More than one way to measure investment volatility

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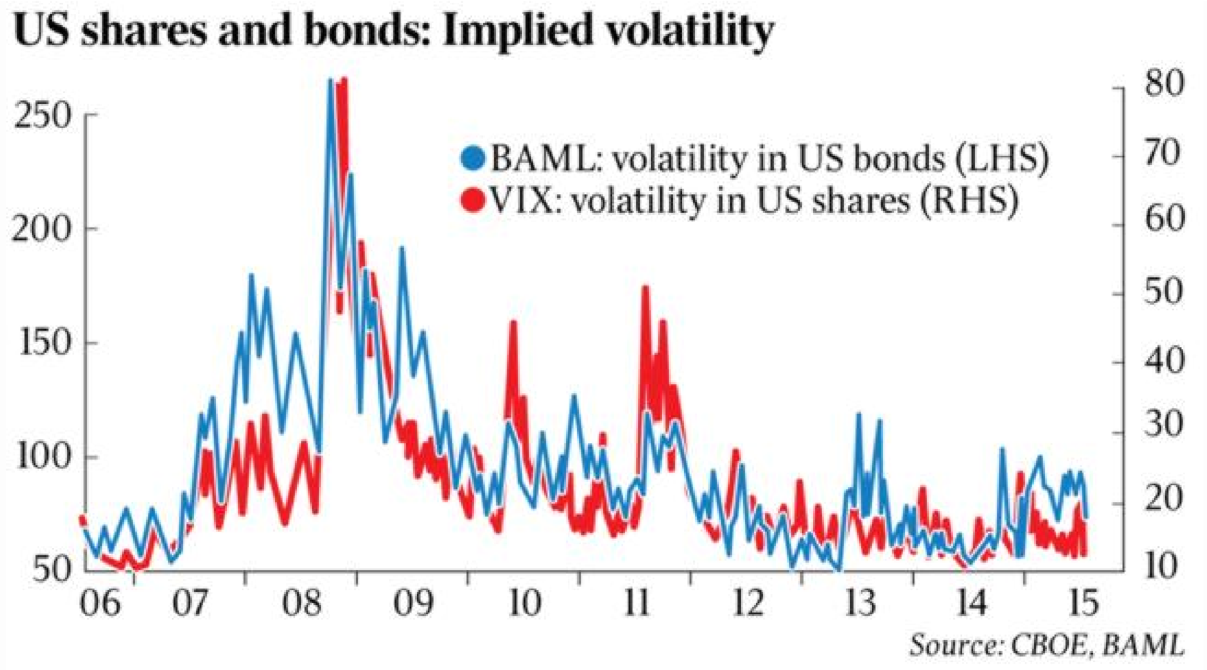

US shares and bonds. *Source:* TheAustralian

To people trained in the sciences, "volatility" is all about a vapour that evaporates rapidly. At least it did when, long ago, I studied science at high school. Perfume was the favoured example.

In investment discussions, volatility is frequently mentioned; it's used to describe the tendency for investment returns to fluctuate markedly over time.

But two concepts of volatility are in common use, and they're quite different. One describes how choppy, or calm, investment markets have been — or are expected to become. For this purpose, volatility indicates the tendency for investment returns to fluctuate sharply and irregularly.

The chart shows the measures of this concept of volatility — one for US shares and one for US bonds — most watched by professional investors. (Big moves in volatility in Australian shares and bonds generally follow those in the US). These measures are calculated from pricing in option markets — and are based on the simple principle that the more traders are prepared to pay for options, the higher is the (implied) volatility. Professional investors can even buy or sell volatility contracts to manage their exposure to volatility.

Volatility jumped to unusually high levels in 2008 and 2009 (the global financial crisis), 2011 (fears of a double-dip global recession), 2013 (taper tantrum) and in October 2014 (a disruption from electronic trading). In recent weeks, volatility again kicked up for a while — more for bonds than shares — but not by much, and then quickly faded. Volatility has mostly been quite low in the past couple of years.

My guess is market volatility will occasionally move to fairly high levels in coming months — and more so, perhaps, for bonds than shares. Market expectations for the US cash rate are likely to swing around a lot, and bond yields around the world are not yet priced for the pick-up now under way in global growth.

Sharemarket valuations are at reasonably high levels relative to corporate earnings and would seem vulnerable to major disappointments in profits or in the broader economic numbers that affect shares. It's useful for investors to allow for the likelihood of increases in short-term volatility in investment returns — rather than be surprised when it comes.

In many investment presentations — and in a lot of investment theory — volatility is looked at in a different way.

It's treated as the key measure of "investment risk". For this purpose, volatility indicates the tendency for investment returns to fluctuate sharply but regularly. Volatility is measured as the historical "variance" of investment returns — specifically, by the standard deviation of investment returns on the relevant asset or group of assets, usually over several decades.

My experience is most investors take a far broader assessment of investment risk than is indicated by the historical variance of investment returns.

They consider investment risk as the risk of loss, for any reason, of all or part their money.

However, an understanding of this concept of volatility in investment returns can help investors understand what is involved when they choose an investment strategy.

It certainly helps to drive home the point investors who seek above-average returns generally need to accept increased variability in investment returns in the short run — and sometimes in the medium term as well.

Historical data on volatility/variance can also help investors get a feel for the probability an asset class — or a portfolio with a predetermined mix of asset classes — will record a loss during selected periods (of, say, one, three, five and 10 years). With this information, investors are better prepared to anticipate the negative returns they are likely to experience at times — and have a better appreciation of how important it is not to overreact to losses in short periods.

Historical volatility/variance is a limited indicator of investment risk. And it's the occasional erratic ups and downs in volatility, rather than the pattern of the average swings in volatility over the investment cycle, that attract the attention of most investors.

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