

2.1 : The Permanent Income Model

The Deterministic Case

The variable H_t defines the non-financial (or human) wealth.

It represents all the income that an agent can obtain from its labor income over its (infinite) lifetime.

Here, we assume perfect foresight (the deterministic case), so the agent perfectly knows the sequence $Y_t, Y_{t+1}, Y_{t+2}, \dots$

For simplicity, assume that the labor income is constant

$$Y_t = \bar{Y} \quad \forall t$$

Putting this into the non-financial wealth

$$H_t = \frac{1}{1+r} \sum_{i=0}^{\infty} \frac{1}{(1+r)^i} Y_{t+i},$$

we obtain

$$H_t = \frac{1}{1+r} Y_t \sum_{i=0}^{\infty} \frac{1}{(1+r)^i} = \frac{1}{1+r} Y_t \frac{1+r}{r} \equiv \frac{Y_t}{r}$$