

Volatility

As economic uncertainty increases so does the volatility of the financial markets. The storm clouds over Europe during 2011 demonstrated the truth of that observation. Each bit of news over resolving the sovereign debt crisis seemed to inspire a strong market response.

Bloomberg.com has reported that the S&P 500 climbed 3% in a single day on 36 occasions since the collapse of Lehman Brothers, or about once a month. Compare that to the nine years before that turning point, with just 27 days with a 3% up move, about once every three months.

What's an investor to do about rising volatility? For many investors, the answer is, not much. Ideally, one wants to be in the market on the up days and out on the down days. In reality, no one can call those days accurately in advance. Academic studies have shown that most of the gains in the stock market occur on just a few trading days. The risk of being out of the market on good days outweighs the reward of avoiding the losers and the transaction costs of managing the process.

The historical record

Business professor Javier Estrada of the IESE Business School in Barcelona, Spain, quantified the effect that exceptional days can have on investment returns. He studied the Dow Jones Industrial Average for the period from 1900 through 2006. Looking at the best 100 trading days, the lowest return was 3.9 standard deviations above the mean. Statisticians will tell you that data suggest such a return should be seen once in 83 years—yet that return or better occurred 100 times in the course of the study.

To translate Estrada's findings into dollars, \$100 invested in the DJIA at the beginning of 1900 would have grown to \$25,746 by the end of 2006. However, if the investor had missed just the ten best days of those 107 years, the investment would have grown to only \$9,008, a reduction of 65%. Miss the 20 best days, and the portfolio would have grown to only \$4,313. Finally, missing the 100 best days of the 29,190 in the period under study, one-third of one percent of the trading days, would have resulted in a loss of capital, as the terminal wealth would have been just \$83.

Of course, there are exceptional days on the downside as well, as Estrada documents. If you had kept all the best days and avoided just the ten worst days, terminal wealth would have jumped to \$78,781. If you had accurately predicted the 100 worst days and avoided them, your \$100 would have grown to an astonishing \$11,198,734!

And it's not just the U.S. stock market that exhibits such behavior. Estrada went on to document similar results in foreign markets as well. He concludes: "A negligible proportion of days determines a massive creation or destruction of wealth. The odds against successful market timing are just staggering."

Lessons for investors

What can investors take away from studies such as these?

- *The costs and risks of trying to time the market probably are larger than the potential benefits.* Academic studies of returns are inherently artificial and tend to overstate returns

because they do not factor in transaction costs or taxes. Thus, the case against market timing is likely even stronger than suggested by Professor Estrada.

- *Over the long term, the stock market has balanced the negative and positive abnormal days.* Past performance does not guarantee future results, but, overall, stocks have outperformed all other investment classes.

- *Diversification may help moderate the impact of exceptional days.* On a day when the stock market overall is down, some stocks are, nevertheless, up. Stock selection matters. The bond market doesn't always move in lockstep with the stock market, so an allocation to this asset class also may reduce the impact of daily swings. Keeping some cash on hand may help the investor weather a rough patch, or even take advantage of opportunities that arise.

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