued" stock to begin with, a quick rise may put you in this camp.
2. Roll up.
   a. To roll up (to a higher strike price) you'll need to "buy to close" your existing written calls and "sell to open" calls of the same expiration month at a higher strike.
   b. This is usually done to make a quick adjustment to your initial position — if some news event were to materially change the upside to your stock and shares jump, for example.
   c. Because the options expire simultaneously, you don't need to worry about time-value dissipation before making this trade.
   d. Rolling up requires adding additional capital to the trade (net debit), which raises your breakeven and adds risk.
3. Roll out.
   a. To roll out (to a more distant expiration date) you'll need to "buy to close" your existing written calls and "sell to open" calls of the same strike at a further expiration.
   b. In doing this, you won't be gaining any additional upside potential of the stock because you're keeping the strike the same, you're only adding the net credit to your profits and giving the stock more time to perform as you expect.
   c. It is more common to roll up and out, instead of just out, so you can capture additional share appreciation.
   d. When rolling out at the same strike price, you will always take in more money than you spend because you're selling more time value (net credit) than you are buying back.
4. Roll up and out.
   a. To roll up and out (to a higher strike and more distant expiration date) you'll need to "buy to close" your existing written calls and "sell to open" calls at a higher strike at a further expiration.
   b. In doing this, you'll be gaining access to additional share appreciation potential.
   c. The loss taken on buying back the original call is usually more than made up for by the gain in the stock, so remember to view your covered calls as a whole, and don't focus on the profits of any individual leg.
   d. If you see more upside potential in the stock and continue to believe it doesn't have much downside risk, rolling up and out may be smart.
   e. Generally, rolling up and out earns a net credit, but that is not always the case.

## What to Do If the Stock Has Fallen

*Note: This means that we're losing money on our underlying shares but we'll probably get to keep all of our written call premium. Still, it's possible that taking follow-up action will allow us to squeeze out additional profits or lessen the losses from our position.*

Remember, writing covered calls means you've agreed sell a stock you own if it rises through your chosen strike price. If the stock you're holding is falling, here are your choices:

1. Do nothing.

   a. If you think the stock is still hovering around fair value after its fall, you can simply do nothing and enjoy the fact that you did better than simply holding the stock outright.

   b. If your view on the stock has changed for the worse, you may be best selling the stock once your calls expire (or **immediately**, if things have gotten considerably worse).

2. Roll down.

   a. To roll down (to a lower strike price) you'll need to "buy to close" your existing written calls and "sell to open" calls of the same expiration month at a lower strike price.

   b. This is usually done to make a quick adjustment to your initial position — if some news event were to cause your stock to fall, for example.

   c. In doing this, you'll be effectively locking in a loss by agreeing to sell at a lower strike price — before rolling down make sure you shouldn't just be selling the shares first.

   d. Rolling down results in a net credit.

   e. For an example, check out Nick's rolling recommendation on **Wal-Mart** (NYSE: WMT): http://newsletters.fool.com/50/coverage/alerts/2011/02/17/roll-your-diagonal-call-on-wal-mart.aspx

3. Roll down and out.

   a. To roll down (to a lower strike price) and out (to a further expiration date), you'll need to "buy to close" your existing written calls and "sell to open" calls at a lower strike price and a further expiration date.

   b. This is usually done to combat the ebbs and flows natural in the stock market and to allow for more time for your thesis to play out.

   c. In doing this, you'll be effectively locking in a loss by agreeing to sell at a lower strike price — before rolling down make sure you shouldn't just be selling the shares first.

   d. Rolling down and out results in a net credit.

## Um ... What If the Stock Hasn't Done Much at All?

Well, Fool, your strategy is playing out as you planned. Your fairly valued stock is probably behaving like a fairly valued stock should.

- If you haven't invoked the 85% guideline, let your OTM call expire and quickly write a new call that expires a few months out.
- If you're view on the underlying has changed, switch strategies or sell the shares and move on to your next candidate

## The Math Behind Covered-Call Follow-Ups

At the beginning of this lesson we said there were three keys to consider when considering follow-up action:

1. Your view of the underlying stock
2. The upside gained by rolling
   a. Look at the total added upside in the stock.
   b. Look at the new total maximum gain (potential profits from the stock and option income combined).
   c. Look at your total maximum return, and look at it on an annualized basis when rolling out.
3. The new breakeven (riskiness) from rolling

We'll be focusing on Nos. 2 and 3 here, and per usual, we advise laying things out in tabular format. Below are a few examples of one way to perform follow-up analysis.

- You'll notice in the video (No. 4 in Jim's covered-call series) that Jim lays things out differently (and calculates CaR a slightly different way).
- You'll notice in the guide that Jeff focuses on the percentage upside gained.

*Note: All of these ways are different ways to do the same thing. Find the one that is most intuitive to you and works in your process and you'll be good to go.*

### *Rolling Up*

In this example, let's assume you initiated your covered call by buying shares at $28 and writing an April $30 call option. The stock jumped on some good news — it's now $32 — and you've increased your estimate of its intrinsic value to a range of $34 to $38. You are considering rolling up:

| No. | Details | Original Scenario | Roll Up | Notes |
|---|---|---|---|---|
| 1 | Purchase stock | $28 | $28 | |
| 2 | Call strike | $30 | $35 | Added $5 upside |
| 3 | Expiration | April | April | |
| 4 | Days | 45 | 45 | |
| 5 | Initial written call | $2 | $2 | |
| 6 | Buy back initial call | | ($3) | |
| 7 | Write new call | | $1 | |
| 8 | Net credit / (debit) | $2 | $0 | No. 5 + No. 6 + No. 7 |
| 9 | Maximum stock gain | $2 | $7 | No. 2 – No. 1 |
| 10 | Total maximum gain | $4 | $7 | No. 8 + No. 9 |

| No. | Details | Original Scenario | Roll Up | Notes |
|---|---|---|---|---|
| 11 | Breakeven | $26 | $28 | No. 1 – No. 8 |
| 12 | CaR | $28 | $28 | No. 1 |
| 13 | Total maximum return | 14.3% | 25.0% | No. 10 / No. 12 |
| 14 | Annualized | 115.9% | 202.8% | No. 13 * [365 / No. 4] |
| 15 | Added upside | nm | $3 | Difference total maximum gain |
| 16 | Added downside | nm | $2 | Difference in breakevens |

The key takeaways from this roll-up example:

- We can add $3 in potential return (No. 15) at the cost of increasing our breakeven by $2 (No. 16).
- In other words, our incremental potential return on incremental risk is 50% [($3/$2) – 1] … well, that's pretty good .
- If the stock continues to perform well, we can earn higher returns too (Nos. 13, 14).

### *Rolling Up and Out*

In the last example, we paid $2. to roll up. Many people don't like to add capital to a trade once it's on. Rolling up and out usually allows us to get a net credit, instead of a net debit, in return for the risk that comes with a farther expiration. Assume the same situation as above (you initiated your covered call by buying shares at $28 and writing a $30 April call option, and the stock jumped on some good news — it's now $32). You are considering rolling up and out:

| No. | Details | Original Scenario | Roll Up and Out | Notes |
|---|---|---|---|---|
| 1 | Purchase stock | $28 | $28 | |
| 2 | Call strike | $30 | $35 | Added $5 upside |
| 3 | Expiration | April | July | |
| 4 | Days | 45 | 120 | |
| 5 | Initial written call | $2 | $2 | |
| 6 | Buy back initial call | | ($3) | |
| 7 | Write new call | | $2 | |
| 8 | Net credit / (debit) | $2 | $1 | No. 5 + No. 6 + No. 7 |
| 9 | Maximum stock gain | $2 | $7 | No. 2 – No. 1 |
| 10 | Total maximum gain | $4 | $8 | No. 8 + No. 9 |
| 11 | Breakeven | $26 | $27 | No. 1 – No. 8 |
| 12 | CaR | $28 | $28 | No. 1 |
| 13 | Total maximum return | 14.3% | 28.6% | No. 10 / No. 12 |
| 14 | Annualized | 115.9% | 86.9% | No. 13 * [365 / No. 4] |
| 15 | Added upside | nm | $4 | Difference total maximum gain |
| 16 | Added downside | nm | $1 | Difference in breakevens |

The key takeaways from this roll-up-and-out example:

- We can add $4 in potential return (No. 15) and only have to increase our breakeven price by $1 (No. 16).
- Our incremental potential return on incremental risk is 300% [($4 / $1) – 1].
- We'll be earning a lower annualized max return.
- While we are raising our break-even point by just $1, we're adding the risk associated with holding the stock for three additional months, or 75 days (No. 4).

