The Rennie Quarterly Return

Rennie & Associates
Financial/Investment Planning
Volume 8, Issue 4
March 31, 2016

Risk

Risk is a four-letter word. However, unlike most words of equal dimension, its interpretation is unique to each individual whose lips it passes and whose ears it enters. Risk's meaning is always a function of the context in which it is used.

A test pilot and a police officer both know personal risk intimately, but entirely differently. Is it reasonable to expect the officer to fully relate to and comprehend a pilot's risk and vice versa?

So why then does the finance industry expect layperson clientele to intimately understand risk in the context of investing? In our opinion, most financial advertising and product disclosures assume financial risk clairvoyance on the part of the client.

Therefore, we thought a more robust explanation of risk, in an investment context, would help everyone communicate more effectively.

Investment Risk

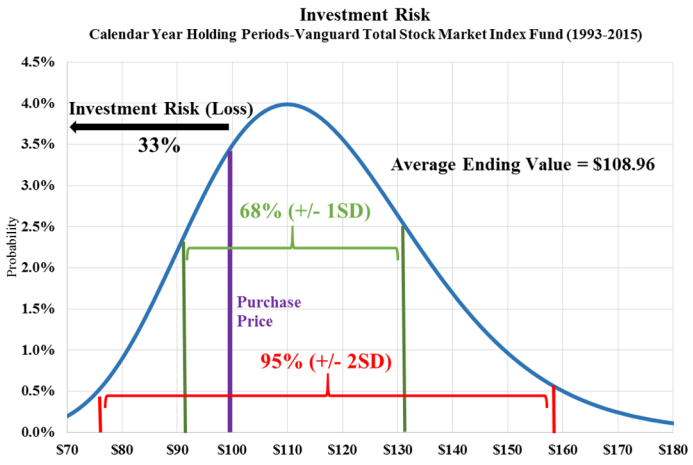
Merriam-Webster offers up several contextual definitions of risk, the most applicable being "the chance that an investment (as a stock or commodity) will lose value." This should leave most investors wanting. For example, for an investment in which a loss is financially catastrophic; the "chance," or likelihood, becomes essentially moot, doesn't it?

Investment risk, therefore, is generally a function of two characteristics of loss: probability and size.

Probability

Of the two, far more intellectual and computational power is required to determine the probability of loss. As you may expect, statistics are involved.

Let's consider an investment in the Vanguard Total Stock Market Index Fund, symbol VTSMX, the largest stock fund in the world.



On any given day, the likelihood of VTSMX going up or down is essentially 50/50. Historically, 68% of the time VTSMX trades between 1.2% and -1.2% of the prior day's closing price. This statistic is called the standard deviation (SD) of daily returns. 2x the SD is the range for 95% of trading days.

For comparison, Apple stock's SD of daily returns is 3.1%, more than twice the risk of VTSMX.

The astute reader will ask why bother investing if the odds are 50/50? Actually, they are not. There is a very small positive "drift," or trend in returns. For VTSMX, this daily drift is .03%, for Apple it is 0.1%.

The SD of returns does not increase linearly with time, but more slowly at the square root of time. Holding VTSMX for two days only increases the SD (risk) by 1.4x, or $2^{(1/2)}$x. The SD over a calendar year is only 15.8x the daily return SD, or +/- 20.2%.

The favorable return drift and the square root of time increase in risk result in a key tenet of investing: the longer the holding period, the higher the probability of positive returns.

As shown on the graph, if an investor holds VTSMX for a full calendar year, rather than a 50/50 daily proposition, risk of loss is reduced to 33%. A $100 investment in VTSMX yielded $108.96, on average, thanks to compounding of the daily return drift. A holding period of 11 years drops the risk of loss below 1%.

Size

Risk is also related to the size of a loss. Fortunately, this is easy to manage. One simply buys more or less of an investment depending on the potential loss one can tolerate.

Gary B. Rennie, CFP®, AWMA®
Chief Executive Officer
Phone/Fax: (949) 679-4775
Cell: (949) 769-1343
Email: gary@rennieandassociatesfp.com

E. P. Rennie, CFP®, CFA®
President
Phone: (949) 650-8622
Fax: (949) 650-6683
Email: ecrennie@att.net

www.rennieandassociatesfp.com

Our Two 1¢

It seems to be a law of nature, inflexible and inexorable, that those who will not risk cannot win.

John Paul Jones

Quarterly Trivia:

What well-known financial theory argues that stock prices move in the same manner as a drunken sailor stumbling down a narrow street at night?

The random walk hypothesis.