

# Asset Allocation and Portfolio Return



## Introduction

One of the most important decisions for your investment portfolio is your choice of asset allocation. 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, cash alternatives, foreign investments, real estate, commodities, and so-called alternative assets such as precious metals. Asset allocation is typically expressed in terms of the percentage of a total portfolio that is devoted to each of the various types of investments within it (as a hypothetical example, 60 percent stocks, 30 percent bonds, and 10 percent cash alternatives).

The underlying principle in asset allocation is the documented observation that different broad categories of investments have shown varying rates of return and levels of price volatility over time. By diversifying your investments over asset classes, you potentially reduce risk and volatility. Downturns in one investment class may be tempered (or even offset) by favorable returns in another. Just as using different asset categories within a portfolio has the potential to reduce your risk, your choice of individual assets within a class can do the same. For instance, choosing stocks from different industries (e.g., automotive, high technology, retail, or utilities) within your stock allocation can be less risky than investing all of your stock allocation in one industry or company.

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.

How you allocate your assets depends on several factors, including your investment objectives, attitudes toward risk and investing, desired return, age, income, tax bracket, time horizon, and even your belief in what the market will do in the near term and long term. Your asset allocation will likely need to adjust over time as your circumstances change.

**Example(s):** Let's say your investment objective is substantial asset growth, you have a 10- to 15-year horizon, and you are willing to assume a high amount of risk. You might choose to place a larger percentage of your funds in stocks of newer, growing companies that may offer higher return but involve a greater degree of risk. Another investor with a 5-year time horizon, whose objective is preservation of principal and who doesn't want substantial risk, may invest more heavily in government securities.

**Caution:** It's important to note that asset allocation does not guarantee a profit or protect against potential loss in a declining market. Asset allocation is a method of managing the types and level of risk you face. Also, all investing involves risk, including the possible loss of principal, and there can be no guarantee that any investing strategy will be successful.

## 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.

Generally, the higher the expected return on an investment, the higher the risk involved in trying for that return. The longer your investment time horizon, the more volatility you may be able to handle, allocating more of your investments to higher-risk assets and making your portfolio more aggressive. With a longer investment horizon,

you have a better opportunity to ride out several economic cycles. A shorter time frame usually requires a more conservative approach because you have less time to try to recuperate from a market downturn. As the time approaches to convert your investments to cash that can be used for a particular goal, you may want to allocate investments into a lower volatility mix of asset classes.

## **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 being considered, then dividing the result by the investment's 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, midcap, 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.

## Monitoring and rebalancing your asset allocation

The major reason you engage in asset allocation is to achieve certain investment objectives. However, even if your current asset allocation is appropriate, it shouldn't necessarily remain static forever. Your asset allocation may change over time; what was appropriate in the past may not be right today, and what works today may not be appropriate for you in the future. This can be the result of a variety of factors, including:

- Changes in your investment objectives and the priority you place on each one
- Economic fluctuations that suggest allocating more of your portfolio to a certain asset class
- Growth or decline within asset classes that require a rebalancing (shifting funds from one asset class to another to return to the ratios you have determined are appropriate for your investment portfolio).

Any of these factors can mean it makes sense to reexamine your asset allocation to see if it needs to change also. For this reason, it is important to monitor your asset allocation periodically and rebalance your portfolio as needed.

**Example(s):** Let's say that on January 1, you determined that you should have 60 percent of your assets in stocks, 20 percent in bonds, and 20 percent in cash, and invested your assets accordingly. At the end of a year, the stock market has done very well, and as a result, you discover that your ratios have shifted. Now, 70 percent of your portfolio's value is in stocks, 15 percent in bonds, and 15 percent in cash, even though you have made no changes in your investments. What should you do? You could sell some stock and invest the proceeds in bonds and cash instruments to bring your portfolio back to your original asset allocation. The opposite would be true if stocks sank; you might sell another asset class and invest enough in stocks to return to your original percentage. Alternatively, you could direct any new cash you are able to invest into asset classes that now represent a lower percentage of holdings than you prefer.

Even if your goals don't change, your planning horizon for them almost certainly will. For example, let's say you set your asset allocation with the initial objective of sending a child to college in 12 years. Time passes, and now that child will be entering college in 2 years. You should probably change your allocations to various asset classes based on the current time horizon. That may mean moving funds from higher-risk to lower-risk investments to ensure that the needed money will be available. Imagine the stress you might feel if the tuition invoice arrives while you are waiting for that risky stock investment to rebound from the tumble it took three months earlier. Imagine the stress that can be avoided by planning ahead and monitoring and rebalancing your allocations as your planning horizon changes.

Some investments are designed specifically to shift your asset allocation over time. However, if you don't want to put the process on autopilot, you should make sure that you monitor your current allocation and adjust it as warranted. Tax time or year-end is often a good time to check up on your portfolio and think about making any necessary adjustments. At a minimum, you should check it in the wake of a substantial change in your life situation.

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