READ ME FILE

Title: Identifying Repo Market Microstructure from Securities Transactions Data

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Description

This 'read me' file describes the code and data used in RDP 2018-09. Readers interested in understanding or using the repo detection algorithm need only look at 'repo detection algorithm FUNCTIONS.R' and 'repo detection algorithm RUN CODE.R'. The rest of the materials relate to the figures and tables provided in the paper. Some familiarity with R is assumed.

If you use any of this code (or more generally, ideas presented in the paper), please cite the author.

The R code was run on R version 3.4.1 (64 bit) with RStudio Desktop version 1.0.143. The Stata code was run on Stata 13.0.

Code files (available)

1. 'repo detection algorithm FUNCTIONS.R'
   - Contains the repo detection algorithm, in the form of a function labelled 'repo.alg.F', and detailed descriptions of each of its components.
2. 'repo detection algorithm RUN CODE.R'
   - Provides an example of running the repo detection algorithm, using randomly generated 'dummy' transactions data. Also provides examples of analysing the algorithm (dummy) output, by generating a column of Table 1, a column of Table 2, and turning the algorithm output and transactions data into a single dataset of repo data. This script reads in 'repo detection algorithm FUNCTIONS.R' and 'Garvin (2018) tables etc FUNCTIONS.R'.
3. 'Garvin (2018) tables etc FUNCTIONS.R'
   - Provides the functions that are used for generating the tables and figures in RDP 2018-09.
4. 'Garvin (2018) tables etc RUN CODE.R'
   - Provides the code that runs the functions in 'Garvin (2018) tables etc FUNCTIONS.R' to generate the data. Also provides some further 'dummy' objects as format examples of some of the arguments used by 'Garvin (2018) tables etc FUNCTIONS.R' – this part first requires running 'repo detection algorithm RUN CODE.R'. Reads in 'Garvin (2018) confidential R objects.R' – a script containing confidential data that is not available to readers.
5. 'Garvin (2018) regressions Stata code.do'
   - Provides the Stata code used to generate Tables 9 and 10 and Figure 11. Reads in data generated by running 'Garvin (2018) tables etc RUN CODE.R'.

Code files (unavailable – confidential)

6. 'Garvin (2018) confidential R objects.R'
   - Reads and transforms confidential data used in 'Garvin (2018) tables etc RUN CODE.R'.

Data (available)

1. 'cashrate.csv'
   - Daily data on the cash rate and a dummy variable for days a policy decision was made.

Data (unavailable – confidential)

2. Eight datasets containing the securities transactions for each of the eight sample windows. Obtained from ASX. These datasets are in the same format as the dummy transactions data generated by 'repo detection algorithm RUN CODE.R'.
3. Eight datasets aligning ISINs with issuer codes for each sample window. Obtained from ASX.
4. Eight datasets aligning Austraclear account IDs with account names for each sample window. Obtained from ASX.
5. APRA data as described in Section 4 and formatted as input for 'Garvin (2018) tables etc RUN CODE.R'. These data come from the ARF 320.5 and RRF 320.5 prudential reporting forms.
6. AGS and SGS mid close-price data covering the sample windows from 2012 to 2015. These are sources from RBA and Yieldbroker.

Figure data

Figure data is provided for Figures 2, 3, 4, 6, 7, 8, 9, 11 and 13 in 'rdp-2018-09-graph-data.xlsx'.

Figure data for Figures 1, 5, 10 and 12 are not available due to confidentiality.