### *Rolling Down*

Continuing with the examples above, we'll assume that this time the stock has fallen to $25 (you purchased it at $28). You still believe the company is trading around fair value and the options pay well enough that you'd like to keep your position on. You are considering rolling down:

| No. | Details | Original Scenario | Roll Down | Notes |
|---|---|---|---|---|
| 1 | Purchase stock | $28 | $28 | |
| 2 | Call strike | $30 | $25 | Took down $5 upside |
| 3 | Expiration | April | April | |
| 4 | Days | 45 | 45 | |
| 5 | Initial written call | $2 | $2 | |
| 6 | Buy back initial call | | ($0.35) | |
| 7 | Write new call | | $1.50 | |
| 8 | Net credit / (debit) | $2 | $3.15 | No. 5 + No. 6 + No. 7 |
| 9 | Maximum stock gain | $2 | ($3) | No. 2 – No. 1 |
| 10 | Total maximum gain | $4 | $0.15 | No. 8 + No. 9 |
| 11 | Breakeven | $26 | $24.85 | No. 1 – No. 8 |
| 12 | CaR | $28 | $28 | No. 1 |
| 13 | Total maximum return | 14.3% | 0.5% | No. 10 / No. 12 |
| 14 | Annualized | 115.9% | 4.3% | No. 13 * [365 / No. 4] |
| 15 | Added upside | nm | $3.85 | Difference total maximum gain |
| 16 | Added downside | nm | ($1.15) | Difference in breakevens |

The key takeaways from this roll-down example:

- You've lost $3 from the drop in the stock price from $28 to $25 and you can earn back a $1.15 net credit by rolling down [(No. 6) + (No. 7)].
- You'll be able to protect your position more by lowering your breakeven by the $1.15 net credit.
- Clearly, you're trading a lower upside for more downside protection.
- Remember, before rolling down, always ask yourself if you'd be better off simply closing the position altogether.

# The Big Quiz

You've read. You've reviewed. But have you learned?

It's time for an options party — a knowledge festival — to check in on what you've been learning. Below are some questions, and a real-world assignment, for you to use as a measuring stick. Further below are the answers. We work on the honor system here, so check yourself after you've given the Big Quiz the "old college try."

Questions? Come see us on the Options Whiz. discussion board: http://boards.fool.com/1321/options-options-u-119968.aspx

## QUESTIONS

1. A while ago, you purchased shares of **Pepsico** (NYSE: PEP) for $58 and wrote March $60 call options. Shares are now trading for $63, and you're considering rolling those call options out. What would be a correct course of action?

   a. "Buy to close" the March $60 calls and "sell to open" March $65 calls.

   b. "Sell to close" the March $60 calls and "sell to open" June $60 calls.

   c. "Buy to close" the March $60 calls and "sell to open" June $60 calls.

2. A while ago, you purchased shares of **Pepsico** (NYSE: PEP) for $58 and wrote March $60 call options. Shares are now trading for $63, and you're considering rolling those call Options up and out. What would be a correct course of action?

   a. "Buy to close" the March $60 calls and "sell to open" March $65 calls.

   b. "Sell to close" the March $60 calls and "sell to open" June $65 calls.

   c. "Buy to close" the March $60 calls and "sell to open" June $65 calls.

3. A net debit indicates that a follow up action requires that we _____ capital, while a net credit indicates that we _____ capital.

   a. Add, earn.

   b. Earn, add.

4. Once you've earned _____ of the value of your written calls, you should at least consider follow-up action because you've earned most of the profit from the strategy but you retain all the risk.

   a. 65%

   b. 75%

   c. 85%

   d. 95%

## ASSIGNMENT

Shares of **Synaptics** (Nasdaq: SYNA) are trading at $30.20. You peg fair value somewhere in the range of $32 to $35 and think it's a prime candidate for writing covered calls, so you purchase shares at $30.20 and write May $32 call options for $1.35. Time passes, and Synaptics' shares have risen to $34. Recent business success in smartphone markets have caused you to raise your estimate of fair value to $35 to $37. You'd like to retain your shares and roll your covered calls up and out.

1. Fill in the blanks in the table below to help analyze the proper course of action.

| No. | Details | Original Scenario | Roll Up and Out | Notes |
|---|---|---|---|---|
| 1 | Purchase stock | $30.20 | $30.20 | |
| 2 | Call strike | $32 | $35 | Added $3 upside |
| 3 | Expiration | May | July | |
| 4 | Days | 78 | 138 | |
| 5 | Initial written call | $1.35 | | |
| 6 | Buy back initial call | | ($2.10) | |
| 7 | Write new call | | $1.30 | |

| No. | Details | Original Scenario | Roll Up and Out | Notes |
|---|---|---|---|---|
| 8 | Net credit / (debit) | $1.35 | | |
| 9 | Maximum stock gain | $1.80 | | |
| 10 | Total maximum gain | $3.15 | | |
| 11 | Breakeven | $28.85 | | |
| 12 | CaR | $30.20 | | |
| 13 | Total maximum return | 10.4% | | |
| 14 | Annualized | 48.8% | | |
| 15 | Added upside | nm | | |
| 16 | Added downside | nm | | |

2. Comment on what you might do.

## ANSWERS

1. C. To roll out, we intend to lengthen the expiration date and keep the strike price the same. We need to "buy to close" our existing options and "sell to open" new ones.

2. C. To roll up and out, we intend to extend the expiration date (June) and write at a higher strike price. We need to "buy to close" our existing options and "sell to open" new ones.

3. A.

4. C. This is only a guideline, not a rule. However, we think it's advisable to consider your options once 85% of your profits are earned.

## ASSIGNMENT ANSWERS

1. The answers for the table are below:

| No. | Details | Original Scenario | Roll Up and Out | Notes |
|---|---|---|---|---|
| 1 | Purchase stock | $30.20 | $30.20 | |
| 2 | Call strike | $32 | $35 | Added $3 upside |
| 3 | Expiration | May | July | |
| 4 | Days | 78 | 138 | |
| 5 | Initial written call | $1.35 | $1.35 | |
| 6 | Buy back initial call | | ($2.10) | |
| 7 | Write new call | | $1.30 | |
| 8 | Net credit / (debit) | $1.35 | $0.55 | No. 5 + No. 6 + No. 7 |
| 9 | Maximum stock gain | $1.80 | $4.80 | No. 2 — No. 1 |
| 10 | Total maximum gain | $3.15 | $5.35 | No. 8 + No. 9 |
| 11 | Breakeven | $28.85 | $29.65 | No. 1 — No. 8 |
| 12 | CaR | $30.20 | $30.20 | No. 1 |
| 13 | Total maximum return | 10.4% | 17.7% | No. 10 / No. 12 |
| 14 | Annualized | 48.8% | 46.9% | No. 13 * [365 / No. 4] |
| 15 | Added upside | nm | $2.20 | Difference total maximum gain |
| 16 | Added downside | nm | $0.80 | Difference in breakevens |

2. Rolling up (to the $35 strike) and out (to the July expiration) will:

a. Cost you a net debit of $0.80, meaning your breakeven will rise by $0.80.

b. Give you the potential to earn an additional $3 in share price appreciation, or $2.20 total in potential profits.

c. The roll would improve the positions total max return (to 17.7%) and have only a marginal decrease in its annualized return (48.8% to 46.9%).

d. The incremental potential return compared to the incremental risk seems adequate to justify the roll [($2.20 / $0.80) – 1 = 175%].

