

## Covered Call Writing

Covered call writing is an investment strategy that can help investors generate additional income on a portfolio of stocks while reducing volatility. An equity covered call strategy involves investing in a portfolio of stocks and then writing (selling) call options on the same stocks that are held in the portfolio in return for cash (premiums). In exchange for earning premiums today, an investor who sells call options (“Investor”) gives up some future upside potential in the price of the portfolio. The income generated from call writing can provide a buffer against equity market declines, thereby helping reduce volatility of an equity portfolio.

## Covered Call Strategies Have Historically Generated Attractive Risk-Adjusted Returns

A study conducted by Wilshire Associates, an independent consulting firm, analysed over 30 years of data on the risk and return profiles of option-based strategies (the “Study”).<sup>1</sup> The Study found that covered call strategies had higher risk-adjusted returns and lower volatility over time, compared to a long-only equity portfolio.

One covered called strategy assessed in the Study was the CBOE S&P 500 30-Delta BuyWrite Index (“Covered Call Index”). The Covered Call Index is designed to track the performance of a hypothetical covered call strategy that holds a long position indexed to the S&P 500 Index and sells a monthly out-of-the-money call option (typically 2-5% out-of-the-money) on the S&P 500 Index. Out-of-the money call options allow an investor to participate in more upside potential of the portfolio’s equity exposure than would be possible using at-the-money calls.

The Study found that over the 31.5 year period (June 30, 1986- December 31, 2018), the Covered Call Index outperformed the S&P 500 Index with lower volatility and also outperformed in bear markets. As shown in the table below, the Covered Call Index provided a higher risk-adjusted return (as measured by the Sharpe ratio) versus the S&P 500 Index. Premiums captured from call option writing also reduced volatility. The Covered Call Index also had fewer down months and more up months than the S&P 500 Index and a lower maximum drawdown.

## Performance and Risk Metrics (June 30, 1986 – December 31, 2018)

	Covered Call Index	S&P 500 Index
<b>Annualized Return</b>	<b>10.2%</b>	9.8%
<b>Annualized Volatility</b>	<b>12.8%</b>	14.9%
<b>Sharpe Ratio</b>	<b>0.55</b>	0.45
<b>Maximum Drawdown</b>	<b>-42.7%</b>	-50.9%
<b># of Up Months</b>	<b>262</b>	257
<b># of Down Months</b>	<b>128</b>	133

The Study also analyzed performance and risk during various market scenarios, characterized by high or low returns, and high or low volatility. In three out of the four market scenarios, the Covered Call Index had a superior return profile compared to the S&P 500 Index on an absolute and/or risk-adjusted basis. The only market environment where the Covered Call Index underperformed the S&P 500 Index on a risk-adjusted basis was in a strong bull market during which market volatility was low.

Risk-adjusted returns (as measures by the Sharpe ratio) for the Covered Call Index were better in three of the four time periods assessed.

<sup>1</sup> Options-Based Benchmark Indexes: Performance, Risk and Premium Capture (June 1986 – Dec. 2018): An Update, March 2019.

## Scenario 1: High returns with low volatility (2010-2018 excluding Q4 2018)

	Covered Call Index	S&P 500 Index
Annualized Return	9.0%	<b>12.6%</b>
Annualized Volatility	<b>10.2%</b>	12.5%
Sharpe Ratio	0.9	<b>1.0</b>

*The Covered Call Index underperformed the S&P 500 Index but exhibited lower volatility.*

## Scenario 2: High returns with moderate volatility (1995-1999)

	Covered Call Index	S&P 500 Index
Annualized Return	26.6%	<b>29.8%</b>
Annualized Volatility	<b>12.1%</b>	14.0%
Sharpe Ratio	<b>2.2</b>	2.1

*The Covered Call Index outperformed on a risk-adjusted basis, though absolute return was lower than the S&P 500 Index over the period.*

## Scenario 3: Low returns with moderate volatility (2000-2006)

	Covered Call Index	S&P 500 Index
Annualized Return	<b>5.4%</b>	2.2%
Annualized Volatility	<b>12.8%</b>	14.3%
Sharpe Ratio	<b>0.4</b>	0.2

