Asset Allocation Ain't Dead, but It's No Spring Chicken Either

By Rex P. Macey, CIMA®, CFA®

Asset allocation is a quantitative exercise that, given numerical assumptions about return, risk, and correlation, produces a set of "efficient" portfolios. Any other portfolios are inferior. It's a black and white world. The reality is that we can't be confident about the assumptions because they vary through time.

In the wake of 2008, the question arose, "Is asset allocation dead?" The question behind the question is, "Is diversification dead?" Asset allocation was born in 1952 when Harry Markowitz published his theory of portfolio allocation under uncertainty. So it's almost 60 years old. It was married at an early age (in the 1960s) to the capital asset pricing model (CAPM). These two often are viewed as a couple, but asset allocation can live apart from CAPM. I will show the difficulty in developing assumptions, particularly in using historical averages. My point is that asset allocation isn't dead; it's just not as attractive as it was when it was young.

Rolling 10-year excess returns have varied significantly and have been negative at times. Equities sometimes underperform, even over periods that many investors would consider long-term. This should not be surprising. If equities always outperformed over long periods of time, who would buy long-term bonds? Equities are risky and risk entails the possibility of inferior returns.

Figures 1 and 2 illustrate the difficulty of producing adequate return forecasts using historical averages. Figure 1 shows that the 10-year equity risk premium as defined by the return of the S&P over Treasury bills has ranged from less than –5 percent per annum to almost 20 percent per annum. Often I hear advisors imply that investors should have a horizon of at least five years to commit to equities. While stocks may be expected to win over the long run, even 10-year periods occasionally have failed to provide a positive equity risk premium.

FIGURE 1: 10-YEAR ROLLING EQUITY RISK PREMIUM (EQUITY–TREASURY BILLS)

FIGURE 2: THE VARYING EQUITY RISK PREMIUM

FIGURE 3: ROLLING 5- AND 10-YEAR VOLATILITY OF S&P 500

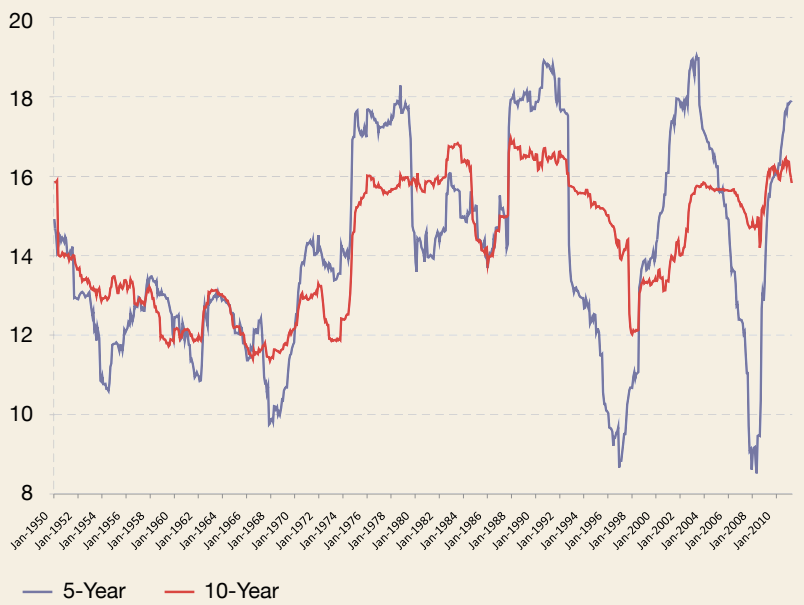


FIGURE 4: RUSSELL 1000-EAFE ROLLING 5-YEAR CORRELATION

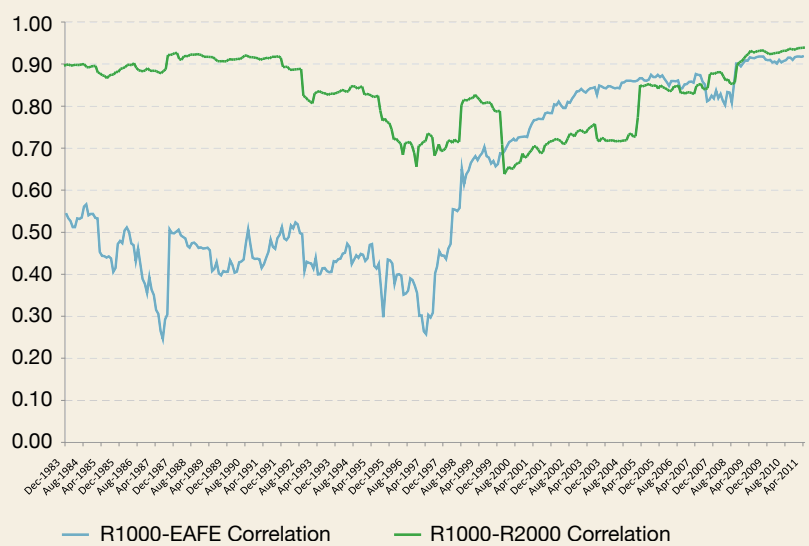


Figure 2 provides a different perspective. Imagine you are estimating the equity risk premium using historical data that start at the end of 1925. In 1935, you'd have 10 years of data. As each year passes you'd collect an additional year. Figure 2 shows how the estimate would have changed as you added to the data set. The data appear to become more stable as each additional year of data affects the long-term average less and less. Given the changes through time, it is difficult to say that now we have enough data to assume a "normal" equity risk premium. This is especially true given that all the points are affected by the starting valuation, which is likely to be different from today's valuation.