# Lesson 7: Writing Puts

## The Goods

***Readings:***

- **Writing Puts**
  http://newsletters.fool.com/50/optionsu/2009/08/10/writing-puts.aspx
- **Video Extra: The Put-Writing Miniseries**
  *(all three videos)*
  http://newsletters.fool.com/50/optionsu/2010/10/29/video-extra-the-put-writing-miniseries.aspx
- **8/28/09 Options Weekly: Time to Get Started**
  http://newsletters.fool.com/50/coverage/weekly/2009/08/28/options-weekly.aspx#cant-write-puts-consider-covered-calls
- **Board thread: Why Put/Call Equivalence Is Hard**
  http://boards.fool.com/1321/why-putcall-equivalence-is-hard-29090645.aspx

***Key Topics:***

- Review: What is a written put?
- Know your tradeoff
- *Motley Fool Options* put-writing guidelines
- Learn to find put-writing candidates
- Covered call/written put equivalence

Check the Foolish Fundamentals section below for my CliffsNotes version of these key topics.

## The Foolish Fundamentals

### Review: What is a written put?

» It's a naked option position that represents an obligation to buy shares if they fall below the chosen strike price:

- It is selling a put option (obligation to purchase the underlying in 100-share blocks)
- For example, Jeff has recommended writing April $29 puts on **Synaptics** (Nasdaq: SYNA).

» As the option writer, you are accepting the downside of a stock below the strike price in exchange for a cash payment up front.

- It may help to think of the premium received like an insurance payment, where you are the insurer.

» You don't need to own shares of the underlying, but you need to be willing and able to buy them in case the puts are exercised.

» Writing puts is a neutral to mildly bullish strategy

*Note: The trade command necessary to write a put option is "sell to open."*

### Know Your Tradeoff

A written put has two potential outcomes:

1. If the stock price is higher than the strike price at expiration, the put expires worthless (we keep the option income and have no position remaining).
2. If the stock price is lower than the strike price at expiration, the put will be exercised by its owner, the put buyer (we're obligated to buy the underlying shares at the strike price).

*Note: The written put represents an obligation to buy the shares at expiration if the stock price is lower than the strike price at expiration.*

» **The tradeoff:** Put writers trade a stock's upside (beyond the strike) for option premium up front.

- **If the stock tanks, you're obligated to buy it.**

*Note: When we write puts, we generally hope for a flat to gently rising stock price.*

*Also Note: A written put has the same payoff properties as a covered call. More on that later…*

*Also Also Note: Put writing is a naked option strategy, so the requirements from your broker will involve a higher-level option approval and sufficient account equity.*

### *Motley Fool Options'* Put-Writing Philosophy

**» Rule No. 1 of written puts: You must be willing and able to buy shares in the underlying stock at the strike price.**

- If you won't be happy owning the stock at your chosen strike, don't write puts.
- If you don't have the cash handy to buy shares if you need to, don't write the puts.

We write puts on stocks that we wouldn't mind owning at our chosen strike price. In some cases, we'll use puts exclusively as a tool to try and buy shares at a cheaper price.

- Generally, this means "fairly valued" stocks of healthy businesses. We do like to see upside potential, but it should be mild, not explosive.
- Overvalued stocks may fall by an amount greater than the premium we received and still be overvalued.
- Undervalued stocks can appreciate rapidly, and we'd be much better off just buying the shares outright.

The main reasons for writing written puts are:

1. Income: to generate cash on a fairly-valued stock
2. A better buy price: to fill out a position at a lower price

At *Motley Fool Options*, we tend to write out of the money puts for for income, or near the money puts to get shares at lower prices.

- When writing puts, you often won't end up owning shares.

If you think a stock has decent upside, but aren't sure when it might materialize, consider buying half of a full position outright and writing puts to the other half of your allocation at cheaper prices. *Note: Writing puts is* ***not*** *free money! Never forget that written puts are leveraged investments that represent a possible obligation.*

You can treat the follow-up action on written puts much like you did on covered calls (Lesson 6):

- Once you've made most of your potential profit (there is only a small amount of time value remaining) you can close puts early ("buy to close") and consider rolling them.
- The 85% guideline you learned in Lesson 6 is a helpful trigger point.

## General Put-Writing Guidelines

*Motley Fool Options* generally writes puts for income. We have differing criteria for shorter put writes (three months or less) and longer put writes (four to six months):

» Three months or less

- >4% out of the money (OTM)
- Downside protection >8%
- Option yield >4%

» Four to six months

- >7% out of the money (OTM)
- Downside protection >14%
- Option yield >7%

*Note: "Option yield" and "downside protection" are defined below.*

*Also Note: The 15% annualized option yield target that you learned when looking for covered call candidates is a good ballpark to shoot for in written puts, too.*

*Also Also Note: These are simply guidelines. We will violate them from time to time depending on the situation (the stock in question, the thesis, and volatility), bur they are a great place to start.*

### *Tips & Tricks*

» Keep a spreadsheet or tally that tracks your exposure (the amount you may be on the hook for). We'll continue to say that **writing puts is not free money**. Do not overleverage — keeping a tally is a great way to make sure you are aware of your exposure.

Your total exposure is the sum total of your capital at risk (CaR).

- The most conservative definition of CaR for written puts is: CaR = [ Strike price * # contracts * 100 ].
- Then, simply add up the CaR for each written put position.

» For example: Pretend you have followed all of *Motley Fool Options*' written put recommendations (writing five contracts for each of the four written put recs). What would your exposure be?

Jeff's side:

- 5 SYNA April 2011 $29 puts = [$29 * 5 * 100] = $14,500
- 5 OTEX March 2011 $55 puts = [$55 * 5 * 100] = $27,500

Jim's side:

- 5 LO June $2011 $72.50 puts = [$72.50 * 5 * 100] = $36,250
- 5 GES March 2011 $43 puts = [$43 * 5 * 100] = $21,500

» In all, your exposure is $99,750 — which you would be on the hook for if the market tanked and all of these positions became in the money

### *Learn This First: Calculate Key Metrics*

Here's how you calculate the key metrics for written puts:

| Metric | Definition | Calculation |
|---|---|---|
| Strike vs. stock, in $ * | The dollar amount by which the stock must fall to be exercised | Stock price – strike price |
| Strike vs. stock % | The % change by which the stock must fall to be exercised — we introduced this concept as "moneyness" in the Basic Degree | (Strike vs. stock in $) / stock price |
| Maximum risk or CaR + | The most you can lose | The strike price of the written put |
| Maximum option reward | The most you can earn from the option | Premium received |
| Option yield | The maximum profit from the option leg | Maximum option reward / CaR |
| Break-even price | The price at which your written put begins to lose money | Strike price – premium received |
| Downside protection, in $ | The dollar amount the stock can drop before you begin to lose | Premium received + (strike vs. stock in $) |
| Downside protection, in % | The percentage the stock can drop before you begin to lose | Downside protection in $ / stock price |

** A negative value indicates that you have written in the money (ITM) puts and are likely to get exercised.*

*+ We are calculating CaR ignoring the written put premium. If you'll remember back to Lesson 2, when we introduced CaR, we said: "If you prefer to ignore the option premium you were paid up front in consideration of CaR, that is perfectly acceptable — a matter of choice." We are choosing to ignore the written put premium here, because we will account for it later and are trying to calculate our returns in the most conservative way possible.*

## Learn to Find Written Puts

» A good written-put candidate meets three criteria:

1. It pays you sufficiently for selling upside

   a. We distinguish between shorter-term (up to four months) and longer-term (four to six months) put writes here.

   b. In general we think this is ~15% annualized yield is appropriate.

2. It doesn't expose you to extreme downside.

3. It fits your personal risk/reward preferences (this is for you to decide).

Remember, written put caps upside and provides only a bit of downside protection, so you should get paid sufficiently and not be exposed to extreme downside.

» What is "sufficient payment"?

- Use the guidelines above as a starting point.
- Build a table to compare different put candidates.

