ADVISOR PERSPECTIVES

Stable Risk Portfolios: A Timely Alternative to Static Asset Allocations?

By Susan B. Weiner, CFA
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Risk matters. October's wild stock market swings have reminded investors that volatility can be painful. They simply can't stomach as much risk as they thought they could.

It's no surprise that Professor André F. Perold's October 21 talk on "Risk Stabilization and Asset Allocation" attracted a bigger than usual crowd to the monthly meeting of the Boston chapter of the Quantitative Work Alliance for Applied Finance, Education, and Wisdom, affectionately known as QWAFAFEW.

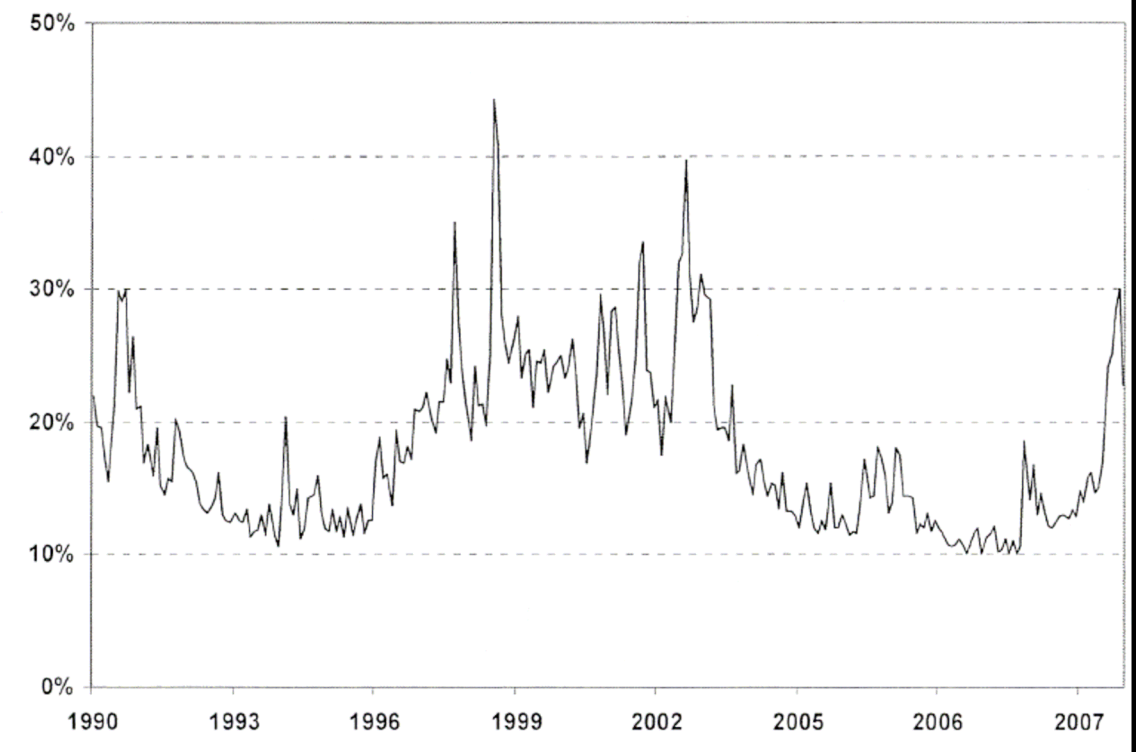
Perold's premise: A stable-risk portfolio that keeps risk constant is a viable alternative to investors' classic static policy portfolio, such as 60% stocks and 40% bonds, and it may offer superior risk-adjusted returns.

Perold brings both academic and applied experience to his topic. In addition to serving as the George Gund Professor of Finance and Banking at Harvard Business School, he also chairs the investment committee of HighVista Strategies, an investment firm with $1.7 billion under management that offers an endowment-style strategy to endowments, foundations, and qualified families. He also serves on the board of The Vanguard Group.

Asset Allocation Should Reflect Changing Levels of Risk

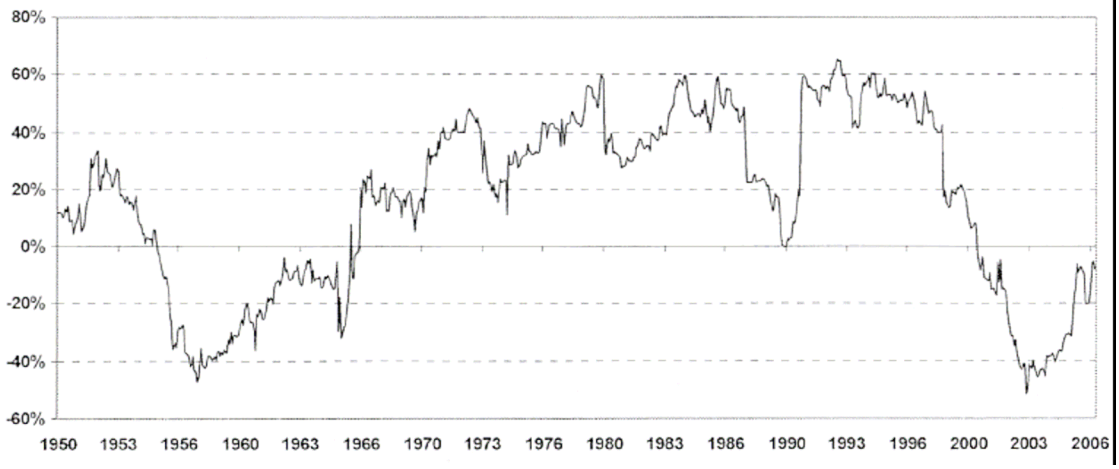
Static asset allocations make sense if expected returns, risks, and correlations for asset classes are constant. But these all change over time. Time-varying risk for portfolios can be seen in measures of stock market volatility and shifts in stock-bond correlations that run the gamut from positive to negative. For example, the market goes through periods of extended calm as it did between 2003 and May 2007 (see the data for the VIX options index below), but there are also crazy times, like October 2008. Last month included one day when the S&P 500 moved up and down by more than 5% six times, and the market at one point moved 12% within 30 minutes.

