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GLOBAL X ETFs RESEARCH

Quarterly Income Commentary: Covered Call Writing Strategies as an Attractive Income Solution

The Global X Income Outlook for Q3 2023 can be **viewed here**. This report seeks to provide macrolevel data and insights across several income-oriented asset classes and strategies.

Last quarter we discussed our thoughts on the potential for a reversal in monetary policy. Since then, the Federal Reserve (Fed) recently announced a pause in interest rate hikes during their June 2023 meeting with the potential for future rate hikes in 2023 should economic conditions and their own data analyses appear prudent to do so.¹ Equity markets have experienced positive sentiment but narrow leadership with big tech names is raising concerns about market breadth. We believe call option writing on major equity index exposures for investors can both supplement income and mitigate some of the downside market concerns via the premiums received from call option selling.

Key Takeaways

- US equity markets were resilient in the first half of 2023, primarily led by a few key leaders. This is leaving some investors at a potential crossroads as to where markets will progress from here.
- Investors seeking to limit potential market volatility while being offered the chance to obtain a level of upside participation may find that writing equity index call options on a certain percentage of a long portfolio's assets while holding the securities within that index, sometimes known as a covered call & growth strategy, may look appealing from a total return potential standpoint.
- Even as equity markets have trended higher, income investors have still sought fully covered, buywrite strategies as a useful strategy due to the potential level of income and buffer from the premiums received.

YTD 2023 Equity Market Outperformance Has Been Concentrated

While we do believe we're at the tail end of the rate tightening cycle, the economic aftermath is still being felt. Per a recent June report, the Institute for Supply Chain Management (ISM) Manufacturing index recorded its eight consecutive month of contraction.² Of the five sub-indexes used to calculate Purchasing Manager's Index (PMI), all of them were in contractionary territory too. However, Real (inflation-adjusted) Gross Domestic Product (GDP) increased with its most recent estimate of 2% outpacing the Philadelphia Fed's surveyed, Q1 2023 median forecast of just 0.6%.^{3,4} As we head into Q2 2023 earnings season, the number of S&P 500 companies issuing positive earnings guidance is at its highest level of 45 companies since Q3 of 2021 (56 companies) and potentially signifies the chance of a soft landing.⁵

Peaking interest rates and recent breakthroughs within artificial intelligence technology were key catalysts for U.S. equity market performance in the first half of the year with S&P 500 total returns of 16.89% and 39.35% for the Nasdaq 100 index.⁶ Driven by large multi-national firms, the top 10 largest constituents within the S&P 500 (SPX) and Nasdaq 100 (NDX) drove 73% and 80% of YTD returns, respectively.⁷ Depicting a similar story, quarterly return spreads between these traditionally, market-cap weighted indices to their equal-weighted index counterparts have been at their highest levels over



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XYLG – Global X S&P 500 Covered Call & Growth ETF

RYLG – Global X Russell 2000 Covered Call & Growth ETF

DYLG – Global X Dow 30 Covered Call & Growth ETF

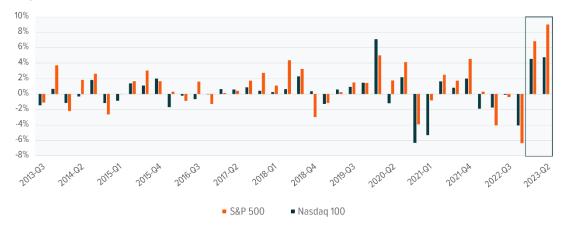
TYLG – Global X Information Technology Covered Call & Growth ETF

HYLG – Global X Health Care Covered Call & Growth ETF

FYLG – Global X Financials Covered Call & Growth ETF the last decade. This has driven a level of concerns as to the sustainability of equity market outperformance for the rest of 2023.

RECENT QUARTERLY RETURN SPREADS BETWEEN MARKET-CAP WEIGHTED AND EQUAL-WEIGHTED U.S. EQUITY INDICES DEMONSTRATES CONCENTRATED PERFORMANCE

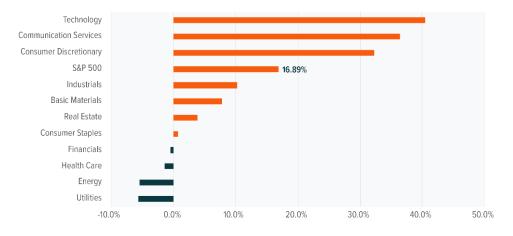
Source: Global X ETFs with data from Morningstar Direct. S&P 500 minus S&P 500 Equal-Weight and Nasdaq 100 minus Nasdaq 100 Equal-Weight Index returns are measured quarterly from Q2 2013 to Q2 2023. Past performance is no guarantee of future results.



