```
clear all
close all

% set parameters
beta = 0.99;
kappa = 1 - 40^(-1);
TPs = 1.0025;
Ls = 6;
epsi = 11;
epsw = 11;
delta = 0.025;
alpha = 1/3;
h = 0.8;
by = 0.1; % steady state government bond-gdp ratio
eta = 1;


% solve for steady state
Rds = beta^(-1);
QEHs = (1/beta - kappa)^(-1);
RyEHs = beta^(-1);
Rys = beta^(-1)*TPs;
RLs = Rys;
Qs = (beta^(-1)*TPs - kappa)^(-1);
zeta = ((TPs - 1)*Ls + 1)^(-1);
Ms = (beta/(1-beta*kappa))*Qs^(-1);
mcs = (epsi-1)/epsi;
Rs = Ms*(1/beta - (1-delta));
Ks = (alpha*mcs/Rs)^(1/(1-alpha));
ws = mcs*(1-alpha)*Ks^(alpha);
Ys = Ks^(alpha);
Is = delta*Ks;
Cs = Ks^(alpha) - delta*Ks;
Lams = (1-h*beta)/(Cs*(1-h));
wss = ws;
B = ((epsw -1)/epsw)*Lams*ws;
fs = Is/(Qs*(1-kappa));
bs = by*Ys;
Ns = (Qs*fs + Qs*bs)/Ls;
PHIs = 1 - ((Ls-1)/Ls)*(1/TPs);

% policy rule parameters
taupi = 1.5;
tauy = 0.25;
rhoR = 0.8;
sR = 0.0025;

% non-steady state parameters
psin = 0;
psik = 2;
thetap = 0.75;
thetaw = 0.75;

% shock processes
rhoA = 0.95; % productivity shock
sA = 0.007;
rhom = 0.8; % MEI shock
sm = 0.025;
rhob1 = 1.8; % bond shock
rhob2 = -0.81;
sb = 0.01;
rhop = 0.9; % credit shock
sp = 0.01;

% save parameters

save param_cfp17 beta kappa TPs Ls epsi epsw thetap thetaw delta alpha h by taupi tauy
rhoR sR psin psik rhoA sA rhom sm rhob1 sb rhop sp Rds QEHs RyEHs Rys RLs Qs zeta Ms
mcs Rs Ks ws Ys Is Cs Lams B fs bs Ns PHIs eta rhob2
```

```
68
69  dynare cfp2017 noclearall nolog
70
71
72  figure
73  subplot(3,3,1)
74  plot(b_eb,'-k','Linewidth',1.5)
75  title('b')
76
77  subplot(3,3,2)
78  plot(400*logRd_eb,'-k','Linewidth',1.5)
79  title('r^{d}')
80
81  subplot(3,3,3)
82  plot(400*logPi_eb,'-k','Linewidth',1.5)
83  title('\pi')
84
85  subplot(3,3,4)
86  plot(logY_eb,'-k','Linewidth',1.5)
87  title('Y')
88
89  subplot(3,3,5)
90  plot(logC_eb,'-k','Linewidth',1.5)
91  title('C')
92
93  subplot(3,3,6)
94  plot(logI_eb,'-k','Linewidth',1.5)
95  title('I')
96
97  subplot(3,3,7)
98  plot(logQ_eb,'-k','Linewidth',1.5)
99  title('Q')
100
101 subplot(3,3,8)
102 plot(400*logRy_eb,'-k','Linewidth',1.5)
103 title('r_{y}')
104
105 subplot(3,3,9)
106 plot(400*logTP_eb,'-k','Linewidth',1.5)
107 title('tp')
108
109
110 figure
111 subplot(3,3,1)
112 plot(Phi_ep,'-k','Linewidth',1.5)
113 title('Phi')
114
115 subplot(3,3,2)
116 plot(400*logRd_ep,'-k','Linewidth',1.5)
117 title('r^{d}')
118
119 subplot(3,3,3)
120 plot(400*logPi_ep,'-k','Linewidth',1.5)
121 title('\pi')
122
123 subplot(3,3,4)
124 plot(logY_ep,'-k','Linewidth',1.5)
125 title('Y')
126
127 subplot(3,3,5)
128 plot(logC_ep,'-k','Linewidth',1.5)
129 title('C')
130
131 subplot(3,3,6)
132 plot(logI_ep,'-k','Linewidth',1.5)
133 title('I')
134
135 subplot(3,3,7)
136 plot(logQ_ep,'-k','Linewidth',1.5)
```

```
title('Q')

subplot(3,3,8)
plot(400*logRy_ep,'-k','Linewidth',1.5)
title('r_{y}')

subplot(3,3,9)
plot(400*logTP_ep,'-k','Linewidth',1.5)
title('tp')


figure
subplot(3,3,1)
plot(A_eA,'-k','Linewidth',1.5)
title('A')

subplot(3,3,2)
plot(400*logRd_eA,'-k','Linewidth',1.5)
title('r^{d}')

subplot(3,3,3)
plot(400*logPi_eA,'-k','Linewidth',1.5)
title('\pi')

subplot(3,3,4)
plot(logY_eA,'-k','Linewidth',1.5)
title('Y')

subplot(3,3,5)
plot(logC_eA,'-k','Linewidth',1.5)
title('C')

subplot(3,3,6)
plot(logI_eA,'-k','Linewidth',1.5)
title('I')

subplot(3,3,7)
plot(logQ_eA,'-k','Linewidth',1.5)
title('Q')

subplot(3,3,8)
plot(400*logRy_eA,'-k','Linewidth',1.5)
title('r_{y}')

subplot(3,3,9)
plot(400*logTP_eA,'-k','Linewidth',1.5)
title('tp')

figure
subplot(3,3,1)
plot(mu_em,'-k','Linewidth',1.5)
title('\mu')

subplot(3,3,2)
plot(400*logRd_em,'-k','Linewidth',1.5)
title('r^{d}')

subplot(3,3,3)
plot(400*logPi_em,'-k','Linewidth',1.5)
title('\pi')

subplot(3,3,4)
plot(logY_em,'-k','Linewidth',1.5)
title('Y')

subplot(3,3,5)
plot(logC_em,'-k','Linewidth',1.5)
title('C')

```

```
subplot(3,3,6)
plot(logI_em,'-k','Linewidth',1.5)
title('I')

subplot(3,3,7)
plot(logQ_em,'-k','Linewidth',1.5)
title('Q')

subplot(3,3,8)
plot(400*logRy_em,'-k','Linewidth',1.5)
title('r_{y}')

subplot(3,3,9)
plot(400*logTP_em,'-k','Linewidth',1.5)
title('tp')

figure
subplot(3,3,2)
plot(400*logRd_eR,'-k','Linewidth',1.5)
title('r^{d}')

subplot(3,3,3)
plot(400*logPi_eR,'-k','Linewidth',1.5)
title('\pi')

subplot(3,3,4)
plot(logY_eR,'-k','Linewidth',1.5)
title('Y')

subplot(3,3,5)
plot(logC_eR,'-k','Linewidth',1.5)
title('C')

subplot(3,3,6)
plot(logI_eR,'-k','Linewidth',1.5)
title('I')

subplot(3,3,7)
plot(logQ_eR,'-k','Linewidth',1.5)
title('Q')

subplot(3,3,8)
plot(400*logRy_eR,'-k','Linewidth',1.5)
title('r_{y}')

subplot(3,3,9)
plot(400*logTP_eR,'-k','Linewidth',1.5)
title('tp')
```