CAPTURING VOLATILITY

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MIRAE ASSET

AGENDA

- What is Covered Call Writing?
- How a Call Option Works
- The Greeks
- Our Approach
- Advantage of Using an ETF over DIY
- The Horizons Family of Covered Call ETFs



HANS ALBRECHT

Hans Albrecht is Vice-President, Portfolio Manager and Options Strategist with Horizons ETFs Management (Canada) Inc. ("Horizons ETFs"). He co-manages Horizons ETFs' growing global line-up of covered call ETFs, and oversees day-to-day options activities.

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OPTIONS

- Options are a powerful investment tool that can be used to speculate, hedge or earn income
- An option buyer has the right, not the obligation, to buy or sell a security (e.g. a stock, bond or ETF) at a future determined value
- An option seller has the obligation to sell the security (call) or buy the security (put) at the strike price until expiry



OPTIONS

- The buyer of a call option wants the price of the security to rise in the future
- The seller of a call option either expects that it will not appreciate, or is willing to give up some of the upside (profit) from a price rise in return for the premium (paid immediately) and retaining the opportunity to make a gain up to the strike price
- The pricing of an option is largely determined by three factors: the duration (or time to expiry) of the option, the volatility of the reference security, and its sensitivity to changes in the pricing of the underlying security



A CONSERVATIVE APPROACH TO EQUITY INVESTING

A covered call writing strategy offers a number of advantages over investing in the same portfolio of stocks with no option strategy.

Key advantages:

- Potentially higher yield than dividends alone
- Tax-efficient distributions
- Reduced volatility*
- A diversified and convenient way to use equity options

Downsides:

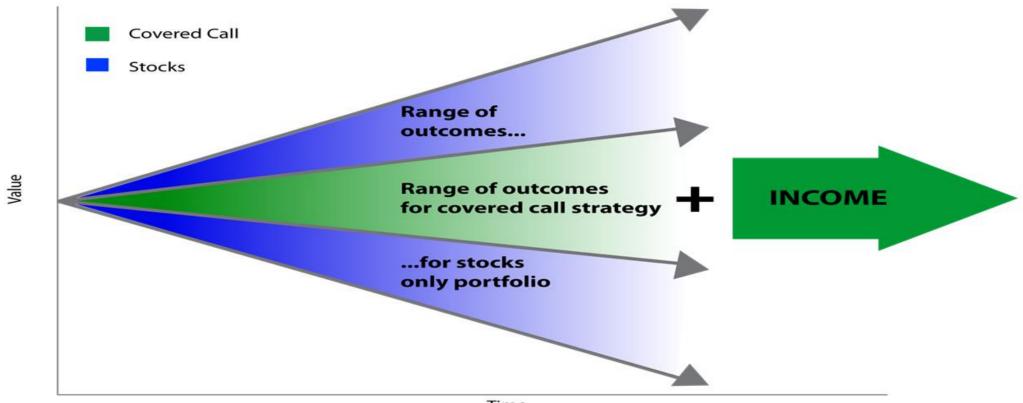
- Can still see negative returns in a bear market
- Returns typically lag in bull markets

*Compared to the same portfolio with no option writing strategy.





COVERED CALLS VS. STOCKS ONLY



Time



HOW A CALL OPTION WORKS

Assumptions: Stock purchased at \$100. Call option written at \$105 strike. Premium received is \$1.00.





COVERED CALL STRATEGIES IN VARIOUS MARKETS

Performance expectations for a covered call strategy



Source: Horizons ETFs Management (Canada) Inc. FOR ILLUSTRATIVE PURPOSES ONLY.



MONEYNESS

In-the-Money means that a call **option's** strike price is below the market price of the underlying asset or that the strike price of a put **option** is above the market price of the underlying asset. Being **in the money** does not mean you will profit, it just means the **option** is worth exercising.

