

How to “hedge” your Hedge Fund Portfolio

***“The inability to predict outliers implies the inability to predict the course of history.”
“What you don’t know is far more relevant than what you do know”. Nassim Taleb***

For this issue of the Tapestry **SPOTLIGHT** we examine tail risk, methodologies employed to hedge it, and some of the benefits and pitfalls to consider.

What are Tail Risk events?

Tail risk events are defined as low probability, large deviation events that will negatively affect investments. The term long-tail risk is derived from the outlying points on a bell-shaped curve that forecasters use to plot the probability of losses or gains in a given market. The most probable outcomes lie at the center. The least probable are plotted at the “tails” of the curve.

Tail risk hedges are investments that produce material gains in extreme market environments that most traditional risk models would consider highly unlikely to occur. These extreme environments can be either positive (right tail) or negative (left tail) in nature. Negative tail risk events can be associated with a rise in systemic risk and a decline in liquidity. In this environment investors are forced to generate liquidity through the sale of their most liquid assets at distressed prices.¹

How are hedges constructed? Active overlay or dedicated allocation?

After the market losses during the 2008 credit crisis and events like the May 6 “flash crash”, hedge fund investors are looking to mitigate tail risk exposure in their portfolios using a variety of approaches and underlying instruments.

Understanding the current and historical risk exposures of each current and candidate manager and analyzing how the portfolio would behave in normal and crisis market conditions are prerequisites to constructing a hedging strategy. Portfolios can be constructed by allocating resources in a multi asset class portfolio to mitigate impact of tail events by identifying potential risks that could adversely impact an overall portfolio. Primary market risk factors that the portfolio can be exposed to are Equities (both domestic and international), Interest Rates, Credit, Commodities and Currencies.

Once the market risks are identified, there are two basic ways a hedge can be constructed. One is an actively managed overlay for the portfolio and the other is where tail risk hedging is an investment holding in the portfolio with its own unique return distribution and payoff profile that is structured to exhibit negative correlation during market crises.

An actively managed overlay strategy requires constant monitoring and review of both direct and indirect hedge instruments with respect to price, availability, liquidity, and payoff characteristics.

Depending on the markets that the portfolio has shown highest correlation to, a suitable liquid exchange traded instrument can be selected or OTC instruments like swaps can be used. The hedges should be low cost, liquid and must have significant convexity (strong upside potential) in times of market stress.

A traditional hedge for a portfolio is to use at-the-money or out-of-the money index options which can have a high cost of carry depending on the time horizon of the hedge and can be costly to roll over as the options expire during periods of high market volatility.

Common credit hedging instruments include CDS indices, CDS on individual issuers, CDS index tranches and sovereign CDS. CDS instruments have varying liquidity and transparency with CDX indices being the most liquid and least expensive. Index tranches and individual CDS contracts have more idiosyncratic risks and should be appropriately put together to provide an effective hedge. Sovereign CDS contracts can be used to hedge against the risks of a government default.

Interest rate hedging can be achieved with the use of interest rate swaps where in an environment of low rates the buyer is entitled to receive fixed rate payments in exchange for paying a floating rate. Flight to safety assets such as cash and Gold can also be used as part of the overlay. Variance swaps can be used as a hedge against rising volatility where the underlying can be any product and allows the buyer to benefit from price volatility by paying the difference between realized variance and the agreed strike variance.

Regardless of the tail risk hedge the investor must be assured of the position's liquidity and price integrity during periods of sharp rises in systemic risk. In this environment, certain instruments may prove difficult to liquidate at what are deemed fair value prices.

In an actively managed overlay, investors have to be cognizant of underlying asset prices, credit spreads, implied and realized volatility spikes in real time. However for many investors the resources and know how required to select, implement and monitor a hedge might not be available without professional assistance.

Active hedging may also not be appropriate depending on whether the firm has hedging/overlay/trading rights and laws restricting use of derivatives and use of leverage.

The second approach to tail risk hedging is to have a dedicated allocation in the portfolio itself to strategies that are negatively correlated to core managers. Custom hedge fund of funds portfolios can be designed to minimize drawdowns with allocations to Global Macro, Managed Futures, Long Volatility strategies and Short Biased funds that are designed to build embedded negative correlation in to the portfolio. For example, from Jan-1980 to Jun-2010, Barclay CTA index had a correlation of 0.01 to the S&P500. From Jan-1990 to Jun-2010, HFRI Short Bias index had a correlation of -0.7 to the S&P500 and the Barclay Currency Traders Index had a correlation of -0.02 to the S&P500 from Jan-1987 to Jun-2010.

Investors can also allocate to standalone tail risk hedge funds. Tail risk hedge funds have grown in number and recently seen substantial growth in AUM. They are designed to benefit from volatility and convexity during tail risk events in equity and credit markets.

Tail risk hedge funds generally use derivatives like liquid equity and credit indices along with interest rate derivatives and currency derivatives. To reduce the cost of carry for options, funds may use spread trades. Some might be targeted to broad risks like flight to quality, sovereign insolvency and financial system crises where as others might be more targeted to a slowdown in emerging markets or commodities.

These funds may have different fee structures from the traditional 2% management and 20% incentive fees and may not charge incentive fees or have a structure where higher incentive fees are charged based on a range of returns. During normal market conditions these funds might lose money through cost of carry, but payoffs are expected to be big at times of crisis ranging from mid teens and higher. Over a period of a few years there might be much higher return but in the short term, these funds may lose money.

What are some of the Risks to consider?

In deciding between methodologies it is relevant to note that both an actively managed overlay and a dedicated allocation to hedging each have a range of risks, some that are market related and some that are more operational.

Liquidity Risk: With the use of swaps and other derivatives, there might be periods when there is low market liquidity so managing liquidity should be a main focus. For tail risk funds that use OTC instruments, unencumbered cash levels are important.

Rising Costs: Another disadvantage is that along with demand for tail risk hedging, costs have also climbed with premiums for put options on the S&P500 rising to their highest ever in the month of June.

Counterparty Risk: If the tail risk hedge employs OTC instruments the ability of the counterparty to perform and stay in business is of utmost importance. Careful attention has to be paid to selecting counterparty, collateral requirements, termination, pricing and use of two way margining in the ISDA agreements.

Regulatory Risk: With OTC instruments under close scrutiny by regulators, investors might be affected by any new regulations. Governments see CDS transactions with no underlying credit as purely speculative transactions involving bets and might ban their usage. Regulations will also affect OTC derivatives as regulators around the world look to regulate derivatives dealers, to promote transparency and to bring all standardized derivatives to clearing houses.

Complexity: Some of the OTC instruments may be complex to analyze with non-linear payout structures that get affected by volatility changes and underlying asset price moves that are difficult to model.

Other Risks: One disadvantage of focusing on a tail event which is a low probability event is that investors might ignore hedging against a period of prolonged low growth that might cause other issues.

A successful tail risk strategy has to be contrarian in that it has to be based on events that the market perceives to be less likely to occur. As most of the hedges are constructed to deal with crises that we have already experienced, they might not be appropriate for a future event.

Conclusion

For any type of hedging program that investors utilize one has to consider the trade off of gains in “extreme” times with losses in “normal” times. In other words, while it may provide economic benefits during periods of decline in financial markets, it may also result in losses for their portfolio. Investors should continue to manage their hedges dynamically by rebalancing or altering their program based on any new risks identified. Depending on the investor’s need, sometimes time and proper asset allocation might be sufficient to manage tail risk.

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