In It for the Long Haul

Short-Term vs. Long-Term Hedged Equity Strategies

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Short-Term vs. Long-Term | Corrections vs. Bear Markets

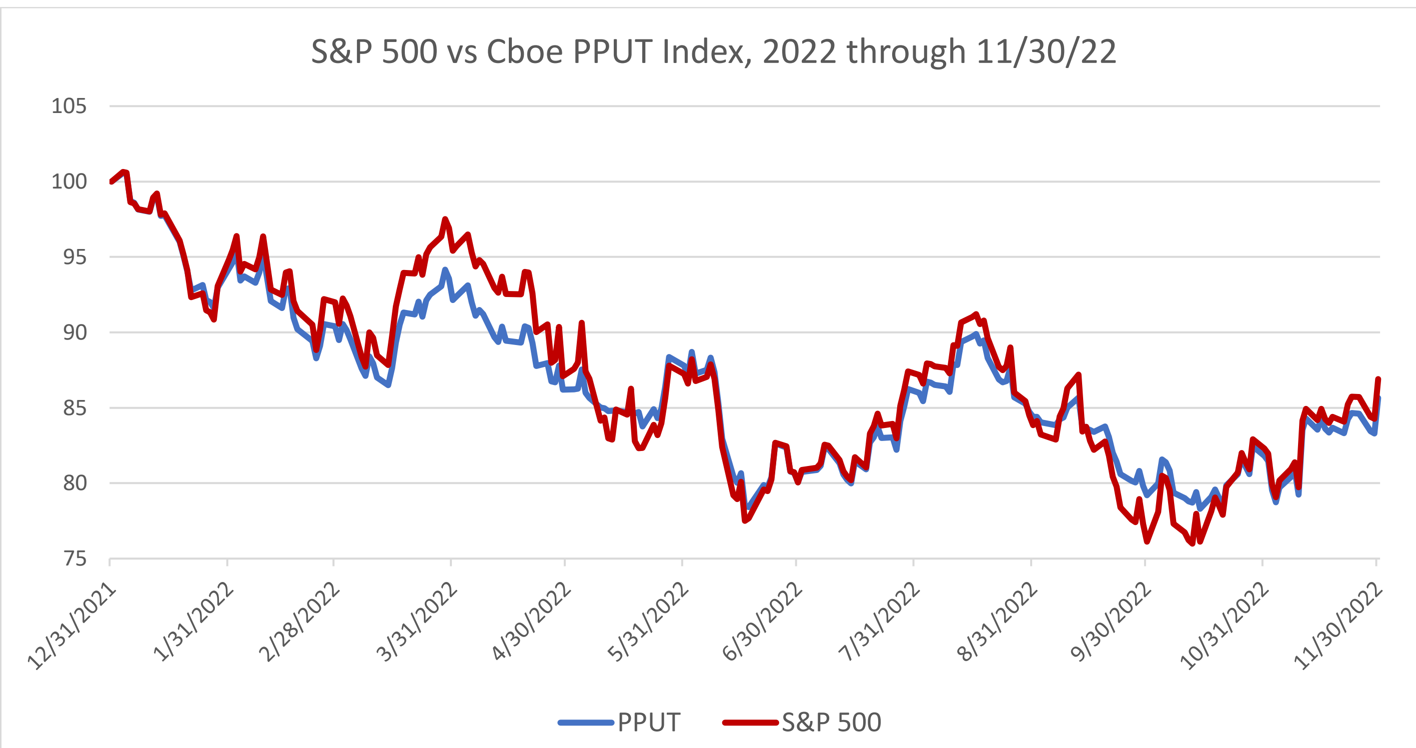
2022 illustrated the need for a capital preservation component in investors' portfolios. Rising interest rates created losses in fixed income that have matched losses in equities. With bonds failing to perform the capital preservation role, a hedged equity strategy would seem to fit the bill. However, not all hedged equity solutions are the same. In an extended bear market some are likely to do better than others.

