

1. Equations

[Consumption Euler]

$$1 = \beta E_t \left[\left(\frac{C_t}{C_{t+1}} \right) (1 + i_t) \right]$$

[Labor Supply]

$$w_t = \frac{1 - \theta}{\theta} \frac{C_t}{1 - h_t}$$

[Capital Demand]

$$\alpha \frac{Y_t}{K_t} = (\delta + q_t i_t) + \mathbf{1}[N_{t-1} < 0] \left(\frac{q_t - q_{t+1}(1 - \delta)}{1 - \eta} \right)$$

[Labor Demand]

$$\gamma \frac{Y_t}{H_t} = w_t$$

[Firm's Balance Sheet]

$$q_t K_t = D_t + N_t$$

[Capital evolution]

$$K_{t+1} = (1 - \delta)K_t + I_t$$

[Debt evolution]

$$D_{t+1} = D_t + q_{t+1}I_t - (1 - \eta)[A_t K_t^\alpha H_t^\gamma - w_t H_t - \delta K_t - i_t D_t]$$

[Production function]

$$Y_t = A_t K_t^\alpha H_t^\gamma$$

[Aggregate Demand]

$$Y_t = C_t + I_t$$