The FTSE 100 Index shows that volatility tells you nothing about risk.

Volatility in the FTSE 100 Index is lower than it has been since June of 2015. But the tails of the returns distribution have been fattening dramatically for the past 6 months. With only days to the U.K. election, the probability of large multi-day moves, either up or down, is much greater than it was two years ago. The fact that volatility is low contains no information about the risks to either long or short positions in the Index.

Measuring risk

Controlling the risk of loss is fundamental to successful investment. If you can't measure risk, you can't control it efficiently. Underestimating it can lead to catastrophe as the investors flooding into 'passive' equity investments will find when the next large correction occurs.

For decades, the default 'risk measurement' has been the volatility of returns. *But volatility contains no information about the probability of loss.*

Low Volatility does not mean low risk.

Just like the CAC 40 prior to the French presidential elections, the FTSE 100 Index is currently at its lowest volatility in over two years[1]. That doesn't mean that there's little chance of a large market move.

Without an assumption about the distribution of returns there's no way to translate volatility into predictions of the probability of events.

The standard assumption, even when it is hidden, is that returns are normally distributed. There are simple statistical tests which show that this assumption is totally inconsistent with market data[2].

Common sense says the same: routine events in the FTSE 100 Index would only occur once in hundreds of years of observations if returns were normally distributed.

Only a tail model that's consistent with the data can make reliable predictions.

While a one day move up or down may cause some alarm, it's the large multi-day returns that can really test the strength of a long or short position. In the aftermath of the U.K. referendum last July, the FTSE 100 ran up over 9% in a week. As of 1 June 2016, our tail model for 5-day returns in the FTSE 100 Index said that such an event should be expected every 1.5 years–so the fact that it happened in July was not a shock to anyone with the ability to measure risk[3].

The tails of the FTSE 100 have been fattening steadily for the past 6 months.

The market risk in the FTSE 100 Index is currently very high. The tails of the 5-day returns distribution for the FTSE 100 Index began fattening back in February–long before the snap election call. They are much fatter than they were a year ago.

The election outcome may well trigger large reactions in the U.K. equity market just as we saw in the wake of the U.K. referendum last year. In fact our tail model now says that a 5-day gain of 9% should be expected at least once every 9 months.

But it's not just short sellers who are at greater risk than they were a year ago. The worst 5-day drawdown in the most recent correction in the FTSE 100 was a loss of over 6% in February 2016. This is an event that our tail model now says should be expected at least once every 8 months. So it would be foolhardy to assume a loss at least this large won't happen again.

And the FTSE 100 tail is now so fat that the average 5-day loss in excess of the February 2016 level is 10%. That hasn't happened since the summer of 2011. But the fat tail of the low volatility FTSE 100 5-day returns distribution now says it is an event that we should expect every 2 years.

Volatility contains none of this critical information about risk in the U.K. equity market in the run up to the June 8th election.

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[1] Calculated using the 250 days to 1 June 2017 the standard deviation of daily returns was 80 basis points. The mean daily return over that period was 7.7 basis points.

[2] See A. Cascon and W. F. Shadwick, *The CS Character and Limitations of the Sharpe Ratio.* IMCA Journal of Investment Consulting, Summer 2006, pp 36-52. There is almost no chance of observing a sample of 250 draws from a normal distribution with a CS Character of 2.88. But that's the result for the 250 days to 1 June 2017.

[3] Using the normal model, such a 5-day gain should happen only once in over 6,000 years.

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