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Putting Put-Writing Into Perspective

When equities sputter, market volatility simmers and interest rates remain elevated, we believe underwriting market risk—by writing puts on the S&P 500 index—can be a capital-efficient strategy for investors seeking to generate a diversified source of income in an uncertain economic environment.

In this paper, we demystify the mechanics of fully collateralized put-writing and illustrate why we believe this approach offers a potentially valuable complement to traditional investment portfolios—especially in the current investment climate.

What Is Put-Writing?

For all its mystique, selling puts is a rather ordinary exercise. In fact, you effectively buy a put every time you pay an insurance premium—what's more, you likely *overpaid* for it.

Consider car insurance: You may purchase coverage to try to mitigate out-of-pocket costs for damages if you get into a fender bender; in options parlance, you are attempting to "put" those expenses back to the insurance company in exchange for your monthly premium. Insurers price their policies with the aim of collecting more in premiums than they expect to pay out in claims. (That's how they make money.) Policyholders tend to be okay with this arrangement to have access to funds with which to make repairs and get back on the road as quickly as possible.

This same concept applies in the equity market: In our view, investors looking to hedge their risk are often willing to overpay for risk mitigation, especially in an uncertain economic climate. Given this inherent demand, we believe long-term investors potentially can earn attractive rates of return by *underwriting* equity market risk.

Put simply: If investors are willing to pay premiums for risk mitigation, *why not sell it to them?*

Put-Writing In Practice

Broadly speaking, if you want long exposure to a risk asset, you can either own it (by buying stock) or lend against it (by buying a bond).

Yet we believe there is a third, potentially attractive way to gain long exposure while reducing price volatility: *Underwrite* someone else's equity risk.

Instead of spending money or loaning it, investors can sell ("write") put options on the S&P 500 index and use their capital as collateral (see figure 1).

FIGURE 1: PUT-WRITING CAN BE A THIRD WAY TO GAIN LONG EXPOSURE AND DIVERSIFIED INCOME

Loan (Bonds)

Lend Money
Collect Coupons

Potential Benefits:

- Income generation
- Capital preservation
- Risk efficiency

Underwrite (Options)

Money as Collateral
Collect Premiums

Potential Benefits:

- Premium income
- Reduced price volatility
- Risk efficiency
- Monetize volatility

Own (Stocks)

Spend Money
Earn Capital Appreciation

Potential Benefits:

- Capital appreciation
- Dividends
- Ownership

By using a put-writing strategy, investors have the potential to collect and compound two income streams: a) the premiums from selling puts, and b) the interest on collateral invested in short-term Treasuries.

To illustrate, consider two $100 portfolios: one owning the S&P 500 index, the other holding cash and selling $2 puts on it. As shown in figure 2, if the market rises 5%, that $5 of capital appreciation will exceed the $2 of premium income. (In this example, owning beats underwriting.) However, in flat or down markets, those put premiums provide extra return. (Underwriting wins.)

