$$\lambda_t = (C_t - h_C\, C_{t-1})^{(-\sigma_C)} \tag{1}$$

$$1 = Q_t \left(1 - \frac{\kappa_I}{2}\left(\frac{I_t}{I_{t-1}} - 1\right)^2 - \left(\frac{I_t}{I_{t-1}} - 1\right)\kappa_I \frac{I_t}{I_{t-1}}\right) + \kappa_I\, \beta_C \frac{\lambda_{t+1}}{\lambda_t} Q_{t+1} \left(\frac{I_{t+1}}{I_t}\right)^2 \left(\frac{I_{t+1}}{I_t} - 1\right) \tag{2}$$

$$Q_t = \beta_C \frac{\lambda_{t+1}}{\lambda_t}\left(1 + {r^K}_{t+1} + Q_{t+1}\,(1-\delta)\right) \tag{3}$$

$$1 = \beta_C \frac{\lambda_{t+1}}{\lambda_t} \frac{P_t}{P_{t+1}}\,(1 + R_t) \tag{4}$$

$$\pi_t = \beta_C\, \rho_P \frac{\lambda_{t+1}}{\lambda_t}\, \pi_{t+1} \frac{{P^*}_{t+1}}{{P^*}_t} \frac{Y_{t+1}}{Y_t} + \frac{\psi_P}{\kappa_P}\left(\frac{MC_{t+1}}{P_{t+1}} - \frac{\psi_P - 1}{\psi_P}\right) + {\varepsilon^\pi}_t \tag{5}$$

$$P_t = \left(\rho_P\, P_{t-1}^{1-\psi_P} + (1-\rho_P)\; {P^*}_t^{1-\psi_P}\right)^{\frac{1}{1-\psi_P}} + {\varepsilon^W}_t \tag{6}$$

$$K_t = (1-\delta)\; K_{t-1} + I_t \left(1 - \frac{\kappa_I}{2}\left(\frac{I_t}{I_{t-1}} - 1\right)^2\right) \tag{7}$$

$$MC_t = \frac{P_{SS}\, W_{SS}}{(1-\gamma)\; (K_{t-1}\, {CR^P}_t)^\gamma\; {\varepsilon^A}_t^{1-\gamma}} \tag{8}$$

$${P^*}_t = MC_t \frac{\psi_P}{\psi_P - 1} \tag{9}$$

$$Y_t = C_t + I_t + G_t \tag{10}$$

$${r^D}_t = (1 + R_t)\; (1-\tau) - \frac{P_{t+1}}{P_t} \frac{\tau}{\beta_B} \frac{\lambda_t}{\lambda_{t+1}} - 1 \tag{11}$$

$${r^C R}_t = R_t + \sigma_{CR} + {\xi^C R}_t \tag{12}$$

$$R_t = \phi_R\, R_{t-1} + (1-\phi_R)\; (\pi_t - \overline{\pi}) + {\varepsilon^R}_t \tag{13}$$

$${W^*}_t = \left(\frac{\left(K_{t-1}\, {CR^P}_t\right)^\gamma\; P_t\, {\varepsilon^A}_t\; (1-\gamma)\; {\varepsilon^L}_t}{\lambda_t}\right)^{\frac{\sigma_L}{\gamma - \sigma_L}} \tag{14}$$

$$W_t = \left(\rho_W\, W_{t-1}^{1-\psi_W} + (1-\rho_W)\; {W^*}_t^{1-\psi_W}\right)^{\frac{1}{1-\psi_W}} + {\varepsilon^W}_t \tag{15}$$

$$M_t = P_t \left(\frac{\beta_C \, \lambda_{t+1}}{\frac{P_{t+1}}{P_t} \, {\varepsilon^M}_t} + \left(\frac{\lambda_t \, \frac{P_{t+1}}{P_t}}{{\varepsilon^M}_t} \right)^{\frac{(-1)}{\sigma_M}} \right) \tag{16}$$

