Assessing New Tools to Protect Against Tail-Risk Events

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Protecting against sudden, severe market drops is as crucial as it is difficult. A plethora of approaches to this problem have been brought to market in last few years, and to evaluate them my firm, Brinton Eaton Wealth Advisors, developed a set of rigorous criteria. These criteria led us to a solution that works for us and for our clients, and I'd like to share our approach with you.

In the wake of the market devastation that took place in the fourth quarter of 2008 and the first quarter of 2009, we, like many firms, increased our attention to tail-risk hedging. While carefully designed asset allocation and opportunistic rebalancing repeatedly got our clients through other bear markets, big and small, the contagion that roiled the markets during those infamous six months – when virtually every asset class suffered simultaneously – was quite another matter. The crisis rendered those time-tested approaches temporarily impotent.

Clearly, we needed something else to supplement traditional portfolio risk management.

One approach is tactical maneuvering (sometimes referred to as "dynamic asset allocation"). This article is not about that; it's about another class of solutions – tail-risk hedging – that come to the rescue automatically and do not require active intervention.

After the financial crisis, many among the multitude of solutions and quasi-solutions that came to market played on investor fears. Against this barrage, we made sure we had very stringent criteria to clearly articulate what we wanted – and did not want – in a solution. Most failed one or more of our requirements, but we did find some very promising approaches. In this article, I'll explain how we applied our criteria to critically evaluate a number of proposed solutions.

The ideal tail-risk hedge should meet three stringent criteria

At Brinton Eaton, we felt that being prepared for the next contagion was an important part of our fiduciary duty to our clients. So, in search of the best possible protection, we established three criteria that any tail-risk hedge would have to satisfy:

- **Sudden appreciation in severe market downturns; the protection kicks in automatically and there is no give back when markets recover.** We want the solution to *suddenly* appreciate when markets suffer *severe* downturns – *suddenly*, because when disaster strikes, you usually don't have the luxury of time to plan and react. By *severe* here we mean a swift, substantial and unexpected decline in market value across most major asset classes, such as what happened in late 2008. You don't need to explicitly protect against "normal" bear markets – as I said earlier, allocating your portfolio among non-correlated assets and rebalancing should already provide that protection. What we're looking for is protection against those rare events when those correlations "go to one," i.e., when contagion occurs and diversification fails. We want that appreciation to occur to a degree sufficient to meaningfully offset the decline.

Importantly, we want no "give-back" during market recovery! Once the appreciation occurs, we want to hold on to it forever, not give it back when markets recover, as they always have.

- **Very low costs, including indirect costs.** We want the solution to cost as little as possible, since, after all, the situation we're trying to protect against is extremely rare. The idea is to minimize the diversion of funds from productive uses inside clients' portfolios. In addition to direct costs, we want to minimize indirect costs as well. That is, *we do not want to sacrifice upside portfolio potential*. The last thing we want to do to our clients is to deprive them of any opportunity to have the market give back what it took from them. The cost of the solution should reflect the fact that it is essentially insurance that we hope and expect not to use. The ideal here is "costless catastrophe insurance."

- **Minimal disruption to the client portfolio.** We don't want our pursuit of protection against extremely rare events to disrupt what works in the overwhelming majority of market environments we are likely to see. Carefully designed asset allocation and rebalancing systems – systems that have been proven to work in "normal" markets, both good and bad – should not be dismantled. We want to be careful not to undo the careful work we have done constructing and optimizing our clients' portfolios.

Putting proposed solutions to the test

Traditional protective devices, such as put options, do not meet our criteria. They are expensive and lose value once the markets recover. Over a full cycle of market decline and recovery, the portfolio is no better off with a put, but you've spent good money on it. The same goes for collars, which are less expensive than puts but sacrifice upside potential – the very last thing you want to do after a significant market decline.

So-called long volatility plays, such as investing in VIX futures, exploit the fact that sudden market declines tend to be accompanied by spikes in volatility. These, however, can be very expensive to hold for any length of time (they are in a perpetual state of "contango," and thus constantly bleed market value) and have a benefit that is transitory, like puts.

Another indirect approach is to invest in cross-asset-class correlation, which also tends to increase when markets get stressed, and which clearly would respond to contagion. Here again, though, the products are quite expensive, and the value doesn't stick.

Other approaches, including some of the "black swan" funds currently on the market, assume calamity, and may perform well in the event of a catastrophic decline, but do not fare so well when the markets are fluctuating normally.

Volatility swaps can be an effective tail-risk hedge

After much research and collaboration with various investment banks and other industry sources, we have found that certain volatility "swaps" – as opposed to the outright purchase of volatility – can meet all three of our criteria for an effective tail-risk hedge.

A specific swap we like is linked to the spread between the daily and weekly volatility of the S&P 500, exploiting the fact that the S&P 500 Stock Index's movement from week-to-week is typically less than its daily movement would imply. Going long daily volatility and short weekly volatility thus results in a very modest return in "normal" markets (good and bad), and the potential for outsize returns in markets under extreme stress, when the same effect simply gets magnified.

Deutsche Bank was the first to market this concept when it rolled out its EMERALD Index in the fall of 2009, and Barclay's followed up in the summer of 2010 with ASTRO, a very similar approach.

Although EMERALD and ASTRO are two of the most effective solutions we have seen, they are not perfect. Volatility swap protection is, after all, indirect – there is no guarantee that the swaps will perform as they did (on a modeled basis) in late 2008. And EMERALD and ASTRO are generally made available to clients through a structured note, subjecting clients to the credit risk of the bank. Potential customers of either product ought to carefully evaluate the pros and cons of each offering.

Clients recognize the need for additional portfolio protection

In the fall of 2010, we conducted an online survey of clients and non-clients on the subject of portfolio protection. What we learned validates what we have been working toward in finding the right safety net.

Respondents had a strong understanding of portfolio protection and placed a high value on it. In some cases, they were willing to overpay for it, although, if our three criteria are diligently applied, this will not be necessary. Importantly, the survey also confirmed that, despite recent market turmoil, investors have not lost faith in portfolio diversification and remain focused on investing for the long term. Our investors acknowledged, though, that an additional safety net is needed in times of extreme market duress.

The search must continue

The solutions I outline here are not the last word. Our research continues into still-better approaches. In the meantime, it's a seller's market right now for tail-risk solutions, so buyer beware. I hope our three criteria help you separate the wheat from the chaff.

In today's complex world, it is impossible to predict when or why the next market Armageddon will occur. But it shouldn't matter. The ideal safety net should kick in automatically, regardless of cause, like a reserve parachute – never weighing you down and there when you need it, but, ultimately, rarely used.

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