Deep-in-the-money is an **option** with an exercise price, or strike price, significantly below (for a call **option**) or above (for a put **option**) the market price of the underlying asset. Significantly, below/above is considered one strike price below/above the market price of the underlying asset.

Out-of-the-money (OTM) is term used to describe a call **option** with a strike price that is higher than the market price of the underlying asset, or a put **option** with a strike price that is lower than the market price of the underlying asset.

At-the-money is a situation where an **option's** strike price is identical to the price of the underlying security. Both call and put **options** are simultaneously **at the money**.





Delta, Gamma, Theta & Vega



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DELTA (PRICE SENSITIVITY)

Delta is typically shown as a numerical value between 0.0 and 1.0 for call options. A delta of 1.00 means that for every \$1 the underlying stock increases, the call option will increase by \$1.00



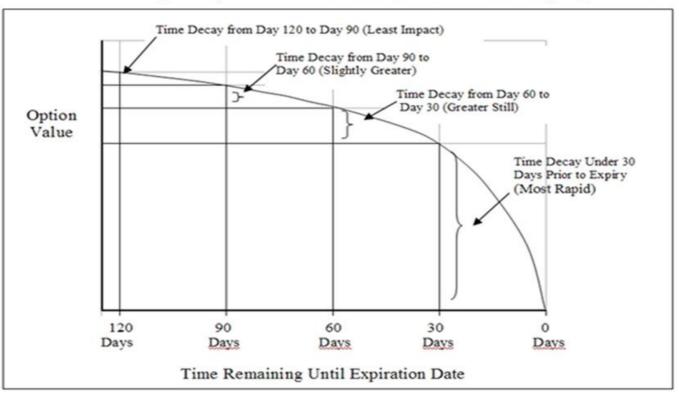
GAMMA (SENSITIVITY TO DELTA)

Gamma is typically shown as a numerical value between 0.0 and 1.0 for call options. A gamma of .20 means that for every \$1 the underlying stock increases, the delta of the call will increase by .20



THETA (TIME DECAY)

Theta measures the time decay of an option. It's the theoretical dollar amount that an option loses every day as time passes, assuming the price and volatility of the underlying remain the same



Source: Investopedia.



VEGA (SENSITIVITY TO DELTA)

Vega measures an option's sensitivity to changes in the volatility of the underlying. Vega represents the amount that an option's price changes in response to a 1% change in volatility of the underlying market



UPSIDE PARTICIPATION, DOWNSIDE PROTECTION

 Historically, a covered call strategy has offered participation in positive markets, positive returns in flat markets and protection in down markets



Annual Performance of the S&P 500® Index, CBOE BXM Index and CBOE BXY Index

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

Source: Bloomberg, between December 31, 1989, and March 31, 2017. Historical index returns for the CBOE S&P 500 BuyWrite Index ("CBOE BXM Index") and CBOE S&P 500 2% OTM BuyWrite Index ("CBOE BXY Index") prior to April 11, 2002, and March 20, 2006, respectively, are back-tested historical returns published by Standard & Poor's. Past performance is not a guarantee of future results.



OUR APPROACH

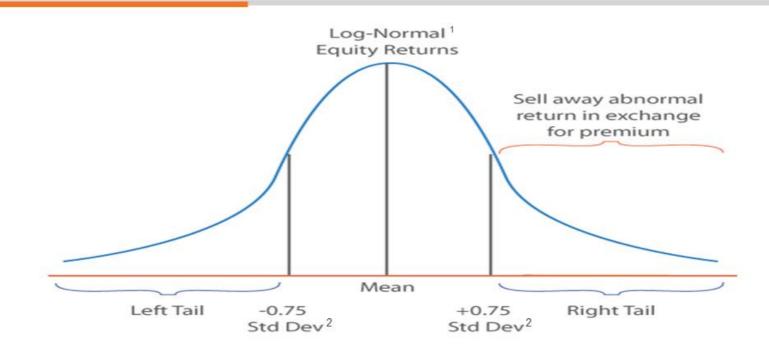
- The portfolio manager will generally sell (write) short-term, slightly out-of-the-money call options on some or all of the portfolio, providing less yield than an out-of-the-money strategy, but generally more stable excess returns
- Regardless of how the stocks perform the portfolio will earn a call option premium on each position written, even on stocks that don't pay dividends
- Before expiry, an in-the-money call will either be closed or rolled
- The option premium earned will partially offset any potential losses experienced by the options and/or the stocks, or increase any potential gains experienced on the stock, up to the strike price (plus the premium)
- Distributions are expected to be treated as capital gains for call premium and dividend income for dividends



