

Homework #4, Economics 362, Due Thursday, February 2.

1. Questions 8, 9, 10, page 367 in KO.

2. Consider the figure on the next page. Suppose that initially, the economy is in an equilibrium with the exchange rate corresponding to the indicated horizontal line. People think the exchange rate will be constant forever after. As a result,

$$R = R_{foreign} + \frac{E^e - E}{E} = R_{foreign},$$

since $E^e = E$, initially. Now, suppose there is a permanent jump in M . This raises everyone's expectation about the long-run value of the exchange rate to the higher level indicated in the graph. The graph indicates four possible paths that the exchange rate could take to get to its new long-run value. The top two involve overshooting. The third one down involves an immediate depreciation followed by further depreciation. The fourth one involves an immediate appreciation, followed by depreciation. This question asks you to explain how each of these four graphs could occur.

Recall our UIP model, modified to include risk, ρ :

$$R = R_{foreign} + \frac{E^e - E}{E} + \rho.$$

Suppose that a drop in R induces a fall in ρ . There are various reasons why this might happen, and which is at work does not really matter for this question. The reason emphasized in class is that the drop in R might make the economy more healthy by making it expand. Why a drop in R might make the economy expand should not be clear yet, since for the time being we are assuming that Y is constant!

The different paths traced out by the exchange rate can be understood as reflecting different specifications of the relationship between R and ρ . In the top path, the relationship is weak or non-existent. For each exchange rate path further below, the connection becomes stronger.

Consider each of the four exchange rate paths. Work out the relevant analysis using our MM and UIP diagrams, in each case. Also, explain what is happening in each case, as a business journalist would write it up in a newspaper.

Four Paths for the Exchange Rate, in Response to a Given,
Permanent Jump in the Money Stock