$${CR^C}_t = \frac{1}{{\varepsilon^{CR^C}}_t - \Psi_U \, \Psi_{CR^C}} \left({\varepsilon^{CR^C}}_t \, h_{CR^C} \, {CR^C}_{t-1} - \Psi_U \, \Psi_D \, D_t + \frac{\lambda_t}{P_t} \left(1 + r^C R_t \right) + \beta_C \, \frac{\lambda_{t+1}}{P_{t+1}} \right) \tag{17}$$

$${CR^P}_t = \left(\frac{Q_{t-1} \, \frac{1}{\beta_C} \, \frac{\lambda_{t-1}}{\lambda_t} - Q_t \, (1-\delta) - 1}{\gamma \, {\varepsilon^A}_t \, K_t^{\gamma-1} \, L_t^{1-\gamma}} \right)^{\frac{1}{\gamma}} \tag{18}$$

$$D_t = \frac{1}{{\varepsilon^D}_t + \Psi_D \, P_t \, \Psi_U} \left(\Psi_{CR^C} \, P_t \, \Psi_U + \lambda_t \, \left(1 + {r^D}_t \right) + \beta_C \, \frac{\lambda_{t+1}}{\frac{P_{t+1}}{P_t}} \right) \tag{19}$$

$${r^K}_t = Q_{t-1} \, \frac{1}{\beta_C} \, \frac{\lambda_{t-1}}{\lambda_t} - Q_t \, (1-\delta) - 1 \tag{20}$$

$$\log \left({\varepsilon^L}_t \right) = \rho_L \, \log \left({\varepsilon^L}_{t-1} \right) + {\eta^L}_t \tag{21}$$

$$\log \left({\varepsilon^M}_t \right) = \rho_M \, \log \left({\varepsilon^M}_{t-1} \right) + {\eta^M}_t \tag{22}$$

$$\log \left({\varepsilon^{CR^C}}_t \right) = \rho_{CR^C} \, \log \left({\varepsilon^{CR^C}}_{t-1} \right) + {\eta^{CR^C}}_t \tag{23}$$

$$\log \left({\varepsilon^D}_t \right) = \rho_D \, \log \left({\varepsilon^D}_{t-1} \right) + {\eta^D}_t \tag{24}$$

$$\log \left({\varepsilon^A}_t \right) = \rho_A \, \log \left({\varepsilon^A}_{t-1} \right) + {\eta^A}_t \tag{25}$$

$$\xi^C R_t = \rho_{CR} \, \xi^C R_{t-1} + \eta^C E_t \tag{26}$$

$${\varepsilon^R}_t = \rho_R \, {\varepsilon^R}_{t-1} + {\eta^R}_t \tag{27}$$

$$I_t = {\eta^I}_t + I_{t-1} \, \rho_I + (1 - \rho_I) \; AUX\_ENDO\_LAG\_3\_1_{t-1} \tag{28}$$

$${\varepsilon^W}_t = \rho_{W_{SS}} \, {\varepsilon^W}_{t-1} + {\eta^W}_t \tag{29}$$

$${\varepsilon^W}_t = \rho_{P_{SS}} \, {\varepsilon^W}_{t-1} + {\eta^P}_t \tag{30}$$

$${\varepsilon^\pi}_t = \rho_{\pi_{SS}} \, {\varepsilon^\pi}_{t-1} + {\eta^\pi}_t \tag{31}$$

$$\log \left(G_t \right) = \rho_G \, \log \left(G_{t-1} \right) + {\eta^G}_t \tag{32}$$

