Lecture notes, Nov. 17th, 2020

$$\max_{\{c_t\}} \beta^t \sum_{t=0}^{\infty} u(c_t)$$

s.t. $c_t + a_{t+1} \leq R a_t + y_t$

$a_{t+1} \geq -\phi$ ϕ is constant, positive

For every period t. $y_t = \begin{cases} y_1 \\ y_2 \end{cases}$ $y_1 < y_2$

$y_1 < c_t < y_2$ $a_{t+1} \geq -\frac{R}{R-1} \cdot y_1$

$a_{t+1} \geq -\phi$ $\phi \leq \frac{R}{R-1} \cdot y_1$

Euler: $\beta E \frac{u'(c')}{u'(c)} + \lambda = 1$

$$W = \int u(c_i)\, dF(i)$$

30% — state 1
70% — state 2

$W_t = 0.3 \cdot u(c_1) + 0.7 \cdot u(c_2)$

$\max \underline{W} = 0.3 \cdot \sum_{t=0}^{\infty} \beta^t u(c_{1,t}) + 0.7 \sum_{t=0}^{\infty} \beta^t u(c_{2,t})$