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One criticism of risk allocation strategies such as Essential Beta is that they do not take valuations into account. The implication is that a risk allocation manager will passively hold the same allocation to equities whether they are overvalued or not. If equities are extremely overvalued, then a risk allocation manager will passively ride out a large correction doing nothing.

This criticism does not take into account the relationship between valuation and volatility, however. In particular, implied volatility does have a relationship with valuation extremes. While many things besides valuation drive implied volatility indices, extreme valuation is one of them.

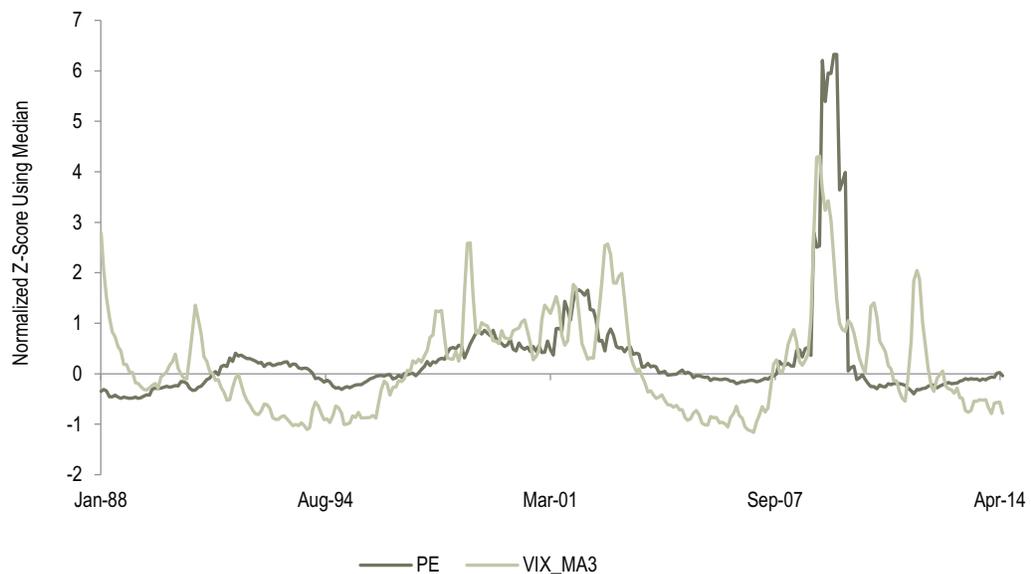
Implied volatility indices basically reflect the cost of hedging a portfolio. The most well known example is the VIX which reflects the

cost of hedging the S&P 500 via options. When implied volatility is rising, the cost of hedging an equity portfolio is rising. The cost will be rising, of course, if the option writers perceive that the risk of an equity market decline is rising so they charge more for an investor to buy insurance.

The chart below shows the relationship between the three month moving average of the VIX and the S&P 500 P/E ratio using "as reported"

EXHIBIT 1: S&P 500 VALUATIONS VS IMPLIED VOLATILITY (VIX)

[January 1988 - April 2014]



Sources: Global Financial Data, CBOE

Past performance is no guarantee of future results. Potential for profit is accompanied by possibility of loss.



earnings from 1/88 – 4/14. For this chart we use a z-score utilizing the median rather than the mean. That is each observation is the number of standard deviations above or below the median. This approach allows us to compare the two series in one chart.

We can see that the relationship is not perfect, but in the periods of extreme overvaluation leading up to the bursting of the tech bubble as well as the credit crisis, the VIX did rise above its median showing that a rise in the VIX can be associated with overvaluation in the equity market.

The S&P VIX along with the Eurostoxx VIX and the WTI Oil VIX make up the composite VIX indicator in the Market Risk Index (MRI) which is used to determine the stage of the market cycle so that a stage appropriate asset allocation can be implemented. If the stock market were to move to an extreme overvaluation we would expect that, as in the past, the VIX would rise with it since option writers, aware of valuation levels, would require a higher price for options.

The P/E ratio using “as reported” earnings is the simplest measure of valuation and is used

here for illustration only; but we can see that while valuations have risen, they remain around their long-term median. The VIX likewise remains below its median. So based upon these simple indicators, the chances of a long-term bear market are unlikely at this time.

Likewise, the MRI remains at 0.00 signaling that the level of market uncertainty is low. The composite VIX, credit spreads, economic growth and monetary policy are all supportive of cyclical growth assets. The VIX component would require a collapse in earnings to signal increased levels of risk. While the current recovery is modest, an earnings collapse continues to seem unlikely.

However, a rise in valuation would result in a rise in the composite VIX which would lead to an increased level in the MRI and trigger a reduction in the capital allocation to equities to control risk. In this way, valuation and risk allocation are directly tied, though it is extreme valuation that would drive this action rather than a short-term misvaluation.