

Guide to running model simulations shown in Figures 7-13 of “Labor Force Participation and Monetary Policy in the Wake of the Great Recession” by Erceg and Levin.

The model simulations are run using MATLAB, and use AIM to solve the log-linearized model. The simulations are run using MATLAB shock macros that use the nomenclature “el_june2014_figxx.m” to generate Figure xx in the paper (xx = 7 to 13).

Required Files. The specific files listed below are required to run the shock macros:

searchn1a: Key model file with the log-linearized equations. This is written as a text file in modelez, and must be “parsed” into matrix notation (using the AIM parser) that can be read by MATLAB. All of the Figures except Figure 10 use this model file.

searchn2: Model file used in Figure 10 for the case of commitment-based policy.

parm_searchn1a.m: Main parameter file that describes parameters and sets most at their benchmark values (some parameters are “commented out” and specified in the individual macros for the figures).

def_searchn1.m: Defines a composite parameter.

solv_searchn1a: Utility code which calls on AIM to solve the model using the parameter file “parm_searchn1a.m” and definitions file “def_searchn1.m” as inputs, and also the model file “searchn1a.” The model is represented in state-space form.

solv_searchn2: Same utility code but solves the model allowing for commitment-based policy specified in “searchn2.”

calc_impulses: utility program to compute impulse responses using the state space form of the model.

calc_impulses_sequence: slight variation of calc_impulses that reports the response to a sequence of unexpected innovations (used only in Figure 7).

In addition to these files, you will need the utility files in the Utilities directory (e.g., SimulateModelAIM.m, etc) to run simulations that impose the ZLB constraint. This code was kindly supplied by Jesper Linde.

Specific Instructions to run figures.

Before running the macros, you should:

Place the files above in the appropriate subdirectory, e.g., c:\modelm\lfpr

Modify the search path in the solv_searchn1a to specify this subdirectory.

Load the utility files used to solve the model subject to the zero lower bound on a subdirectory of the one you have specified for these program files, e.g., c:\modelm\lfpr\Utilities.

To run the figures, just type the name of the macro calling the figure into the MATLAB command line. Thus, to display Figure 8, just type "run el_june2014_fig8.m."