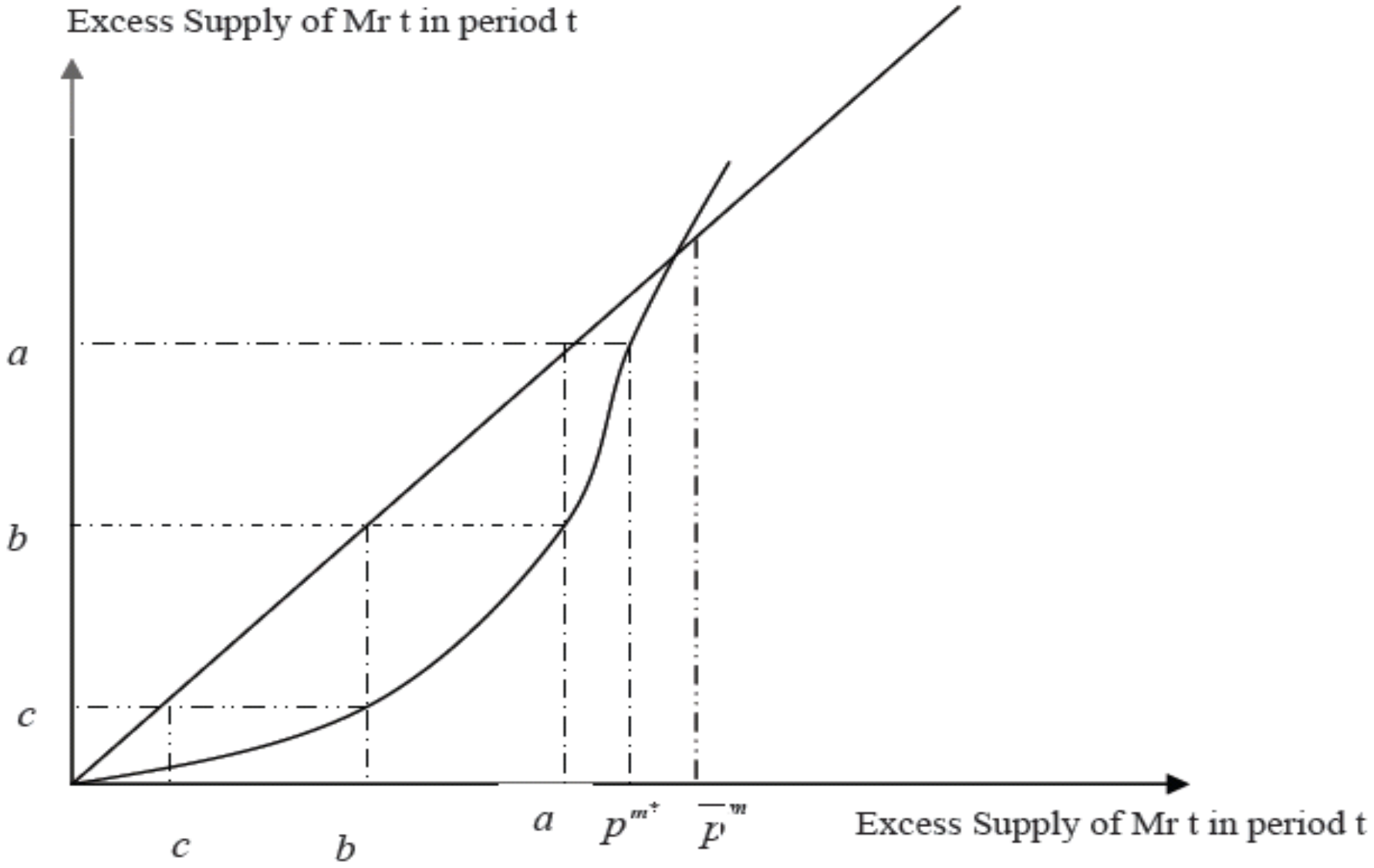
Lecture Notes #7

- D. Gale,"Pure Exchange Equilibrium of Dynamic Economic Models",Journal of Economic Theory, February 1973, 6(1): 12-36.
- D. Cass, M. Okuno andI.Zilcha, "The Role of Money in Supporting the Pareto Optimality of Competitive Equilibrium in Consumption-Loan Type Models",Journal of Economic Theory, February 1979, 20(1): 41-80. Reprinted in Models of Monetary Economics, J.H. Kareken and N. Wallace, eds., Federal Reserve Bank of Minneapolis, 1980.

Samulson Case



Mr 0 consumes $\omega_0^1 + p^{m*}$

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

Mr 1 consumes $\omega_0^2 + a$ in period 2

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

for 1 unit of money

$\overline{p}^m$ is PO steady state

0 is WPO (not PO) steady state

In Samulson case, p^t is increasing with t.