***Tips & Tricks***

» Try building this table — or one similar to it — to compare call options of different strikes and expirations. Find any that meet the *Motley Fool Options* guidelines and use those as a starting point for choosing your written puts. Match the best option choice with your expectations for the underlying stock.

| | April | April | April | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $34 | $35 | $36 | $34 | $35 | $36 |
| Stock price | $37.52 | $37.52 | $37.52 | $37.52 | $37.52 | $37.52 |
| Put price | $0.40 | $0.85 | $1.50 | $1.25 | $1.90 | $2.30 |
| Days to expiration | 48 | 48 | 48 | 115 | 115 | 115 |
| Strike vs. stock, $ | $3.52 | $2.52 | $1.52 | $3.52 | $2.52 | $1.52 |
| Strike vs. stock, % | 9.4% | 6.7% | 4.1% | 9.4% | 6.7% | 4.1% |
| CaR | $34 | $35 | $36 | $34 | $35 | $36 |
| Maximum option reward | $0.40 | $0.85 | $1.50 | $1.25 | $1.90 | $2.30 |
| Option yield | 1.2% | 2.4% | 4.2% | 3.7% | 5.4% | 6.4% |
| Annualized yield | 8.9% | 18.5% | 31.7% | 11.7% | 17.2% | 20.3% |
| Breakeven | $33.60 | $34.15 | $34.50 | $32.75 | $33.10 | $33.70 |
| Downside protection, $ | $3.92 | $3.37 | $3.02 | $4.77 | $4.42 | $3.82 |
| Downside protection, % | 10.4% | 9.0% | 8.0% | 12.7% | 11.8% | 10.2% |

***What kind of stock makes a good candidate?***

» Look for "fairly valued" stocks — ones that trade near your estimate of intrinsic value.

- An overvalued stock may fall more than you're paid (exposing you to too much downside).
- An undervalued stock may appreciate rapidly past the strike price (in which case, writing the put is much inferior to buying the stock outright).

QUICK CHECK

Before moving on you should be able to answer these questions:

Question: Which put options in the table above meet all three the *Options* guidelines (OTM, downside protection, and option yield)?

Answer: Only one does. The April $36 calls are 4.1% out of the money (OTM), offer 8% downside protection and provide a 4.2% yield.

Question: Calculate the CaR, annualized option yield, and downside protection for the April $36 put options in the table above.

Answer:

- CaR = stock price
  -$36 (the most we can lose)
- Option yield = maximum option reward / CaR
  [ $1.50 / $36 = 4.1% ] .041 * (365/48) = 31.7%
- Downside protection = (put premium + strike vs.stock price) / stock price
  ($1.50 + $1.52) / $37.52 = 8.0%

*Note: Many times we will use written puts as an attempt to buy shares at a better price. We'll generally do this when we are less certain about our upside expectations or simply if the puts pay well.*

*Also note: If you find a candidate that seems too good to be true (the option yield is extremely high), it probably is. There is likely a very risky underlying story. Be wary.*

## Covered Call / Written Put Equivalence

By now you may have noticed that the risk/reward characteristics of covered calls and written puts is virtually identical (at the same strike and expiration).

- They are strategic alternatives.
- Both strategies make a limited amount of money on the upside while incurring the downside risk associated with owning the stock.

The major differences between the two are:

- With covered calls, you put in more capital up front (you purchase the shares).

- With written puts, you can delay putting that capital in until expiration.
- Writing puts involves only one transaction charge (though some brokerages now allow covered calls to be filled under a single charge).
- Writing puts involves only one bid/ask spread to navigate.

Jim's put-writing miniseries in Options Whiz. does a wonderful job of showing the equivalence; I suggest you watch it several times. Here's the link, along with a couple of other supplemental resources:

**Video Extra: The Put-Writing Miniseries:**
http://newsletters.fool.com/50/optionsu/2010/10/29/video-extra-the-put-writing-miniseries.aspx

**8/28/2009 Options Weekly:**
http://newsletters.fool.com/50/coverage/weekly/2009/08/28/options-weekly.aspx#cant-write-puts-consider-covered-calls

**This board thread:**
http://boards.fool.com/1321/why-putcall-equivalence-is-hard-29090645.aspx

# The Big Quiz

You've read. You've reviewed. But have you learned?

It's time for an options party — a knowledge festival — to check in on what you've been learning. Below are some questions, and a real-world assignment, for you to use as a measuring stick. Further below are the answers. We work on the honor system here, so check yourself after you've given the Big Quiz the "old college try."

## QUESTIONS

1. When we write puts, what sort of performance are we hoping for/expecting in the underlying stock?

   a. Rocketship to the moon

   b. Flat to gently rising

   c. Moderate decline

2. State Rule No. 1 of writing puts.

3. What type of stocks makes the best put writing candidates? Whichever two answers you don't choose, explain why.

   a. Undervalued stocks

   b. Fairly valued stocks

   c. Overvalued stocks

4. When looking to write near-dated put options (1-3 months), what are the three criteria MFO looks for (the written put guidelines)?

## ASSIGNMENT

1. Writing puts is not a path to free money. Because it is easy to overleverage, we recommend keeping a tally of your exposure. If you don't already have one, stop now and create one for your existing written put positions.

2. Jeff's original put-writing recommendation on **Synaptics** (Nasdaq: SYNA) (found here: http://newsletters.fool.com/50/coverage/alerts/2011/01/04/write-puts-on-synaptics.aspx), at the time $27.67, made a case for limited downside in a general sense.

   a. Fill in the blanks in the written put comparison table by calculating all missing numbers.

   b. Call out any puts that meet the MFO criteria.

   c. Choose which of the put options below looks most interesting for a new covered call trade. Justify your answer.

| | April | April | April | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $25 | $26 | $27 | $25 | $26 | $27 |
| Stock price | $27.67 | $27.67 | $27.67 | $27.67 | $27.67 | $27.67 |
| Put price | $0.30 | $0.55 | $0.90 | $1 | $1.40 | $1.80 |
| Days to expiration | 48 | 48 | 48 | 115 | 115 | 115 |
| Strike vs. stock, $ | | | | | | |
| Strike vs. stock, % | | | | | | |
| CaR | | | | | | |
| Maximum option reward | | | | | | |
| Option yield | | | | | | |
| Annualized yield | | | | | | |
| Breakever | | | | | | |
| Downside protection, $ | | | | | | |
| Downside protection, % | | | | | | |

## ANSWERS

1. B.

2. Rule No. 1 of writing puts: You must be willing and able to buy shares of the underlying stock at the strike price

3. B. We would be better off purchasing the shares of undervalued stocks outright, as opposed to writing puts (the stock gains would far outweigh our earned put premium). If we dabble in overvalued stocks, the share price could fall below our breakeven making our put premium insufficient to cover losses.

4. The general *Options* written-put guidelines (for expirations three or fewer months away) are:

   a. > 4% OTM

   b. >8% downside protection

   c. Option yield > 4%

## ASSIGNMENT ANSWERS

1. This is for you to do; answers will vary.

2a. The answers for the table are below:

| | April | April | April | June | June | June |
|---|---|---|---|---|---|---|
| Strike | $25 | $26 | $25 | $25 | $26 | $27 |
| Stock price | $27.67 | $27.67 | $27.67 | $27.67 | $27.67 | $27.67 |
| Put price | $0.30 | $0.55 | $0.90 | $1 | $1.40 | $1.80 |
| Days to expiration | 48 | 48 | 48 | 115 | 115 | 115 |
| Strike vs. stock, $ | $2067 | $1.67 | $0.67 | $2.67 | $1.67 | $0.67 |
| Strike vs. stock, % | 9.6% | 6.0% | 2.4% | 9.6% | 6.0% | 2.4% |
| CaR | $25 | $26 | $27 | $25 | $26 | $27 |
| Maximum option reward | $0.30 | $0.55 | $0.90 | $1 | $1.40 | $1.80 |
| Option yield | 1.2% | 2.1% | 3.3% | 4% | 5.4% | 6.7% |
| Annualized yield | 9.1% | 16.1% | 25.3% | 12.7% | 17.1% | 21.2% |
| Breakeven | $24.70 | $25.45 | $26.10 | $24 | $24.60 | $25.20 |
| Downside protection, $ | $2.97 | $2.22 | $1.59 | $3.67 | $3.07 | $2.47 |
| Downside protection, % | 10.7% | 8.0% | 5.7% | 13.3% | 11.1% | 8.9% |

2b. None of these put options meet the *Motley Fool Options* guidelines (this happens quite frequently)

2c. Your answer may vary based on your view for Synaptics shares over the time period in question. Something along these lines would be great:

A case can be made for the Syanptics April 2011 $26 puts. The puts offer 8% downside protection (meeting the *Options* guideline), and the strike is 6% below the current stock price (exceeding the 4% guideline). While the option yield is below the *Options* guideline (2.1% vs. 4.0%), the April options expire in only 48 days, so the annualized yield of 17.3% is attractive. Of course, we can't spend annualized returns, but we think that at $27 the downside to Synaptics shares is limited. We would consider writing these puts.