$$AUX\_ENDO\_LAG\_3\_1_t = I_{t-1} \tag{33}$$

Table 1: Endogenous

Variable	LaTeX	Description
lambda	λ	Magrginal utility of consumption
C	C	Consumer consumption
G	G	Government consumption
I	I	Investments
Q	Q	Tobins q
rK	r^K	Gross return rate of capital
R	R	Central bank key rate
Pi	π	Inflation rate YoY
P	P	Aggregate price level
Pstar	P^*	Optimal price level
MC	MC	Firms marginal cost
K	K	Firms capital
Y	Y	GDP level
CRC	CR^C	Credits to consumer consumption
CRP	CR^P	Credits to firms production
rD	r^D	Bank deposit interest rate
rCR	$r^C R$	Bank lending interest rate
M	M	Money in Utility
W	W	Wage level
Wstar	W^*	Optimal wage level
L	L	Labour
D	D	Aggregate level of consumer deposits
epsL	ε^L	Labour preferences shock rule
epsM	ε^M	Money holding preferences shock rule
epsCRC	ε^{CR^C}	Consumer credit preferences shock rule
epsD	ε^D	Consumer deposit preferences shock rule
epsA	ε^A	Total factor productivity shock rule
ksiCR	$\xi^C R$	Bank lending risk-premium shock rule
epsR	ε^R	Inflation targeting shock rule
epsW	ε^W	Wage shock rule
epsP	ε^W	Price shock rule
epsPi	ε^π	Price shock rule
AUX_ENDO_LAG_3_1	$AUX\_ENDO\_LAG\_3\_1$	AUX_ENDO_LAG_3_1

Table 2: Exogenous

Variable	LaTeX	Description
nuL	η^L	Labour preferences shock
nuI	η^I	Investments shock
nuM	η^M	Money preferences shock
nuCRC	η^{CR^C}	Consumer credit preferences shock

Table 2 – Continued

Variable	LaTeX	Description
nuD	η^D	Consumer deposits preferences shock
nuA	η^A	Technology shock
nuCR	$\eta^C E$	Bank lending risk-premium shock
nuR	η^R	Taylor rule shock
nuW	η^W	Wage rule shock
nuP	η^P	Price rule shock
nuPi	η^π	Inflation rule shock
nuG	η^G	Government spending rule shock

Table 3: Parameters

Variable	LaTeX	Description
HC	h_C	Consumption habbit formation
SIGMAC	σ_C	Inverse of the intertemporal elasticity of substitution
KAPPAI	κ_I	Rotemberg investments adjustment weight
BETAC	β_C	Consumers discount-factor rate
DELTA	δ	Depreciation rate of capital formation
PITARGET	$\overline{\pi}$	Inflation target
BETAP	β_C	Firms discount-factor rate
ROP	ρ_P	Share of firms changing their prices
PSIP	ψ_P	Elasticity of substitution in the production of goods
PSIW	ψ_W	Elasticity of substitution in the wage settings
KAPPAP	κ_P	Firms average adjustment cost
TAU	τ	Banks reserve ratio
BETAB	β_B	Banks discount-factor rate
FIR	ϕ_R	Taylor rule weight
GAMMA	γ	Elasticity of firms factors production
SIGMAL	σ_L	Inverse Frisch elasticity of labor supply
ROW	ρ_W	Wage shock persistence rate
SIGMAM	σ_M	Elasticity of money in utility
PSIU	Ψ_U	General tendency to substitute deposits for loans
PSICRC	Ψ_{CR^C}	Measure of replacing deposits with loans
HCRC	h_{CR^C}	Consumer credit habbit formation
PSID	Ψ_D	Measure of replacing loans with deposits
ROL	ρ_L	Labour preferences shock persistence rate
ROM	ρ_M	Money holding preferences shock persistence rate
ROCRC	ρ_{CR^C}	Credits using preferences shock persistence rate
ROD	ρ_D	Deposits using preferences shock persistence rate
ROA	ρ_A	Technology shock persistence rate
ROAD	ρ_{AD}	Total supply shock persistence rate
ROCR	ρ_{CR}	Bank lending risk-premium shock persistence rate
ROR	ρ_R	Taylor rule shock persistence rate

