

Readme for Matlab code of

“A Macroeconomic Model with a Financial Sector”

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To get started, save the four Matlab files (*solve_equilibrium.m*, *evntfcn.m*, *investment.m* and *fnct.m*) in a folder, and change Matlab's current directory to the folder that contains all the saved files.

The main program is *solve_equilibrium*: to compute equilibrium type *solve_equilibrium.m* in the command window and press enter. The file will then produce two figures:

- Figure 1 shows important equilibrium quantities such as q , ψ , drift and volatility of η , etc.
- Figure 2 shows expert and household utility within the model.

To compute the equilibrium under a different set of parameters change line 14 of *solve_equilibrium.m*, in which parameter values are assigned. Investment adjustment cost parameter can be modified directly in the function *investment.m*.

The program can be easily modified to solve **extensions** of the model.

- *fnct.m* is a key function that programs the set of equations to compute the derivatives of θ and q using the equations from Proposition 2 of the paper.
- *solve_equilibrium.m* operates by searching for initial conditions near $\eta = 0$.
- *evntfcn.m* is used to determine when integration of the differential equations should be terminated for a given set of initial conditions, and how the initial conditions should be modified on the next iteration.