

What it takes to invest in volatile markets

Written by The Conversation USA

Investors have had a tough start to 2016. Financial markets are extremely volatile and many are wondering what investment strategy to pursue.

There are a huge number of approaches used to decide the best time to buy and sell financial assets, such as shares, bonds, commodities, and currencies. This activity is variously referred to using terms such as “active management” and “market timing”.

Hindsight can be a fine thing for the investor or asset manager. But what they need to know is how they can best assess in advance whether an active management technique is going to add value or not. Small gains in performance can result in large amounts of wealth being created given the large amount of money under management.

There have been numerous advances in this area by researchers recently, which may help investors to make decisions with more confidence, especially in the current environment of uncertainty.

The first thing to consider is whether the returns generated over the historical test period are statistically significantly different to zero. Just because an approach generates an impressive average return does not guarantee that it passes the statistical significance test. Large average returns may be driven by a small number of extremely good daily or monthly returns, which are not representative of the usual return.

Traditional statistical significance tests can often give misleading results but new improved methods are very robust. Related to this is the sequence of returns. It is important to investigate this because an approach that generates superior returns overall – but has long periods of sub-standard returns – will be hard to stick with in reality.

Risk is another important consideration. Simply finding that a strategy has generated historical returns is not sufficient as a risky strategy needs to generate larger returns if it is to appeal to the average investor who is risk averse. The risk-adjusted returns of a technique therefore need to be determined. Sharpe ratios are commonly used in this area but recently developed approaches, which overcome some of their limitations, have been shown to be superior.

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Testing large numbers of approaches in historical data raises the possibility that one technique will show promise by chance. Indeed, we know of one paper that found over a certain time period the best predictor of movements in the S&P 500 index was butter production in Bangladesh! It is therefore important to account for “data snooping bias” using an appropriate statistical technique before concluding whether an active management approach does in fact produce historical superior returns beyond what might be expected by chance.

Some approaches work well in certain periods but poorly in others. It is therefore important to investigate the historical performance in periods such as bull and bear markets and recessions and expansions. While consistent historical performance over these periods does not guarantee future success, a finding of sub-standard performance in one of these historical settings could be indicative of poor performance in these periods in the future.

It is also important to conduct style analysis to get an appreciation of what influences the returns of an active management approach. Addressing questions such as “do the equities in the portfolio tend to do better when oil prices or the exchange rate are going up or down?” provides some intuition which can be used to determine the likely performance going forward.

This type of analysis can be extended to determine the proportion of historical out-performance that is driven by the assets that are in the portfolio or decisions around when to buy and sell the various components of the portfolio.

Transaction costs are often a large determinant of the returns an investor receives. An investment approach that requires frequent rebalancing will incur larger transactions costs than a more passive approach, and the types of assets that are chosen will also influence the level of transaction costs.

A logical way to quantify the performance of a strategy is to document the level of “break-even” transaction costs, that is level that transaction costs would have to be at before the profits disappeared. If these are much larger than reasonable estimates of actual transaction costs it is clear the strategy’s historical returns are greater than its transaction costs.

Conducting out-of-sample tests is another important approach. Refining a technique on a subset of available data and then testing its performance on remaining data can add confidence

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around whether it has the potential to add value going forward.

While there is never complete certainty that the superior returns of an active management approach in the past will be repeated in the future, the approaches we have discussed give an asset manager or individual the best chance of identifying techniques with robust returns.

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