

Problem Set 4

Due in Lecture on Monday, May 5th. "Box-in" your answers to the algebraic questions.

1. Flexible price monetary model of exchange rates.

Assume $\lambda=6$. Suppose initially the fundamentals grow by -3% per annum. Suppose the growth rate increases by 1%. What then happens to the exchange rate, if anything, the instant the growth rate changes?

2. Present Value Relationship. Suppose once again $\lambda=6$. Recalling that:

$$s_t = \left(\frac{1}{1+\lambda} \right) \sum_{\tau=0}^{\infty} \left(\frac{\lambda}{1+\lambda} \right)^{\tau} E_t \tilde{M}_{t+\tau}$$

Where s_t is the log exchange rate, \tilde{M}_t is the log fundamentals.

2.1 What is the value of the log exchange rate if \tilde{M}_t is expected to be 1 forever?

2.2 Suppose \tilde{M}_t were to rise today 2, and were expected to remain 2 forever. What would then be the value of the log exchange rate today?

3. Sticky price monetary model of exchange rates.

3.1 Explain what happens if the monetary authority in US decreases the money supply by 5 percent. In your answer, indicate the time paths of M , P , M/P , $r-r^*$, s . Use graphs.

3.2 In this model, do movements in the real exchange rate cause movements in the nominal exchange rate?

3.3 Suppose θ equals infinity. Redo 3.1.