

Focus on Derivatives

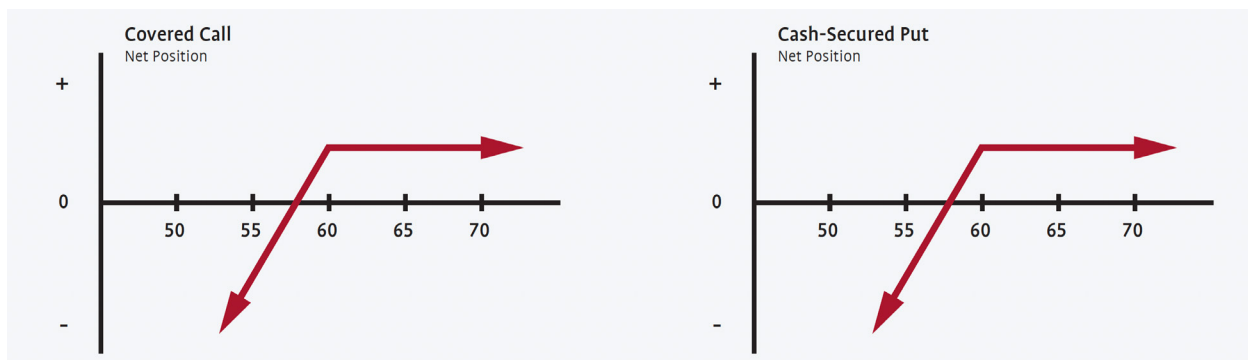
Covered Calls are the same as Cash-Secured Puts: How equivalent positions can help you size up a strategy

In the financial media, writing put options is often viewed as being ultra-risky while a covered call strategy is portrayed as conservative. Financial institutions can also cast these strategies in a similar light. As an example, a large financial organization that I was once acquainted with decided that, due to the prevailing market conditions, selling puts was no longer going to be allowed due to the high risk. I questioned the risk department on this decision asking if covered call writing was still allowed under this restriction. I was told that because covered calls were “more conservative”, it was still being allowed. Was their risk department correct? Let’s take a deeper look at [covered calls](#) vs [cash-secured puts](#) (or cash-covered). In the following I assume basic familiarity with both strategies. If not please see the links above.

On the trading floor, one of the catch phrases I often used to get junior traders to think outside the box was: “Calls are puts and puts are calls”. This is obviously rooted in put-call parity. However, what I was trying to convey is that for every call option strategy there exists an equivalent strategy using puts and vice versa. This is easy to imagine when you consider that the inputs (interest rate, implied vol etc.) entered into an options pricing model are roughly the same for both puts and calls. Instead of thinking of puts and calls as completely separate, the options world begins to open up a bit when you start to think in terms of equivalent positions. An equivalent position is a position created using different instruments that has the same payoff or risk/reward as the position being examined. Some examples of common strategies and their equivalents positions are:

STRATEGY	EQUIVALENT POSITION
Long Stock	Long Call + Short Put
Short Stock	Short Call + Long Put
Long Call	Long Stock + Long Put
Long Put	Short Stock + Long Call
Covered Call	Short Put

Yes, the risk department that banned put selling got it wrong. Assuming the same inputs, a covered call carries the exact same payoff as a short put. This is easily demonstrated with the all too common (and of limited usefulness) “hockey stick” diagram as seen below (courtesy of the Options Industry Council).



Clearly, the payoff at expiry is exactly the same for both strategies. The hockey stick diagrams aren't very informative so let's look at some simple numbers for the payoffs between covered call and cash-secured puts. If a covered call is sold on a \$100 stock with a strike of \$100 for \$1 in premium, the maximum loss is \$99 (\$100 - \$1) if the stock goes to zero. If a put is sold on the same stock with the same strike (\$100) and for the same amount, the maximum loss is also \$99 (\$100 - \$1). The maximum gain that can be made with either strategy is \$1.00. With the payoffs being the same for both strategies, it's fair to say that these are equivalent strategies. Moral of the story: Do not equate selling puts with risk while cozying up to covered calls because of a pre-conceived notion that it's a safer strategy. The risk/reward is the same for both. There are, however, some important differences when it comes to how each strategy is typically implemented.

- Both covered calls and cash-secured puts are usually executed by selecting a strike that is a specified percentage distance away from the current stock price or by selecting a strike that meets a targeted delta (i.e. 20 delta).
- Strikes are also frequently chosen based on an investor's profit target in the case of a covered call, and on where they would like to buy stock in the case of a cash-secured put.

For covered calls, this means a higher strike than the current market and for the cash-secured put, a lower strike. As an example, a 2% out-of-the-money (OTM) option is a strike selection method that is frequently used. For a stock that is at \$50, this means selling a call with a strike of \$51 (1.02 * \$50) or for the cash-secured put investor, selecting a put with a strike of \$49 (0.98 * \$50). The table below contrasts the returns for a covered call and a cash-secured put.

STRATEGY	PROFIT AND LOSS					
	47	48	49	50	41	52
Buy Stock at \$50, Sell \$51 Call for \$1	-2.00	-1.00	0.00	1.00	2.00	2.00
Sell \$49 Put for \$1	-1.00	0.00	1.00	1.00	1.00	1.00

Because of its lower strike, the cash-secured put has a lower breakeven at \$48 than the covered call at \$49. The cash-secured put doesn't earn as much as the covered call if the stock moves higher as the covered call profits from owning the shares up to the strike as well as earning the premium. Because different strikes are typically used, the relative returns from these strategies will vary depending on the market environment. The covered call writer will generally have better relative performance in rising markets while the cash-secured put seller will generate better relative results in declining markets. This is important to note but it says more about strike placement than the strategy itself.

