

Last Homework Assignment (#4)
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Macroeconomics II- Spring, 2005-05-18
Gothenburg University, Department of Economics

Due June 1st

(note it must be turned in by 2PM on June 1st ... this is a hard deadline as I am leaving the country the next day).

- (1.) Romer 10.12 (4 points)
- (2.) Romer 10.14 (3 points)
- (3.) Romer 10.4 (3 points)
- (4.) Romer 5.11 (5 points)

Extra Credit:

(5a.) Let m_t be a deterministic log-money supply process. Assume a Cagan

money demand function: $\left(\frac{m_t}{p_t}\right)^D = (E_t p_{t+1} - p_t)^{-\eta}$. Suppose you are now told that

$m_{t+1} = m_t + g$ so that the log of the money supply increases a constant amount each period. Moreover suppose that $m_0 = 10$ and $g=2$. Derive the no-bubble price sequence. (1 point)

(5b.) Following (5a.), derive two bubble price sequences (1 point)

(5c.) let m_t now be stochastic and equal to $m_{t+1} = m_t + g + \delta_t$ where δ_t is a mean zero, finite-variance random variable which is independently and identically distributed over time. Suppose moreover that the initial conditions are the same as in (5a.). Derive the expected price sequence at date zero. Derive the actual price sequence. (2 points)