

Replication Instructions for “A Model of Monetary Policy Shocks for Financial Crises and Normal Conditions”^{*}

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Notes

The software versions used for the analysis in the paper were MATLAB R2014b and Dynare version 4.4.2.

Figure 1

Figure 1 was created using Dynare. Open MATLAB and after adding the necessary path to execute Dynare (i.e. `addpath c:\dynare\4.4.2\matlab`), change the directory to `...\Figure1Table1` and then run the `plot_mp_irf.m` script to generate Figure 1.

Figure 2

Open MATLAB and change the directory to `...\Figure2` and then run the `var_setup.m` script to generate Figure 2.

Figure 3

Open MATLAB and change the directory to `...\Figure3` and then run the `var_setup.m` script to generate Figure 3.

^{*}The views expressed herein are solely those of the authors and do not necessarily reflect the views of the Federal Reserve Bank of Kansas City or the Federal Reserve System.

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Figure 4

Open MATLAB and change the directory to `...\Figure4` and then run the `var_setup.m` script to generate Figure 4.

Figure 5

Open MATLAB and change the directory to `...\Figure5` and then run the `var_setup.m` script to generate Figure 5.

Figure 6

Open MATLAB and change the directory to `...\Figure6` and then run the `var_setup.m` script to generate Figure 6.

Figure 7

Open MATLAB and change the directory to `...\Figure7` and then run the `var_setup.m` script to generate Figure 7.

Figure 8

Open MATLAB and change the directory to `...\Figure8` and then run the `var_setup.m` script to generate Figure 8.

Figure 9

Figure 9 was created using Dynare. Open MATLAB and after adding the necessary path to execute Dynare (i.e. `addpath c:\dynare\4.4.2\matlab`), change the directory to `...\Figure9` and then run the `get_3d_LiquidityEffect.m` script to generate Figure 9.

Figure 10

Open MATLAB and change the directory to `...\Figure10` and then run the `var_setup.m` script to generate Figure 10.

Table 1

Table 1 was created using Dynare. Open MATLAB and after adding the necessary path to execute Dynare (i.e. `addpath c:\dynare\4.4.2\matlab`) change the directory to `...\Figure1Table1` and edit lines 34-39 of `match_mp_irf.m` to specify the form of the interest rate rule to be matched by a money growth rule (the commented values in lines 34-39 define the rules used in the paper). After specifying the interest rate rule, execute `match_mp_irf.m`. After the code finishes, the resulting parameter values of the money growth rule are printed to the screen. The values shown in Table 1 can be recovered by cycling through the various interest rate rules and executing `match_mp_irf.m` for each calibration.

Table 2

Open MATLAB and change the directory to `...\Table2` and then run the `var_setup.m` script to generate the values shown in Table 2. The values printed to the screen are as follows, for each variable: The first row is the point estimate of the FEVD, the second row is the lower bound of the 90% probability interval (the 5th percentile), and the third row is the upper bound of the 90% probability interval (the 95th percentile). The first column shows these values for the 4-quarter-ahead horizon, the second column shows these values for the 8-quarter-ahead horizon, and the third column shows these values for the 20-quarter-ahead horizon.

Table 3

Open MATLAB and change the directory to `...\Table3` and then run the `var_setup.m` script to generate the values shown in Table 3. The values printed to the screen are as follows, for each sample: The first row is the reaction to growth in real GDP, the second row is the reaction to growth in the GDP deflator, the third row is the reaction to growth in the commodity price index, and the fourth row is the reaction to the sum of growth in the GDP deflator and growth in the commodity price index (i.e. the total response to the growth of all nominal variables). The first column is the lower bound of the 90% probability interval (the 5th percentile), the second column is the point estimate, and the third column is the upper bound of the 90% probability interval (the 95th percentile).