

Beyond the Covered Call

Enhancing a Covered Call Strategy with Cash-Secured Puts

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Highlights

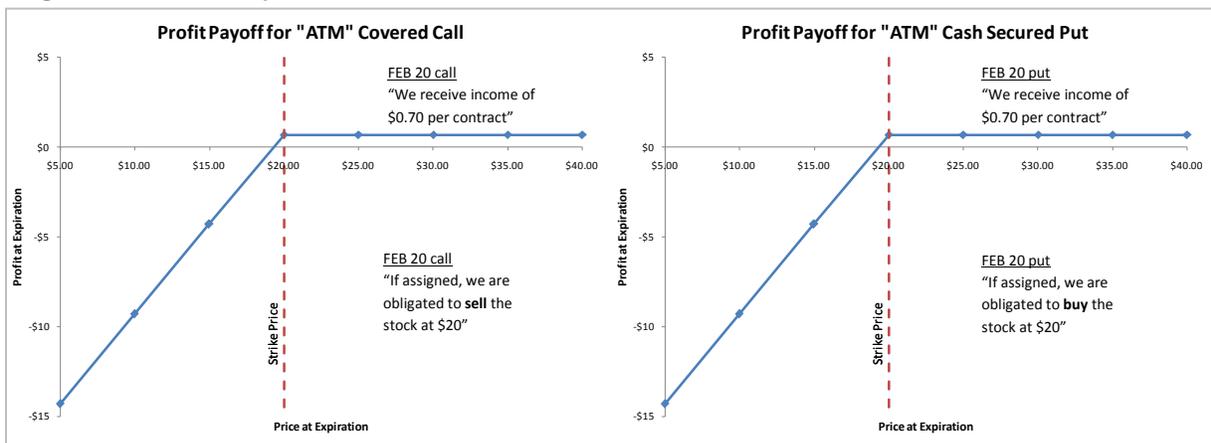
- Selling a cash-secured put has a profit payoff equivalent to selling a covered call.
- A covered call strategy can be enhanced to increase liquidity, decrease costs, and increase optionality by combining it with a cash-secured put strategy.

Investor interest in covered calls has been piqued by a track record of attractive risk-adjusted returns¹. A covered call is an options strategy that involves purchasing shares of stock and simultaneously writing a call against that stock. In a covered call strategy, an investor forgoes potential upside in exchange for upfront income in the form of an option premium. In addition to upfront income, the option premium provides a small measure of downside protection. Due to the conservative nature of covered call writing, which reduces downside risk versus simply holding an underlying equity, the strategy is permitted in Individual Retirement Accounts ("IRAs"). However, an investor who seeks to add income and manage risk solely through covered calls is missing half of the picture: a basic covered call strategy can be enhanced by marrying it with a cash-secured put strategy.

Relationship between Cash-Secured Puts & Covered Calls

Before discussion of the benefits of using both strategies, it's important to understand the relationship between cash-secured puts and covered calls. A cash-secured put strategy involves selling a put and holding cash in abeyance for the put obligation (otherwise the strategy would involve leverage as the investor would need to borrow cash in event of an assignment). Just like writing a call, the sale of a put generates an upfront option premium. The following example compares the two strategies using shares of the hypothetical XYZ Company. XYZ stock is currently trading at \$20, the at-the-money ("ATM") call is trading at \$0.70, and the ATM put is trading at \$0.70.

Figure 1. Profit Payoff of Covered Calls & Cash-Secured Puts



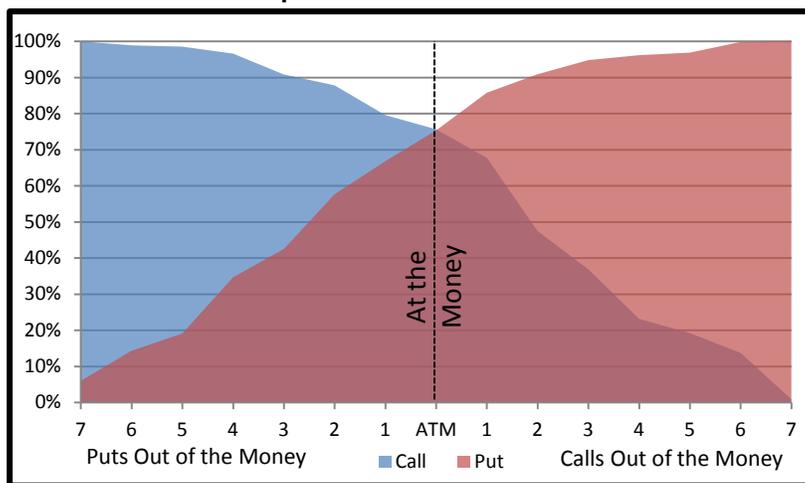
Notice that for any given price at expiration (the x-axis) the profit at expiration, (the y-axis) is identical. The conclusion is that the profit payoffs of a covered call are equivalent to a cash-secured put. Also notice that as the two strategies share the same risk-return characteristics, if they are not priced similarly an arbitrage opportunity exists. While outside of the scope of this paper, in-depth discussions of put-call parity are available². Accepting that the two strategies are equivalent in theory, a practical discussion of the benefits of adding cash-secured puts to a conventional covered call strategy follows.