# Lesson 8: Buying Calls

## The Goods

***Readings:***

- **Buying Calls**
  http://newsletters.fool.com/50/optionsu/2009/08/12/buying-calls.aspx

***Key Topics:***

- Review: What is a purchased call?
- Know your tradeoff
- *Motley Fool Options* purchased call philosophy
- *Options'* purchased call guidelines
- Learn to find purchased-call candidates

Check the Foolish Fundamentals section below for my CliffsNotes version of these key topics.

## The Foolish Fundamentals

Historically speaking, *Motley Fool Options* has preferred to write (or sell) options. Heck, can you blame us for wanting to be paid up front for an asset that naturally loses value with time? But the strategies involving buying options have their place too, so we should learn their ins and outs.

We've touched on buying call options in Lessons 3 and 4 of the Basic Degree. You should review those sections if need be: http://newsletters.fool.com/50/coverage/extras/2011/02/11/options-u-the-basic-degree.aspx

Lesson 8 is designed to take those basics a step further and help you put your knowledge of what purchased calls are into action, and to feel comfortable implementing the strategy.

http://newsletters.fool.com/50/coverage/extras/2011/02/11/options-u-the-basic-degree.aspx

Unfortunately, there aren't many hard and fast rules we have to use for this strategy. Much of the decision falls in our ability to find undervalued stocks that we think have great futures and whose shares will rise sooner rather than later. For now…

### Review: What is a purchased call?

» It gives you the right to buy the underlying stock at the strike price, up until the expiration date.

*Note: As an option buyer, we have an initial cash outflow.*

» Why would we do it?

- You think a stock is going to rise by the expiration date.
- To bet on a stock using less capital than buying shares directly.
- You want to leverage analysis you've done on a stock or leverage your bullish expectations on a stock you already own.

***Stuff You'd Better Know:***

- **Direction:** Bullish
- **Underlying position size:** [ # of contracts * 100-share multiplier * strike price ]
- **Maximum risk:** The call premium
- **Maximum reward:** Unlimited — this happens if the stock price goes up to infinity
- **Break-even price:** [strike price + call premium ]

***Tips & Tricks***

» If your timing is wrong, you could lose your entire investment (especially if you purchase out-of-the-money calls). When you are an option buyer, you have to be right in your directional bet and your time frame.

» In *Motley Fool Options*, we tend to buy longer-term call options (so our thesis has plenty of time to be proven right) on stocks that we think are undervalued.

### Know Your Tradeoff

» A purchased call has two potential outcomes:

1. If the stock price is higher than the strike price at expiration, you will exercise the call (you can buy shares for cheaper than the current asking price, so you'd be crazy not to) or you'll close your call at a profit.

2. If the stock price is lower than the strike price at expiration, your call will have no intrinsic value and will expire worthless (you have little interest in buying shares at the strike — a higher price than you could nab shares for on the open market).

*Note: A purchased call represents the right, but not the obligation, to buy the shares at expiration if the stock price is higher than the strike price at expiration.*

» The tradeoff: Call purchasers trade an initial cash outflow (the call premium paid) for the upside potential beyond the strike price.

- It's similar to owning shares, but your CaR is lower (for the option: premium paid; for the stock: cost of shares) and your time frame is condensed.
- You have a known cost (max loss) and an unknown potential future benefit.
- You need to be prepared to accept a full loss.

*Note: When we buy calls, we want a rising stock price within our chosen time frame.*

***Tips & Tricks***

» Compare your profit and loss of owning shares directly next to purchasing a call.

For example, pretend you believe that the for-profit education sector is currently mispriced due to overblown fears of reform. You look into the largest firm in the space, **Apollo Group** (Nasdaq: APOL) — which trades at $40.90 — and think its shares will be revalued much higher once regulatory uncertainty in the U.S. winds down. You think this will happen within a year or a year and a half.

- You wouldn't mind owning shares, but you don't want to risk the full amount by buying Apollo shares outright, so you consider purchasing a deep in-the-money LEAP call option.
- You note that you can buy a January 2013 $35 call option for $12.40.

» What is the potential range of payoffs for owning shares directly and for owning a LEAP call?

| Stock Price at Expiration | Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| | (Ending price – $40.90) | (Stock G/L / CaR) | (IV at expiration) | (Option price at expiration – cost) | (Option G/L / CaR) |
| $27.50 | ($13.40) | -32.8% | — | ($12.40) | -100.0% |
| $30 | ($10.90) | -26.7% | — | ($12.40) | -100.0% |
| $32.50 | ($8.40) | -20.5% | — | ($12.40) | -100.0% |
| $35 | ($5.90) | -14.4% | — | ($12.40) | -100.0% |
| $37.50 | ($3.40) | -8.3% | $2.50 | ($9.90) | -79.8% |
| $40 | ($0.90) | -2.2% | $5 | ($7.40) | -59.7% |
| $42.50 | $1.60 | 3.9% | $7.50 | ($4.90) | -39.5% |
| $45 | $4.10 | 10.0% | $10 | ($2.40) | -19.4% |
| $47.50 | $6.60 | 16.1% | $12.50 | $0.10 | 0.8% |
| $50 | $9.10 | 22.2% | $15 | $2.60 | 21.0% |
| $52.50 | $11.60 | 28.4% | $17.50 | $5.10 | 41.1% |
| $55 | $14.10 | 34.5% | $20 | $7.60 | 61.3% |
| $57.50 | $16.60 | 40.6% | $22.50 | $10.10 | 81.5% |
| $60 | $19.10 | 46.7% | $25 | $12.60 | 101.6% |

*Note: The following are things that should jump out from the table:*

- We lose 100% if the option finishes out of the money.
- Our breakeven price when purchasing the call is $47.40 ($35 strike + $12.40 cost of the call); our break-even price when purchasing the stock is $40.90 (the price we bought shares).
- Our gains and losses are magnified at almost every price point by owning the call.

## *Motley Fool Options'* Purchased-Call Philosophy

**» Rule No. 1 of purchased calls: You must have well-formed expectations for company and stock performance that include time frame expectations.**

» Two important factors to focus on when purchasing calls:

1. The likelihood that the price and value of the underlying stock will converge (price will move up to your guess of intrinsic value); and
2. The time it will take for that convergence.

» When purchasing calls:

- You usually want as much time as possible to be proven correct.
- Remember, you pay more for longer-dated options.
- Consider calculating time value per day [ TV / days until expiration ] or time value per month [ TV / months until expiration ] for the options you are considering.
- Use TV/day or month as a consideration when choosing among options.
- Choose the longest-dated option that has a price you're willing to pay (the maximum you're willing to lose).
- If you can identify a catalyst that may impact the stock within the time frame, that can help guide your expiration choice.
- The price of time value usually declines when you speak in terms of years (LEAP options) compared to months (shorter-dated options), so you may find longer-term options are less expensive than you think

» The main reasons for purchasing calls are:

1. You believe a stock has strong appreciation potential and you don't want to risk as much capital as you would by buying shares outright .
2. You want to leverage your bullish expectations on a stock you already own.