When hedging with put options, one of the most important decisions is the options' expiration cycle. Every option eventually expires, but the time to expiration varies greatly. Options can expire in days, weeks, months, or even years. The effectiveness of a put option to mitigate market losses will depend greatly upon the length of a market drawdown.

Generally speaking, short-term put options perform better in short-term sell-offs. Long-term put options, like LEAPS, tend to be better suited for long-term bear markets. This paper compares and contrasts the two.

Downside of Shirt-Term Hedging Strategies

The pitfalls of short-term hedging solutions are illustrated by the Cboe S&P 500 5% Put Protection Index (ticker: PPUT). If one goes strictly by the name of the index, one might guess that "put protection" implies limited downside risk. One might even mistakenly interpret the "5%" to indicate some sort of buffer or maximum loss threshold. This would be an inaccurate interpretation and illustrates why it is important to understand a strategy's construction and its possible risk and return scenarios.



Source: Cboe, Morningstar Direct

The above graph shows the 2022 performance of the PPUT index against the S&P 500 index through November 30th. PPUT has offered little to no protection in 2022's bear market.

Why is this?

It is important to understand how the PPUT index is constructed and the shortcomings of short-term options in an extended bear market. Cboe's definition of PPUT is:

> *The Cboe S&P 500 5% Put Protection Index (PPUT) tracks the value of a hypothetical portfolio of securities (PPUT portfolio) designed to protect an investor from negative S&P 500 returns. The PPUT portfolio is composed of S&P 500® stocks and of a long position in a one-month 5% out-of-the-money put option on the S&P 500 (SPX put).*

Key to this definition is "a one-month 5% out-of-the-money put option." Hedging with one-month, 5% out-of-the-money options might appear to be a cost-effective strategy because:

1. Options with shorter-term expirations are cheaper than options with longer-term expirations
2. Out-of-the-money ("OTM") options are cheaper than at-the-money ("ATM") options

Both characteristics have drawbacks, brutally exposed in the kind of bear market seen in 2022.

Expiration Cycle: As stated previously, every option eventually expires. A hedging strategy that uses short-term options needs to constantly purchase new put options to replace those that have expired. During bear markets, the price of put options, especially short-term put options, tends to skyrocket as the demand for downside protection surges. In a long, grinding bear market, this can prove costly as a short-term hedging strategy is forced to repeatedly purchase new put options at elevated prices.

Moneyness: The "5% OTM" feature of the put options used in PPUT were designed to reduce the up-front hedging costs. However, the drawback to such an approach is that the investor is responsible for the first "tranche" of losses. For the first 5% drawdown, the investor has full market exposure. It is only if the S&P 500 losses exceed 5% - ***within the one-month expiration cycle***- that further losses are mitigated. If the option is ***not*** "in-the-money" at the time of expiration, it is worthless. At expiration the "reset" button is hit, and a new 5% "deductible" must be taken for the coming month.

These costs add up.

How Short-Term Hedging Performed in the Current Environment

The true costs of a short-term hedging strategy like PPUT are seen in a year like 2022. The bear market of 2022 has been a long, grinding one. Throughout the year the same cycle has repeated itself several times:

1. The market sells off, setting new low point for the year
2. The market stages a bear market rally as investors hope the worst is behind them
3. The rally peters out and the market sells off again, setting a new intra-year low

This market dynamic has been challenging for short-term hedging strategies like PPUT. In such an environment:

1. The OTM put options fail to offset much of the market losses. While markets have fallen, the one-month losses have mostly been in the 0% to 5% range where the strategy is fully exposed to the S&P 500.
2. The strategy is forced to buy new put options every month and the bear market drags on
3. The new put options are expensive, as demand for put options is high

This explains why the Cboe S&P 500 5% Put Protection has been down in lock-step with the S&P 500 in 2022.

