

Guidelines to the replication codes

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Unconventional Monetary Policy, Fiscal Side Effects and Euro Area (Im)balances

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The analysis in the paper "Unconventional Monetary Policy, Fiscal Side Effects and Euro Area (Im)balances" builds on a large number of estimated VAR models, which differ for the variables included in the model as well as for the period and the instrument employed for the identification. In addition, the results displayed in the paper report the comparison of the effects across different monetary regimes, rather than just displaying the results for one monetary regime at the time. To accommodate for all these differences, the analysis builds on the following three .m files:

1. *A_ComputeShocksPanel.m*: loads data from the folder *Data*, computes the monetary instrument for the selected monetary phase of interest and stores the instrument in the folder *Temporary*. It also stores the variations of all daily variables around the events used, required for the mixed-frequency identification approach used in the paper;
2. *B_Organize_Data.m*: loads data from the folders *Data* as well as the series just created from *A_ComputeShocksPanel.m* and organizes the full dataset, before saving it in *Temporary*;
3. *C_RunVARs.m*: runs the VAR models for the variables of interest and saves, in *Temporary*, all the statistics required to plot impulse responses.

The figures in the paper can then be generated using the following two .m files:

1. *D_AllCodesInARow.m*: it is in this file that one selects

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- the baseline and marginal variables added in the VARs;
- whether the analysis is done for phase 1 or phase 2 of unconventional monetary policy, or for the conventional period.

The code *D_AllCodesInARow.m* runs *A_ComputeShocksPanel.m* in order to generate the relevant instrument, then *B_Organize_Data.m* in order to update the data for the variations in the daily variables for the events used, and then *C_RunVARs.m* in order to run the VAR models. *C_RunVARs.m* is run twice, first for only the baseline VAR and then for all marginal VARs. All relevant statistics are saved in *Temporary*. Depending on the part of the code that is not commented out in the code, the analysis is done either twice, i.e. once for phase 1 and one for phase 2 of unconventional monetary policy, or three times, i.e. once for each unconventional monetary policy phase and once for each conventional period;

2. *E_CombineFigures.m*: it uploads the files just generated through *D_AllCodesInARow.m* and generates the figures comparing the results.

We leave the codes such that they automatically generate Figures 1 and 3 of the paper, which is done by simply executing *D_AllCodesInARow.m* and then *E_CombineFigures.m*. To generate Figures 2, 4-8, comment in the corresponding selection of marginal variables at the beginning of *D_AllCodesInARow.m*, then run it, and then run *E_CombineFigures.m*. To generate Figures 9-11, which show the comparison to the conventional period, comment in the section of *D_AllCodesInARow.m* that runs the analysis for the conventional part, and then adjust “what_to_show” in *E_CombineFigures.m*.

The codes run on a 2017a version of Matlab.

Applied papers who need an instrument to identify ECB monetary policy shocks can use the ones generated in this paper. For convenience, we save and report the instruments of our paper in the separate file *MonetaryPolicyInstruments_ECB.xlsx*.