FIGURE 2: COLLECTING PUT PREMIUMS CAN PROVIDE INCOME/BUFFER LOSSES IN FLAT/DOWN MARKETS

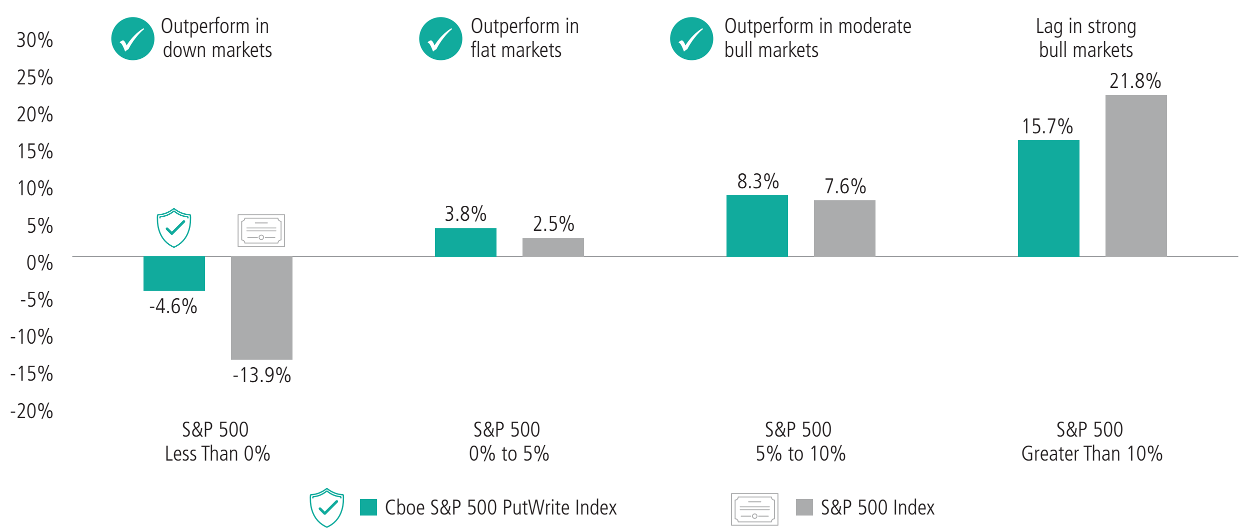
	Underwrite		Own	
	Starting value	**$100**	Starting value	**$100**
Up +5%	Premium collected	$2	Capital appreciation	$5
	Ending value	**$102**	Ending value	**$105**
Flat 0%	Premium collected	$2	Capital appreciation	$0
	Ending value	**$102**	Ending value	**$100**
Down +5%	Premium collected	$2		
	Option liability	-$5	Capital depreciation	$5
	Ending value	**$97**	Ending value	**$95**

UP MARKET	**Underperform:** Premiums collected are less than the market gain
FLAT MARKET	**Outperform:** Continue to collect premium despite flat market
DOWN MARKET	**Outperform:** Premium collected buffers the liability generated from down market

We believe this strategy gets even more attractive after layering in the second income stream: the returns on the collateral sitting in short-dated Treasuries.

Figure 3 provides a nearly four-decade comparison of the CBOE S&P 500 PutWrite index, which is designed to track a fully collateralized put-writing strategy, versus owning the S&P 500 index outright. According to data from 1986 to 2023, *underwriting equities beat owning them when the S&P 500 was moderately bullish, flat or down.*[1] Furthermore, during this time period put-writing strategies have often recovered from market downturns *faster* than the underlying index.[2]

FIGURE 3: COLLATERALIZED PUT-WRITING CAN BEAT OWNING EQUITIES IN MANY ENVIRONMENTS



Source: Bloomberg LP. Index data is gross of fees, and the selected time period reflects the indices' longest common history. The CBOE S&P 500 PutWrite ("PUT") Index incepted in June 2007, but CBOE makes available historical backtested data through June 30, 1986.

Note: Indices are unmanaged and not available for direct investment. SPX index put options receive 1256 treatment by the IRS, and hence get 60% long-term and 40% short-term capital gains treatment. **In up markets, put-writing typically will not participate in the full gain of the underlying index above the premium collected. Past performance is no guarantee of future results.**

Yet another benefit of collateralized put-writing, we believe, is that it demands little discretion from asset managers. Unlike selling traditional insurance, investors don't need a crystal ball to price put premiums. While an auto insurer may have to wait a month to tally its claims and recalibrate policyholders' premiums, the options market reprices risk on the fly and in real time—no savvy soothsaying required.

A brief note on put-writing's more popular sibling, called "buy-writing": This strategy involves owning the underlying equity index and selling long call options against it, thereby seeking to generate income while capping the capital appreciation of the index.

We believe collateralized put-writing can offer a more capital-efficient way to achieve the same—or better—results. Why? Buy-writing involves being long and short the equity index at the same time, whereas put-writing involves being long both the equity index and Treasuries. In our view, buy-writing generates *competing* exposures, while put-writing (using only options and collateral) offers *complementary* exposures.

[1] Source: Bloomberg, data from 1986 to 2023. Put-Writing Strategies as measured by the S&P 500 index. Note: We find that collateralized put-writing generally incurs smaller drawdowns, allowing for a higher base of capital from which to compound during a recovery; also, premiums on puts tend to be larger during market pullbacks, which can help this strategy recover faster than simply owning the broader index.