## General Purchased-Call Guidelines

We don't have published guidelines (it's really quite tricky), but the following are good starting points for finding good purchased call candidates:

» In general, anytime you're buying calls you should be seeking at least a 50% to 100% gain at expiration to justify the risk and commissions.

» The return you command should vary with the moneyness of the option (and therefore the likelihood it will end ITM):

- A deep ITM call should give you a 50% gain on your investment.

- An OTM call should offer much more, perhaps 100% returns.
- An ATM call should fall in between, around 75%

» As you can see, deep ITM calls require the lowest expected returns because you will likely own the stock as recourse even if your upward price move isn't realized (and because they have the highest chance of ending up successful). OTM calls, which risk little but have a larger chance of 100% loss, should only be used when the potential payoff is high. Using ATM calls, or near the money calls, is a way of balancing the two.

*Note: You should see why purchasing calls is hard. You've got to know what is going on with the underlying company, find one that is undervalued, and make sure the market's misvaluation will be resolved within your time frame. This is a tall order*.

***Tips & Tricks***

» At *Motley Fool Options*, we don't believe we can come close to correctly "timing the markets." So when we purchase calls, we're likely to buy LEAP calls (or the longest available call options) most of the time.

- This affords us the most time possible for our thesis (the disconnect between the stock's price and our guess of its intrinsic value) to play out.
- LEAP options also offer the lowest price (in terms of time value per day) of long-dated options.
- We often try to lower the cost of buying LEAP calls by turning our purchased call strategy into a diagonal call strategy — you can learn more here: http://newsletters.fool.com/50/optionsu/2009/09/28/diagonal-calls.aspx

» While you can always close your purchased calls early (by "selling to close"), you should only purchase the number of calls that represent the stock position size you would have in your portfolio.

- For example, if you'd ordinarily buy 500 shares of XYZ, you should only purchase five XYZ call options.
- This is certainly a conservative use of the leverage inherent in options, but it's the way we advise using such leverage.

## Learn to Find Purchased-Call Candidates

A good written purchased call candidate meets four criteria:

1. The underlying is a business that you know well.
2. You have good reason to believe the stock is worth much more than its current stock price.
3. You have identified a catalyst that will help the stock reach your estimate of fair value prior to the option's expiration date.
4. The call you've chosen offers enough reward to compensate for your risk (per the guidelines) and has an expiration date that matches your identified catalyst

# The Big Quiz

You've read. You've reviewed. But have you learned?

It's time for an options party — a knowledge festival — to check in on what you've been learning. Below are some questions, and a real-world assignment, for you to use as a measuring stick. Further below are the answers. We work on the honor system here, so check yourself after you've given the Big Quiz the "old college try."

## QUESTIONS

1. Purchasing call options is a _____ strategy:

   a. Bullish

   b. Bearish

   c. Neutral

2. Purchasing call options is tough because you have to be right about your time frame or you're likely to lose your entire investment. For this reason, *Motley Fool Options* advises choosing a _____ time frame and buying _____ buying options (most of the time).

   a. Long, Out-of-the-money

   b. Long, In-the-money

   c. Short, Out-of-the-money

   d. Short, In-the-money

3. To purchase a call, and later close out that same call, the proper trade commands are:

   a. "buy to open," "sell to close"

   b. "sell to open," "buy to close"

   c. "close your eyes and click the mouse"

4. State the No. 1 rule of purchasing calls.

5. State the fuzzy guidelines for purchasing out-of-the-money, in-the-money, and at-the-money call options.

## ASSIGNMENT

1. You believe that the for-profit education sector is currently mispriced because of overblown fears of reform. You look into the largest firm in the space, **Apollo Group** (Nasdaq: APOL) — trading at $40.90 — and think its shares will be revalued much higher once regulatory uncertainty in the U.S. winds down. Your target price for the shares is $51, and you think shares will rise to this level within a year or a year and a half.

- You're unsure whether you'd prefer to own shares outright or buy an ITM LEAP call.
- You note that you can buy a January 2013 $40 call option for $9.75.
- Fill in the blanks in the following table to help you decide what to do.

| Stock Price at Expiration | Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| | (Ending price – $40.90) | (Stock G/L / CaR) | (IV at expiration) | (Option price at expiration – cost) | (Option G/L / CaR) |
| $27.50 | | | | | |
| $30 | | | | | |
| $32.50 | | | | | |
| $35 | | | | | |

| Stock Price at Expiration | Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $37.50 | | | | | |
| $40 | | | | | |
| $42.50 | | | | | |
| $45 | | | | | |
| $47.50 | | | | | |
| $50 | | | | | |
| $52.50 | | | | | |
| $55 | | | | | |
| $57.50 | | | | | |
| $60 | | | | | |

a. Does the call option meet the *Motley Fool Options* guidelines?

b. Would you (pretending you agree with the brief thesis above) be interested in purchasing this call option?

## ANSWERS

1. a

2. b

- Having a long time horizon allows you time for your investment thesis to play out.
- Purchasing in-the-money call options makes it less likely you'll lose your entire investment

3. a. You are purchasing the call option and you'd later like to sell it.

4. Know your expectations for the underlying stock as well as the time frame for your expectations to play out.

5. You should look for a call option that you think will provide an ROI along these lines at expiration:

a. ITM: 50% return on investment

b. OTM: 100% return on investment

c. ATM: ~75% return on investment

## ASSIGNMENT ANSWERS

| Stock Price at Expiration | Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| | (Ending price – $40.90) | (Stock G/L / CaR) | (IV at expiration) | (Option price at expiration – cost) | (Option G/L / CaR) |
| $27.50 | ($13.40) | -32.8% | — | ($9.75) | -100.0% |
| $30 | ($10.90) | -26.7% | — | ($9.75) | -100.0% |
| $32.50 | ($8.40) | -20.5% | — | ($9.75) | -100.0% |
| $35 | ($5.90) | -14.4% | — | ($9.75) | -100.0% |
| $37.50 | ($3.40) | -8.3% | — | ($9.75) | -100.0% |
| $40 | ($0.90) | -2.2% | — | ($9.75) | -100.0% |
| $42.50 | $1.60 | 3.9% | $2.50 | ($7.25) | -74.4% |
| $45 | $4.10 | 10.0% | $5 | ($4.75) | -48.7% |
| $47.50 | $6.60 | 16.1% | $7.50 | ($2.25) | -23.1% |
| $50 | $9.10 | 22.2% | $10 | $0.25 | 2.6% |
| $52.50 | $11.60 | 28.4% | $12.50 | $2.75 | 28.2% |

| Stock Price at Expiration | Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $55 | $14.10 | 34.5% | $15 | $5.25 | 53.8% |
| $57.50 | $16.60 | 40.6% | $17.50 | $7.75 | 79.5% |
| $60 | $19.10 | 46.7% | $20 | $10.25 | 105.1% |

a. You think shares will rise to $51 by the expiration date (given in the problem). Looking at the ROI in the table, you see that if shares are at $50 at expiration your ROI is 2.6%. If shares rise to $52, your ROI is 28.2%. When purchasing ITM calls (which fits this scenario), the guidelines suggest seeking a 50% ROI, so this call option DOES NOT meet the MFO guidelines.

b. Unless you think the stock has a very high probability of hitting your target price, you should search for an option with a better risk/reward relationship. Note that if you do have high conviction, it would be more beneficial to own the shares outright (from an ROI standpoint) up until the $52.50 price point. If the stock rises higher than that, the option becomes the higher-return vehicle.

# Lesson 9: Buying Puts

## The Goods

***Readings:***

- **Buying Puts to Short**
  http://newsletters.fool.com/50/optionsu/2009/08/12/buying-puts-to-short.aspx
- **Buying Puts for Protection**
  http://newsletters.fool.com/50/optionsu/2009/08/12/buying-puts-for-protection.aspx

***Key Topics:***

- Review: What is a purchased put?
- Know your tradeoff
- *Motley Fool Options'* purchased-put philosophy
- *Motley Fool Options'* purchased-put guidelines
- Learn to find purchased-put candidates

Check the Foolish Fundamentals section below for my CliffsNotes version of these key topics.

