In the following economy, household i's ($i \in [0,1]$) problem is

$$E_0 \sum_{t=0}^{\infty} \beta^t U(c_t^i, h_t^i)$$

subject to

$$P_t(c_t^i + k_{t+1}^i) + m_{d,t+1}^i + m_{c,t+1}^i = W_t h_t^i + (R_t^k + P_t(1-\delta))k_t^i + (1+R_t^d)m_{dt}^i + m_{ct}^i + \pi_t$$
$$P_t c_t^i \le m_{ct}^i.$$

Above, m_{ct}^i represents cash balances held to satisfy the cash-in-advance constraint, m_{dt}^i is deposits at a bank, π_t represents all profits received, and R_t^d is the net nominal interest rate on deposits.

Firm $j \in [0,1]$ needs to borrow from a bank to pay its wage bill, $W_t h_t^j$. These loans are within period and bear the net nominal interest rate R_t^ℓ. Firm j solves a static profit maximization problem with production given by $y_t^j = \lambda_t F(k_t^j, h_t^j)$

The only role for banks is to accept deposits, receive a lump-sum nominal injection from the government, and make loans. Assuming that intermediation is costless and that there is free entry to the banking sector, the nominal interest rate paid to deposits will equal that received on loans. The bank loans out all of its available funds (assuming the net nominal interest rate is positive).

The government's budget constraint is

$$(g_t - 1)M_t = \tau_t$$

where M_t is per capital money balances (cash plus deposits), and g_t is the gross growth rate of money.

The shock processes are:

$$\ln z_t = \gamma \ln z_{t-1} + \varepsilon_{zt}$$
$$\ln(g_t) = \alpha \ln(g_{t-1}) + (1-\alpha)\ln(\overline{g}) + \varepsilon_{gt}$$
$$\begin{bmatrix} \varepsilon_{zt} \\ \varepsilon_{gt} \end{bmatrix} \sim N\left(0, \begin{bmatrix} \sigma_z^2 & 0 \\ 0 & \sigma_g^2 \end{bmatrix}\right)$$

Use the following functional forms:

$$U(c_t, h_t) = \ln c_t - \omega \frac{h_t^{1+1/\rho}}{1+1/\rho}$$
$$F(k_t, h_t) = k_t^\theta h_t^{1-\theta}$$

Use the following parameters values: $\beta = 0.99$, $\omega = 3$, $\rho = 4$, $\delta = 0.0175$, $\theta = 1/3$, $\gamma = 0.95$ and $\sigma_z = 0.00763$, $\alpha = 0.56$, $\sigma_g = 0.0045$ and $\overline{g} = 1.014$.

You will need to normalize nominal variables to remove their growth. I suggest normalizing by the aggregate stock of money, M_t.