Forecasting the Daily Time-Varying European Banks Beta during the Crisis Period: Comparison between GARCH models and Kalman Filter

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Paper summary

- This paper empirically analyses the performances of four GARCH models and the Kalman Filter method in the prediction of the daily betas of major European banks during different volatile periods

- The results show the absence of a single superior model
  - Pre Crisis period $\rightarrow$ the superiority of the models depend on the bank
  - Volatile period $\rightarrow$ Kalman Filter performs the best in most cases

- The work contributes to the literature in two ways.
  - Forecast the T.V. betas of the major European banks during the crisis
  - Provide an extended comparison between the forecasting ability of the GARCH models and the Kalman Filter procedure

Comments: Paper structure

- Clear introduction where you underline the aims and the novelties of your paper, explaining the methodological approaches and the financial implication of your results.

- I personally found the central apart of the paper a bit long. All the models are really well-known in literature and so many details make heavy the structure of the paper. I would focus more on the empirical part, where your novelty is.

- The empirical part is very well-structured; you describe coherently the procedure followed and the results obtained by the MCS approach. I would add also the plots and the tables for the other countries

Comments: Methodological observations

- Why not including other recent approaches for time variation
  - <u>Kalman Filtering</u> − Gagliardini et al. (2015)
  - <u>Rolling windows</u> − Cosemans et al. (2015)
  - <u>Non-parametric</u> − Ang & Kristensen (2012)

- Within the forecasting exercise you might put beside other tests like Diebold and Mariano or Giacomini and White and see if the results change

- I would enlarge the cross-sectional dimension, considering also the United Kingdom and the United States, where the effects of the crisis are heavier. This may allow you also to investigate if there is a relationship between the performance of the model and the features of the series