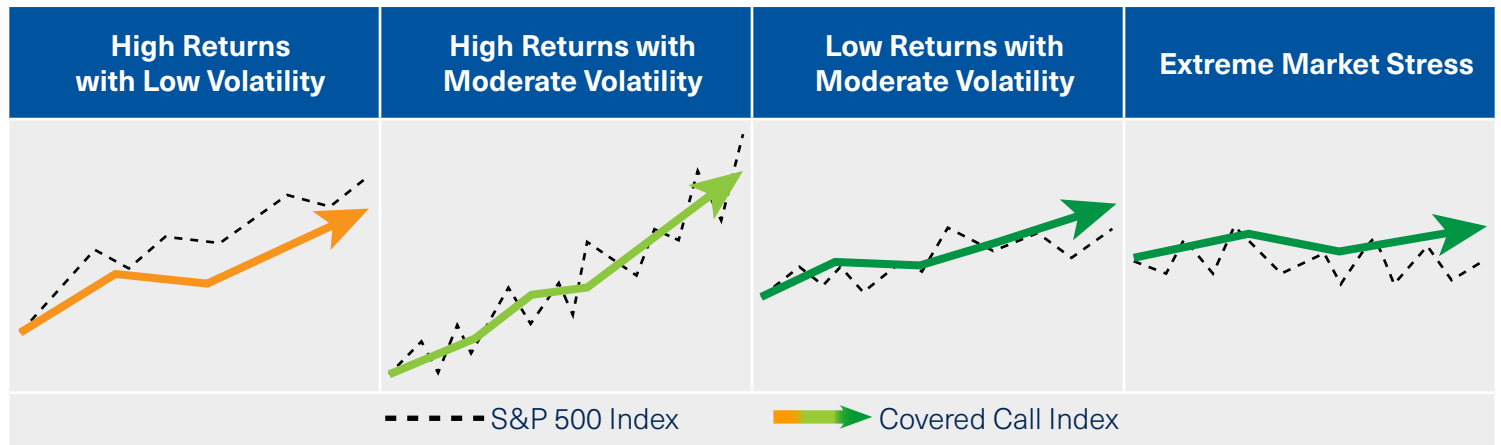
*The Covered Call Index outperformed on an absolute and risk-adjusted basis, with higher return and lower volatility than the S&P 500 Index.*

## Scenario 4: Extreme market stress during the financial crisis (2007-2009)

	Covered Call Index	S&P 500 Index
Annualized Return	<b>0.6%</b>	-3.7%
Annualized Volatility	<b>18.8%</b>	19.9%
Sharpe Ratio	<b>0.0</b>	-0.2

*The Covered Call Index outperformed on an absolute and risk adjusted basis, with higher return and lower volatility than the S&P 500 Index.*

## Summary: Covered Call Index Performance Relative to S&P 500 Index



Figures of relative performance are for illustrative purposes only

In three out of the four scenarios the Covered Call Index outperformed the S&P 500 Index on a risk-adjusted basis and had lower volatility. The only scenario in which the Covered Call Index underperformed was during a strong bull market with low volatility; however, it still produced positive return with lower volatility. Depending on your outlook for market returns and volatility, a covered call strategy may help improve risk-adjusted returns in an equity portfolio.

### Brompton's Active Covered Call Strategy

Brompton takes an active approach to covered call writing with the aim to maximize total return. We determine what percentage of the portfolio and which equity securities to sell call options on, based on market conditions and our investment outlook. We may write calls on a lower percentage of the portfolio in rising or low volatility markets in an effort to capture more market appreciation for the fund's portfolio, or a higher percentage in declining or high volatility markets in an effort to generate more option premium and provide a cushion against a market decline.

