

## EC306 Written Assignment Generic Feedback 24/25:

**Feedback on your assessment will be presented in the form of your mark, your individual assessment feedback and the cumulative distribution of marks for this module across the whole cohort. You can view your mark, your marked assignment, your individual feedback and the cumulative distribution function on tabula.**

**The Department strongly recommends that you read back through your work and reflect on the markers' generic and individualised comments. Your module tutors and module leader will be happy to discuss with you, your progress with your studies in Advice and Feedback hours. However, this is not an opportunity to request a re-mark, as academic judgement cannot be challenged and the tutor will not be able to re-read your essay. Before going to Advice and Feedback hours, you should first reflect on what you could or should have done differently in the light of the written feedback/annotations on your work, together with the generic feedback provided below and be able to demonstrate this reflective process. Where you have problems understanding the material, you should seek additional and specific support in the module team's Advice and Feedback hours or in the Study Skills Sessions, where relevant.**

1) This question was generally answered well with students secure in the core skills of ARIMA modelling. Most were able to use information criteria appropriately for in-sample and potential forecast based model selection. RMSE was the popular choice for forecast comparison, and it was good to see it almost universally reported. Students with the highest marks answered on exactly the required sample and found small models performed best, AR(2) was a very good candidate, though few spotted AR(1) was also good at forecasting, even if less theoretically justified (in a Box Jenkins sense). Quite a few students lost control of the 4-step ahead forecasting test-period, including results from the covid period, which obscured how well simple model forecasted 4 periods out on the given sample. At the lower end a quite a few students forgot to take logs, which was a fundamental error.

2) This was a tough one, setting a on open question rather than a standard exercise. My idea was that you would estimate a GARCH in mean model on an interest rate, as interest rates are the credit rationing mechanism. A few students who did this received high marks. My hint was evidently a bit cryptic, and marks well up into first class were available for alternative approaches using either GARCH based or rolling measures of conditional volatility of interest rates in a 2-step estimation, with investment as the depvar in the second stage. Though there was some light abuse of the time series nature of the sample here (using future observations to generate the conditional vols which entered the second stage as regressors with date  $t$  indices) it tended to produce the same result as above, limited evidence of interest rate volatility making credit rationing more severe. A few students were

able to find transformation of the data where the hypothesis seemed more viable, which was interesting. Weak answers failed to develop/ test a clear hypothesis capable of answering the question, or contained multiple weaknesses in their time series regressions in the second stage above.

3) Straightforward: estimate a VAR, comment on lag selection, residual admissibility, Granger forecasting power and compare the RMSEs with Qu 1 results. For high marks use the results of the GC tests to try and design a VAR which could compete with the smaller models. Small models are hard to beat, but some people did, with a good combination of interest rate and investment information.

4) Always fiddly, it was good to see some clever use of the monthly data in the quarterly forecasting exercise from the strong papers. These included sensible monthly models and attention to/selection of powerful forecasting variables. Results should have been modest however, as most of the forecasting power of interest rates for output growth appears to be at longer lags than 3 months. MIDAS models could therefore do well, as they can use this information without excessive parameterisation. There were some good answers along this line. Bridging regressions were also well rewarded, especially where there was clear evidence of how the forecast updated over the quarter, which the MIDAS answers tended to forget. Weaker answers averaged the data and banged out another VAR, which demonstrated little additional skill.

Overall, a pretty good set of assignments, with some very strong scripts at the top end.