Table 3 – Continued

Variable	LaTeX	Description
ROI	ρ_I	Investment dynamic acceleration rate
PSS	P_{SS}	Steady-State level of prices (DLOG price level)
WSS	W_{SS}	Steady-State level of wages (DLOG wage level)
YSS	Y_{SS}	Steady-State level of GDP (DLOG GDP level)
LSS	L_{SS}	Steady-State level of labour (DLOG employment (in persons) level)
PiSS	π_{SS}	Steady-State level of inflation (average level of inflation rate)
SIGCR	σ_{CR}	Bank risk-premium shifter
ROPP	$\rho_{P_{SS}}$	Aggregate price dynamic shock persistence rate
ROWW	$\rho_{W_{SS}}$	Wage correction shock persistence rate
ROPi	$\rho_{\pi_{SS}}$	Price correction shock persistence rate
ROG	ρ_G	Government spending rule persistence rate

Table 4: Parameter Values

Parameter	Value	Description
h_C	0.600	Consumption habbit formation
σ_C	0.750	Inverse of the intertemporal elasticity of substitution
κ_I	2.500	Rotemberg investments adjustment weight
β_C	1.042	Consumers discount-factor rate
δ	0.025	Depreciation rate of capital formation
$\overline{\pi}$	0.040	Inflation target
β_C	0.800	Firms discount-factor rate
ρ_P	0.800	Share of firms changing their prices
ψ_P	9.000	Elasticity of substitution in the production of goods
ψ_W	3.000	Elasticity of substitution in the wage settings
κ_P	0.300	Firms average adjustment cost
τ	0.200	Banks reserve ratio
β_B	0.900	Banks discount-factor rate
ϕ_R	0.200	Taylor rule weight
γ	0.100	Elasticity of firms factors production
σ_L	3.000	Inverse Frisch elasticity of labor supply
ρ_W	0.800	Wage shock persistence rate
σ_M	1.500	Elasticity of money in utility
Ψ_U	0.550	General tendency to substitute deposits for loans
Ψ_{CR^C}	0.500	Measure of replacing deposits with loans
h_{CR^C}	0.900	Consumer credit habbit formation
Ψ_D	0.150	Measure of replacing loans with deposits
ρ_L	0.720	Labour preferences shock persistence rate
ρ_M	0.910	Money holding preferences shock persistence rate
ρ_{CR^C}	0.840	Credits using preferences shock persistence rate
ρ_D	0.710	Deposits using preferences shock persistence rate
ρ_A	0.670	Technology shock persistence rate
ρ_{AD}	0.580	Total supply shock persistence rate
ρ_{CR}	0.730	Bank lending risk-premium shock persistence rate
ρ_R	0.760	Taylor rule shock persistence rate
ρ_I	0.430	Investment dynamic acceleration rate
P_{SS}	1.510	Steady-State level of prices (DLOG price level)
W_{SS}	2.390	Steady-State level of wages (DLOG wage level)
Y_{SS}	2.430	Steady-State level of GDP (DLOG GDP level)
L_{SS}	0.100	Steady-State level of labour (DLOG employment (in persons) level)
π_{SS}	0.000	Steady-State level of inflation (average level of inflation rate)
σ_{CR}	1.200	Bank risk-premium shifter
$\rho_{P_{SS}}$	0.900	Aggregate price dynamic shock persistence rate
$\rho_{W_{SS}}$	0.900	Wage correction shock persistence rate
$\rho_{\pi_{SS}}$	0.200	Price correction shock persistence rate
ρ_G	0.800	Government spending rule persistence rate

$$\lambda_t = (C_t - h_C\, C_{t-1})^{(-\sigma_C)} \tag{34}$$

$$1 = Q_t \left(1 - \frac{\kappa_I}{2}\left(\frac{I_t}{I_{t-1}} - 1\right)^2 - \left(\frac{I_t}{I_{t-1}} - 1\right)\kappa_I \frac{I_t}{I_{t-1}}\right) + \kappa_I\, \beta_C \frac{\lambda_{t+1}}{\lambda_t} Q_{t+1} \left(\frac{I_{t+1}}{I_t}\right)^2 \left(\frac{I_{t+1}}{I_t} - 1\right) \tag{35}$$

$$Q_t = \beta_C \frac{\lambda_{t+1}}{\lambda_t}\left(1 + {r^K}_{t+1} + Q_{t+1}\,(1-\delta)\right) \tag{36}$$