Figure 3 Implied volatility of S&P 500 options (VIX)



As for stock-bond correlations, they've been negative during periods of stable inflation, when real interest rates drive bond prices, and positive during periods of inflation uncertainty, like we are facing today.

Figure 2 Correlation between U.S. stocks and bonds: 1950-2006
(3-year trailing correlation of monthly returns)



In his talk, Perold questioned whether, in an environment of shifting risk, a traditional static asset allocation can fulfill its goal "to make efficient tradeoffs between broad asset class risk and expected returns." After all, he said, "When asset class risks and correlations are time-varying, the risk of a static allocation is also time-varying." Investors can feel certain that a 60-40 portfolio is safer than a 70-30 portfolio and riskier than a 50-50 portfolio, but—because risk levels fluctuate—they don't know the portfolio's actual level of risk.

Perold's alternative: Adopt a stable-risk policy in which asset allocation would change as risks change to keep the portfolio at a constant level of overall risk. "For example, one would lower the exposure to global equities when equity market risk is high, and raise the exposure to global equities when equity market risk is low," he said.

The Appeal of Stable Risk Portfolios

Stable-risk portfolios are attractive in three main ways. The risk benefit is obvious. But portfolio returns may also benefit. As Perold writes in his preliminary paper, also entitled "Risk Stabilization and Asset Allocation":

1. Investors have a much better sense in advance of the risk they are taking, and thus should be able to select and experience the risk level that is appropriate given their risk tolerance.

2. Since risk is more controlled, it is easier to determine the risk-adjusted performance of a portfolio with stable risk. When a portfolio has random risk, the ex ante risk of that portfolio is usually unknown, forcing investors to rely on particularly noisy ex post measures to calculate risk-adjusted performance.

3. Stable-risk portfolios may have higher Sharpe ratios than static asset allocations.

Of course, in order to create stable-risk portfolios, it is necessary to measure and forecast risk.

It is possible to forecast volatility, at least in the near term, said Perold, if you use yesterday as a prediction for today. “You don’t have to be a genius to forecast near-term volatility,” he said. It’s like guessing the weather short term, he added. If it’s sunny in the morning, there’s a high likelihood that the afternoon will be sunny too. Volatility increases since May 2007 illustrate that “persistence makes near-term volatility and correlation forecastable.”

Perold’s QWAFAFEW presentation and his corresponding paper focus on how adopting a stable risk policy actually improves a portfolio’s risk-adjusted return, as measured by its Sharpe ratio. He tested the idea that “if expected returns are not strongly related to risk, then the reward-to-risk ratio will be more attractive when risk is low.” Despite theory to the contrary, said Perold, “there is only weak empirical support for the proposition that, in the broad equity market, expected return and variance are related.”

Perold analyzed the case of a reference portfolio consisting of a riskless asset and a diversified portfolio of risky assets. He found there is no relationship between volatility and expected returns. There is, in effect, a benefit that can be earned by reducing exposure to risky assets during volatile times because that is when their Sharpe ratio is lower. “A stable-risk policy will take advantage of this by decreasing exposures [to risky assets] when risk is forecast to be high, and increasing exposures when risk is forecast to be low.” There is no improvement in the Sharpe ratio if expected returns are much higher in volatile than in calm economic environments.

Implications for Advisors

Perold discussed stable risk portfolios with an eye toward institutional investors. But, during the question-and-answer session he said, “This is attractive for high net worth investors because people like to see the same monthly fluctuations [instead of big variations over time].” In order to maintain stable risk, investors will need to ratchet up or down overall market exposure, depending on estimates of

risk. Transaction costs could be high, depending on your choice of investment vehicle, he said, “but if you’re trading index futures, then it is not very costly.”

Perold noted a big caveat for advisors considering this strategy. If investors’ reactions to a period of anticipated low volatility are too correlated, they will actually increase overall volatility. There must be investors willing to buy when stable risk investors want to sell and vice versa. The 1987 failure of portfolio insurance fail was linked to this kind of a problem.

Advisors seeking to implement stable risk portfolios will need to wait until commercial solutions become available. Right now, conventional wisdom, like the 60/40 portfolio, needs reexamination.

Perold’s main point is that we live in a world in which risk changes dynamically, and that clients would be better served if asset allocation frameworks acknowledged and factored in changing risks and correlations.

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