## The Foolish Fundamentals

We've come to the end of our official Options Whiz. Intermediate Degree curriculum with Lesson 9: Buying Puts. It's fitting that we're ending our guided journey together on this strategy. While it's one that we almost never use in *Motley Fool Options* (in fact, only once!), it is a strategy that deserves a place in your investing arsenal. And since *Options* is an idea service, and not a portfolio service, you're more likely to decide to purchase puts on your own than you would on our recommendation.

Employing this strategy means your training wheels are off, Fool. But at any time, as always, you can post your questions on the Options Whiz. discussion board — I'll see you there.

### Review: What is a purchased put?

» It gives you the right to sell the underlying stock at the strike price, up until the expiration date.

*Note: As an option buyer, we have an initial cash outflow.*

» Why would we do it?

- You think a stock is going down by the expiration date.
- To short a stock by betting against it with less capital at risk than shorting the shares directly.
- To protect a stock by hedging an anticipated decline in a stock you already own.

***Stuff You'd Better Know:***

- **Direction (for puts to short):** Bearish
- **Underlying position size:** [ # of contracts * 100-share multiplier * strike price ]
- **Maximum risk:** The put premium
- **Maximum reward:** [ strike price – put premium]; this happens if the stock goes to $0
- **Break-even price:** [strike price – put premium ]
- **Direction (for protective puts and married puts):** Long-term bullish, short-term bearish

***Tips & Tricks***

» The trade command is "buy to open."

» The expiration date works against you. At *Options*, we tend to purchase long-dated puts to allow the most time for our thesis to play out.

» Start small and only purchase the number of contracts to cover the same number of shares you'd be willing to short outright.

### Some Follow-Up Vocabulary

**Protective put:** A generic purchased put, initiated to hedge part or all of a portfolio

- Usually, the put is purchased on an index (exchange-traded fund) that zigzags along with the portfolio.
- Because *Options* is an idea service, and not a portfolio service, we won't likely engage in protective puts.
- It's like buying term insurance — you hope you don't have to use it.

**Married put:** a put purchased to hedge a specific portfolio holding

- You own 100-share blocks of a certain stock that you are long-term bullish on, but you want to protect against short-term declines.
- Again, it's like buying term insurance — you hope you don't have to use it.

*Note: When uncertainty is highest — probably the times you'll want insurance — the cost of purchasing put options skyrockets. Remember that purchasing options of any sort requires a cash outlay that starts your quest for profits in a hole. Be conscious of the cost of purchasing insurance.*

**Naked purchased put:** an outright bet against an underlying stock

- A substitute for shorting the stock directly.
- Our position in **Green Mountain Coffee Roasters** (Nasdaq: GMCR) started this way.

## Know Your Tradeoff

» A purchased put has two potential outcomes:

1. If the stock price is higher than the strike price at expiration, your put will expire out of the money and have zero value, so you'll lose your entire investment.
2. If the stock price is lower than the strike price at expiration, your put has intrinsic value, and you can either close it out ("sell to close") to book your profit or exercise it (by selling the underlying stock at the strike price).

*Note: A purchased put represents the right, but not the obligation, to sell the shares at expiration if the stock price is lower than the strike price at expiration.*

» The tradeoff: Put purchasers trade an initial cash outflow (the put premium paid) for the downside potential beyond the strike price.

- It's similar to shorting shares, but your CaR is lower (for the option: premium paid; for the stock: infinite, if a stock could rise to ininity), and your time frame is condensed.
- You have a known cost (maximum loss) and an unknown potential future benefit (bounded by zero).
- You need to be prepared to accept a full loss.

*Note: When we buy naked puts, we want a falling stock price within our chosen time frame. When we buy protective puts or married puts, we generally hope the options expire worthless. This may seem counterintuitive, but the purpose of these strategies is to protect our portfolio rather than profit off of a drop. We'd lose more if our portfolio dropped precipitously than the puts would be able to protect.*

*Also note: The CaR for a naked put is the cost of the put option. If you were to short shares directly, your CaR would be infinite — assuming a stock could go up forever. So the next time you're at a cocktail party and someone is aghast that you dabble in "risky options trading," you can cite this as an example of how options investing can be used to control risk rather than simply pile it on (and then make them get you a drink).*

### *Tips & Tricks*

» Compare your profit and loss of shorting shares directly next to purchasing a naked put.

For example, pretend you believe that the for-profit education sector is currently overpriced because of underappreciated fears of reform. You look into the largest firm in the space, **Apollo Group** (Nasdaq: APOL) — trading at $40.90 — and think its shares will be revalued much lower once regulatory action in the U.S. is taken and government lending pulls back. You think this will happen within a year or a year and a half.

- You're on the fence about shorting shares outright, because you think the U.S. government has its hands full right now and may not take on the for-profit education industry very soon, so you consider purchasing a near-the-money LEAP put option.
- You note that you can buy a January 2013 $40 put option for $7.50.

What is the potential range of payoffs for owning shares directly and for owning a LEAP put?

| Stock Price at Expiration | Shorted Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $26 | $14.90 | 36.4% | $14 | $6.50 | 86.7% |
| $28 | $12.90 | 31.5% | $12 | $4.50 | 60.0% |
| $30 | $10.90 | 26.7% | $10 | $2.50 | 33.3% |
| $32 | $8.90 | 21.8% | $8 | $0.50 | 6.7% |
| $34 | $6.90 | 16.9% | $6 | ($1.50) | -20.0% |
| $36 | $4.90 | 12.0% | $4 | ($3.50) | -46.7% |
| $38 | $2.90 | 7.1% | $2 | ($5.50) | -73.3% |
| $40 | $0.90 | 2.2% | — | ($7.50) | -100.0% |
| $42 | ($1.10) | -2.7% | — | ($7.50) | -100.0% |
| $44 | ($3.10) | -7.6% | — | ($7.50) | -100.0% |
| $46 | ($5.10) | -12.5% | — | ($7.50) | -100.0% |
| $48 | ($7.10) | -17.4% | — | ($7.50) | -100.0% |
| $50 | ($9.10) | -22.2% | — | ($7.50) | -100.0% |
| $52 | ($11.10) | -27.1% | — | ($7.50) | -100.0% |

*Note: The following are things that should jump out from the table:*

- *We lose 100% if the option finishes out of the money.*
- *Our break-even price when purchasing the put is $32.50 ($40 strike – $7.50 cost of the put); our break-even price when purchasing the stock is $40.90 (the price at which we shorted shares).*
- *Our gains and losses are magnified at almost every price point by owning the put.*

## *Motley Fool Options'* Purchased-Put Philosophy

**» Rule No. 1 of purchased puts: If you are purchasing naked puts, you must have well-formed expectations for company and stock performance that include time frame expectations. If you are purchasing protective or married puts, you should first investigate whether you should simply sell your shares.**

» Important factors to focus on when purchasing puts:

1. You should know the underlying business well.
   - If buying protective puts or married puts, you should

have confidence that the holding or holdings will be worth much more in the future so that future gains earn back the cost of short-term insurance.

- If buying naked puts, you should have confidence that the underlying stock is worth much less than it currently sells for.

2. Your estimate of fair value should guide your choice of strike price, along with the severity/likelihood of near-term pressure on the stock price.
3. You usually want as much time as possible to be proven correct — having a catalyst helps.
4. You pay more for longer-dated options.
   - Consider calculating Time Value per Day [ TV / days until expiration ] or Time Value per Month [ TV / months until expiration ] for the options you are considering.
   - Use TV/day or month as a consideration when choosing among options.
5. Choose the longest-dated option that has a price you're willing to pay (the maximum you're willing to lose).
   - If you can identify a catalyst that may impact the stock within the time frame, that can help guide your expiration choice.
   - The price of time value usually declines when you speak in terms of years (LEAP options) compared to months (shorter-dated options), so you may find longer-term options are less expensive than you think.