$$1 = \beta_C \frac{\lambda_{t+1}}{\lambda_t} \frac{P_t}{P_{t+1}}\,(1 + R_t) \tag{37}$$

$$\pi_t = \beta_C\, \rho_P \frac{\lambda_{t+1}}{\lambda_t}\, \pi_{t+1} \frac{{P^*}_{t+1}}{{P^*}_t} \frac{Y_{t+1}}{Y_t} + \frac{\psi_P}{\kappa_P}\left(\frac{MC_{t+1}}{P_{t+1}} - \frac{\psi_P - 1}{\psi_P}\right) + {\varepsilon^\pi}_t \tag{38}$$

$$P_t = \left(\rho_P\, P_{t-1}^{1-\psi_P} + (1-\rho_P)\; {P^*}_t^{1-\psi_P}\right)^{\frac{1}{1-\psi_P}} + {\varepsilon^W}_t \tag{39}$$

$$K_t = (1-\delta)\; K_{t-1} + I_t \left(1 - \frac{\kappa_I}{2}\left(\frac{I_t}{I_{t-1}} - 1\right)^2\right) \tag{40}$$

$$MC_t = \frac{P_{SS}\, W_{SS}}{(1-\gamma)\; (K_{t-1}\, {CR^P}_t)^\gamma\; {\varepsilon^A}_t^{1-\gamma}} \tag{41}$$

$${P^*}_t = MC_t \frac{\psi_P}{\psi_P - 1} \tag{42}$$

$$Y_t = C_t + I_t + G_t \tag{43}$$

$${r^D}_t = (1 + R_t)\; (1-\tau) - \frac{P_{t+1}}{P_t} \frac{\tau}{\beta_B} \frac{\lambda_t}{\lambda_{t+1}} - 1 \tag{44}$$

$${r^C R}_t = R_t + \sigma_{CR} + {\xi^C R}_t \tag{45}$$

$$R_t = \phi_R\, R_{t-1} + (1-\phi_R)\; (\pi_t - \overline{\pi}) + {\varepsilon^R}_t \tag{46}$$

$${W^*}_t = \left(\frac{\left(K_{t-1}\, {CR^P}_t\right)^\gamma\; P_t\, {\varepsilon^A}_t\; (1-\gamma)\; {\varepsilon^L}_t}{\lambda_t}\right)^{\frac{\sigma_L}{\gamma - \sigma_L}} \tag{47}$$

$$W_t = \left(\rho_W\, W_{t-1}^{1-\psi_W} + (1-\rho_W)\; {W^*}_t^{1-\psi_W}\right)^{\frac{1}{1-\psi_W}} + {\varepsilon^W}_t \tag{48}$$

$$M_t = P_t \left(\frac{\beta_C \, \lambda_{t+1}}{\frac{P_{t+1}}{P_t} \, {\varepsilon^M}_t} + \left(\frac{\lambda_t \, \frac{P_{t+1}}{P_t}}{{\varepsilon^M}_t} \right)^{\frac{(-1)}{\sigma_M}} \right) \tag{49}$$

$${CR^C}_t = \frac{1}{{\varepsilon^{CR^C}}_t - \Psi_U \, \Psi_{CR^C}} \left({\varepsilon^{CR^C}}_t \, h_{CR^C} \, {CR^C}_{t-1} - \Psi_U \, \Psi_D \, D_t + \frac{\lambda_t}{P_t} \left(1 + r^C R_t \right) + \beta_C \, \frac{\lambda_{t+1}}{P_{t+1}} \right) \tag{50}$$

$${CR^P}_t = \left(\frac{Q_{t-1} \, \frac{1}{\beta_C} \, \frac{\lambda_{t-1}}{\lambda_t} - Q_t \, (1-\delta) - 1}{\gamma \, {\varepsilon^A}_t \, K_t^{\gamma-1} \, L_t^{1-\gamma}} \right)^{\frac{1}{\gamma}} \tag{51}$$

