
Excess Demand of Mr t in Period t+1 = Excess Supply of Mr t+1 in Period t+1
Mr 0 consumes $\omega^1_0 + p^{m*}$

Mr 1 supplies $p^{m*}$ in chocolate to Mr 0 in exchange for 1 unit of money

Mr 1 consumes $\omega^2_0 + a$ in period 2

Mr 2 supplies $a$ units of chocolate to Mr 1 in period 2 in exchange

for 1 unit of money
$\bar{p}^m$ is PO steady state

0 is WPO (not PO) steady state

In Samuelson case, $p^t$ is increasing with $t$.

Hence interest rate $r^t < 0$.

Over-saving as in Phelps-Koopmans and Cass Criterion

For $0 < p^m < \bar{p}^m$, hyper-inflation. Final value of money is zero

For $\bar{p}^m < p^m$, not CE since demand grows beyond resource.

See”Capital Gains, Income, and Saving”
Excess Demand of Mr \( t \) in Period \( t+1 \) = Excess Supply of Mr \( t+1 \) in Period \( t+1 \)
- Allows for limit cycles and sunspot cycles
- Backward bending supply curve (usually in labor supply)
Classical Case

Excess Demand of Mr t in Period t+1 = Excess Supply of Mr t+1 in Period t+1
\[ \bar{p}^m = 0 \] Money is worthless

Autarky is PO CE

\[ p^t \to 0, \text{ as } t \to \infty \]

Hence interest rate are positive.

No over-saving