Replication Guide for "Asset Safety versus Asset Liquidity"

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*Matlab R2017a and Stata 16 were used in 64-bit Windows 10 at the time of submission.

Figures 2–8, 10, and 11

Open the Matlab function `svl_jpe_figures.m` in the folder "Sections 3 and 4, Appendix B2" and you will see the following commented codes:

```
function svl_jpe_figures()
% Sections 3 & 4, Appendix B.2

clear
clc
close all

[ell,theta,sigma,pi,rho,eta,i,M,A,B]=parameters();

% figure2(ell,theta,sigma,pi,rho,eta,i,M,A,B)    %   6.046038 seconds
% figure3(ell,theta,sigma,pi,rho,eta,i,M,A,B)    %   4.795128 seconds
% figure4(ell,theta,sigma,pi,rho,eta,i,M,A,B)    %  27.073627 seconds
% figure5(ell,theta,sigma,pi,rho,eta,i,M,A,B)    % 308.779134 seconds
% figure6(ell,theta,sigma,pi,rho,eta,i,M,A,B)    % 323.064565 seconds
% figure7(ell,theta,sigma,pi,rho,eta,i,M,A,B)    %  51.461650 seconds
% figure8(ell,theta,sigma,pi,rho,eta,i,M,A,B)    % 297.998642 seconds
% figure10(ell,theta,sigma,pi,rho,eta,i,M,A,B)   % 859.837159 seconds
% figure11(ell,theta,sigma,pi,rho,eta,i,M,A,B)   %  27.315433 seconds
```

To plot a figure, uncomment the corresponding line and run the function. The subfunction figure# plots Figure #. The number next to each subfunction indicates the estimated computation time to run that subfunction. These subfunctions are defined below the above lines, along with the other subfunctions called by these subfunctions.

In this folder, there are eight other function files. These are user-defined functions called by the main function `svl_jpe_figures.m`. Six of them (`fminconstr.m`, `fminconstr0.m`, `fminconstr1.m`, `sys.m`, `sys0.m`, and `sys1.m`) are for computation, and the other two (`parseArgs.m` and `subaxis.m`) are for plotting figures.

Figure 9

Go to the folder "Section 5\Data\Section 5.1" and you will find two folders. The Stata do-file `CORP.do` in the folder "Corporate Bond" plots the top panel of Figure 9 using the data in `CORP.xlsx`, and the Stata do-file `MUNI.do` in the folder "Municipal Bond" plots the bottom panel of Figure 9 using the data in `MUNI.xlsx`. In each folder, the folder "Raw Data" contains the originally downloaded data, along with the text document `sources.txt` that describes the sources of the data.

Figures 12 and 13

Open the Matlab function `svl_jpe_figures_app.m` in the folder "Appendix C" and you will see the following commented codes:

```
function svl_jpe_figures_app()
% Appendix C

clear
clc
close all

[ell,theta,sigma,pi,rho,eta,i,M,A,B]=parameters();

% figure12(ell,theta,sigma,pi,eta,i,M,A,B)      % 280.645461 seconds
% figure13a(ell,theta,sigma,pi,eta,i,M,A,B)     %   1.287914 seconds
% figure13b(ell,theta,sigma,pi,rho,eta,i,M,A,B) %   1.305089 seconds
```

To plot a figure, uncomment the corresponding line and run the function. The subfunction figure# plots Figure #. The number next to each subfunction indicates the estimated computation time to run that subfunction. These subfunctions are defined below the above lines, along with the other subfunctions called by these subfunctions.

In this folder, there are ten other function files (`fminconstr.m`, `fminconstr0.m`, `fminconstr1.m`, `fminconstr_crs.m`, `fminconstr_irs.m`, `sys.m`, `sys0.m`, `sys1.m`, `sys_crs.m`, and `sys_irs.m`). These are user-defined functions called by the main function `svl_jpe_figures_app.m`.

The last row of Tables 2, and Table 3

Open the Matlab function `svl_jpe_tables.m` in the folder "Section 5" and you will see the following commented codes:

```
function svl_jpe_tables()
% Section 5.2

clear
clc
close all

[ell,theta,sigma,pi,rho,eta,i,M,A,B]=parameters();

% table2(ell,theta,sigma,pi,rho,eta,i,M,A,B) %    5.346179 seconds
% table3(ell,theta,sigma,pi,rho,eta,i,M,A,B) % 3748.086483 seconds
```

To reproduce a table, uncomment the corresponding line and run the function. The subfunction table2 reproduces the last row of Table 2 (and footnote 25), and the subfunction table3 reproduces Table 3. The number next to each subfunction indicates the estimated computation time to run that subfunction. These subfunctions are defined below the above lines, along with the other subfunctions called by these subfunctions.

In this folder, there are six other function files (`fminconstr.m`, `fminconstr0.m`, `fminconstr1.m`, `sys.m`, `sys0.m`, and `sys1.m`). These are user-defined functions called by the main function `svl_jpe_tables.m`.

The second, third, and fourth rows of Table 2

Go to the folder "Section 5\Data\Section 5.2" and you will find two folders. The Excel worksheet `supply_data.xlsx` in the folder "Supply" reproduces the second and third rows of Table 2, and the Excel worksheet `yield_data.xlsx` in the folder "Yield" reproduces the fourth row of Table 2. (Look for the green-shaded cells in the sheet "data" in the worksheets.) In each folder, the folder "Raw Data" contains the originally downloaded data, along with the text document `sources.txt` that describes the sources of the data.