

Improving Portfolio Performance with Asset Allocation

Introduction

Asset allocation refers to how a portfolio is divided up among the various types of investments (also known as asset classes) that are available to invest in. Examples of asset classes include U.S. stocks, bonds, foreign investments, real estate, commodities, and so-called alternative assets such as precious metals. Careful selection of the asset classes that comprise a portfolio, as well as the individual investments within each asset class, is important to the ultimate performance of the portfolio. While there is some debate over the exact percentage of portfolio performance that should be attributed to asset allocation, there is general agreement among investment experts that asset allocation is an important determinant of portfolio performance.

Because asset allocation plays an important role in determining portfolio results, emphasis should be placed on allocating the appropriate target percentage for each asset class. Only after determining the asset classes you will invest in and the proper proportions of each for your portfolio should you begin to analyze which individual investments (e.g., mutual funds, stocks, bonds) you will invest in. And remember that your asset allocation will likely need to adjust over time as your circumstances change.

The relationship between risk and return

Risk is inversely related to return. The higher the risk, the greater the potential for a higher return and the greater potential for loss. Investors expect to be rewarded with higher returns in exchange for accepting greater risk and accept lower returns in exchange for lower risk. A major goal of designing and managing an investment portfolio is to maximize total return while keeping overall risk to an acceptable level.

Measuring risk

Risk can be measured in a number of ways. One measure of risk for an investment, known as standard deviation, represents the extent to which an investment's price tends to vary from its mean return over time--in other words, how much its price tends to deviate, both up and down, from a hypothetical midpoint. This is a mathematical way of expressing price volatility. The greater an asset's standard deviation, the higher its highs and the lower its lows will be from its mean return. Using standard deviation to gauge the potential volatility of a security can help an investor determine the likelihood that a security will produce a return similar to its historical averages. The higher the standard deviation, the higher the possibility that a security's return at any given time may differ from that average.

The Sharpe ratio is a way of considering the risk of an investment when compared to its return. This is calculated by subtracting the best risk-free return currently available in the market (such as the yield on Treasury securities) from the average return of the investment, then dividing the result by the standard deviation. The Sharpe ratio is a way of quickly comparing the risk associated with an asset with its historical return. The higher the resulting ratio, the better the risk-reward profile of the investment.

Various classes of investments offer different risk and return combinations. For instance, Treasury securities are considered extremely low risk because they are backed by the full faith and credit of the U.S. government and, historically, investors who have held them until maturity have always received the anticipated return on their investment. Small cap stocks, by comparison, are considered extremely risky because their performance has historically deviated substantially from their mean historical return. Remember, though, that past performance of an investment is no guarantee of its future performance.

Correlation: selecting diverse asset classes to reduce risk

Combining a variety of asset classes within a portfolio is called diversification. The goal of diversification is not simply to have many different investments, but to combine complementary investments so that the resulting

portfolio offers the best return for the least amount of risk during the investor's time horizon. To accomplish this, it helps to understand the concept of correlation.

Correlation measures the similarity of investments' price movements over time. When the prices of two different investments move identically, they are said to have a correlation of 1.0. When the prices move in exactly opposite directions, their correlation is -1.0. A correlation of 0 means that price movements are unrelated to each other, so that a price movement of one investment is not useful in predicting the price movement of the other.

A well-diversified portfolio consists of asset classes that are not closely correlated to each other. For instance, say a portfolio consists of stocks in U.S. companies in the large cap, mid cap, and small cap categories. This portfolio is not well diversified, because historically all classes of U.S. stocks have tended to be closely correlated. The addition of less highly correlated asset classes such as foreign investments, bonds, and real estate would add significantly to the diversification of this portfolio. Diversification can't guarantee a profit or ensure against a loss, but it can help you manage the types and level of risk you take.

Approaching the efficient frontier

The efficient frontier is a concept from modern portfolio theory (a body of study on markets developed since 1952) that examines the relationship between risk and return for various investment portfolios. The efficient frontier can be expressed as a curved line on a graph. The graph plots risk, expressed as standard deviation, on the horizontal axis and return on the vertical axis.

The efficient frontier line is comprised of the points on the graph that represent where risk is minimized for a given rate of return and where return is maximized for a given degree of risk. In other words, portfolios that fall along the efficient frontier are said to be optimized (known as mean variance optimization). Portfolios that are well diversified among various asset classes will generally perform better over time, approaching or falling along the efficient frontier, than portfolios that are assembled without the benefit of a diversified asset allocation approach.

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