$$D_t = \frac{1}{{\varepsilon^D}_t + \Psi_D \, P_t \, \Psi_U} \left(\Psi_{CR^C} \, P_t \, \Psi_U + \lambda_t \, \left(1 + {r^D}_t \right) + \beta_C \, \frac{\lambda_{t+1}}{\frac{P_{t+1}}{P_t}} \right) \tag{52}$$

$${r^K}_t = Q_{t-1} \, \frac{1}{\beta_C} \, \frac{\lambda_{t-1}}{\lambda_t} - Q_t \, (1-\delta) - 1 \tag{53}$$

$$\log \left({\varepsilon^L}_t \right) = \rho_L \, \log \left({\varepsilon^L}_{t-1} \right) + {\eta^L}_t \tag{54}$$

$$\log \left({\varepsilon^M}_t \right) = \rho_M \, \log \left({\varepsilon^M}_{t-1} \right) + {\eta^M}_t \tag{55}$$

$$\log \left({\varepsilon^{CR^C}}_t \right) = \rho_{CR^C} \, \log \left({\varepsilon^{CR^C}}_{t-1} \right) + {\eta^{CR^C}}_t \tag{56}$$

$$\log \left({\varepsilon^D}_t \right) = \rho_D \, \log \left({\varepsilon^D}_{t-1} \right) + {\eta^D}_t \tag{57}$$

$$\log \left({\varepsilon^A}_t \right) = \rho_A \, \log \left({\varepsilon^A}_{t-1} \right) + {\eta^A}_t \tag{58}$$

$${\xi^C R}_t = \rho_{CR} \, {\xi^C R}_{t-1} + \eta^C E_t \tag{59}$$

$${\varepsilon^R}_t = \rho_R \, {\varepsilon^R}_{t-1} + {\eta^R}_t \tag{60}$$

$$I_t = I_{t-1} \, \rho_I + (1 - \rho_I) \; I_{t-2} + {\eta^I}_t \tag{61}$$

$${\varepsilon^W}_t = \rho_{W_{SS}} \, {\varepsilon^W}_{t-1} + {\eta^W}_t \tag{62}$$

$${\varepsilon^W}_t = \rho_{P_{SS}} \, {\varepsilon^W}_{t-1} + {\eta^P}_t \tag{63}$$

$${\varepsilon^\pi}_t = \rho_{\pi_{SS}} \, {\varepsilon^\pi}_{t-1} + {\eta^\pi}_t \tag{64}$$

$$\log \left(G_t \right) = \rho_G \, \log \left(G_{t-1} \right) + {\eta^G}_t \tag{65}$$

$$\lambda = (C - C\,h_C)^{(-\sigma_C)} \tag{66}$$

$$1 = Q \tag{67}$$

$$Q = \beta_C\ \left(1 + r^K + Q\ (1 - \delta)\right) \tag{68}$$

$$1 = \beta_C\ (1 + R) \tag{69}$$

$$\pi = \pi\,\beta_C\,\rho_P + \frac{\psi_P}{\kappa_P}\ \left(\frac{MC}{P} - \frac{\psi_P - 1}{\psi_P}\right) + \varepsilon^{\pi} \tag{70}$$

$$P = \left(\rho_P\,P^{1-\psi_P} + (1 - \rho_P)\ P^{*1-\psi_P}\right)^{\frac{1}{1-\psi_P}} + \varepsilon^{W} \tag{71}$$

$$K = I + (1 - \delta)\ K \tag{72}$$

$$MC = \frac{P_{SS}\,W_{SS}}{(1 - \gamma)\ (K\,CR^P)^{\gamma}\ \varepsilon^{A^{1-\gamma}}} \tag{73}$$

$$P^* = MC\,\frac{\psi_P}{\psi_P - 1} \tag{74}$$

$$Y = C + I + G \tag{75}$$

$$r^D = (1 + R)\ (1 - \tau) - \frac{\tau}{\beta_B} - 1 \tag{76}$$

$$r^C R = R + \sigma_{CR} + \xi^C R \tag{77}$$

$$R = R\,\phi_R + (1 - \phi_R)\ (\pi - \overline{\pi}) + \varepsilon^{R} \tag{78}$$

