Redefining Investment Risk

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A Tale of Two Investments

Let's assume that you're evaluating the risk of two alternative investments, both of which are segments of the stock market. In looking at annual returns, Segment #1 has declined in value six times since 1972 while Segment #2 declined in value eight times during the same period. In these down years, the average decline for Segment #1 was 11.11% while Segment #2 showed an average decline of 12.42%. Investors clearly lost less money and had fewer down years in Segment #1. Amazingly, neither of those things seem to be particularly important when the investment industry considers risk.

Which investment is less risky? Believe it or not, according to the way our industry views risk, Segment #1 is considered to be about 8.5% MORE risky than Segment #2. If risk is one of your hot buttons, investment professionals will overwhelmingly recommend Segment #2 as the more conservative investment. By the way, Segment #1 is midcap value stocks and Segment #2 is the S&P 500 Index, which is a proxy for large cap stocks. It's also worth noting that Segment #1 produced significantly higher returns during this period.

Volatility

If you're getting the impression that the investment industry views risk a bit differently than the rest of the world, you're right. We're saddled with a definition of risk that's inaccurate and is mostly inexplicable to the average investor. However, it does have the advantage of allowing investment professionals to use a lot of jargon and give the impression that risk is enormously complex and takes a lot of training to be properly understood.

We got to this point because, decades ago, academics scratched their beards, pondered risk, and came up with a definition that proved that none of them had ever invested in the stock market. Risk, they explained, was volatility. Volatility is the standard deviation of historic returns for a particular investment, which is a definition guaranteed to produce a blank stare from most investors. What it means in English is that greater fluctuations in price and returns equal greater risk.

Apparently, our industry believes that the first question that occurs to anyone evaluating a potential investment is "how volatile are my returns going to be?" What's amazing is that this perception of risk has gone unchallenged for so many years. In the real world, more important questions for investors are "what's my potential return?" and "what are the chances of losing money?"

The Probability of a Negative Return

Let's say that you're considering an investment in a portfolio of midcap stocks and you're curious about the risk. An investment advisor who has become a Chartered Financial Analyst tells you that, since 1972, the standard deviation of annual returns for this segment of the market is .2125. Someone without the benefit of all that training tells you that you can expect a decline in value about every 5 years and, in any given year, the likelihood of making money is about 80%. Does anyone seriously believe the first answer was more useful?

Probability tables are available to calculate a definition of risk that provides investors with a good estimation of the likelihood of losing money on an investment. Students of probability know that there are actually two components of investment risk. Volatility is one. However, average returns are the missing link that makes the current definition of risk misleading.

The simplistic view that investments with the same volatility have the same risk is absurd. If average returns differ, investments with the same volatility can have significantly different risk profiles. As our first example pointed out, it's also possible for an investment that's more volatile than another to decline in value less often if its average returns are significantly higher.

A Comparison

For comparison, let's look at segments of the stock market using both measures of risk, calculated using annual returns from 1972 and ranked from least to most risky:

Segment	Volatility	Segment	Probability of a Decline
Large Value	0.1668	SmallCap Value	18.68%
REITs	0.1697	MidCap Value	18.95%
S&P 500	0.1769	REITs	19.22%
MidCap Value	0.1920	MidCap	20.05%
Large Growth	0.2094	Large Value	21.19%
MidCap	0.2125	MicroCap	22.07%
Europe Stocks	0.2138	S&P 500	23.28%
SmallCap Value	0.2142	SmallCap	24.83%
MidCap Growth	0.2211	Europe Stocks	25.79%
Foreign Stocks	0.2253	Foreign Stocks	27.43%
MicroCap	0.2292	MidCap Growth	28.10%
SmallCap	0.2410	Large Growth	29.12%
SmallCap Growth	0.2480	SmallCap Growth	29.12%
Asia/Pacific Stocks	0.3290	Asia/Pacific Stocks	32.28%

As a professional, the first thing I notice is that the large cap (S&P 500) or "blue chip" segment of the stock market isn't the safe haven it's cracked up to be. A problematic definition of risk and a flawed interpretation of the Prudent Man Rule keeps most professional investors in the "blue chip" segment of the market in general and in large growth stocks in particular. Under the guise of controlling volatility, most of their clients are kept in areas of the equity market with relatively unattractive returns and above-average risk.

Fixed Income

When it comes to bonds, using volatility as a measure of risk looks even more questionable. If historic volatility is the only consideration, then current interest rates don't matter when comes to assessing risk. In this view, a bond with current interest rates at of 3% has the same risk as the same bond when current interest rates are at 7%. It doesn't appear to matter that, if interest rates rise and bond prices decline by 5%, the bond with a 3% coupon will produce a negative return while the bond with a 7% coupon will produce a positive return.

Using historic volatility and current interest rates as our average return, the chances of losing money in bonds decline as interest rates go up. Following are the probabilities of losing money in a 5-Year Treasury Note, depending upon the current level of interest rates. This data is also based upon total annual returns from 1972.

Current Interest Rate	5 Yr. T-Bond Prob. of Decline
3.0%	30.16%
4.0%	24.20%
5.0%	19.22%
6.0%	14.69%
7.0%	11.13%
8.0%	8.08%
9.0%	5.83%
10.0%	4.01%

It's also difficult to resist pointing out that, even though bonds with maturities of 20 years and over have produced negative returns about as often as stocks over longer time periods, our industry believes that these have about 50% less risk than most stocks. Granted, the average decline in bonds was less than stocks in down years. However, that's probably little consolation for investors that purchased bonds because they're supposed to be a safe haven.

Conclusion

One of the things the investment industry seems to do pretty well is to obfuscate relatively simple ideas, and the concept of risk is a perfect example. The investment industry needs a better way of measuring risk, as the current measure is inaccurate and mostly incomprehensible to a lot of investors. It's past time to reevaluate this measure since everyone except investment professionals seems to have a pretty good idea of what risk really is.