Risk is a Four-Letter Word

When it comes to investing, there is an essential component that is always present and on which all investors focus: risk. We can just hear the financial "experts" right now:

"Riskier investments provide higher returns."

"Stocks are riskier than bonds."

"If you want to make more money, you have to take on more risk."

Let's examine the concept of risk in more detail, by considering three possible investments:

1. Buying shares in a retailer that has had operating losses for each of the last two years and seems destined to file for bankruptcy in the near future
2. Buying long-term (30-year) U.S. government bonds yielding 2.7%
3. Putting cash in a savings account that yields 0.2%

How would you rank these investments, from riskiest to safest?

Before we answer this question, though, let's define "risk."

A Volatile Equation

One of the advantages of going to a fancy business school is that you learn things that can make you sound really smart, especially when communicating with members of the opposite sex. Case in point:

Attractive Member of the Opposite Sex: "Hi. What do you do for a living?"

Fancy MBA: "I'm an investor. I buy and sell stocks."

Attractive Member of the Opposite Sex: "Isn't that risky?"

Fancy MBA: "It can be. It depends on the volatility of the stock relative to the market overall. If you divide the covariance of the stock with the market by the variance of the market, you get a stock's beta. Stocks with a beta of less than one are less risky than the market, and stocks with a beta of more than one are riskier."

Attractive Member of the Opposite Sex: "Huh." [accompanied by a blank stare but an obvious rumbling in the loins]

The Fancy MBA in our example would easily earn an A on his next finance exam. In academia, risk is denoted by the Greek letter beta, which is defined as the correlated volatility of an asset in relation to the volatility of the benchmark that the asset is compared to. Or, in mathematical terms:

$$\beta = \frac{\text{Cov (asset, benchmark)}}{\text{Var (benchmark)}}$$

In other words, the more volatile a stock is in relation to the S&P 500, the riskier that stock is.

Or, in still other words, volatility is risk.

Going back to our three investment choices, any good finance student in America would conclude that buying shares in the retailer is the riskiest option and putting cash in a savings account is the least risky.

But, is that really the case?

A Better Definition

We find the academic definition of risk more than a little bemusing. For instance, the calculation of beta does not take into account what the company in question makes, or what its competitors are doing, or how much borrowed money the company employs. Its only input is the price history of the stock. As we soon will see, that can lead to some absurd results.

When we talk about risk, we prefer to go with the simplest and most intuitive explanation possible: the dictionary definition. Here is how Merriam-Webster defines it:

> **risk**
> *noun*
> : the possibility that something bad or unpleasant (such as an injury or a loss) will happen
>
> Synonyms: danger, hazard, trouble, pitfall, threat, peril.

To put the concept into more financial terms, let's look at a quote from Warren Buffett: “the real risk that an investor must assess is whether his aggregate after-tax receipts from an investment (including those he receives on sale) will, over his prospective holding period, give him at least as much purchasing power as he had to begin with, plus a modest rate of interest on that initial stake.”

Of course, this definition is not the precise mathematical equation that academics love. You can't plug "whether one's after-tax receipts will give at least as much purchasing power as at the beginning plus a modest rate of interest" into a formula and have it spit out a precise number. But, to us, it makes much more sense.

Using this common-sense definition, our assessment of a given security's risk can be dramatically different than when using the academic definition. No, we don't care about the price volatility of the investment, but about the probability of whether an investment will suffer a loss of purchasing power over a specific holding period. When looked at through this lens, an investor's perspective totally changes.

Consider the following: Since 1930, the dollar has lost more than 90% of its original value. In other words, what cost $1 in 1930, costs more than $10 today. An investor that put his money under the mattress in 1930, and then woke up this year, would have suffered a staggering loss in terms of purchasing power. But according to the academic theory, his investment was completely non-volaitle and was therefore "riskless." To which we ask, "How can an investment that lost more than 90% have no risk??!!"

The Financial World Turned Upside Down

Going back to our three initial investment choices, and using our preferred definition of risk, let's ask the question again. Which is the riskiest?

The correct answer to this question is, "I need more information. I need to know more details about the retailer. What do the financials look like? What are the assets and liabilities? What is the stock trading at?" Since we are the ones who devised the question, we just happen to know these facts…. the retailer has $236 million in assets and $94 million in liabilities, of which about $20 million was debt. The assets include $2.5 million in cash, $97.7 million in real estate, $65.8 million in inventory, and $70.0 million in other assets. In addition, the real estate is probably highly understated on the balance sheet, as it was purchased decades ago and is, according to America's generally accepted accounting principles, valued at cost. The stock has a market cap of $75 million. [This is not a far-fetched example. This is similar to the situation of Syms Corp. in November 2011.]

With this information in hand, one would correctly conclude that the least risky investment is the struggling retailer. The determinant factor was not the price history and volatility of the stock but the cheap price of the shares. At a market cap of $75 million, the stock was trading so cheap as compared to the assets of the company that the risk is minimal. Compare that to the almost certain loss of purchasing power in investing in the 2.7% longer-term bonds or putting money in the bank earning almost nothing, and it is evident that these two choices are far riskier.

Stocks For the Long Run

When considering an investment, thinking about risk is crucial. But the true testament of whether something is risky is not the volatility of the investment. The important factor is the probability of whether you will have a permanent loss of capital over the holding period, regardless of the wiggles and waggles on the price chart of that investment.

In his 2011 letter to shareholders, Warren Buffett wrote about the three basic investment choices that investors have: (1) currency-denominated investments, such as money-market funds, bonds, bank deposits, and other instruments; (2) non-income producing investments, such as art, stamps, and gold; and (3) productive assets, such as businesses (stocks), farms, or real estate.

After explaining the characteristics of all three categories, he concluded, “I believe that over any extended period of time this category [the third one] of investing will prove to be the runaway winner among the three we’ve examined. More important, it will be *by far* [his emphasis] the safest.”

We couldn’t agree more.

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