Using Short-Term Hedged vs Long-Term Hedging

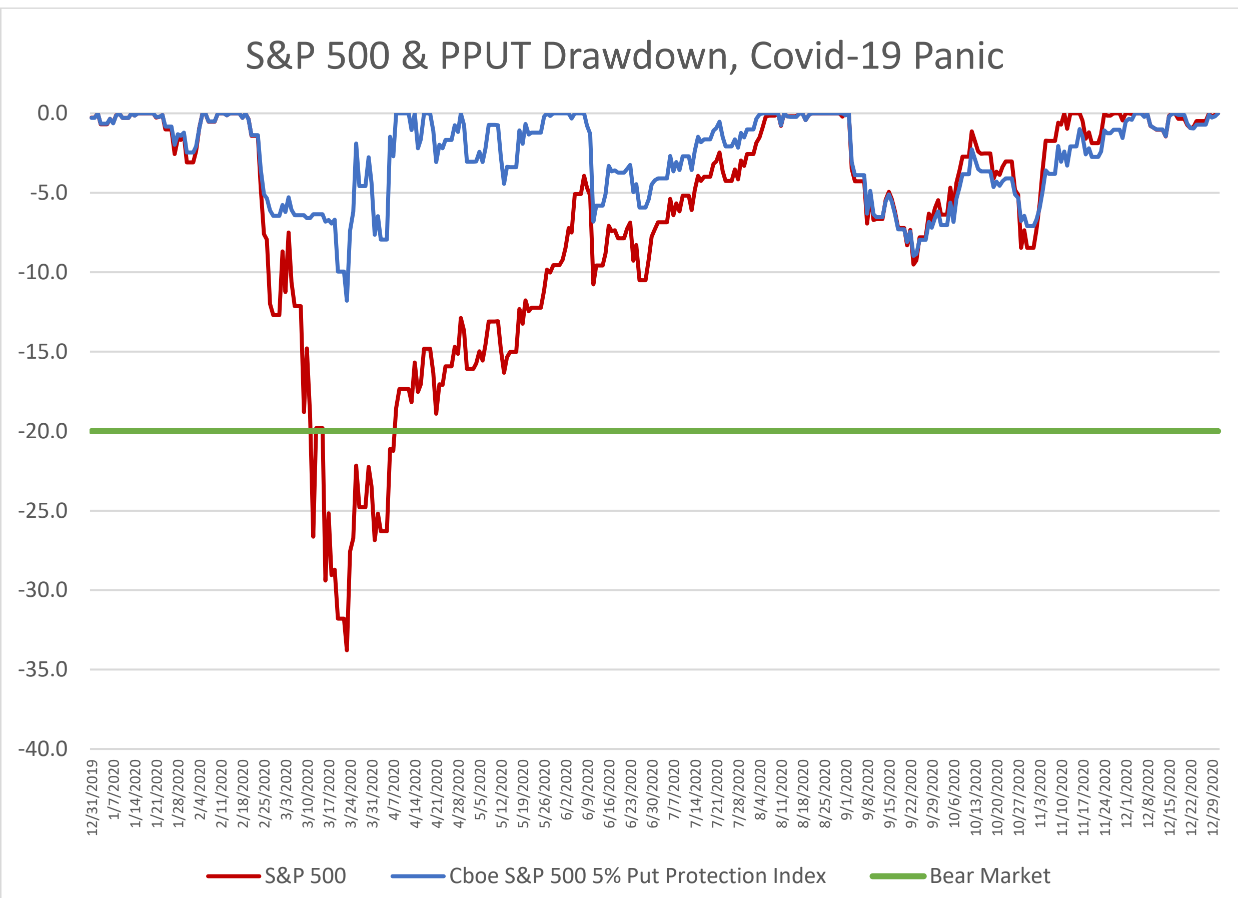
In contrast to the ***short-term*** options at or ***out-of-the-money***, one can choose to hedge using ***long-term options*** that are ***at-the-money***. Long-term Equity Anticipation Securities, or LEAPS, are options that have an expiration cycle of a year or longer. In a year like 2022, a LEAP put option purchased in December of 2021 would have remained valid throughout the multiple twists and turns the market has made throughout the year. The investor wouldn't have needed to be constantly replacing expiring put options in a high-volatility environment.

