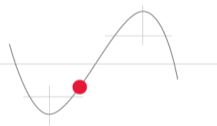

Criteria Investment Partners

Applied Insights

Quarterly Review October 2015

Feature Insight

The case for systematic investment management: Basics and Biases Part 3.

NVAM utilizes a rigorous systematic approach to designing investment strategies and implementing them in the Criteria Investment Partners LLC Fund. This is the last of a three part series discussing systematic approaches to investment management.

Systematic managers will usually present you with simulations of attractive historical results. We all know we should be suspicious of such historical "paper" results. After all, who has seen a presentation of a simulation with a poor outcome? Therefore, we should take the time to consider many of the possible biases which could be overstating results relative to what we should expect in the future.

What are some of these biases? In the first two parts of the series we discussed four biases:

- Hindsight bias
- Look-ahead bias
- Survivorship bias:
- Information Decay bias

In this piece we describe two additional biases:

Transaction Cost Bias:

Some studies don't include trading costs. More often, an adjustment is made. However, results can still be overstated. Trading costs include (a) direct commissions and fees (b) the bid-ask spread (c) market impact – the additional spread necessary to satisfy a larger order and (d) for short sellers, "rebate" costs. Of the four, (b) and especially (c) are not only the most important but also the most difficult to estimate. Hence, it is important that historical results reflect reasonable assumptions about total costs. This is especially important for managers who trade frequently, are managing a "large" amount of assets and/or trade in less liquid markets.

Regime Bias:

Even when one has addressed the subtle statistical and numerical biases which can impact an historical study, it is still easy to overlook the "big picture". Specifically, the results may have been importantly impacted by an economic or market environment which was more applicable to the history being tested than to the future.

Examples (of which there are countless):

Styles - value" stocks dramatically underperformed "growth' stocks in the late 1990s and then outperformed just as dramatically. Thus historical studies should include both periods or, alternatively, start from a period of more normal valuation dispersion eg. 2003 instead of 2000.

Markets - the U.S. equity market moved persistently upward during the 1982-2000 period. The S&P 500 experienced only one decline in excess of 20% over this entire 28 year period Stock market trading strategies which are biased towards up markets will be biased upward and conversely during such periods.

Economy - the past 30 years have been a period of generally benign or declining inflation expectations. Factors which benefit from such an environment are likely overstated in their effectiveness. For example, riskier, more-leveraged companies have underperformed over this period as have commodity related industries. However, during periods of rising inflation (such as in the 1970s), such companies outperformed significantly. Consequently, even a "lengthy" 30 year backtest can be

severely biased if factors/strategies used were aided by such an environment. While inflation (and interest rates) may be subdued in the years ahead (we don't know), it is a certainty that inflation and interest rates will not fall to the extent they have over the past 30 years.

Summary:

There are substantial benefits to a systematic approach to investing. However, such practitioners, as well as their clients and prospects, can often have a false sense of comfort created by the precision with which historical results are presented. Therefore, it is important that all involved are aware of and address the biases, some clear – some more subtle – which such a history may reflect. By doing so, future results are less likely to be disappointing.