Hence interest rate $r^t < 0$.

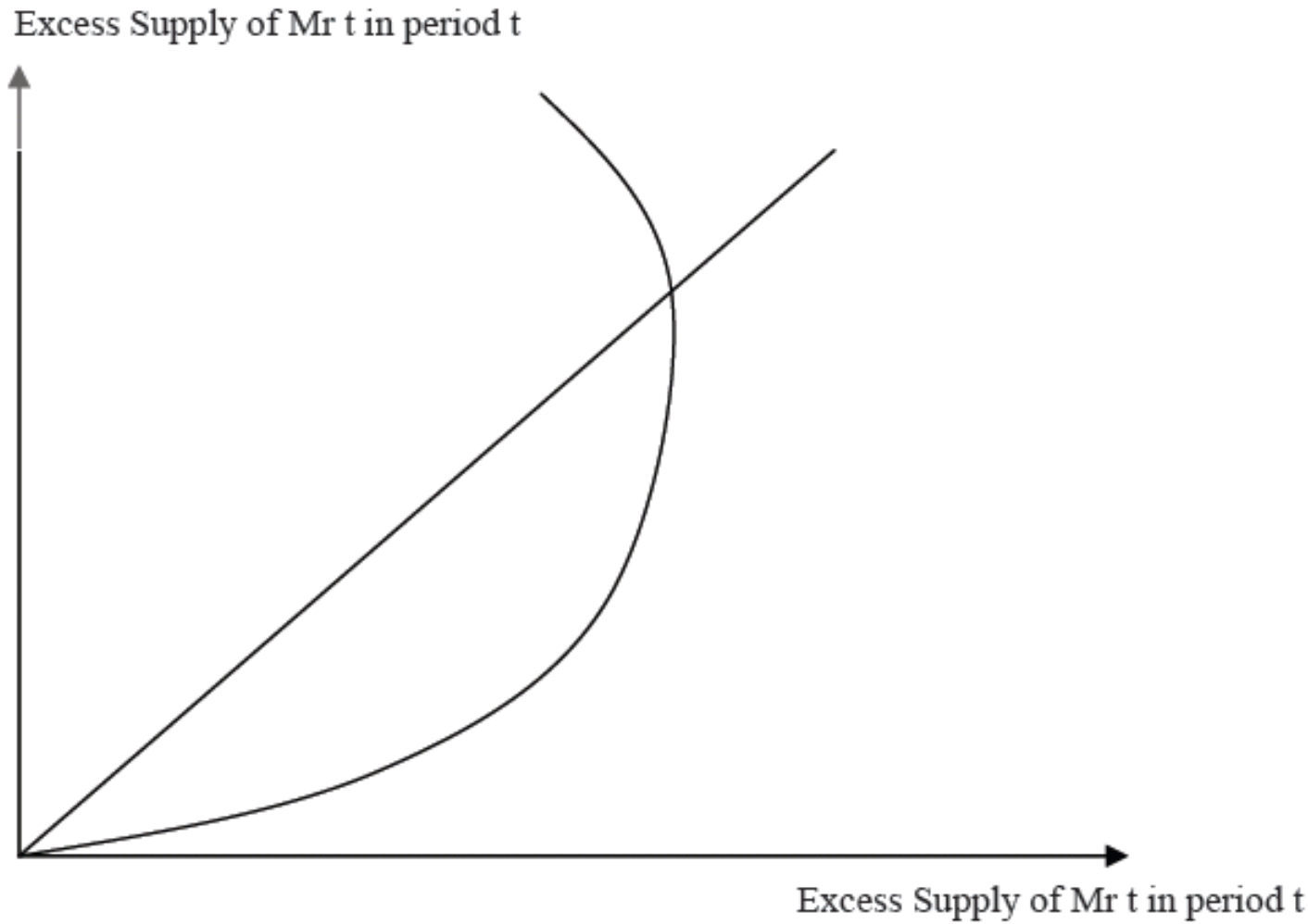
Over-saving as in Phelps-Koopmans and Cass Criterion

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

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

See "Capital Gains, Income, and Saving"
(Shell, Sidrauski and Stiglitz), The Review of Economic Studies, Vol. 36(1) No. 105, January 1969, 15-26.

Samulson Case #2



Allows for limit cycles and sunspot cycles

See Azariadis, "Self-Fulfilling Prophecies,"
Journal of Economic Theory, December 1981, 25(3): 380-396.

Backward bending supply curve (usually in labor supply)

Classical Case

$\overline{p}^m = 0$ Money is worthless

Autarky is PO CE

$p^t \to 0$, as $t \to \infty$

Hence interest rate are positive.

No over-saving