A Covered Call & Growth Strategy Offers a Balance of Income and Growth Potential

Going into the second half of 2023, investors may want to take a more balanced approach to equity income portfolios as uncertainties rise. Companies that distribute high dividends or have proven dividend growth over a pre-determined, trailing timeframe appear attractive but also tilt away from growth-style equity sectors such as technology, a key sector that has driven year-to-date returns.

YTD U.S. EQUITY RETURNS HAVE PRIMIARLY BEEN DRIVEN BY GROWTH-ORIENTED SECTORS Source: Global X ETFs with data from Morningstar Direct, measured as of 06/30/2023. U.S. Sector representations are as follows: Consumer Discretionary, S&P Consumer Discretionary Select Sector Index; Communication Services, S&P Communication Services Select Sector Index; Real Estate, S&P Real Estate Select Sector Index; Technology, S&P Technology Select Sector Index; Basic Materials, S&P Materials Select Sector Index; Financials, S&P Financial Select Sector Index; Industrials, S&P Industrial Select Sector Index; Energy, S&P Energy Select Sector Index; Consumer Staples, S&P Consumer Staples Select Sector Index; Health Care, S&P Health Care Select Sector Index; Utilities; S&P Utilities Select Sector Index. Past performance is not a guarantee of future results.





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One alternative may be a buywrite strategy that seeks to write call options on half of a portfolio it already maintains long exposure to, also known as a covered call & growth strategy. The primary intention of such a strategy is to provide both option income and hedging properties while simultaneously offering upside potential on specified reference asset or index. For example, Global X's flagship covered call & growth strategies, QYLG and XYLG, write "at-the-money" (ATM) covered calls on 50% of their respective portfolio's assets while leaving the remaining 50% of the portfolio uncovered. Therefore, these strategies have the potential to achieve half of the upside of well-known equity indices, the Nasdaq 100 (for QYLG) and the S&P 500 (for XYLG) with attractive yield potential while maintaining a level of exposure to sectors that are typically not found within high dividend screening strategies.

STATE OF THE U.S. EQUITY INCOME LANDSCAPE

Source: Global X ETFs with data from Morningstar Direct, measured as of 06/30/2023. Yields are measured by their 12-Month Trailing Yields. Index Asset Classes represented by the following: U.S. Equities, S&P 500 Index; U.S. High Dividend, S&P 500 High Dividend Index; U.S. Low Vol, High Div, S&P 500 Low Volatility High Dividend Index; Equity REITs, FTSE NAREIT All Equity REITs Index; U.S. Shareholder Yield, Morningstar US Dividend and Buyback Index; Utilities Sector, S&P Utilities Select Sector Index; U.S. Div Aristocrats, S&P 500 Dividend Aristocrats Index.



Performance data quoted represents past performance. Past performance is not a guarantee of future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted. For performance current to the most recent month- and quarter-end, click to the fund web pages linked above.

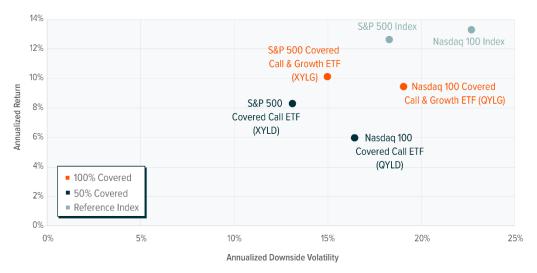
If broader U.S. equity markets continue to trend upward, strategies like these would be expected to maintain 50% of their reference index upside plus any collected premiums from their call writing strategy. QYLG and XYLG have also demonstrated lower levels of downside volatility, a measurement of tail risk, than their reference indices and may be able to provide a level of risk management should equity markets reverse course from what we've seen over the last 6 months.





GLOBAL X'S HALF-COVERED, BUYWRITE STRATEGIES HAVE DEMONSTRATED A BALANCE BETWEEN GROWTH & RISK MITIGATION

Source: Global X ETFs with data derived from Morningstar Direct. Data measured with weekly returns using NAV returns from 09/18/2020 (QYLG & XYLG's inception date) to 06/16/2023 (the last options roll date for the Global X Covered Call ETF Suite).



Past performance is not a guarantee of future results. NAV returns do not represent the returns you would receive if you traded shares on the exchange.

