

## READ ME FILE

**Title:** Credit Spreads, Monetary Policy and the Price Puzzle

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### Description

This 'read me' file contains details of the code and data used in the RDP 2020-01. Relevant files are contained within 'rdp-2020-01-supplementary-information.zip'. All code files and data are available to the public.

### Data

For most data and their sources, see Appendix C of the Paper.

#### *Australian Bureau of Statistics (ABS)*

- Consumer Price Index (CPI): All Groups: Index, seasonally adjusted, quarterly (ABS Cat No 6401.0 'Consumer Price Index, Australia')
- CPI - Trimmed Mean Excl Interest and Tax Changes: Index, seasonally adjusted, quarterly (ABS Cat No 6401.0 'Consumer Price Index, Australia')
- Gross Domestic Product (GDP): Chain Volume, \$m, seasonally adjusted, quarterly (ABS Cat No 5206.0 'Australian National Accounts: National Income, Expenditure and Product')
- Unemployment Rate: %, seasonally adjusted, monthly (ABS Cat No 6202.0 'Labour Force, Australia')

#### *Reserve Bank of Australia (RBA)*

- Non-financial corporate BBB-rated bonds – Spread to AGS – 10 year target tenor (RBA statistical tables: F3 Aggregate Measures of Australian Corporate Bond Spreads and Yields: Non-Financial Corporate (NFC) Bonds)

#### *Figure Data*

Data for all figures are publically available and are provided in 'rdp-2020-01-graph-data.xls'.

### Code

The results reported in this RDP were generated using R version 3.5.1. To generate all results, run the master file '000\_run\_all.R'.

This file will run through the individual files in order. The final transformed data required to run the master file is provided in folder 'Data', files 'data\_final.Rdata' or 'data\_final.xlsx'. Results shown in figures are exported in xlsx files, results in tables are provided in RStudio using the 'stargazer' package.

#### *Collect data*

File	Description	Output
00_collect_data.R and 00# ... #a ... e	[Main file will only run for RBA users due to internal functionality] Collect and transform data on cash rate, RBA forecasts, US data from FRED, Australian lending and money market rates	data_final.Rdata and data_final.xlsx

#### *Plot descriptive data series*

File	Section in paper and description	Output
01_plot_data.R	Section 2: Collects and exports RBA forecasts and measures of credit spreads and uncertainty	Figures 2, 3 and 4

*Estimate monetary policy rules and obtain policy shocks*

<b>File</b>	<b>Section in paper and description</b>	<b>Output</b>
02a_rr_regression.R	Section 3.1: Estimates Romer and Romer (2004, RR) type regressions for the Bishop and Tulip (2017, BT) specification and the credit spreads-augmented monetary policy rule. Plot and export BT and BT-CS shock series.	Table 1 and Figure 6, Shocks for Section 5
02b_rr_regression_anticipation_effects.R	Section 3.2: Estimates anticipation of BT and BT-CS shocks by financial markets and purge shock series of anticipation. Plot and export unanticipated BT and BT-CS shock series.	Table 3, Figures 5 and 8, Shocks for Section 5
02c_rr_regression_credit_spreads.R	Section 3.2: Estimates RR-type regressions for BT-specification and credit-spreads augmented models, augmented by the expected cash rate change from financial market data.	Table 2
02d_rr_regression_subsample.R	Section 6.2: Replicates 02a_rr_regression.R for various sub-samples and purges resulting RR-type shocks of financial market expectations.	Table 7, Shocks for Section 5
02e_rr_regression_alternative.R	Appendix D: Estimates variations of RR-type regressions with alternative independent variables.	Table D1, Shocks for Appendix D

*Evaluate predictive content of credit spreads for RBA forecast errors*

<b>File</b>	<b>Section in paper and description</b>	<b>Output</b>
03a_fc_err_cpii.R	Section 4.1: Evaluates predictive content of individual credit spreads and uncertainty measures for the Bank's 4-quarter inflation forecast errors.	Table 4
03b_fc_err_cpii_allhor.R	Section 4.1: Evaluates predictive content of individual credit spreads and uncertainty measures for the Bank's 1 to 8-quarter inflation forecast errors	Table D2
03c_fc_err_ur_allhor.R	Section 4.2: Evaluates predictive content of individual credit spreads and uncertainty measures for the Bank's 1 to 8-quarter unemployment forecast errors	Table 5
03d_fc_err_gdp_allhor.R	Section 4.2: Evaluates predictive content of individual credit spreads and uncertainty measures for the Bank's 1 to 8-quarter GDP forecast errors	Table 6
03e_fc_err_cpii_exgfc.R	Section 6.2: Replicates 03a_fc_err_cpii.R for various sub-samples.	Table 8

*Estimate the effect of monetary policy on inflation, unemployment and GDP*

<b>File</b>	<b>Section in paper and description</b>	<b>Output</b>
04a_svar_cr_vs_bt.R	Section 1: Estimates SVARs with cash rate or original BT shock as policy variables	Figure 1
04b_svar_bt_vs_btcs.R	Section 5.1: Estimates SVARs with original BT or BT-CS shocks as policy variables	Figure 7
04c_svar_unant.R	Section 5.1: Estimates SVARs with unanticipated BT or BT-CS shocks as policy variables	Figure 9
04d_svar_fincon.R	Section 6.1: Estimates SVARs with original BT or unanticipated BT-CS shocks as policy variables, and domestic credit spreads as additional endogenous variables	Figure 10
04e_svar_robust.R	Section 6.1: Estimates various SVAR specifications with original BT or unanticipated BT-CS shocks as policy variables, including SVARs with 2 or 8 lags, different Cholesky ordering, and additional control variables	Figure D1
04f_svar_altbase.R	Appendix D: Estimates SVARs with original BT or unanticipated BT-CS shocks as policy variables from the alternative RR policy rule from '02e_rr_regression_alternbase.R'.	Figure D3
04g_svar_btcs.R	Appendix D: Estimates SVARs with original BT or BT-CS shocks as policy variables, with individual credit spreads accounted for in the RR policy rule	Figure D4
05a_lp_base.R	Appendix D: Estimates impulse responses from Local Projections with original BT or unanticipated BT-CS shocks as policy variables	Figure D2
05b_lp_ex_gfc.R	Section 6.2: Estimates impulse responses from Local Projections with original BT or unanticipated BT-CS shocks as policy variables, estimated over a sample excluding the GFC episode	Figure 11

28 January 2020