$$W^* = \left(\frac{\left(K\,CR^P\right)^{\gamma}\ P\,\varepsilon^A\ (1 - \gamma)\ \varepsilon^L}{\lambda}\right)^{\frac{\sigma_L}{\gamma - \sigma_L}} \tag{79}$$

$$W = \left(\rho_W\,W^{1-\psi_W} + (1 - \rho_W)\ W^{*1-\psi_W}\right)^{\frac{1}{1-\psi_W}} + \varepsilon^{W} \tag{80}$$

$$M = P\ \left(\frac{\lambda\,\beta_C}{\varepsilon^M} + \left(\frac{\lambda}{\varepsilon^M}\right)^{\frac{(-1)}{\sigma_M}}\right) \tag{81}$$

$$CR^C = \frac{1}{\varepsilon^{CR^C} - \Psi_U \, \Psi_{CR^C}} \left(CR^C \, \varepsilon^{CR^C} \, h_{CR^C} - \Psi_U \, \Psi_D \, D + \frac{\lambda}{P} \, \left(1 + r^C R\right) + \beta_C \, \frac{\lambda}{P} \right) \tag{82}$$

$$CR^P = \left(\frac{Q \, \frac{1}{\beta_C} - Q \, \left(1 - \delta\right) - 1}{\gamma \, \varepsilon^A \, K^{\gamma - 1} \, L^{1 - \gamma}} \right)^{\frac{1}{\gamma}} \tag{83}$$

$$D = \frac{1}{\varepsilon^D + \Psi_D \, P \, \Psi_U} \, \left(\lambda \, \beta_C + \Psi_{CR^C} \, P \, \Psi_U + \lambda \, \left(1 + r^D\right) \right) \tag{84}$$

$$r^K = Q \, \frac{1}{\beta_C} - Q \, \left(1 - \delta\right) - 1 \tag{85}$$

$$\log\left(\varepsilon^L\right) = \log\left(\varepsilon^L\right) \, \rho_L + \eta^L \tag{86}$$

$$\log\left(\varepsilon^M\right) = \log\left(\varepsilon^M\right) \, \rho_M + \eta^M \tag{87}$$

$$\log\left(\varepsilon^{CR^C}\right) = \log\left(\varepsilon^{CR^C}\right) \, \rho_{CR^C} + \eta^{CR^C} \tag{88}$$

$$\log\left(\varepsilon^D\right) = \log\left(\varepsilon^D\right) \, \rho_D + \eta^D \tag{89}$$

$$\log\left(\varepsilon^A\right) = \log\left(\varepsilon^A\right) \, \rho_A + \eta^A \tag{90}$$