ETF Name	Ticker Symbol	General Investment Strategy
Horizons Enhanced Income U.S. Equity (USD) ETF	HEA.U	OTM calls on equally-weighted portfolio of large-cap U.S. equities
Horizons Enhanced Income International Equity ETF	HEJ	OTM calls equally-weighted portfolio of large-cap international equities
Horizons Enhanced Income Financials ETF	HEF	OTM calls on equally-weighted portfolio of Canadian financial stocks
Horizons Enhanced Income Energy ETF	HEE	OTM calls on equally-weighted portfolio of Canadian energy stocks
Horizons Enhanced Income Gold Producers ETF	HEP	OTM calls on equally-weighted portfolio of North American gold stocks
Horizons Enhanced Income Equity ETF	HEX	OTM calls on equally-weighted portfolio of 30 large-cap Canadian stocks
Horizons Natural Gas Yield ETF	HNY	Writes calls on 1/3 of portfolio, 2/3 natural gas futures
Horizons Gold Yield Fund ETF	HGY	Writes calls on 1/3 of portfolio, 2/3 long gold bullion



OUT-OF-THE-MONEY CALL OPTIONS



The strategy has the potential to trade away a lower probability of statistically "abnormal" monthly returns in exchange for additional income from call premiums, while maintaining exposure to statistically "normal" monthly returns

¹Log-normal distribution: a continuous probability statistical distribution of a random variable whose logarithm is normally distributed. ²Standard deviation or "Std. Dev": a statistical measure of the dispersion of a set of data (in this case, equity returns) from its average or "mean".



IMPLIED Volatility=Option Prices

Implied volatility could be the MOST important factor in option trading
A result of supply and demand for options



HOW VOLATILITY IMPACTS STRIKE

Stock	А	В	С	D
Price	\$50.00	\$50.00	\$50.00	\$50.00
Days to Expiry	30	30	30	30
Implied Volatility	15%	25%	35%	45%
1-∑¹	\$2.15	\$3.58	\$5.02	\$6.45
Strike	\$52.15	\$53.58	\$55.02	\$56.45
Out-of-the-Money (%)	4.3%	7.2%	10.0%	12.9%
Option Price	\$0.24	\$0.36	\$0.49	\$0.63
Option Delta	0.2	0.2	0.2	0.2

 $1-\sum 1$ - The amount by which the strike price changes based on the implied volatility.



HYPOTHETICAL EXAMPLE # 1: COMPANY A

- This example takes the May 25, 2017 pricing on company A, where it was priced at \$154.20. The strategy would likely write close to a 25 delta, since liquidity is historically high and there are many strikes to choose from. The implied volatility is 16.40%, a little higher than average, which means the covered call ETF would target a strike about 3.7% out-of-the-money
- The call would earn \$1.16 in premium

Stock	Market Price	Implied Volatility	Best Available Strike Price	% OTM	Call Option Bid Price	Probability of Being Called (Delta)	
Company A	\$154.25	16.40%	<u>\$160.00</u>	3.70%	\$1.20	25.00%	100.00%



HYPOTHETICAL EXAMPLE # 2: COMPANY B

- In this example, company B has a stock price of \$94.10. However, the delta of these options is higher than 25, which requires the ETF to write on less of the position
- With a lower standard deviation of 12.60%, the call would have to strike closer to the money, only 1.9% out-of-the-money
- The call would earn \$0.54 in premium

