出清方程

$$\mathrm{L}_t=\left[\left(\mathrm{L}_t^b\right)^{1+\rho_{\mathrm{L}}}+\left(\mathrm{L}_t^g\right)^{1+\rho_{\mathrm{L}}}\right]^{\frac{1}{1+\rho_{\mathrm{L}}}} \tag{1}$$

$$\mathrm{M}_{t,t+1}=\beta\left(\mathrm{C}_{t+1}-\varpi\frac{\mathrm{L}_{t+1}^{1+\xi}}{1+\xi}\right)^{-\eta}\Big/\left(\mathrm{C}_t-\varpi\frac{\mathrm{L}_t^{1+\xi}}{1+\xi}\right)^{-\eta} \tag{2}$$

$$1=\mathrm{E}_t\left(\mathrm{M}_{t,t+1}\mathrm{R}_t\right) \tag{3}$$

$$\omega_t^i=\varpi\mathrm{L}_t^{\xi-\rho_{\mathrm{L}}}\left(\mathrm{L}_t^i\right)^{\rho_{\mathrm{L}}},i=\{g,b\} \tag{4}$$

$$W_t=Q_t^bS_t^b+Q_t^gS_t^g \tag{5}$$

$$s_t^g=\frac{Q_t^gS_t^g}{W_t} \tag{6}$$

$$\chi_t^b=E_t\left[\Omega_{t+1}\left(R_{k,t+1}^b-\left(1+\tau_t^b\right)R_t\right)\right] \tag{7}$$

$$\chi_t^g=E_t\left[\Omega_{t+1}\left(\left(R_{k,t+1}^g-R_{k,t+1}^b\right)-\left(\tau_t^g-\tau_t^b\right)R_t\right)\right] \tag{8}$$

$$\nu_t=E_t\left[\Omega_{t+1}R_t\right] \tag{9}$$

$$\Omega_{t+1}=M_{t,t+1}\left(1-\gamma+\gamma\varphi_{t+1}\right) \tag{10}$$

$$\Upsilon_t=\chi_t^b+\chi_t^gs_t^g-\nu_t\psi\left(s_t^g-\bar{s}^g\right)^2\Big/2 \tag{11}$$

$$\varphi_t=\kappa\nu_t\Big/\kappa-\Upsilon_t \tag{12}$$

$$W_t=\nu_tN_t\Big/\kappa-\Upsilon_t \tag{13}$$

$$s_t^g = \chi_t^g \big/ \nu_t \psi + \bar{s}^g \tag{14}$$

$$N_{t+1} = \gamma \left[\sum_{i=\{g,b\}} R_{k,t+1}^i Q_t^i S_t^i - R_t D_t \right] + \zeta \sum_{i=\{g,b\}} Q_t^i S_t^i \tag{15}$$

$$D_t = \left(1+\tau_t^b\right) Q_t^b S_t^b + \left(1+\tau_t^g\right) Q_t^g S_t^g + \frac{\psi}{2}\left(s_t^g - \bar{s}^g\right)^2 W_t - N_t \tag{16}$$

$$Y_t = \left[\left(\pi^b\right)^{\frac{1}{\rho_Y}} \left(Y_t^b\right)^{\frac{\rho_Y - 1}{\rho_Y}} + \left(1-\pi^b\right)^{\frac{1}{\rho_Y}} \left(Y_t^g\right)^{\frac{\rho_Y - 1}{\rho_Y}} \right]^{\frac{\rho_Y}{\rho_Y - 1}} \tag{17}$$

$$Y_t^i = \left[1 - d\left(X_t\right)\right] A_t \left(K_{t-1}^i\right)^{\alpha^i} \left(L_t^i\right)^{1-\alpha^i}, i = \{g,b\} \tag{18}$$

$$p_t^b = \left(\frac{\pi^b Y_t}{Y_t^b} \right)^{\frac{1}{\rho_Y}} \tag{19}$$

$$p_t^g = \left(\frac{\left(1-\pi^b\right) Y_t}{Y_t^g} \right)^{\frac{1}{\rho_Y}} \tag{20}$$

$$X_t = \delta_X X_{t-1} + e_t + e_t^{row} \tag{21}$$

$$e_t = \left(1-\mu_t\right)\left(Y_t^b\right)^{\epsilon} \tag{22}$$

$$Z_t = \theta_1 \mu_t^{\theta_2} Y_t^b \tag{23}$$

$$\omega_t^b = \left(1-\alpha^b\right) \frac{Y_t^b}{L_t^b} \left[p_t^b - \theta_1 \mu_t^{\theta_2} - \tau_t^e \left(1-\mu_t\right) \epsilon \left(Y_t^b\right)^{\epsilon - 1} \right] \tag{24}$$

$$\tau_t^e = \left(Y_t^b\right)^{1-\epsilon} \theta_1 \theta_2 \mu_t^{\theta_2 - 1} \tag{25}$$

$$R_{k,t}^b = \frac{\alpha^b \frac{Y_t^b}{K_{t-1}^b} \left[p_t^b - \theta_1 \mu_t^{\theta_2} - \tau_t^e \left(1-\mu_t\right) \epsilon \left(Y_t^b\right)^{\epsilon-1} \right] + \left(1-\delta^b\right) Q_t^b}{Q_{t-1}^b} \tag{26}$$

$$\omega_t^g = \left(1-\alpha^g\right) \frac{p_t^g Y_t^g}{L_t^g} \tag{27}$$

$$R_{k,t}^g = \frac{\alpha^g \frac{p_t^g Y_t^g}{K_{t-1}^g} + \left(1-\delta^g\right) Q_t^g}{Q_{t-1}^g} \tag{28}$$

$$Q_t^i = 1 + \frac{\phi^i}{2}\left(\frac{I_t^i}{I_{t-1}^i} - 1 \right)^2 + \phi^i \left(\frac{I_t^i}{I_{t-1}^i} - 1 \right) \frac{I_t^i}{I_{t-1}^i} - \mathrm{E}_t \left\{ M_{t,t+1} \phi^i \left(\frac{I_{t+1}^i}{I_t^i} - 1 \right) \left(\frac{I_{t+1}^i}{I_t^i} \right)^2 \right\}, i = \{g,b\} \tag{29}$$

$$K_t^i = \left(1-\delta^i\right) K_{t-1}^i + I_t^i, i = \{g,b\} \tag{30}$$

$$Q_t^i S_t^i = Q_t^i K_t^i, i = \{g,b\} \tag{31}$$

$$Y_t = C_t + \sum_{i=\{g,b\}} I_t^i + Z_t + \sum_{i=\{g,b\}} \frac{\phi^i}{2}\left(\frac{I_t^i}{I_{t-1}^i}-1\right)^2 I_t^i + \frac{\psi}{2}\left(s_t^g - \bar{s}^g\right)^2 W_t \tag{32}$$