Global X's Buywrite Strategies Emphasizing Higher Income Potential Continued to See Elevated Demand

As we covered in our latest covered call commentary, implied volatility, a key determinant of option premiums, has been on a decline this year. While this has resulted in lower premiums received, by writing calls ATM on 100% of their long portfolios, strategies such as QYLD (Nasdaq 100), XYLD (S&P 500), DJIA (Dow 30), and RYLD (Russell 2000) are able to achieve elevated premium potential relative to a covered call & growth strategy on the same reference indices. This has translated to relatively attractive yields for fully covered, buywrite strategies compared to different segments of both equities and fixed income.



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GLOBAL X'S 100% COVERED, BUYWRITE STRATEGIES HAD ATTRACTIVE INCOME RELATIVE TO OTHER INCOME ASSET CLASSES

Source: Global X ETFs with data from Morningstar Direct, measured as of 06/30/2023. QYLD, XYLD, RYLD, DJIA, and equity index yields are measured by their 12-Month Yields. Fixed Income and Preferred Stock index yields are measured by Yield-to-Worst. Asset Classes represented by the following: U.S. High Dividend Equities, S&P 500 High Dividend Index; U.S. Equities, S&P 500 Index; Corporate Bonds, Bloomberg US Corporate Bond TR Index; U.S. Fixed Income, Bloomberg U.S. Aggregate Bond Index; Emerging Market Bonds, Bloomberg EM USD Aggregate Index; Fixed Rate Preferreds, ICE BofA Fixed Rate Preferred Securities Index; High Yield Bonds, Bloomberg U.S. Corporate High Yield Bond TR Index.



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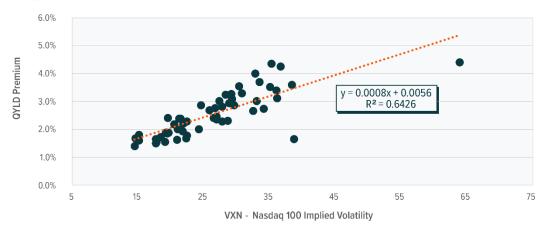
Covered call strategies typically generate a large portion of their income from sources that are not associated with traditional income-oriented investments such as fixed income securities, whose income is mainly determined by the level of interest rates, and dividend equities, whose income is affected by the financial health of the company issuing the stock. On the other hand, option premiums have historically been largely explained by the underlying asset's level of implied volatility.

Utilizing a linear regression analysis, a statistical model used to explain the relationship between two variables, we can see this connection between QYLD's premiums and Nasdaq 100 implied volatility from the computed coefficient of determination (R²). This predictive power of an index's implied volatility is visualized further by the line of "best fit", modeled from the equation stated within the graph.



IMPLIED VOLATILITY IS A KEY DETERMINANT OF QYLD CALL OPTION PREMIUMS RECEIVED

Source: Global X ETFs with data from Morningstar Direct. QYLD regression analysis is measured from 12/24/2018 to 06/16/2023. QYLD analysis utilizes the monthly option premium received as the dependent variable, the variable the model is attempting to explain. The Cboe Nasdaq Volatility Index (VXN) is the independent variable, the variable that is thought to influence the dependent variable.



We found significant R² for XYLD (0.6352) and RYLD (0.8029) when conducting similar regression analyses, demonstrating implied volatility's importance in options pricing across 3 different indices. This dynamic generally occurs since implied volatility itself is a forward looking metric calculated based on the marketplace's demand for options. Therefore, as this demand increases, so should option premiums.

REGRESSION ANALYSIS RESULTS FOR XYLD AND RYLD SHOW A SIMILAR RESULT

Note: XYLD regression analysis is measured from 08/21/2020 (first roll date after the Fund started to write "at-the-money" S&P 500 index call options) to 06/16/2023. RYLD regression analysis is measured from 04/18/2019 to 06/16/2023. XYLD analysis utilizes the Cboe Volatility Index (VIX) as the independent variable while the monthly option premium received is the dependent variable. RYLD analysis utilizes the Cboe Russell 2000 Volatility Index (RVX) as the independent variable while the monthly option premium received is the dependent variable.

| | XYLD | RYLD |
|---|--------|--------|
| Coefficent of Determination (R ²) | 0.6352 | 0.8029 |

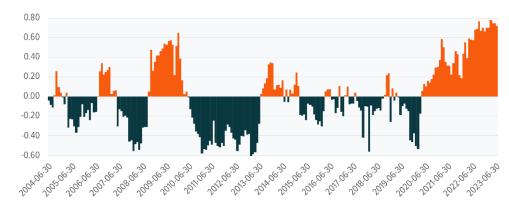
Buywrite fund flow momentum has been strong with net flows of \$16.45B year-to-date. We believe this is primarily due to income potential but risk reduction potential too.⁸ Writing more call options on a larger percentage of a long portfolio's assets can increase risk reduction potential, all else equal, since more premiums are expected to be received to offset downside losses. This may make a buywrite strategy that covers 100% of its net assets with covered calls an attractive, complementary strategy to traditional asset allocations as U.S. equities and fixed income appear to be trading with higher correlations than we have seen over the last two decades.





