Homework I
(due March 7, 2015)

1. The equation $S^p = I + CA + (G - T)$ tells us that to reduce a current account deficit, a country must increase its private saving, reduce domestic investment, or cut its government budget deficit. Nowadays, some people recommend restriction on imports from China (and other countries) to reduce the American current account deficit. How would higher US. Barriers to imports affect its private saving, domestic investment, and government deficit?

2. Suppose the Canadian dollar is currently traded at C$ 1.40/$. The Deutsche mark is traded at DM 1.39/$.

   a. Determine the C$/DM exchange rate consistent with these direct quotations.

   b. Suppose the C$/DM cross rate in the market was at C$ 1.05/DM. Is there any arbitrage opportunity?

   c. How would you take advantage of any arbitrage situation?

   d. What is your profit?

3. Calculate the dollar rates of return on the following assets:

   a. A painting whose price rises from $200,000 to $250,000 in a year.

   b. A bottle of a rare Burgundy, Domaine de la Romanee-Conti 1978, whose price rises from $180 to $216 between 1999 and 2000.

   c. A £10,000 deposit in a London bank in a year when the interest rate on pounds is 10 percent and the $/£ exchange rate moves from $1.50 per pound to $1.38 per pound.

4. Suppose the spot rate is $ 0.20/FF. The US one-year rate is 6%. You expect the future exchange rate to be $0.1923/FF.

   a. What is the current one-year French interest rate that will satisfy the Interest Rate Parity?

   b. Suppose the one-year French interest rate is 12% instead. What kind of arbitrage would you perform to take advantage of this opportunity?

5. Petroleum is sold in a world market and tends to be priced in U.S. dollars. The Nippon Steel Chemical Group of Japan must import petroleum to use in manufacturing plastics and other products. How are its profits affected when the yen

depreciates against the dollar? Which hedging instrument is likely to be the most appropriate scheme for this particular company, and why?

6. Suppose the dollar interest rate and the pound sterling interest rate are the same, 5 percent per year. What is the relation between the current equilibrium $/£ exchange rate and its expected future level? Suppose the expected future $/£ exchange rate, $1.52 per pound, remain constant as Britain interest rate rises to 10 percent per year. If the U.S. interest rate also remains constant, what is the new equilibrium $/£ exchange rate?

7. Traders in asset markets suddenly learn that the interest rate on dollars will decline in the near future. Use the diagrammatic analysis based on the Uncovered Interest Parity to determine the effect on the current dollar/euro exchange rate, assuming current interest rates on dollar and euro deposits do not change.

8. