# README for Codes for “Transmission of Monetary Policy with Heterogeneity in Household Portfolios” by Ralph Luetticke

## Software requirements

Matlab code runs on Linux (18.04.01 Ubuntu) with Matlab R2018b and Dynare 4.6.
Minimum required Matlab version is R2018b.
Stata code runs on Windows with Stata 14.

## Public_code

The folder public_code contains all Matlab code to reproduce the model results in the paper. The code runs on Linux (Matlab mex-files are only compiled for Linux) and calls DYNARE (which needs to be in the Matlab path). The code runs on either the Matlab Desktop version or by running ‘matlab –nodesktop < run.m’ in the terminal.

Run the script run.m in the folder “main text” to reproduce table 3 and figures 1, 2, 3, 4, 5, 7 in the paper. You can find the figures and tables in the subfolder “saves”.

/public_code/main text:
HANK-1
HANK-2
RANK
plot_all_irfs.m
printpdf.m
run.m
saves

Run the script run.m in the folder “appendix material” to reproduce all tables and figures in the appendix. You can find the figures and tables in the subfolder “saves”.

/public_code/appendix material:
HANK-1
HANK-2
HANK-2_ghh
HANK-2_liquid
HANK-2_profits
HANK-2_real
HANK-2_scarce
run.m
saves

## Public_empirics

The folder public_empirics contains all Matlab code and data to reproduce the empirical results in the paper.

Optional: First, run the stata file Master_file.do in the folder “stata” to produce the micro portfolio data from the Survey of Consumer Finances.

This is not necessary because this output is already provided as csv files: SCFdata_stata_all, SCFdata_stata_resi_all, SCFdata_stata_resi_young, SCFdata_stata_resi_middle, SCFdata_stata_resi_old.

All other aggregate data are saved as excel files in the folder "data". See below for the data availability statement, which contains the precise data sources.

Run the script run.m in the folder to reproduce figures 6 and 7 in the paper. You can find the figures in the subfolder "saves".

Run the script run.m in the folder "appendix" to reproduce all figures and tables in the appendix. You can find the figures and tables in the subfolder "saves".

appendix
data
load_Gommeetal.m
local_projections_aggr_quarterly.m
local_projections_cross_SCF.m
run.m
saves
stata

## List of Figures and Codes to Produce Them

### Main text

| | |
|---|---|
| Figure 1 | /public_code/main text/run.m |
| Figure 2 | /public_code/main text/run.m |
| Figure 3 | /public_code/main text/run.m |
| Figure 4 | /public_code/main text/run.m |
| Figure 5 | /public_code/main text/run.m |
| Figure 6 | /public_empirics/run.m |
| Figure 7 | /public_code/main text/run.m |
| | /public_empirics/run.m |

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|---|---|
| Table 1 | Model: values in struct "target" in SS_BASELINE.mat<br>Data: See Table 2 in Appendix |
| Table 2 | values in struct "mpar" in SS_BASELINE.mat |
| Table 3 | /public_code/main text/run.m |

### Appendix

| | |
|---|---|
| Figure 1 | /public_code/appendix_material/run.m |
| Figure 2 | /public_code/appendix_material/run.m |
| | /public_empirics/appendix/run.m |
| Figure 3 | /public_empirics/appendix/run.m |
| Figure 4 | /public_empirics/appendix/run.m |
| Figure 5 | /public_empirics/appendix/run.m |

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|---|---|
| Figure 6 | /public_empirics/appendix/run.m |
| Figure 7 | /public_code/appendix_material/run.m |
| Figure 8 | /public_code/appendix_material/run.m |
| Figure 9 | /public_code/appendix_material/run.m |
| Figure 10 | /public_code/appendix_material/run.m |
| Figure 11 | /public_code/appendix_material/run.m |
| Figure 12 | /public_code/appendix_material/run.m |
| Figure 13 | /public_code/appendix_material/run.m |
| Figure 14 | /public_code/appendix_material/run.m |
| Figure 15 | /public_code/appendix_material/run.m |
| Figure 16 | /public_code/appendix_material/run.m |
| Figure 17 | /public_code/appendix_material/run.m |
| Figure 18 | /public_code/appendix_material/run.m |
| Figure 19 | /public_code/appendix_material/run.m |
| Figure 20 | /public_code/appendix_material/run.m |
| Figure 21 | /public_code/appendix_material/run.m |

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|---|---|
| Table 1 | /public_code/appendix_material/run.m |
| Table 2 | Model: values in struct "target" in SS_BASELINE.mat |
| | Data: /public_empirics/appendix/run.m |

## Data Availability Statements

| **Data file** | **Source** | **Provided** |
|---|---|---|
| public_empirics/data/AAA10Y.xlsx | Federal Reserve Bank of St. Louis, Moody's Seasoned Aaa Corporate Bond Yield Relative to Yield on 10-Year Treasury Constant Maturity [AAA10Y], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/AAA10Y, March 3, 2020. | no |
| public_empirics/data/FEDFUNDS.xlsx | Board of Governors of the Federal Reserve System (US), Effective Federal Funds Rate [FEDFUNDS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/FEDFUNDS, March 3, 2020. | yes |
| public_empirics/data/Gommeetal_usdata.xlsx | Gomme, P., Ravikumar, B., & Rupert, P. (2011). The return to capital and the business cycle. Review of Economic Dynamics, 14(2), 262-278.<br>Obtained via:<br>https://paulgomme.github.io/usdata/usdata.csv, March 3, 2020 | yes |
| public_empirics/data/Monetarydat.xlsx | Ramey, V. A. (2016). Macroeconomic shocks and their propagation. In Handbook of macroeconomics (Vol. 2, pp. 71-162). Elsevier.<br><br>Obtained via:<br>https://econweb.ucsd.edu/~vramey/research/Ramey_HOM_monetary.zip, March 3, 2020 | yes |
| public_empirics/data/TimeSeriesQuarterly.xlsx | Various aggregate time series obtained from the Federal Reserve Bank of St. Louis and the Flow of Funds obtained from the "Financial Accounts of the United States" (Z.1) data released by the Board of Governors of the Federal | yes |

| | | |
|---|---|---|
| | Reserve System. See Appendix 4 for a description of individual time series used in the estimations.<br><br>https://fred.stlouisfed.org/ and https://www.federalreserve.gov/releases/z1/default.htm<br><br>Obtained, March 3, 2020 | |
| public_empirics/data/ Wieland_RR_MPshocks.mat | Wieland, J. F., & Yang, M. J. (2020). Financial dampening. Journal of Money, Credit and Banking, 52(1), 79-113.<br><br>Obtained via: https://sites.google.com/site/johannesfwieland/Monetary_shocks.zip?attredirects=0, March 3, 2020 | Yes |
| public_empirics/stata/data/SCF_final_1983_2007.dta | Board of Governors of the Federal Reserve System (U.S.). 2003. Survey of consumer finances. Washington, D.C.: Board of Governors of the Federal Reserve System.<br><br>Obtained via: https://www.federalreserve.gov/econres/scfindex.htm, March 3, 2020 | Yes |