Referee Report on

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The main purpose of this paper is to analyse the statistical properties of the Korea's representative implied volatility index (VKOSPI) and exam the predictive power of a set of macroeconomic and financial variables for this index. Seven volatility forecasting models (of HAR-type) are presented. Each of these models contains different exogenous variables in predicting future VKOSPI. The authors find some Korea's macroeconomic variables as well as US market stock return and implied volatility index can significantly explain and forecast the VKOSPI.

Major Comments.

The topic of the paper is less interesting in terms of both theoretical development and empirical analysis. In what follows I signal the major drawbacks and I give some suggestions for possible improvements:

Theoretical development:

(1) This paper employs seven versions of HAR models to exam the predictive ability of a set of exogenous variables for implied volatility index that appears very redundant exercise. I can't see the point why the authors need a variety of models which are only different from each other by having different combinations of the same set of variables. There should be a very simple alternative available to deal with the same issue instead. That is, one can firstly include all the considered variables in the model, use the stepwise procedure to remove all the insignificant variables at the second step, and at the end to analyse predictive ability just relying on the final version of the model

(2) In contrast with the studies in US and other important markets, the authors conclude that the return of stock market does not predict the VKOSPI. This seems a bit counter-intuitive. It is worthwhile to further try stock market realized volatility instead of return to see whether the information from stock market has predictive power on implied volatility index. A simple HAR model may not be appropriate if the two volatilities are highly related. It is interesting to develop a bivariate HAR model with exogenous variables to re-exam the relationship.

Empirical analysis:

(1) From empirical study perspective, it is not clear to me why the author particularly focused on Korean market. Does this market significantly different from US

market which needs either new model development or new empirical analysis? Therefore, it would be better to state the purpose of this study more clearly in Section 2.

(2) The sample period of the data spans from 2004-2013 which undergoes the financial crisis period. It would be interesting to conduct the same analysis using subsample periods, such as pre-crisis and post-crisis periods, and see whether there is a structure break in predictive ability of these variables.

(3) With respect to forecasting comparison, the author uses DM test that is useful to make pairwise comparison. It would be better to use SPA test of Hansen which is more suitable to rank a set of candidate models.