Drawdown risk in the S&P 500 Index is now higher than it has ever been until *after* a major correction.

In August we warned of a high risk of drawdowns much worse than those seen in the S&P 500 Index in February 2018. Now the expected outcomes have worsened and their probability has risen dramatically. A repeat of the losses of October 2008 or even of October 1929 is ominously likely. It's time for those who have been long the 'Everything Bubble' to turn their investment talents to risk management.

This Time *Really Is* Different.

But not in the way a decade of markets tranquillised by ultra low interest rates has led many investors, central bankers and politicians to believe.

In August we warned of a high risk of drawdowns much worse than those seen in the S&P 500 Index in the market scare of February 2018[1]. Now the expected severity of those drawdowns has increased as has their likelihood.

Omega Analysis' risk measurements have *always* observed increases in drawdown risk prior to major market events. But levels are now higher than have ever been seen in the past century until *after* market crashes.

Without Realistic Estimates of the Scale and Frequency of Loss You Cannot Control Risk.

Unlike conventional approaches which treat multi-day returns by applying simplistic formulas to single day estimates, Omega Analysis' risk measurement technology for multi-day drawdown risk is based on data samples of those returns.

This purely data-driven analysis provides accurate estimates of 99% Value at Risk (VaR) and Expected Shortfall (ES)—the average VaR breach—for multi-day returns in financial markets. But it does much more: it allows us to assign realistic probabilities to market losses of any level. For example our predictions of the likelihood of very unpleasant outcomes for the 'Short VIX' and FAANG investors proved prescient[2,3].

In August of this year we warned that drawdown risk in the S&P 500 Index was at alarming levels. Now it's worse.

Drawdown Risk in the U.S. Equity Market is Now Extreme.

In August[1] we reported that the tails of the 5-day returns in the S&P 500 Index were fatter than they have ever been. 'Routine' events such as a breach of the 99% VaR, which should be expected once every 5 months, are now significantly more severe than they were then.

The worst 5 days of February produced a loss of 8.5%. We should now expect this level to be exceeded every 6 months.

The 99% ES has risen from 11% to over 13% and the probability of an ES breach is now even higher than it was in August.

We should now expect an ES breach once every 17 months.

The average 5-day ES breach is a horrific 23%—a drawdown that matches the worst 5 days in October of 1929.

It's time for those who have been long the 'Everything Bubble' to turn their investment talents to risk management.

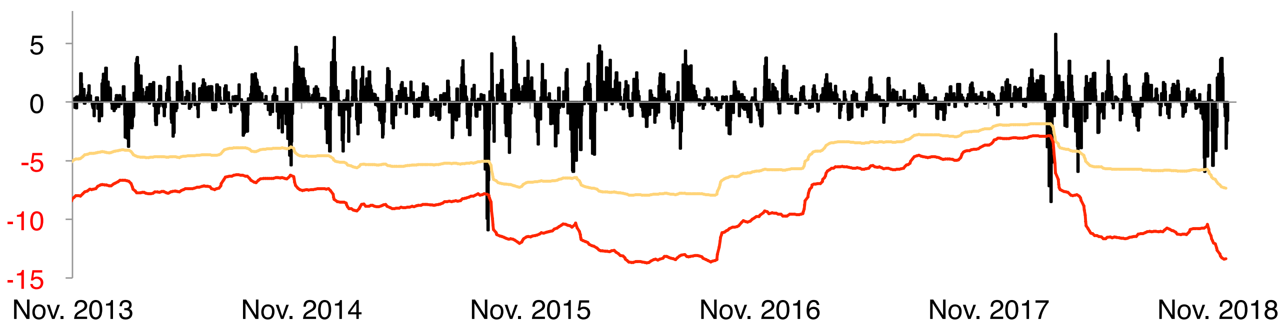

Figure 1. 5-Day Returns in the S&P 500 Index with the 99% Value at Risk (yellow) and Expected Shortfall (red). Risk has increased inexorably since February 2018.

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[1] *There is now a high risk of S&P 500 Index drawdowns much worse than those we saw in February 2018.* WJH? 10 August 2018. https://www.omegaanalysis.com/new-research

[2] *The 'low volatility' short VIX trade is getting very dangerous.* WJH? 14 June 2017. https://www.omegaanalysis.com/research-archive-2017-i and *The danger of very fat tailed VIX in a 'low volatity' period was confirmed yesterday.* WJH? 11 August 2017. https://www.omegaanalysis.com/research-archive-2017-ii

[3] *FAANG investors running a high risk of being bitten.* WJH? 23 July 2018. https://www.omegaanalysis.com/new-research and *FAANG Risk is starting to bite.* WJH? 16 Nov 2018. (Risk@OmegaAnalysis.com).

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