

READ ME FILE

Title: Estimating the Effects of Monetary Policy in Australia Using Sign-restricted Structural Vector Autoregressions

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Description

This 'read me' file contains instructions about how to replicate the results in RDP 2022-09.

Data

The data are publically available and are contained in VARData.xlsx. These are obtained from a variety of sources and are described in Appendix B of the paper. Data used to plot the figures can be found in 'rdp-2022-09-graph-data.xlsx'.

Programs

The results were obtained using Matlab R2021b on a desktop computer running Microsoft Windows 10 Enterprise with an Intel Core i7-9700 CPU @ 3.00GHz, 8 cores and 128 GB RAM. The Matlab code uses the Optimization, Parallel Computing, and Statistics and Machine Learning toolboxes.¹ Note that it can take a long time to generate the results, particularly those obtained under variations of Restriction (6); for example, the results for Restriction (6) (presented in Figure 6) took about 18 hours.

To replicate the results underlying Figures 1–11 and Tables 1–3, run runall.m. This will:

- 1) Generate the results under Restrictions (1)–(6) and in the robustness exercises from Section 5 of the paper. Full results for each model are saved to a .mat file. The results underlying the figures are saved to FigureData.xlsx and the results underlying Table 3 (posterior lower probabilities) are saved to TableData.xlsx (posterior upper probabilities are also saved here).
- 2) Compute the informativeness measure under each set of restrictions (presented in Table 1) and display this in the command window.
- 3) Compute the posterior probability that zero is included within the identified set for the impact response of the cash rate under (presented in Table 2) and the posterior plausibility (described in the text of Section 3.6.1) under each set of restrictions, and display these in the command window.

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1 Researchers without access to the Optimization Toolbox can replicate the main results after replacing checkBoundedIS_Read with checkBoundedIS_GKV in mainfile.m (within the auxFunctions folder). Researchers without access to the Parallel Computing Toolbox can run the code after replacing 'parfor' with 'for' in drawQs.m (within the auxFunctions folder). Researchers without access to the Statistics and Machine Learning Toolbox could run the code after writing their own functions to draw random variables from the inverse Wishart distribution (replacing Matlab's iwishrnd function) and to compute sample percentiles (replacing Matlab's prctile function); this would require modifying mainfile.m and mainfile_proxy.m in the auxFunctions folder.