U.S. FIXED INCOME AND U.S. EQUITY CORRELATIONS REMAINED ELEVATED

Source: Global X ETFs with data from Morningstar Direct. Correlation data is measured as monthly rolling correlations from 06/30/2004 to 06/30/2023. U.S. Fixed Income is represented by the Bloomberg US Aggregate Bond Index while U.S. Equities are represented by the S&P 500 Index.



Conclusion: Covered Calls May Increase Portfolio Versatility

The first half of this year has left some investors surprised as consensus estimates placed a 65% probability of a U.S. recession within the next 12 months, in the early onsets of 2023.9 Economists have since revised these forecasts lower as the U.S. unemployment rate under remains under 4%.¹⁰ However, concerns have been raised about equity market breadth and if the ensuing rally can continue moving forward. While we agree there is a potential for an economic soft landing, cautious income investors may find that a covered call & growth strategy as a balanced approached to both potential upside and income can potentially mitigate levels of downside risk. Investors prioritizing income over total return may find that covered call strategies conducting a call writing strategy on 100% of a portfolio's assets may appear attractive in the current environment as declining volatility may fuel total returns.

Footnotes

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ABOUT

Glossary

S&P 500: S&P 500 Index tracks the performance of 500 leading U.S. stocks and captures approximately 80% coverage of available U.S. market capitalization. It is widely regarded as the best single gauge of large-cap U.S. equities.

Nasdaq 100: The Nasdaq-100 Index includes 100 of the largest domestic and international non-financial companies listed on The Nasdaq Stock Market based on market capitalization. The Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology. It does not contain securities of financial companies including investment companies.

VIX: The CBOE Volatility Index, commonly referred to as the VIX, reflects a market estimate of future volatility of the U.S. stock market, based on the weighted average of the implied volatilities of the S&P 500.

VXN: The Cboe NASDAQ-100 Volatility Index, commonly referred to as the VXN, reflects a market estimate of future volatility of the Nasdaq 100 Index, based on the weighted average of the implied volatilities.

RVX: The Cboe Russell 2000 Volatility Index, commonly referred to as RVX, reflects a market estimate of future volatility of the Russell 2000 Index, based on the weighted average of the implied volatilities.

ISM Manufacturing Index: Also known as the purchasing managers' index (PMI), is a monthly indicator of U.S. economic activity based on a survey of purchasing managers at more than 300 manufacturing firms. It indicates the level of demand for products by measuring the amount of ordering activity at the nation's factories and outlines index movement for manufacturing, new orders, production, employment, inventory, prices, and backlogs.

Downside Volatility: This is the standard deviation for only those points where returns were below the average return.

Standard Deviation: A statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time.

Strike Price: The fixed price at which an option holder can buy or sell the underlying asset. Also called 'exercise price'.

Correlation: Correlation indicates the strength of the linear relationship between two different variables. A correlation that is greater than zero indicates a positive relationship. A value that is less than zero signifies a negative relationship. A value of zero indicates no relationship between the two variables. Correlation is measured on a scale from -1 to 1.

Coefficient of Determination (R²): a number between 0 and 1 that measures how well a statistical model predicts an outcome and is used to analyze how differences in one variable can be explained by a difference in a second variable.

"At-The-Money": An options contract whose strike price is equal to that of the current market price of the underlying security.

12 Month Trailing Yield: A financial ratio that indicates how much is paid out in distributions every 12 months relative to the share price. Dividend yield is represented as a percentage and can be calculated by dividing the dollar value of distributions paid over a 12 month period by the dollar value of one share of stock.

Regression Analysis: a statistical method that shows the relationship between two or more variables

Line of Best Fit: used to express a relationship in a scatter plot of different data points. It is an output of a regression analysis and can be used as a prediction tool for indicators and variable movements.

Independent Variable: often called the predictor variable, it used a means to describe the movement patterns of another variable.

Dependent Variable: the variable that is being measured or tested in an experiment or regression analysis, utilizing one or more independent variables.





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