



Risk Adjusted Investment Performance Measurement

The rate of return on an investment and its risks are directly related. High rates of return on investments are almost always tied to higher risks, and lower rates of return imply lower risks. The association between risk and return is consistently observed and has few exceptions. Since higher rates of return can be attained by taking greater risk and lowering the risk of an investment should lead to reduced returns, no attempt to measure investment performance is complete without measuring the risk taken to achieve the result.

Even though the notion of risk is a very complex and highly subjective one, a useful proxy exists that is objective and based on a simple premise. The more uncertain a future prospect, the riskier it is. If you agree that investments for which past returns have varied greatly are more likely to have uncertain future returns, a statistic is available with which to measure investment risk. The statistic, called the standard deviation, reveals the extent to which a series of numbers are spread around their average value, and is easily calculated. Consequently, for the practical purpose of attempting to objectively measure investment results, risk may be defined in terms of the uncertainty of the rates of return on an investment, and measured by the standard deviation of past returns.

Now, when working with investments that are actively traded in organized markets it is helpful to think of investment risk in two different, but related ways. There are those risks associated with the investment itself, such as the business involved or the industry of which the investment is a part, risks that are not necessarily shared with other investments. In addition, there is a risk that is attributed to the fluctuations of the market in which the investment is traded, a risk shared with all other investments traded in that market. As a result, investors generally acknowledge two distinct components of investment risk: the risk peculiar to the investment itself and the investment's market risk.

It can be demonstrated that by the process of efficient diversification, arranging investments in a portfolio in such a way that their separate and unique risks are basically unrelated, the risk peculiar to an investment itself can be reduced to a negligible level. However, the market risk of an investment cannot be reduced by diversification since it is shared to a greater or less degree by all investments in the market

Now, there is a straightforward argument for market risk being the principal determinant of an investment's rate of return. Investors should not expect to be compensated for assuming unnecessary risk, and thus should not expect very much in the way of return for assuming any risk that can be drastically reduced, if not actually eliminated, by adequately diversifying a portfolio. The risk that cannot be diversified away and remains to determine the level of return on an investment portfolio is primarily its market risk.

Just as the standard deviation can be used to measure the variability, or total risk, of an investment, there is an equally convenient way to separately examine an investment's market risk. The actual statistic used is called a "Beta coefficient," which can most simply be interpreted as the percentage change in a mutual fund's rate of return that has accompanied a one percent change in the market. That is, a fund with a Beta of 1.25 would have been one quarter as volatile as the market, up or down, over the time period for which the Beta coefficient was calculated. Beta is, then, simply an index of an investment's volatility.

There is yet another statistic which helps to identify superior risk adjusted investment performance. The objective of any portfolio manager is twofold: not to take on any unnecessary risk, i.e. risk that goes unrewarded, and to realize all of the return possible for the risk that was taken. While risk that can be avoided by diversification is, in a sense, unnecessary, there are times when a portfolio manager will want to take that risk by concentrating his portfolio in those securities for which he has especially high expectations.

The statistic, called an "Alpha coefficient," measures the success or failure of a portfolio manager in realizing significant returns over and above that which can be attributed primarily to taking market risk. Roughly, the Alpha coefficient measures the portfolio manager's success or failure in selecting profitable securities for his portfolio.

The old adage that "You get what you pay for.," is nowhere better demonstrated than in the investment principle that the rate of return to be expected on an investment is commensurate with the level of risk taken. When considering the investment performance posted by mutual fund managers it is, then, only *risk adjusted* rates of return that really matter.



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