

READ ME FILE

Title: How Risky is Australian Household Debt?

Authors: Jonathan Kearns, Mike Major and David Norman

Description

This 'read me' file contains details of the code and data included in this archive that were used to generate the results in reported in RDP 2020-05. Plotting data for all figures are publically available and can be found in the spreadsheet 'rdp-2020-05-graph-data.xlsx'.

If you make use of any of these files you should clearly attribute the authors in any derivative work.

Data

The following data sources were used:

- Cross-country DTI panel data:
 - o Data obtained from a wide variety of sources. Details of these can be found in Appendix A of the paper, and on a 'metadata' tab in the spreadsheet 'stata_input.xlsx'.
- Household-level data:
 - o Obtained from ABS: '6541.0.30.001 - Microdata: Income and Housing, Australia, 2017-18'
 - o Obtained from ABS: '6540.0 - Microdata: Household Expenditure, Income and Housing, 2015-16'
 - o Obtained from ABS: '6540.0 - Microdata: Household Expenditure Survey and Survey of Income and Housing, Australia, 2009-10 Third Edition'
 - o Obtained from ABS: '6540.0 - Microdata: Household Expenditure Survey and Survey of Income and Housing, Basic and Expanded CURF, Australia, 2003-04 (Third Edition)'.
- Aggregate household debt (including and excluding offset account balances):
 - o RBA calculation, using data obtained from: ABS Cat Nos '5206.0 - Australian National Accounts: National Income, Expenditure and Product' and '5232.0 - Australian National Accounts: Finance and Wealth'; and APRA.
- Household Expenditure Measure and Henderson Poverty Line:
 - o Obtained from Melbourne Institute – not available for release.
- Aggregate interest rates ('rate_changes.xlsx')
 - o Obtained from RBA: Statistical Table 'F5 Indicator Lending Rates' – available at <https://www.rba.gov.au/statistics/tables/>. The average change in interest rates from origination to the survey date is calculated for each survey year and age of origination.

The underlying data files from the ABS and the Melbourne Institute that is used by the code referenced in the final four do files below are not included in this archive due to the terms of our access; as such, the code for these files will not run.

Code

The results reported in this RDP were generated using Stata 16.0.

Included in this archive are the following programs:

- DTI panel regression.do
- 1_setup.do
- 2_merge_datasets.do

- 3_unemployment.do
- 4_main_model.do

'DTI panel regression.do' runs the regressions reported in Section 2 of the paper. To do this, it first calls data from 'stata_input.xlsx'. To recreate the contributions data in Figures 5 and 6, use the following formula:

$$Contribution_i = \frac{\beta(\ln(i_t) - \ln(i_{t-k}))}{\ln(DTI_t) - \ln(DTI_{t-k})} (DTI_t - DTI_{t-k})$$

where β is the coefficient of variable i , t represents the time period and DTI is the debt-to-income ratio.

The remaining four programs are used to conduct the stress testing in Section 3 of the paper. The first program defines all the parameters and assumptions, imports the relevant data, as well as run the other programs when necessary. After running each of the other programs, the first program also exports the relevant output for the figures in the paper. The second program extracts the relevant household-level and loan-level data from the ABS micro data (not provided in this documentation). The third program extracts the relevant person-level variables and runs the employment loss model. The fourth program merges the data sources, runs the stress testing model and exports the results. When two variables have the same name (other than the final suffix '_'), those with '_' represent post-shock values and those without '_' represent pre-shock values.

28 August 2020