

Feedback on the Preliminary Report

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1 Summary

Overall the report reads well and has most of the important contents. While the report demonstrates decent progress made in tackling the project, the current version is not complete, as some sections such as Introduction and detailed discussions of results are missing. In addition to filling in the missing parts, more effort will also be needed to make sure that the whole report is scientifically sound.

2 Comments

Below are some detailed comments:

- Introduction needs to be expanded with further motivation and details, particularly on the formulation of the research problems, discussions of the associated challenges and the approaches proposed. It would also be nice to put some plots of the market data there to visualize the nature of the time series. The results section is not quite complete (but I understand that this will be completed soon). Eventually, empirical evaluation should be completed and deepened, including both quantitative and qualitative analysis.
- The results section lacks standard performance metrics like RMSE, MAE, or log-likelihood comparison. It would be nice to include tables comparing these metrics (at least one of them) across the three forecasting methods for each dataset and maturity level. This would quantify statements about model performance rather than relying on visual plots.
- The analysis of STIBOR is missing results/plots entirely, and discussion for all datasets is minimal or absent.
- The choice of λ is fixed (e.g., 0.0609) without justification of its robustness across datasets. It would be nice to perform a sensitivity analysis or show the impact of optimizing λ per dataset or maturity.
- The inclusion of the bootstrap method adds non-parametric dimension, which is interesting, but lacks validation: there is no evidence it performs better or comparably. Can we evaluate the effectiveness of the method in terms of better capturing of heavy-tailed behavior (looking at histogram of the residuals/forecast errors) compared to Kalman filter?
- While conformal prediction theory is well-covered, the empirical effectiveness (e.g., actual coverage rates) is not shown. It would be great if we could add empirical coverage plots (e.g., percentage of times actual rates fall inside prediction intervals) and compare them to nominal levels (e.g., 90 %).
- Check for minor typos/inconsistencies across the thesis: e.g., some equations (measurement equation labeled as “??”) need fixing.