Moreover, an at-the-money LEAP would be in a better position to hedge against market drawdowns in 2022. The S&P 500 peaked on the very first trading day of the year but has been underwater since then. A strategy facing multiple 5% deductibles throughout the year would have higher hedging costs in an extended bear market, limiting the effectiveness of the downside risk mitigation strategy.

Efficacy of Long-Term Hedging

Granted, there are times when short-term hedging strategies will likely perform better. The kind of approach used by PPUT will tend to do better if the market sell-off is ***sharp*** and ***short***. If the market sell-off exceeds 5%, then the put option goes in the money. If the sell-off is short, then a strategy doesn't need to re-hedge at elevated prices or worry about multiple deductibles.

A "best case scenario" for the PPUT strategy was the massive sell-off during the Covid-19 panic in early 2020. The S&P 500 lost over a third of its value in just five weeks, then rallied sharply and ended the year up 18.4%. During this period the PPUT held up well, with a maximum drawdown of only -11.8%.

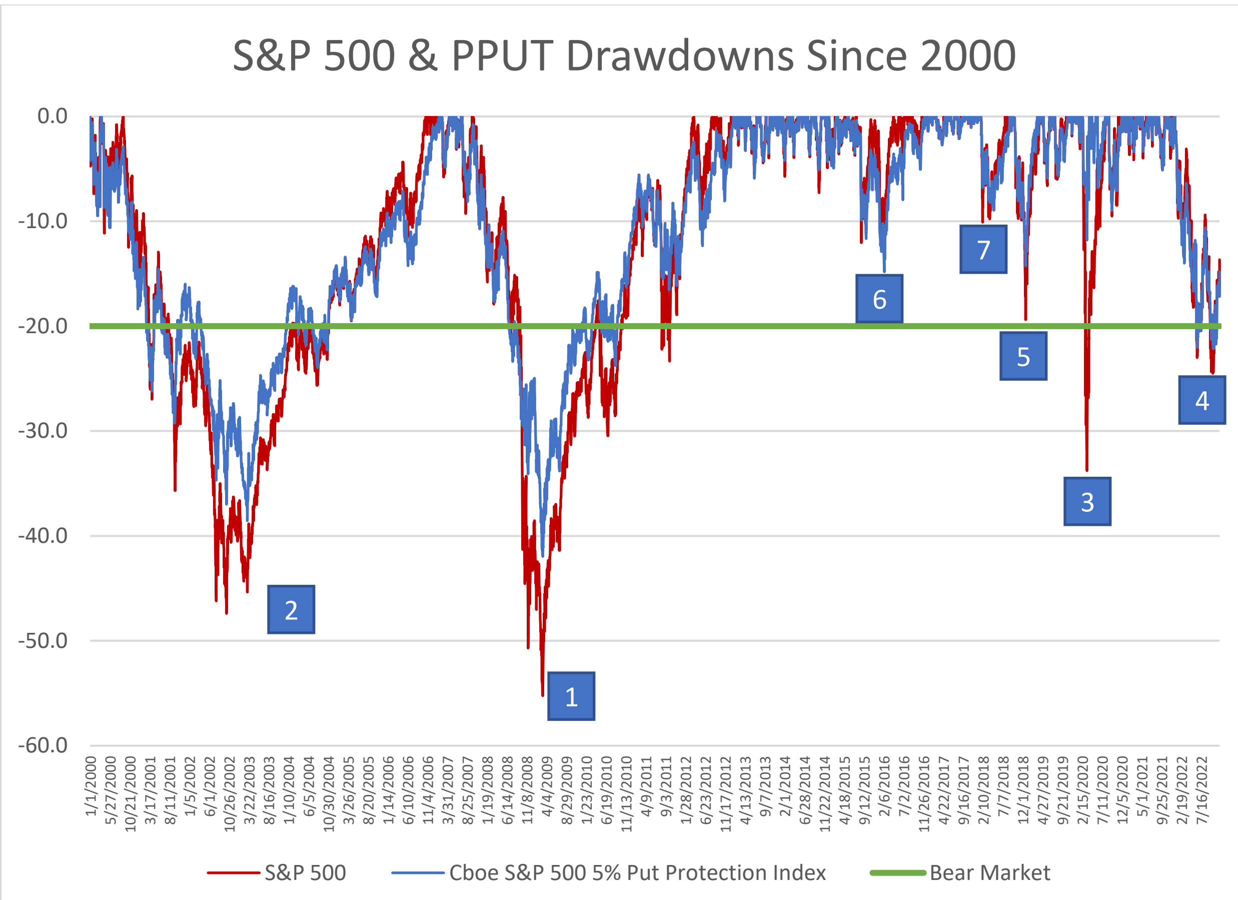


	S&P 500 MAX DD	DAYS	YEARS	PPUT MAX DD

				DURING S&P DD CYCLE
COVID-19	-33.79%	173	0.5	-11.79%

Source: Cboe, Morningstar Direct

However, in many other drawdown situations the short-term hedging strategy employed in PPUT has less-than-impressive results. If a sell-off lasts an extended period of time and has multiple legs down, the strategy will have to take on multiple "deductibles", severely limiting the effectiveness of the short-term, 5% OTM put options. The graph below illustrates the seven largest drawdowns since 2000. Only during the Covid-19 sell-off did the short-term hedging strategy offer significant outperformance.



	Event	*S&P 500 Max DD*	*Days*	*Years*	*PPUT Max DD During S&P DD Cycle*
1	GFC	-55.25%	1773	4.9	-41.51%
2	Dot-Com	-47.41%	2292	6.3	-36.73%
3	Covid-19	-33.79%	173	0.5	-11.79%
4	Now	-24.49%	330	0.9	-22.14%
5	Near-Miss Bear	-19.36%	204	0.6	-14.24%
6	Yuan Deval	-12.96%	273	0.7	-14.50%
7	Volmaggedon	-10.10%	178	0.5	-8.96%

Source: Cboe, Morningstar Direct

2022's bear market has resembled the bear markets of 2000-02 and 2007-09. While the S&P 500 has not lost nearly as much in 2022 as it did in those two, it does follow the pattern of having multiple legs down, bear market rallies, and the setting of new lows.

