Macroprudential Regulation, Quantitative Easing, and Bank Lending

Andrea Orame, Rodney Ramcharan, and Roberto Robatto

Review of Financial Studies

Data and code files

This file describes the data and code used in our paper "Macroprudential Regulation, Quantitative Easing, and Bank Lending". There are two sets of code files. The first 21 Stata do-files prepare the datasets that are then used later to estimate the results in the paper. Then, each of the table or figure in the paper is estimated or constructed using a do-file whose name is associated with the table or figure. The do-file `00_master.do` runs all the files, save the estimates and the pictures in *.ster and *.gph format, respectively, and converts them in *.xlsx and *.jpg.

We include the dataset of the monetary policy shock, which is based on Altavilla et al. (2019). We are not allowed to share all the other data, but in line with the Code Sharing Policy of the Review of Financial Studies (as of July 2020), we include pseudo-data sets with randomly generated data to illustrate the format. The code uses 46 (pseudo-)datasets as inputs, which are provided in the folder `pseudo_input`. The code has been screened to make sure that no confidential information has been released.

About the enumerated 21 do-files:

- Files with the "2015" suffix prepare the datasets to analyze the 2015 PSPP announcement.
- Files with the "2019" suffix prepare the datasets to analyze the 2019 PSPP announcement.
- Files with the "MONPOL" suffix prepare the datasets to analyze the other monetary policy shocks.
- Files with the "PLACEBO" suffix prepare the datasets to run the placebo test in the appendix.

Next, we provide more details about each of the 21 do-files that prepare the datasets:

- `01_auxiliarydatasets.do`: Stata do-file to import total assets and customer deposits data. Input data files:

  - assets.sas7bdat (total assets);
  - depo.sas7bdat (customer deposits).
- 02_auxiliarydataset2019_1.do (and 2015): Stata do-file to set up several datasets. Input data files:
  - type2019.sas7bdat and type.sas7bdat (bank type, e.g., joint stock company, mutual bank);
  - gru2019.sas7bdat and gru.sas7bdat (map of the groups);
  - fs2019.sas7bdat and fs.sas7bdat (cash);
  - netinterbank2019.sas7bdat and netinterbank.sas7bdat (data to compute the net interbank position as in Bottero et al. (2022): interbank loans and deposit with a maturity of up to one week);
  - capital2019.sas7bdat and capital.sas7bdat (capital position);
  - comprov2019.sas7bdat and comprov.sas7bdat (data to map municipalities into provinces).
- 03_auxiliarydataset2019_2.do (and 2015): Stata do-file to define the sample, compute several pre-announcement variables (including exposure to PSPP), and import data on the amount of money borrowed from the ECB. Main input data files:
  - bloans2019.sas7bdat and bloans.sas7bdat (credit register data);
  - isin2019.sas7bdat and isin.sas7bdat (banks' security holdings);
  - refin2019.sas7bdat and refin.sas7bdat (amount borrowed from the ECB).
- 04_auxiliarydataset2019_3.do (and 2015): Stata do-file to import Initial Information Service (IIS) data and check out if the loans has been granted of rejected. Main input data files:
  - bloans2019long.sas7bdat and bloans.sas7bdat (credit register data);
  - iis2019.sas7bdat and iis.sas7bdat (IIS data).
- 05_auxiliarydataset2019_4.do (and 2015): Stata do-file to import security price data. Input data files:
  - isinprices2019.sas7bdat and isinprices.sas7bdat (security price data).
- 06_auxiliarydataset2019_5.do (and 2015): Stata do-file to compute capital gains. The code uses datasets already produced with other do-files.

- 07_auxiliarydataset2019_6.do (and 2015): Stata do-file to import credit register data with unencrypted firm identification numbers and information about their credit risk and size. Input data files:
  - bloansn2019.sas7bdat and bloansn2015total.sas7bdat (unencrypted credit register data);
  - cerveds2019.sas7bdat and cerveds2015.sas7bdat (firms' credit risk and size data).
- 08_auxiliarydataset2019_7.do (and 2015): Stata do-file to set up a dataset at the bank-province level. Input data files:
  - bloans2019.sas7bdat and bloans.sas7bdat (credit register data);
- SA_satellite2019.do: Stata do-file to set up several datasets. Main input data files:
  - cbabser2019.sas7bdat (issuers of covered bonds and asset-backed securities);
  - isin2019.sas7bdat (banks' security holdings);
  - Dati lavorati 1905_06_07.xlsx (data about banks' reserves);
  - ecbdepo.sas7bdat (deposits at the ECB);
- SA_satellite2015.do: Stata Do-file to set up several datasets. Main input data files:
  - cbabser.sas7bdat (issuers of covered bonds and asset- backed securities);
  - isin.sas7bdat (banks' security holdings);
  - tltroauction.sas7bdat (ECB borrowing with a residual maturity greater than two years);
  - ecbdepo.sas7bdat (deposits at the ECB);

- 16_auxiliarydatasetsMONPOL_1: Stata do-file to set up several datasets. Input data files:
  - typeover.dta (bank type, e.g., joint stock company, mutual bank,...);
  - gruover.dta (map of the groups);
  - assets.sas7bdat (total assets);
  - refin.sas7bdat (borrowing from the ECB);
  - ecbdepo.sas7bdat (deposits at the ECB);
  - cashover.dta (cash).
- 17_auxiliarydatasetsMONPOL_2: Stata do-file to import banks's securities data. Input data files:
  - portfolioover.dta (banks' security holdings).

- `18_auxiliarydatasetsMONPOL_3`: Stata do-file to compute banks' exposure to monetary policy shocks and condense all control variables in one dataset. The code uses datasets already produced with other Do-files.
- `19_auxiliarydatasetsMONPOL_4`: Stata do-file to import two datasets. Input data files:
  - `DS_bil_con.csv` (capital position);
  - `MonPolShocks.xlsx` (Euro Area Monetary Policy Event-Study Database, see Altavilla et al., 2019).
- `20_auxiliarydatasetsPLACEBO_1`: Stata do-file to import several datasets. Input data files:
  - `typeplacebo.sas7bdat` (bank type, e.g., joint stock company, mutual bank);
  - `gruplacebo.sas7bdat` (map of the groups);
  - `fsplacebo.sas7bdat` (cash);
  - `ecbdepo.sas7bdat` (deposits at the ECB);

- `21_auxiliarydatasetsPLACEBO_2`: Stata do-file to define the sample, compute several pre-announcement variables (including exposure to PSPP), and import data on the amount of money borrowed from the ECB. Main input data files:
  - `bloans.sas7bdat` (credit register data);
  - `isinsplacebo.sas7bdat` (banks' security holdings);
  - `refin.sas7bdat` (borrowing from the ECB);

The following user-defined programs do some routine works throughout the codes presented above:

- `RO_creditregister.do` imports raw credit register data for a given time window and clean the data;
- `RO_labels.do` assigns data labels to the months around the PSPP announcement date;
- `RO_tdummies.do` creates time dummies;
- `RO_tdintera.do` creates interaction variables between a set of given variables and time dummies.