

Economics 6130
Cornell University
Fall 2015
Macroeconomics, I - Part 2

Problem Set #4
Due in class on Wednesday December 2, 2015

Question 1

Consider the following economy:

$$\begin{aligned}K &= K_1 + K_2 \\Y &= C + Z_1 + 4Z_2 = K^{\frac{2}{3}}L^{\frac{1}{3}} \\ \dot{K}_1 &= Z_1 \\ \dot{K}_2 &= Z_2 \\ \frac{\dot{L}}{L} &= .02 \\ C &= \frac{7Y}{10}\end{aligned}$$

- What would a smart planner do about the allocation of investment between types of machines?
- Describe the momentary (static) equilibrium. What are the conditions on prices imposed by momentary equilibrium?
- Give the asset market clearing equations.
- Describe the trajectory of capitals and prices consistent with momentary equilibrium and efficiency of long-run development.
- Show that on other paths there are bubbles that burst in finite time.