6.4 Equilibrium Prices in a Debt Constrained Economy

Next, we explore an economy where the borrowing constraints are endogenously determined. At any point in time, households have an incentive to renege on their claims and walk away from the credit market. The punishment from defaulting in credit market is that a household is excluded from future intertemporal trade. Formally, the individual rationality constraint implies

$$(1-\beta)\sum_{\tau=t}^{\infty}\beta^{\tau-t}u(c_\tau^i) \geq (1-\beta)\sum_{\tau=t}^{\infty}\beta^{\tau-t}u(\omega_\tau^i) \qquad \forall t,$$

The value of continuing participating in the market is no less that the value of dropping out. The credit agency will never lend so much to the consumers so they will choose bankruptcy. Next, we define the notion of market equilibrium. We have assumed that the individual rationality constraint is directly imposed into the consumer budget constraint.

Definition: *A competitive equilibrium in this economy is an allocation* $\{c_t^1, c_t^2\}_{t=0}^{\infty}$, *and prices* $\{p_t\}_{t=0}^{\infty}$, *such that.*

- *Consumers* i *solves*

$$\max(1-\beta)\sum_{t=0}^{\infty}\beta^t u(c_t^i)$$

$$s.t. \qquad \sum_{t=0}^{\infty} p_t c_t^i \leq \sum_{t=0}^{\infty} p_t(w_t^i + s_0^i d) \qquad \forall t$$

$$(1-\beta)\sum_{\tau=t}^{\infty}\beta^{\tau-t}u(c_\tau^i) \geq (1-\beta)\sum_{\tau=t}^{\infty}\beta^{\tau-t}u(w_\tau^i)$$

- *Markets clear*

$$c_t^1 + c_t^2 = \omega^g + \omega^b + d = \omega \qquad \forall t$$

$$s_t^1 + s_t^2 \leq 1 \qquad \forall t$$

IS THIS CONDITION NEEDED?????