14.02 Introduction to Macroeconomics

Problem Set 9

1. Suppose that initially German and United States interest rates are exactly equal. Equation (13.5) in the text suggests that an increase in the US dollar interest rate, relative to the German DM interest rate implies the dollar will appreciate. However, investors will hold US and German bonds only if they expect the dollar to depreciate. Is this a contradiction? Explain.

2. Suppose the Mexican interest rate is 28%, the US interest rate 7%, and the exchange rate is 7.5 Pesos/$. If interest rate parity holds and assuming no country risk, what is the P/$ exchange rate expected to be one year from today? Is the peso expected to appreciate or depreciate? By what percentage?

3. Suppose that a formerly closed economy engages in trade liberalization and suddenly allows open trade in goods, services and financial assets. What will happen to the effectiveness of fiscal policy in affecting GDP if the economy operates under flexible exchange rates? What will happen to the effectiveness of monetary policy in affecting GDP if the economy operates under flexible exchange rates?

4. How does the size of the open economy impact the multiplier and the sensitivity of output to changes in the interest rate? In a flexible exchange rate regime, is fiscal policy more effective at changing output in a smaller or larger open economy? Explain.

5. In many medium-sized developing countries which maintained fixed exchange rate regimes, the level of the fixed real exchange rate turned out to be recessionary. Explain how maintaining a fixed exchange rate can be recessionary.

6. In many medium-sized developing countries which maintained fixed exchange rate regimes, expectations of a devaluation turned out to be recessionary. Explain how such expectations can be recessionary.

7. Suppose the DM-French Franc exchange rate is fixed, yet the financial markets believe that the franc may be devalued by 10% with a 50% probability and unchanged with a 50% probability. In order to maintain the exchange rate today should the French central bank decrease or increase the money supply? Specifically, by how much should the French interest rate change in order to maintain the exchange rate today?

8. Comment on the following statement: A country suffering from an overvalued exchange rate need not devalue its currency since in the long run output will return to the natural level anyway. What is the difference between a devaluation and simply allowing the price level to adjust by itself (specifically, think in terms of the transition time from the SR to the LR, and the impact on price in the LR)? Does your answer change if wages are indexed?

9. Suppose an economy suddenly switches from a floating to a fixed exchange rate. If people believe the government is credible in maintaining a fixed exchange rate, should we expect an increase or decrease in the natural level of output? Explain.