Accessing Liquidity

A major benefit to using both covered call and cash-secured put strategies is the ability to access all available liquidity, which reduces transaction costs.

We collected trading data on the 10 largest stocks in the S&P 500 by market capitalization and, using open interest as a proxy for liquidity, examined how their option liquidity was distributed in a two month-long expiration cycle. The chart at right shows the cumulative put and call open interest on the aforementioned 10 stocks. Option liquidity is typically concentrated around the at-the-money strike, which is shown in the chart by the

Figure 2. Cumulative Open Interest on 10 Largest, Non-Energy S&P 500 Stocks. Jan 2015 Expiration



relative steepness of the respective call and put slopes near the at-the-money strike. Equally evident is how the slope rapidly begins to approach zero as both calls and puts are deeper in the money. Fully 70% of the call open interest was at the money or out-of-the-money, and 70% of the put interest was at the money or out-of-the-money. Given the typical negative relationship between liquidity and trading costs where increased liquidity leads to reduced transaction costs⁷, an investor seeking a certain risk profile should choose the more liquid of the equivalent covered call and cash-secured put.

Reducing Transaction Costs

Commission costs and assignment charges can be lowered by using both covered calls and cash-secured puts. As a seller of American-style options, assignments may happen at any time until expiration, but typically assignments only occur prior to expiration when a stock goes ex-dividend or when an option is deep in-the-money and time premium is near zero. If a stock pays a dividend, which over 80% of the S&P 500 currently do³, a covered call writer faces the risk of assignment when a stock is going ex-dividend and the dividend amount is greater than the amount of time premium left in an in-the-money option^{4,5}. Likewise, a deep in-the-money option has the risk of early assignment if there is little to no time premium left in the option. Furthermore, the brokerage fees paid as the result of an assignment are often higher than a commission for a standard option trade⁶. Dovetailing with the previous discussion on liquidity, an investor considering an in-the-money covered call on a dividend paying stock can avoid the risk of being called early, avoid expensive assignment charges, and frequently take advantage of better liquidity by instead writing an out-of-the-money put.

Conclusion

Covered call strategies have captured investors' attention by producing attractive risk-adjusted returns. However, an investor who relies solely on covered calls is neither minimizing his costs nor taking advantage of available liquidity. By considering the combined impact of liquidity and trading costs, an important conclusion is reached — adding cash-secured puts to a covered call strategy greatly expands the accessible portion of the risk spectrum. From the perspective of a covered call strategy's downside risk, the further in-the-money a call is written, the less risk it has. This is due to a bigger cushion before participating in the downside. As previously discussed, in-the-money calls are generally less liquid and exposed to early assignment, but an out-of-the money cash-secured put is not. More generally, it follows that with the ability to use either covered calls or cash-secured puts, an investor can more precisely implement an investment thesis by choosing the most efficient strategy at a given strike price. Therefore, a covered call strategy can be enhanced — increased liquidity, decreased costs, and increased optionality — by combining it with a cash-secured put strategy.

DISCLOSURE: Any statistics mentioned have been obtained from sources we believe to be reliable, but the accuracy and completeness of the information cannot be guaranteed. Any statements non-factual in nature are those of the author(s) and are subject to change. The information and views expressed are intended to educate readers on the use of options and should not be considered as investment advice or constitute as a recommendation to buy or sell any security, strategy or product nor should it be considered as a forecast of future events or a guarantee of future results. Options involve risk and are not suitable for all investors. Please see page 5 for additional important information.

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Seth joined BC Investment Partners in 2006, which acquired MAI in 2007. Seth has extensive experience in risk management including options strategies. Seth was the Managing Partner and Chief Investment Officer for DaVinci Capital and Chief Investment Officer for Bank of Tokyo Trust, which managed accounts in excess of \$1.5 billion. Seth received his BA in Political Science from Rutgers University.



