PROBLEM SET 1
(Due October 8)

Questions 1-3. Answer True, False, or Uncertain. Briefly explain your answer. No credit without explanation (5 points each).

1. Higher domestic interest rates lead to an appreciation of the domestic currency.
2. If a country saves more than it invests then it will have a current account deficit.
3. If markets are efficient, then real interest rates should be the same in all countries.

The following questions are short answer. 15 points each.

4. Suppose the 12-month forward price of the euro in terms of dollars is 1.2 dollars per euro. Suppose the spot price of the euro in terms of dollars is 1.1. Next, suppose that currently the annual interest rate on dollar deposits is 8%, while the interest rate on a comparable euro deposit is 5%. There are no transactions costs. Is there an arbitrage opportunity here? If so, explain exactly how you would take advantage of this situation to make riskless profits.

5. Consider a two-period economy that has at the beginning of period 1 a net foreign asset position of -100. In period 1, the country runs a current account deficit of 5 percent of GDP, where GDP in both periods is 120. Assume the interest rate is constant at 10 percent.
   (a) Calculate the trade balance in period 1, the current account balance in period 1, and the country’s net foreign asset position at the beginning of period 2.
   (b) Is the country living beyond its means? To answer this, calculate the country’s current account balance in period 2 and the associated period 2 trade balance. Is the required trade balance feasible? (Hint: Remember, the trade balance cannot exceed GDP!)
   (c) Now suppose that in period 1, the country runs a larger current account deficit, of 10 percent of GDP. Find the country’s net foreign asset position at the end of period 1 in this case. Is the country now living beyond its means? If so, show why.

6. It is often asserted that China’s exchange rate is ‘undervalued’, and that this gives China’s exporters an unfair advantage in world markets. Given what you’ve learned in class so far, how would you decide whether this is true? (Hint: How would you use data to measure the extent of over- or undervaluation?)

7. It is often asserted that China imposes capital controls. Given what you’ve learned in class so far, how would you measure the severity of China’s capital controls?

8. Suppose there is a permanent reduction in the money supply. Illustrate the short-run and long-run effects on the exchange rate, interest rate, and price level (i.e., graph the time paths).