As of this writing it is unclear whether or not the S&P 500 has found a bottom. What can be said is that it is almost one year since the market peaked on January 3rd, 2022 and this bear market has already lasted longer than the entire peak-to-trough-to-full recovery cycles of every sell-off since the Global Financial Crisis of 2007-09.

A Time-Tested, Long-Term Hedging Approach

The active management of long-term LEAPS and at-the-money put options has been the cornerstone of Swan's Defined Risk Strategy ("DRS") for over 25 years. In addition to being designed with longer-term bear markets in mind, the DRS seeks to exploit market dislocations by actively re-hedging its portfolio. This "sell high, buy low" component to the strategy is another key distinction compared to passively managed hedging strategies.

A robust investment strategy should prepare for both bear markets and bull markets. The DRS is always invested in equity index ETFs, with no cap to upside market participation, and seeks to capitalize on market weakness via active management of long-term hedges. By seeking to combine loss mitigation with uncapped upside participation, the DRS is constructed to help investors navigate uncertainty in an attempt to provide an improved investment experience through full market cycles. This actively managed, long-term approach to hedged equity may deliver the most benefit to investors during large market swings, like we're seeing in the current environment.

As we roll into 2023, the forecasts for recession and more market pain are mounting. The bear market has already lasted longer than any other drawdown since the Global Financial Crisis. Moreover, traditional allocation strategies may continue to struggle. The market cycle is still unfolding, and there is still time to prepare.

About the Author:

Marc Odo, CFA®, FRM®, CAIA®, CIPM®, CFP®, Director of Investment Solutions, is responsible for helping clients and prospects gain a detailed understanding of Swan's Defined Risk Strategy, including how it fits into an overall investment strategy. Formerly Marc was the Director of Research for 11 years at Zephyr Associates.

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