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Kurt joined MAI in November 2011 and was an intern in 2008. In the interim, Kurt was an Investment analyst with the Townsend Group where he provided portfolio modeling, investment due diligence, and analytical support to clients. Prior to Townsend Group, Kurt was a Senior Financial Analyst at Capital One where he focused on forecasting and analysis. He earned his BS in Economics from The Ohio State University and holds the Chartered Financial Analyst® designation.

Glossary of Terms

At-the-money is an option with a strike price that is equal to the current market price of the underlying stock.

Call is an option contract giving the owner the right (but not the obligation) to buy a specified amount of an underlying security at a specified price within a specified time.

Cash-secured Put is a put for which the writer deposits an amount of cash equal to the option's exercise price.

Covered Call is an options strategy whereby an investor holds a long position in an asset and writes (sells) call options on that same asset in an effort to potentially generate increased income from the asset.

Expiration cycle is expiration dates applicable to the different series of options. Today, equity options expire on a hybrid cycle that involves four option series: the two nearest-term calendar months and the next two months from the traditional cycle to which that class of options has been assigned. For example, on January 1, a stock in the January cycle will be trading options expiring in these months: January, February, April and July. After the January expiration, the months outstanding will be February, March, April and July.

Index Option is an option providing exposure to the movement of the stock market.

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

Put is an option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying asset at a set price within a specified time.

Open interest is the total number of outstanding option contracts on a given series or for a given underlying stock.

Option Premium is the total price of an option; intrinsic value plus time value.

Out-of-the-money: Call option is out-of-the-money if the stock price is below its strike price and a **put option is out-of-the-money** if the stock price is above its strike price.

Spread to strike price is the difference between the current price of the security and the strike price.

Strike Price is the price at which a specific options contract can be exercised.

Write / Writer is to sell an option that is not owned through an opening sale transaction. While this position remains open, the writer is subject to fulfilling the obligations of that option contract; i.e., to sell stock (In the case of a call) or buy stock (In the case of a put) if that option is assigned. An investor who so sells an option is called the writer, regardless of whether the option is covered or uncovered.

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Important Information

Past performance is no guarantee of future results. This material is for informational purposes only. Material should not be considered a recommendation to purchase or sell any particular security or shares in any particular investment fund. It should not be assumed that any security transactions, holdings, or sectors discussed were or will be profitable or that the investment recommendations or decisions we make in the future will be profitable. Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size.

About Anticipated Performance and Risk

Risk Factors include exposure to financial and market risks that accompany investments in stocks and options. Additional information about option trading can be found in the updated Options Disclosure Document (Characteristics and Risks of Standardized Options) located on the Options Clearing Corporation Website <http://www.optionsclearing.com/about/publications/character-risks.jsp>

The Chicago Board Options Exchange Education Center located at <http://www.cboe.com/learncenter/>

The NASDAQ Options Trading Guide located at <http://www.nasdaq.com/investing/options-guide/>

Option risks include, but are not limited to, the possibility of an imperfect correlation between the movement in the options' prices and that of the securities/indices hedged (or used for cover), which may render a given hedge unable to achieve its objective; possible loss of the premium paid for options; and potential inability to benefit from the appreciation of an underlying security above the exercise price. **Premium realized through the sale of options is characterized as short-term capital gains and is not distributable as quarterly income.**

References:

1: "An Historical Evaluation of the CBOE S&P 500 BuyWrite Index Strategy." Callan Associates, Oct. 2006. Web. 7 Jan. 2014

2: One such article is the following : Klemkosky, Robert C., and Bruce G. Resnick. "Put-Call Parity and Market Efficiency." *Journal of Finance* 34.5 (1979): 1141-155. Web. 30 Dec. 2013

3: "S&P Dow Jones Indices." S&P 500 Index. McGraw Hill Financial, n.d. Web. 05 Jan. 2014.

4: Dawson, Paul. "Rational Early Exercise of Equity and Index Options: The Impact of Market Frictions." *Journal of Business Finance & Accounting* 23.7 (1996): 931-51. *EBSCO Business Source Corporate*. Web. 2 Dec. 2013.

5: "Equity Option Strategies - Covered Calls." *CBOE.com*. Chicago Board Options Exchange, n.d. Web. 30 Dec. 2013.

6: Based on a sample of three institutional brokerages and two retail brokerages. Figure 1. Profit Payoff of Covered Calls & Cash-Secured Puts. Source: MAI Capital Management, LLC

Figure 2. Trading data of 10-largest, non-energy stocks of the S&P 500 according to market capitalization. Due to volatility in the crude oil markets during this period, open interest for energy stocks was distorted. Consequently the 2 energy stocks in the top 10 have been excluded; data for the next 2 companies by market cap has been used. Source: Bloomberg and MAI Capital Management. September 2014.