$$\xi^C R = \xi^C R \, \rho_{CR} + \eta^C E \tag{91}$$

$$\varepsilon^R = \varepsilon^R \, \rho_R + \eta^R \tag{92}$$

$$I = \eta^I + I \, \rho_I + I \, \left(1 - \rho_I\right) \tag{93}$$

$$\varepsilon^W = \varepsilon^W \, \rho_{W_{SS}} + \eta^W \tag{94}$$

$$\varepsilon^W = \varepsilon^W \, \rho_{P_{SS}} + \eta^P \tag{95}$$

$$\varepsilon^\pi = \varepsilon^\pi \, \rho_{\pi_{SS}} + \eta^\pi \tag{96}$$

$$\log\left(G\right) = \log\left(G\right) \, \rho_G + \eta^G \tag{97}$$

$$AUX\_ENDO\_LAG\_3\_1 = I \tag{98}$$

$$Q = 1 \tag{99}$$

$$I = \exp\left(\eta^I\right) \tag{100}$$

$$K = \frac{I}{\delta} \tag{101}$$

$$R = \pi_{SS} - \overline{\pi} \tag{102}$$

$$Y = Y_{SS} \tag{103}$$

$$L = L_{SS} \tag{104}$$

$$G = \exp\left(\frac{\eta^G}{1-\rho_G}\right) \tag{105}$$

$$\varepsilon^L = \exp\left(\frac{\eta^L}{1-\rho_L}\right) \tag{106}$$

$$\varepsilon^M = \exp\left(\frac{\eta^M}{1-\rho_M}\right) \tag{107}$$

$$\varepsilon^{CR^C} = \exp\left(\frac{\eta^C E}{1-\rho_{CR}}\right) \tag{108}$$

$$\varepsilon^D = \exp\left(\frac{\eta^D}{1-\rho_D}\right) \tag{109}$$

$$\varepsilon^A = \exp\left(\frac{\eta^A}{1-\rho_A}\right) \tag{110}$$

$$\xi^C R = \frac{\eta^C E}{1-\rho_{CR}} \tag{111}$$

$$\varepsilon^R = \frac{\eta^R}{1-\rho_R} \tag{112}$$

$$\varepsilon^W = \frac{\eta^W}{1-\rho_{W_{SS}}} \tag{113}$$

$$\varepsilon^{W} = \frac{\eta^{P}}{1 - \rho_{P_{SS}}} \tag{114}$$

$$\varepsilon^{\pi} = \frac{\eta^{\pi}}{1 - \rho_{\pi_{SS}}} \tag{115}$$

$$C = Y - I - G \tag{116}$$

$$\beta_{C} = \frac{1}{1 + R} \tag{117}$$

$$\lambda = \left(C\ \left(1 - h_{C}\right)\right)^{(-\sigma_{C})} \tag{118}$$

$$r^{D} = \left(1 + R\right)\ \left(1 - \tau\right) - \frac{\tau}{\beta_{B}} - 1 \tag{119}$$

$$CR^{P} = \left(\frac{Q^{\frac{1}{\beta_{C}}} - Q\ \left(1 - \delta\right) - 1}{\gamma\, K^{\gamma - 1}\, L^{1 - \gamma}}\right)^{\frac{1}{\gamma}} \tag{120}$$

$$MC = \frac{P_{SS}\, W_{SS}}{\left(1 - \gamma\right)\ \left(K\, CR^{P}\right)^{\gamma}} \tag{121}$$

$$P^{*} = MC\, \frac{\psi_{P}}{\psi_{P} - 1} \tag{122}$$

$$P = P^{*} \tag{123}$$

$$\pi = \frac{\frac{\psi_{P}}{\kappa_{P}}\ \left(\frac{MC}{P} - \frac{\psi_{P} - 1}{\psi_{P}}\right)}{1 - \beta_{C}\, \rho_{P}} \tag{124}$$

$$D = \frac{1}{1 + P\, \Psi_{U}\, \Psi_{D}}\ \left(P\, \Psi_{U}\, \Psi_{CR^{C}} + \lambda\ \left(1 + r^{D}\right) + \beta_{C}\, \lambda\right) \tag{125}$$

$$r^{C} R = R + \sigma_{CR} \tag{126}$$

$$CR^{C} = \frac{D\, \Psi_{D}\ \left(-\Psi_{U}\right) + \frac{\lambda}{P}\ \left(\beta_{C} + 1 + r^{C} R\right)}{1 - h_{CR^{C}} - \Psi_{U}\, \Psi_{CR^{C}}} \tag{127}$$

$$W^{*} = \left(\frac{\left(K\, CR^{P}\right)^{\gamma}\ \left(1 - \gamma\right)\ P}{\lambda}\right)^{\frac{\sigma_{L}}{\gamma - \sigma_{L}}} \tag{128}$$

$$W = W^{*} \tag{129}$$

$$M = P\ \left(\beta_{C}\, \lambda + \lambda^{\frac{(-1)}{\sigma_{M}}}\right) \tag{130}$$

$$r^{K} = \frac{Q}{\beta_{C}} - Q\ \left(1 - \delta\right) - 1 \tag{131}$$

$$AUX\_ENDO\_LAG\_3\_1 = I \tag{132}$$