» The main reasons for purchasing puts are:

1. You want to bet against a stock but want to put less capital at risk than shorting shares outright (naked put).
2. You want to insure your holding/holdings against near-term price pressures and think future appreciation will more than make up for the cost of insurance (protective puts and married puts).

## General Purchased-Put Guidelines

We don't have published guidelines (it's really quite tricky), but the following are good starting points for finding good purchased-put candidates:

» If you're purchasing protective puts or married puts, you should have no problem losing your entire investment (this means your stock/portfolio) probably didn't decline much.

» When purchasing naked puts you should be seeking at least a 50% to 100% gain at expiration to justify the risk and commissions.

» The return you command should vary with the moneyness of the option (and therefore the likelihood it will end in-the-money):

- A deep ITM put should give you a 50% gain on your investment.
- An OTM put should offer much more, perhaps 100% returns.
- An ATM put should fall in between, around 75%

As you can see, deep ITM puts require the lowest expected returns because you will likely be able to sell the stock for less than it is trading for even if your downward price move isn't realized and because they have the highest probability of success. OTM puts, which risk little but have a larger chance of 100% loss, should only be used when the potential payoff is high. Using ATM puts, or near-the-money puts, is a way of balancing the two.

*Note: You should see why purchasing naked puts is hard. You've got to know what is going on with the underlying company, find one that is overvalued, and make sure the market's assessment will turn 180 degrees within your time frame. This is a tall order*.

### *Tips & Tricks*

» At *Motley Fool Options*, we don't believe we can come close to correctly "timing the markets." So when we purchase naked puts, we're likely to buy LEAP puts (or the longest available put options) most of the time.

- This affords us the most time possible for our thesis (the disconnect between the stock's price and our guess of its intrinsic value) to play out.
- LEAP options also offer the lowest price (in terms of time value per day) of long-dated options.
- If things go awry, you have plenty of options to re-engineer your naked put trade; see Jim's Lurking Gator on GMCR:
  http://newsletters.fool.com/50/coverage/alerts/2011/02/09/set-up-a-lurking-gator-on-green-mountain.aspx

» While you can always close your purchased puts early (by "selling to close"), you should only purchase the number of puts that represent the stock position size you would have shorted in the first place.

- For example, if you'd ordinarily short 500 shares of XYZ, you should only purchase five XYZ put options.
- This is certainly a conservative use of the leverage inherent in options, but it's the way we advise using such leverage.

## Learn to Find Purchased-Put Candidates

A good naked purchased put candidate meets four criteria:

1. The underlying is a business that you know well.
2. You have good reason to believe the stock is worth much less than its current stock price (it has a flawed business model, inferior products, defecting customers, or is fraudulent, for example).
3. You have identified a catalyst that will help the market to catch on to your knowledge prior to the option's expiration date.
4. The put you've chosen offers enough reward to compensate for your risk (per the guidelines) and has an expiration date that matches your identified catalyst.

# The Big Quiz

You've read. You've reviewed. But have you learned?

It's time for an options party — a knowledge festival — to check in on what you've been learning. Below are some questions, and a real-world assignment, for you to use as a measuring stick. Further below are the answers. We work on the honor system here, so check yourself after you've given the Big Quiz the "old college try."

## QUESTIONS

1. Purchasing naked put options is a _____ strategy:

   a. Bullish

   b. Bearish

   c. Neutral

2. Explain how purchasing a married put is actually a bullish strategy.

3. Which is greater: the CaR for shorting a stock directly or the CaR for purchasing a naked put on the same stock. (For bonus points, define the CaR for both.)

   a. The stock

   b. The naked put

   c. They have the same CaR

4. State the No. 1 rule of purchasing puts.

5. State the fuzzy guidelines for:

   a. Purchasing protective/married puts

   b. Purchasing naked OTM, ITM, and ATM put options

## ASSIGNMENT

6. You believe that the for-profit education sector is currently overpriced due to underappreciated fears of reform. You look into the largest firm in the space, **Apollo Group** (Nasdaq: APOL) — trading at $40.90 — and think its shares will be revalued much lower once regulatory action in the US is taken and government lending pulls back. Your target price for the shares is $29 and you think shares will fall to this level within a year or a year and a half.

- You're unsure whether you'd prefer to short shares outright or buy an OTM LEAP put.
- You note that you can buy a January 2013 $35 put option for $5.40.
- Fill in the blanks in the following table to help you decide what to do.

| Stock Price at Expiration | Shorted Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $26 | | | | | |
| $28 | | | | | |
| $30 | | | | | |
| $32 | | | | | |
| $34 | | | | | |
| $36 | | | | | |
| $38 | | | | | |

| Stock Price at Expiration | Shorted Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $40 | | | | | |
| $42 | | | | | |
| $44 | | | | | |
| $46 | | | | | |
| $48 | | | | | |
| $50 | | | | | |
| $52 | | | | | |

a. Does the put option meet the *Motley Fool Options* guidelines?

b. Would you (pretending you agree with the brief thesis above) be interested in purchasing this naked put option?

## ANSWERS

1. B. Bearish

2. When you initiate a married put, you own 100-share blocks of the underlying stock and have purchased put options in the same quantity. Your purchased puts offer short term downside protection, but your long-term expectations for the performance of the underlying stock is bullish enough that you believe you'll be able to make profits that far exceed the cost of the shorter-term purchased puts. Thus, married puts are a short-term bearish, but long-term bullish strategy. If you were bearish on the long-term prospects of your stock, you would sell it.

3. A. The stock.

a. The CaR for shorting a stock is infinite — the stock could go up forever.

b. The CaR for a purchased naked put is the amount you paid for the put.

4. Rule No. 1 of Purchased Puts: If you are purchasing naked puts, you must have well-formed expectations for company and stock performance that include time frame expectations. If you are purchasing protective or married puts, you should first investigate whether or not you should simply sell your shares.

5. In general…

a. For protective/married puts, you need to be okay losing your entire investment — treat it like a term insurance policy that you hope you don't have to use.

b. For purchased naked puts:

i. ITM: 50% return on investment

ii. OTM: 100% return on investment

iii. ATM: ~75% return on investment

## ASSIGNMENT ANSWERS

| Stock Price at Expiration | Shorted Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $26 | $14.90 | 36.4% | $9 | $3.60 | 66.7% |
| $28 | $12.90 | 31.5% | $7 | $1.60 | 29.6% |
| $30 | $10.90 | 26.7% | $5 | ($0.40) | -7.4% |
| $32 | $8.90 | 21.8% | $3 | ($2.40) | -44.4% |
| $34 | $6.90 | 16.9% | $1 | ($4.40) | -81.5% |
| $36 | $4.90 | 12.0% | — | ($5.40) | -100.0% |
| $38 | $2.90 | 7.1% | — | ($5.40) | -100.0% |

| Stock Price at Expiration | Shorted Stock G/L | Stock ROI | Options Price at Expiration | Option G/L | Option ROI |
|---|---|---|---|---|---|
| $40 | $0.90 | 2.2% | — | ($5.40) | -100.0% |
| $42 | ($1.10) | -2.7% | — | ($5.40) | -100.0% |
| $44 | ($3.10) | -7.6% | — | ($5.40) | -100.0% |
| $46 | ($5.10) | -12.5% | — | ($5.40) | -100.0% |
| $48 | ($7.10) | -17.4% | — | ($5.40) | -100.0% |
| $50 | ($9.10) | -22.2% | — | ($5.40) | -100.0% |
| $52 | ($11.10) | -27.1 | — | ($5.40) | -100.0% |

a. This put option **does not** meet the *Motley Fool Options* guidelines. As you can see, this out-of-the-money put option (remember, we have a strike of $35 and a stock price of $40.90) has an option ROI between -7.4% and 29.6% at our estimate of fair value — well below our required 100% return requirement. Furthermore, the breakeven for this put option is $29.60, only $0.60 above our estimate of fair value which doesn't leave much room for being wrong (or even almost right).

b. I wouldn't be interested in purchasing the $35 put options for $5.40.