Figures 1 and 2 demonstrate that it's difficult to estimate the equity risk premium within even a few hundred basis points over long periods.

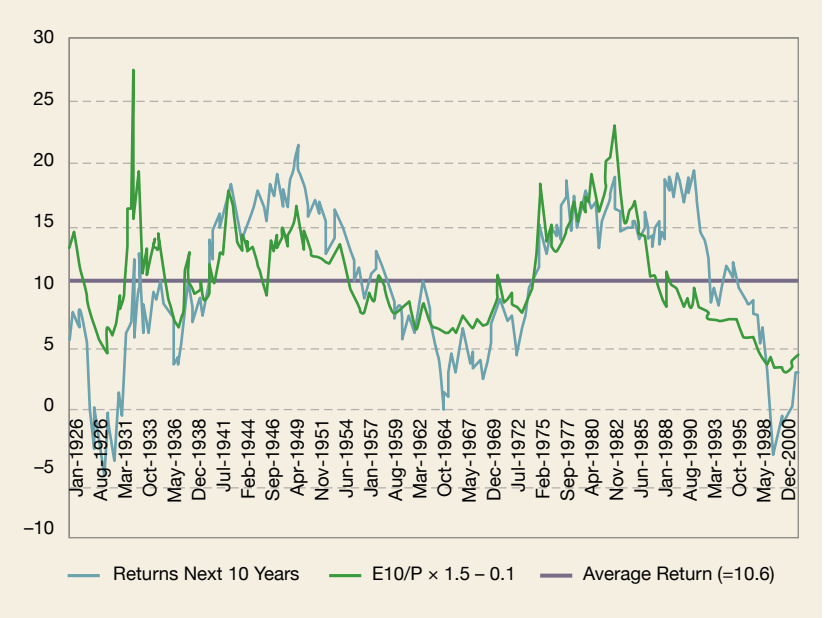
Figure 3 shows that volatility estimates are not much easier. Even 10-year average volatilities vary. Ten-year volatilities since 1950 have ranged from below 12 to above 16. Risk too is hard to predict, but at least it's always positive.

Figure 4 is my favorite chart of the series. It demonstrates that historical relationships can change. The five-year correlation between domestic large stocks (Russell 1000) and the MSCI EAFE index varied but never exceeded 0.6 from the start of the dataset until the late 1990s. Consultants used this data to argue for international diversification. Who would have expected based on historical data that the correlation would rise to the 0.9 level matching the correlation of large U.S. stocks with small U.S. stocks? I suspect those relying on international diversification were quite disappointed.

Clearly, mean-variance optimization—the heart of asset allocation—is difficult to apply in practice given that past performance is a poor predictor. It is safe but uninteresting to say that the future will be uncertain. Risk, return, and correlation forecasts based on historical averages are error-laden. So what are we to do? Some help may come from valuations, at least with respect to forecasting future returns.

The important thing to note about figure 5 is that the line representing the valuation of the S&P (E10/P * 1.5 – 0.1) is closer to the S&P Return Next 10 Years line than the flat Average Return line. The valuation is measured by the adjusted earnings-to-price (E/P) yield, which is the inverse of the price-to-earnings (P/E) ratio. This earnings yield is the real earnings of the preceding 10 years, divided by the index level, the inverse of Robert

FIGURE 5: VALUATION EXPLAINS FUTURE RETURNS BETTER THAN AN AVERAGE



Shiller's cyclically adjusted P/E ratio. This E10/P was multiplied by 1.5 and then reduced by 0.1 per a regression analysis.

Asset allocation theory tells us that correlations below 1.0 offer diversification benefits. This is indisputable. The dispute is about the benefits in the real world. Mean-variance optimization may be quantitative but it is far from precise. At best it is a guide, to be used as such along with knowledge, i.e., in a crisis, correlations move toward 1.0.

One should not expect a free lunch. If one could create a riskless portfolio combining risky assets, then one should expect a risk-free rate of return. Diversifying among risky assets may reduce risk some, but in a year such as 2008 one should expect assets with systemic (beta) risk to fall when the system is stressed. It makes sense that corporate bonds are going to be more correlated with equities in a crisis as the debt of distressed companies behaves more like equities. Diversification across stocks helps, but it never should have been expected to eliminate risk or create bond-like returns.

In the real estate market, one buys property insurance to reduce risk. In the stock market, one pays a premium for a put option to limit equity risk. True safety is valuable and those who sell it command a price. Treasuries have a low yield in this environment because of their perceived safety. Do not expect to create safety without sacrifice.

Is asset allocation dead? Do you think diversification works? My simple answer to that question is the answer to this question: "Would you rather put all of your eggs in one basket?" Just because you have two or more baskets doesn't mean you can't drop them all.

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(April). http://www.imf.org/external/pubs/ft/fm/2011/01/pdf/fm1101.pdf.

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