With the simple examples out of the way, let's look at the returns for both strategies during periods of rising and declining stock prices. First item we need is a stock that has seen both decent uptrends and downtrends in the past; Blackberry will fit the bill (apologies if it brings back bad memories for anyone but at least I didn't use Nortel...).

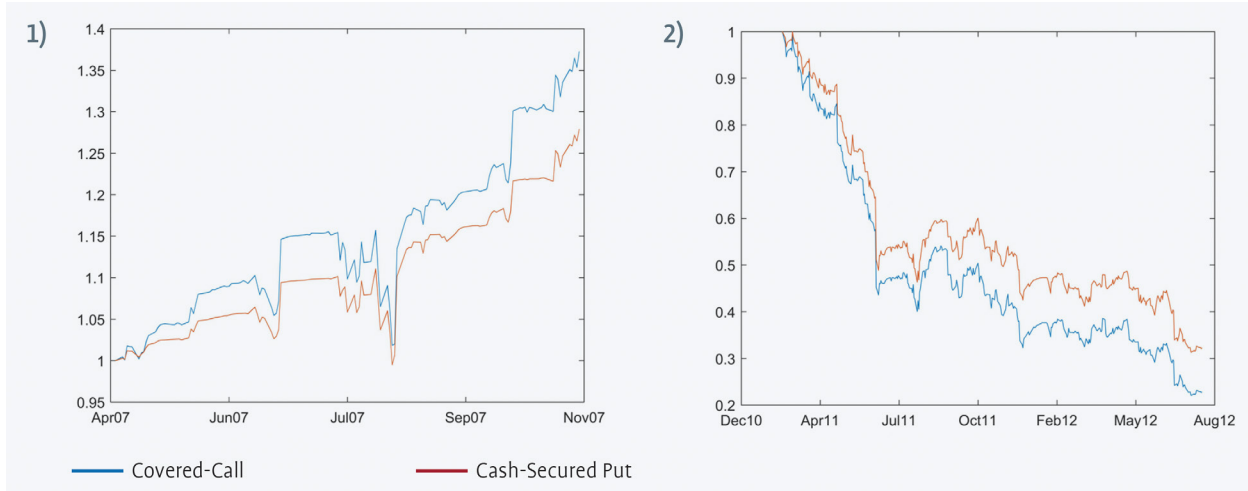
- April, 2007 to November 02, 2007 was a solid uptrend and, is shown in graph below in black.
- February 18, 2011 to August 03, 2012 was a one-sided move to the downside, displayed in red.

Blackberry Stock Price



The strategies that will be analyzed on these two periods are: 1) a covered call strategy that is always fully invested and sells one month 2% OTM calls on a rolling basis and 2) a cash-secured put strategy that sells 2% OTM puts on a rolling one month basis. The normalized return series for both strategies is displayed in the following graphs:

BlackBerry: Cash-Secured Put vs Covered Call



During the uptrend, the covered call outperformed the cash-secured put by 9.36% annualized as it benefitted from price movement up to the strike. On the other hand, the cash-secured put only earns the premium from selling and therefore its performance lagged. In the downtrend, the situation is reversed with the cash-secured put outperforming the covered call by 9.45% annualized. This underscores the importance of selecting the strategy that will perform best over the anticipated market environment. Astute readers will also quickly point out that the same effect could be realized by moving the covered call strike instead of engaging in the cash-secured put, using the concept of equivalent positions as discussed above. In other words, selling a one month 2% in-the-money (ITM) call would generate approximately the same returns as one month 2% OTM put. Similarly a one month 2% ITM put could be used to replicate a one month 2% OTM call. Commissions were not included in the above tests but it is worth pointing out that a cash-secured put only requires one commission to initiate while a covered call requires two (stock and option).

Seeing the two strategies side by side and thinking back to equivalent positions, it's easy to see that if the strikes were the same for each strategy, both return series would be roughly identical. This further cements that covered calls and cash-secured puts are the same strategy.

Don't fall into the trap of thinking of covered calls and cash-secured puts as separate and unrelated strategies. Learning to think about these strategies in terms of equivalents can help match your market outlook to the most efficient strategy.



John Ley is a derivative trader with over 25 years' experience in the capital markets across multiple institutions, geographic locales and product lines. Most recently John was a Managing Director in Global Equity Derivatives and Institutional Equities at TD Securities. Clifton Capital Management Inc. (CCMI) was founded by John to bring together his derivative experience with cutting edge derivative back-testing and analysis technology. CCMI assists Portfolio Managers with derivative overlays, the creation of new products and volatility management. John believes in data driven decisions and analysis which is reflected in CCMI's motto, "fact not fiction".

For more information

equityderivatives@tmx.com

m-x.ca/options

Opinions expressed in this article do not necessarily represent the views of the Bourse de Montréal Inc.

This article is made available for general information purposes only. The information provided in this article, including financial and economic data, quotes and any analysis or interpretation thereof, is provided solely for information purposes and shall not be construed in any jurisdiction as providing any advice or recommendation with respect to the purchase or sale of any derivative instrument, underlying security or any other financial instrument or as providing legal, accounting, tax, financial or investment advice. Bourse de Montréal Inc. recommends that you consult your own advisors in accordance with your needs before making decision to take into account your particular investment objectives, financial situation and individual needs.