



Risk and Expected Return Are Related

*A mistake that is often made is to say that risk and reward are related when it comes to investing. But if risk and return were always related, there'd be no risk. It's risk and **expected** return that are actually related. The price investors have to pay is the chance that the risk will actually show up.*

When we talk about stocks, we should acknowledge what asset classes we are talking about.

Here are the nominal and real returns for the four major U.S. asset classes from January 1944 through December 2010.¹

Asset Class	Nominal Returns	Real Returns
Fama/French US Large Cap Index	11.1	6.9
Fama/French US Large Value Index (ex utilities)	12.9	8.7
Fama/French US Small Cap Index	13.4	9.2
Fama/French US Small Value Index (ex utilities)	16.0	11.6

Note that a diversified portfolio comprised of these four asset classes with annual rebalancing would have outperformed the weighted average of the components —13.6 percent versus 13.2 percent. You might think of this as the “diversification return” or the “rebalancing bonus.”

The data also shows that risk and expected return were related in *realized* returns — which won't always be the case or there would not be any risk. Small outperformed large, and value outperformed its less risky counterpart. You can again see the benefits of our strategy to tilt portfolios to the riskier asset classes (allowing us to have less exposure to the market, cutting the tail risks).

As for bonds, five-year Treasuries returned 5.7 percent in nominal terms and 1.8 percent in real terms, while 20-year Treasuries returned 5.8 percent and 1.8 percent, respectively. Investors weren't rewarded much for going long, again showing the benefits of our strategy of avoiding longer-term bonds.

Risk and reward were related here, too — riskier stocks outperformed safer bonds.

As mentioned, risk and expected return must be related, but sometimes the risks show up, even for very long periods. And the data we see might be viewed as “the triumph of the optimists.” In other words, the world did not have to turn out this way. Back in 1950, stocks were trading at single-digit price-to-earnings ratios because stocks were viewed as being highly risky. We had just had two world wars and the Great Depression, Russia was threatening, and the Korean War was beginning. We know *today* that capitalism and the United States triumphed, but it was not a certain outcome.

With this thought that alternative universes might have shown up, including the possibility that 2008 might have turned into the Great Depression II with one misstep in policy, consider what the data

looked like for a somewhat different period. Let's look at the 40 years from 1969–2008. The S&P 500 returned a real rate of 4.2 percent, providing **no higher return than did** 20-year Treasuries.²

That is 40 years with risk and expected return going unrelated. And it certainly could have turned out worse. That is the nature of risk. If we did not experience such periods, then stocks would not be so risky and investors would not demand such a high-risk premium for taking the risk. In other words, price-to-earnings would be much higher, and the cost of capital for companies would be much lower, thus making the returns to investors much lower.

Because none of us has a clear crystal ball, the right answer is to make sure you don't take more risk than you absolutely need to take. While higher equity allocations do provide higher *expected* returns, they may not provide higher *realized* returns. And the surest way to create a small fortune is to start with a large one and then make risky (or “interesting”) investments. Remember, the strategy to get rich is entirely different than the strategy to stay rich. You have already won the game. Why keep playing?

Consider the lesson of Pascal's Wager — the consequences of your decisions should dominate the probability of the outcome. So even if you place a high probability on equities outperforming in the long term, the consequences of them not doing so could be far more negative for you than the benefits if they do. In fact, one might argue that for some (those who already have sufficient wealth to provide a high quality of life), their marginal utility of wealth is very close to zero. So why take more risk? Those in such situations can certainly take risk if they want to. And it is likely that they would be fine in almost any circumstance, but why take the risks if the upside is of such limited marginal utility?

There is no right equity allocation — just one right for you. If you care more about wealth preservation and sleeping well, then you should have a low equity allocation, in the neighborhood of 20 percent to 30 percent. If you still care more about wealth creation, then you have to accept the risks. You will *likely* be rewarded, though you just might have to wait more than 40 years for that to happen, as shown above.

¹ Source: Dimensional Fund Advisors. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio nor do indices represent results of actual trading.

² Ibid.

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