Sovereign Debt Ratchets and Welfare Destruction Replication Code Readme

Peter DeMarzo[*] Zhiguo He[†] Fabrice Tourre[‡]

January 5, 2023

[*]Stanford University and NBER; pdemarzo@stanford.edu
[†]University of Chicago and NBER; zhiguo.he@chicagobooth.edu
[‡]Copenhagen Business School; ft.fi@cbs.dk

In this document, we discuss the replication code for the various figures in the main article as well as in the online appendix. Our calculations use the software R; it was tested on versions 3.5.3 and 4.1.2 without any notable issues. The computational time required to run the entire code is approximately 24 hours; this time-frame is relevant for a 2GHz CPU with a RAM of 16GB. Our code is structured as follows:

1. The file "Model_Inputs.R" is an execution file that needs to be run in order to generate the relevant figures. It contains all the parameter inputs for the computations of all the figures in the article. The code, when executed, creates various sub-folders, in which all key results and figures are stored. Two folders are of particular interest:

   - the "paper_plots" folder will contain all the .eps files used for the figures in the main article;
   - the "appendix_plots" folder will contain all the .pdf files used for the figures in the online appendix.

   The structure of this file is relatively straightforward; after installing the required R packages, the code is appropriately labeled and goes through various sections of the paper to produce all the necessary calculations and plots.

2. The file "Sovereign_Debt_Functions.R" contains all the functions required for the computations of the article. This file is not an execution file but is necessary since it is used by the execution file.

Both files need to be saved into a common folder before launching the execution file "Model_Inputs.R". The R code is richly commented, so as to allow any person attempting to replicate the authors' calculations to understand the intermediate steps taken before obtaining the desired results. For any questions related to the code, please reach out to the authors.