[2] Ibid.

Like buying insurance, we find that selling calls doesn't tend to make money over time—nor, in our view, is it an optimal way to generate income while managing equity risk. Both of these goals, we argue, can be accomplished more efficiently by blending put-writing with an investor's existing index exposure (to help preserve the upside of being long the index) and simply reducing that exposure as needed.

An Attractive Liquid Alternative

While we believe that fully collateralized put-writing can be a potentially attractive complement to traditional investment portfolios in many different market environments, we believe it may be an especially effective solution when:

- Market volatility is high (driving demand for puts and increasing premium income)
- Equity market returns are relatively range-bound (mitigating losses on put-writing)
- Interest rates are elevated (boosting current returns on the cash collateral)

Furthermore, we believe that collateralized put-writing can complement many alternative investments, from hedge funds to private equity; for example, alternative strategies often gain their competitive edge through manager discretion and financial leverage. By contrast, fully collateralized put-writing seeks to add value by taking an unlevered, systematic approach.

Conclusion

We believe options are a valuable, if often misunderstood investment tool.

While many investors have realized that buying puts can be a prohibitively expensive way to manage equity risk, we find that too few have taken the next logical step of *selling that very same effectively overpriced reassurance*—especially in a potentially higher rate, more volatile and range-bound equity market, when taking that step could matter most.

Disclosures

Glossary of Terms

The S&P 500 consists of 500 stocks chosen for market size, liquidity and industry group representation. It is a market value weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value. The "500" is one of the most widely used benchmarks of U.S. equity performance. As of September 16, 2005, S&P switched to a float-adjusted format, which weights only those shares that are available to investors, not all of a company's outstanding shares. The value of the index now reflects the value available in the public market.

The Cboe S&P 500 PutWrite Index (PUT) is designed to track the performance of an index option putwriting strategy that sells a sequence of one-month, at-the-money S&P 500 Index puts and invest cash at one- and three-month Treasury Bill rates. The number of puts sold varies from month to month, but is limited so that the amount held in Treasury Bills can finance the maximum possible loss from final settlement of the SPX puts, i.e., put options are fully collateralized.

This material is presently solely for educational and informational purposes. Nothing herein is intended to represent any strategy or product and nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security. Any analogy to insurance products used herein is solely for illustrative purposes. Options strategies are not insurance products and do not protect or guarantee against any losses. Options involve investment strategies and risks different from those associated with ordinary portfolio securities transactions. By writing put options, an investor assumes the risk of declines in the value of the underlying instrument and the risk that it must purchase the underlying instrument at an exercise price that may be higher than the market price of the instrument, including the possibility of a loss up to the entire strike price of each option it sells but without the corresponding opportunity to benefit from potential increases in the value of the underlying instrument. The investor will receive a premium from writing options, but the premium received may not be sufficient to offset any losses sustained from exercised put options.

The portfolio composition, strategy, risks and fees and expenses, and accordingly the performance, of alternative products such as actively-managed options strategies may differ significantly from other traditional asset class offerings, including equities and fixed income products and from passive strategies. In up markets, option put-writing strategies typically will not participate in the full gain of the underlying index above the premium collected.

The Cboe S&P 500 Index incepted in June 2007 with historical backtested data available since June 30, 1986; the Cboe MSCI EAFE PutWrite Index and Cboe MSCI Emerging Markets PutWrite Index were introduced in June 2019 with historical backtested data available since March 1, 2006; the Cboe S&P 500 2% OTM PutWrite Index incepted in March 2019 with historical backtested data available since June 30, 1986. No recommendation or advice is being given as to whether any investment or strategy is suitable for a particular investor. Information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. All information is current as of the date of this material and is subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Certain products and services may not be available in all jurisdictions or to all client types. The use of tools cannot guarantee performance. Diversification does not guarantee profit or protect against loss in declining markets. As with any investment, there is the possibility of profit as well as the risk of loss. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Unless otherwise indicated, returns shown reflect reinvestment of dividends and distributions. **Past performance is no guarantee of future results.**

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