The 1-2-3 of Investing
Part 1: Volatility

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Financial literacy has four elements: debt, budgeting, saving, and investing. This series focuses on investing. The implicit assumption of investing is that the investor has saved money not intended for paying bills. Invested dollars lack the liquidity needed to pay short-term debt.

Once invested, money becomes vulnerable to the *ups* and *downs* of the marketplace—realities that are quantified by a variety of risk measures. The least sophisticated measure is an investment's historical range of returns. An investment's best and worst returns of 25 percent and -15 percent over some defined period of time will produce a range of 40 percent. Investments with wider (narrower) ranges would be regarded as more (less) risky.

The most cited risk measure is standard deviation. Like the range of returns, it focuses on an investment's volatility. The term "volatility" is defined as the rapid and unexpected change in an investment's market value. Although volatility and risk are often used interchangeably, risk is confined to negative changes that lead to the loss of money and failure to reach financial goals.

Calculating an investment's standard deviation requires multiple steps and is best left to a calculator. Since the measure is commonly used, readers may want to solve for the standard deviation of the returns below. (The answer is 15.2%.)

Year	1	2	3	4	5
Return	10%	5%	–15%	30%	20%

While an investment's volatility may seem like a fate to avoid or to at least minimize, it can actually be a positive quality for some investors. Those investors are young investors with long-term horizons that can smooth out the usually bumpy ride of stocks. Because risk and return are positively related, greater volatility allows for greater returns. (That relationship makes risk the independent variable and return the dependent variable.)

Single stocks can be expected to have standard deviations roughly two to three times larger than those for diversified portfolios with no fewer than 15 stocks. The word "diversified" means that the stocks belong to companies in a variety of industries and are therefore impacted by different market developments. Investors are spared having to create portfolios that are diversified. That task should be left to mutual funds which can customize portfolios to investors' specific investment objectives.

In the next part of this series, mutual funds will be explored. Other pieces in this series will look at the history of the stock market, the similarity between trading stocks and betting on sports, the "gambler's fallacy," and the advantages and disadvantages of fix-income securities.