Stock	Market Price	Implied Volatility	Best Available Strike Price	% OTM	Call Option Bid Price	Probability of Being Called (Delta)	
Company B	\$94.16	12.60%	<u>\$96.00</u>	1.90%	\$0.54	30.00%	83%



HORIZONS' FAMILY OF ENHANCED INCOME ETFS

ETF Name	Ticker Symbol	General Investment Objective
Horizons Enhanced Income International Equity ETF	HEJ	To provide unitholders with (a) exposure to the performance of an equal weighted portfolio of large capitalization international, non-North American, companies; and (b) monthly distributions of dividend and call option income.
Horizons Enhanced Income Financials ETF	HEF	To provide unitholders with (a) exposure to the performance of an equal weighted portfolio of Canadian banking, finance and financial services companies; and (b) monthly distributions of dividend and call option income.
Horizons Enhanced Income Energy ETF	HEE	To provide unitholders with (a) exposure to the performance of an equal weighted portfolio of Canadian companies that are involved in the crude oil and natural gas industry; and (b) monthly distributions of dividend and call option income.
Horizons Enhanced Income Gold Producers ETF	HEP	To provide Unitholders with (a) exposure to the performance of an equal weighted portfolio of North American listed gold mining and exploration companies; and (b) monthly distributions of dividend and call option income.
Horizons Enhanced Income Equity ETF	HEX	To provide Unitholders (as defined below) with (a) exposure to the performance of an equal weighted portfolio of large capitalization Canadian companies; and (b) monthly distributions of dividend and call option income.
Horizons Enhanced Income US Equity (USD) ETF	HEA.U	To provide Unitholders with: (a) exposure to the performance of an equal weighted portfolio of large capitalization U.S. companies; and (b) monthly U.S. dollar distributions of dividend and call option income. Horizons HEA will invest primarily in a portfolio of equity and equity related securities of U.S. companies that, as at the Constituent Reset Date, are amongst the largest by market capitalization and most liquid issuers on the New York Stock Exchange (the "NYSE") or the NASDAQ Stock Market ("NASDAQ").



Management Fee*: 0.65% Distributions: <u>NOT FIXED</u> Set monthly Distribution Frequency: Monthly Distribution Tax Treatment: Call option premium taxed as capital gains, dividends as dividend income Eligibility: All registered and non-registered investment accounts DRIP, PACC and SWP eligible: Yes



THE ADVANTAGES OF USING AN ETF OVER DIY

- Few investors have options expertise and/or experience
- Effective option trading requires specialized skills to monitor and manage options positions properly
- Effective diversification in a covered-call strategy generally requires a large account/portfolio size
- Selling call options for a series of individual equities is both time-consuming and cost-inefficient



REASONS TO CONSIDER COVERED CALLS

- Stay long equities, "Getting paid for volatility"
- Generate an attractive monthly yield
- Offset a portion of further price depreciation
- Increased volatility enhances premium
- Earn income from commodities e.g. gold and natural gas



HORIZONS' FAMILY OF ACTIVE COVERED CALL ETFs

ETF Name	Ticker Symbol	General Investment Strategy
Horizons Enhanced Income U.S. Equity (USD) ETF	HEA.U	OTM calls on equally-weighted portfolio of large-cap U.S. equities
Horizons Enhanced Income International Equity ETF	HEJ	OTM calls equally-weighted portfolio of large-cap international equities
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Horizons Gold Yield Fund ETF	HGY	Writes calls on 1/3 of portfolio, 2/3 long gold bullion



Key concepts:

- Options are a form of insurance, one we can all monetize via covered calls
- Pricing versus Risk: There's a difference!
- Is more volatility better? Sweet spot for option pricing
- Stay long equities but transform some upside into capital gains income!





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WE'RE SOCIAL





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