Risk Management in Asset Allocation

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The Building Blocks of Return

Despite the large number of asset classes available to investors today, capital markets only offer a handful of independent risk premia. These risk premia are the buildings blocks of an asset's expected return.

For example, the returns for long-term government bonds can be decomposed into the real risk-free rate, expected inflation, and a liquidity premium. Corporate bonds build upon this structure to include a default risk premium while high yield bonds include the default risk premium plus an additional high yield risk premium. Return is sourced from the same set of building blocks with differences in expected return stemming solely from the blocks used.

A More Prudent Approach to Asset Allocation

Given that asset class returns are driven by a handful of independent risk premia, portfolio diversification can be enhanced with a thorough understanding of what risks are present in a particular asset allocation strategy. Instead of simply managing a portfolio to its return objectives, investors should carefully consider how much of each type of risk they are willing to assume, and allocate accordingly. Such an approach requires careful consideration of:

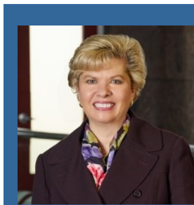
- The expected return, expected volatility, and expected illiquidity of each asset class
- The correlations of the various asset classes
- The expected behavior of investments given current and future economic conditions and asset class valuations

The goal of such an approach is to maximize return while minimizing volatility. Stress testing the portfolio is an important step using this approach, and should be performed using different economic scenarios. The stress testing can offer valuable insight into how volatility could potentially impact the portfolio, particularly on the downside.

Why Does Volatility Matter?

Downside protection is critical to long-term performance due to the effect of volatility on compounded returns. To illustrate this point, consider a portfolio with a 50% return in years one and two followed by a 50% decline in year 3. The compound annual return of the portfolio is just 4%. It would take over seven years to recover the portfolio's high assuming a 10% annual rate of return.

Diversifying the risk premia in a portfolio is intended to reduce such variability in returns. As a result, the portfolio's downside exposure can be reduced and the potential for strong long-term performance is improved. Since volatility has historically been more stable than returns, it is more predictable and easier to manage. Having established a risk allocation, the historical volatility for each asset class can be used to determine how to allocate the portfolio's risk budget across the various risk premia.



Valerie J. Sill, CFA, CAIA

Ms. Sill is President and CEO of DuPont Capital Management and serves as its Chief Investment Officer. She is responsible for overseeing the investment of more than $26 billion in assets held by DuPont Company plans and external clients. DuPont Capital manages assets across nine different asset classes using a value-based investment approach that combines valuation and risk control disciplines designed to produce risk-efficient excess returns that satisfy its clients' investment objectives.

Ms. Sill is a member of the Board of Trustees of Longwood Gardens and chairs its Investment Committee. She chairs the Investment Committee of the Delaware Community Foundation and is a member of its Board of Directors. Ms. Sill is a Trustee of the Christiana Care Health System and a member of its Investment Committee. Ms. Sill served a three-year term on the Federal Reserve Bank of Philadelphia's Economic Advisory Council.

Ms. Sill was awarded a Bachelor of Arts degree, magna cum laude, in Economics and Philosophy from Wellesley College. She was elected to Phi Beta Kappa and was a Durant Scholar.

Portfolio diversification can be enhanced by thoroughly understanding what risks are present in an asset allocation strategy.

Defining Roles

In practice, each asset class plays a specific role within the portfolio, whether serving as a growth engine, diversifier, or macroeconomic hedge. For example, public equities are drivers of growth. It is difficult to produce strong returns without some level of public equity exposure. However, this asset class is also one of the most volatile. In a simple portfolio composed of 60% equity and 40% bonds, more than 90% of the volatility could be attributed to equities exposure.

Fixed income and alternative assets can be an attractive offset to the volatility produced by an equity allocation. High quality bonds are an effective macroeconomic hedge, providing downside protection in periods of elevated volatility. They are a good buffer against volatility during a deflationary period since investors tend to rotate into the asset class during a flight to quality event. Private equity investments, on the other hand, are attractive due to their dual role as a growth engine and diversifier, providing exposure to economic sources of return that have little correlation to both public equity and fixed income investments. Each asset class within a portfolio plays an important role, whether it is a growth engine, diversifier, or macroeconomic hedge.

Win By Not Losing

The key to long-term performance is to win by not losing. A broad diversification can reduce volatility while improving risk-adjusted returns. However, a diversification strategy is not without risk and the potential for downside exposure still exists. Consequently, a risk allocation should be constructed by considering the degree of exposure to each risk premia that is appropriate for the portfolio. The allocation should then be satisfied with an understanding of the underlying risk of each investment, how the investment's volatility could potentially impact the portfolio, and how to mitigate these risks.

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