Referee Report for Economics

Manuscript # 385

"Different Risk-Adjusted Fund Performance Measures: A Comparison"

Summary

This paper compares various risk-adjusted performance measures for a set of mutual funds. The authors argue that performance measures based on Value-at-Risk (VaR) or Extreme Value Theory (EVT) are more appropriate than other popular performance measures such as the Sharpe ratio (SR), the Treynor index (TI) or Jensen´s Alpha (JA) . They propose a performance index similar to the SR and the TI based on losses calculated by means of VaR together with EVT. They find that EVT-VaR measures are more appropriate in the presence of non-normal data.

Main Comments

The topic of the paper is of relevance for financial practitioners as well as academics and it is certainly applicable to the current financial stability context. The paper is also generally well-written. However, I have some comments for its improvement.

1. The contribution of the paper is not clearly stated. In the 6th paragraph of the introduction, the authors suggest that their main contribution is the construction of a performance index based on EVT-VAR. However, it is not very clear why the new proposed measure should be better in relation to existing measures as it is now explained. It is true that VaR or EVT should be more reliable measures for extreme events but when looking at formula (13) it is not apparent why this measure should be more reliable than the traditional measures. The denominator has, in fact, an "extreme return" as opposed to the SR or TI which have strictly second moments, so it is not very straight forward to relate these measures. A better job should be done at explaining the implications of such VaR based measure, how it relates to other measures and why it should be better.

2. Why have the measures been compared only in a "static" way? It is widely known in the finance literature that asset return volatility is time-varying, and to some extent, also expected returns. It would be possible to go around the latter by arguing market efficiency (which is also questionable) but it is certainly much more difficult to argue against time-variability of the standard deviation in the VaR measures (or in the SA and TI ratios). This is very important as the "good" or "bad" applicability of a particular performance measure could be sample dependent and as it is now with unconditional measures, this is hard to uncover. For instance, while the authors account for non-normality of returns in the modified-VaR measure by means of a Corner-Fisher quantile,

they assume a constant standard deviation which means that in periods of high volatility they could still understate the VaR. So at the minimum, the performance comparisons should be done for the full sample and different sub-samples and it should be tested whether the measures obtained are significantly different over different samples.

3. The authors concentrate on top 10 and bottom 10 funds for their analysis and discarded the other funds "for the sake of simplicity". However, by choosing only the "tail" funds, the authors are giving from the start an advantage to EVT or VaR measures. It would be more appropriate to also report results on (say) 10 "mid" funds.

4. It is not very clear why the top 10 funds "show more departures from normality" in relation to bottom funds. This finding should be expanded and the intuition behind it should be better explained. One could argue that "losers" could be more volatile than "winners" as the level of uncertainty with respect to the fund might increase which could lead to more extreme returns. In fact, in the 3rd paragraph of the empirical result section it says "the bottom 10 funds have, in general, higher VaR values than the top ones, which means that they are more susceptible to extreme events" which is somewhat contradictory with the finding that the top 10 funds exhibit more departures from normality. Moreover, one of the main findings of the study is that the VaR and EVT performance measures perform best in relation to other measures when there are more departures from normality in returns. A better attempt to reconcile the findings of non-normality, the "winner vs. looser" funds and the results on the performance measures with some previous studies or satisfactory intuition should be done.

Other comments

1. The contributions of the paper should be stated earlier in the paper and not almost at the end of the introduction as it is now. The contributions should be clearer (see also point 1 above) and should be better related to the existing relevant literature.

2. The conclusion is too long. The concluding remarks should be much shorter and should only summarize the main findings and reconcile them with the issues raised in the introduction as well as highlight possible extensions for future work.

3. The tables should also be improved. They should have a short description of the contents to facilitate reading. As it is now, the reader has to constantly come back to the main text to find out what the contents mean.

4. The figures are hardly visible, they should also be improved and a short explanation should be given.