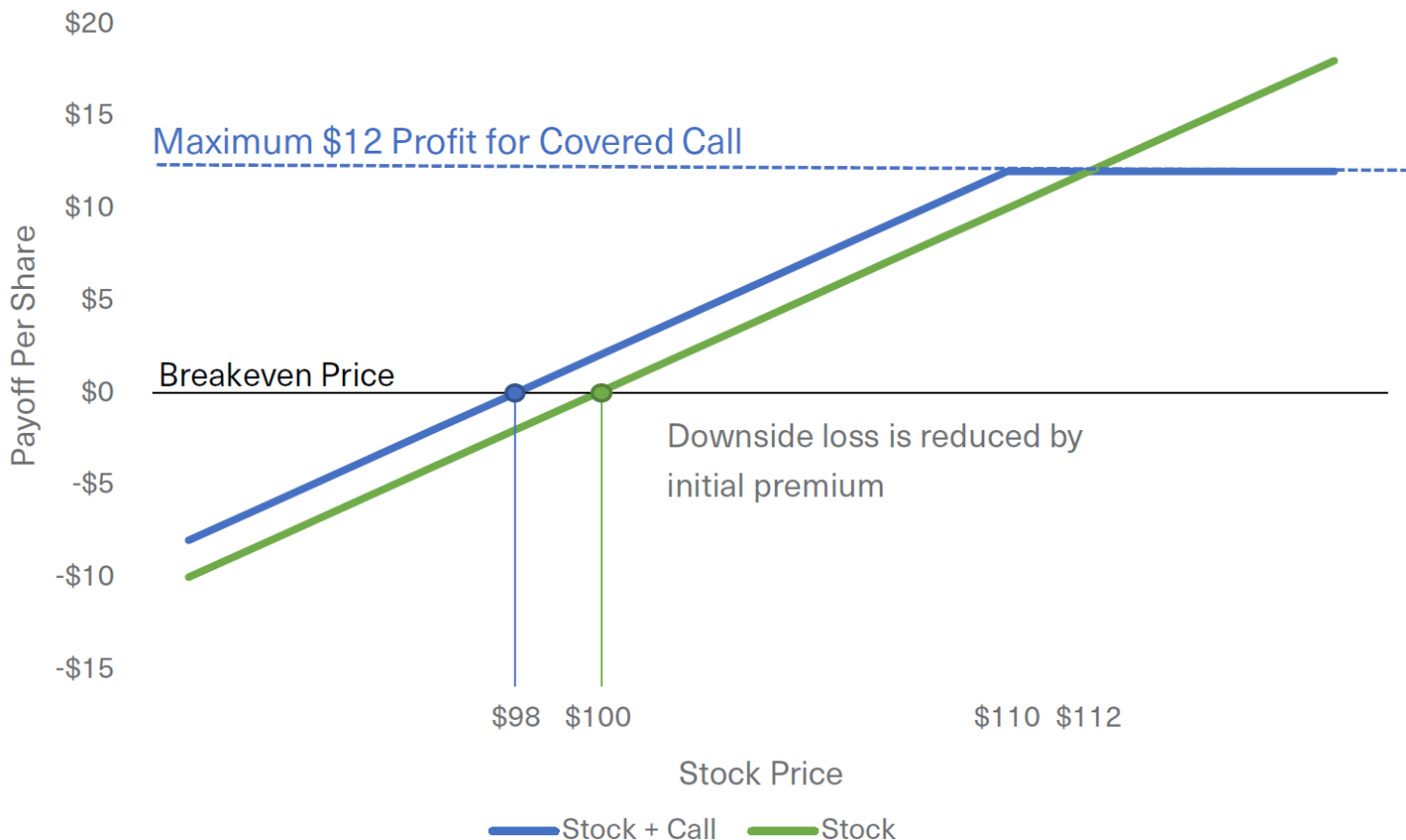
Brompton typically writes covered call options that are short-dated (1-2 months expiry). Writing short-term call options can increase the likelihood that the options to expire without being exercised, thereby allowing new calls to be written on the same underlying securities and potentially generating more premiums. In addition, Brompton will often write out-of-the-money calls to allow investors to participate in the upside potential of the underlying securities to a greater extent than do at-the-money calls. An out-of-the-money call sets the strike price above the market price (e.g. 1%-5% higher), allowing the fund to capture capital appreciation upside plus the option premium.

## How a Covered Call Strategy Works

Assumptions: An Investor purchases a stock for \$100. He or she also writes a call option on the stock that has a strike price of \$110 and generates a premium of \$2.

The example below illustrates the payoff profile for a stock investment upon which an investor has sold a covered call option compared to a long-only stock investment.

### Payoff Profile of a Covered Call vs. Stock



The blue line represents the payoff profile of the covered call strategy. The Investor caps his or her maximum profit at \$12. However, he or she also reduces potential losses by the \$2 generated in premiums which results in a lower breakeven point of \$98 (\$100 stock price – \$2 premium) than a long-only investor. Additionally, the Investor has a higher profit than a long-only investor up until the stock hits \$112 (\$110 strike price + \$2 premium).

## Brompton's Covered Call Funds

TSX Ticker	Fund Name	Fund Overview
<b>Exchange-Traded Funds (ETFs)</b>		
<b>BDIV</b>	<b>Brompton Global Dividend Growth ETF</b>	Actively managed portfolio of large cap global dividend growth companies
<b>BFIN</b>	<b>Brompton North American Financials Dividend ETF</b>	Actively managed portfolio of large cap North American financial services companies
<b>EDGF</b>	<b>Brompton European Dividend Growth ETF</b>	Actively managed portfolio of equity securities of large capitalization European Dividend Growth Companies
<b>HIG</b>	<b>Brompton Global Healthcare Income &amp; Growth ETF</b>	Actively managed portfolio of equity securities of large cap global healthcare companies
<b>TLF</b>	<b>Brompton Tech Leaders Income ETF</b>	Actively managed portfolio of equity securities of large cap technology companies
<b>Split Share Corps.</b>		
<b>DGS</b>	<b>Dividend Growth Split Corp.</b>	Actively managed portfolio of equity securities, primarily large cap Canadian equities with dividend growth
<b>GDV</b>	<b>Global Dividend Growth Split Corp.</b>	Actively managed portfolio of large cap global dividend growth companies
<b>LBS</b>	<b>Life &amp; Banc Split Corp.</b>	Portfolio of Canada's four largest publicly-listed life insurance companies and the "Big Six" banks
<b>LCS</b>	<b>Brompton Lifeco Split Corp.</b>	Portfolio of common shares of Canada's four largest publicly-listed life insurance companies
<b>OSP</b>	<b>Brompton Oil Split Corp.</b>	Portfolio of common shares of at least 15 large cap North American oil and gas issuers
<b>SBC</b>	<b>Brompton Split Banc Corp.</b>	Portfolio of common shares of Canada's "Big Six" banks



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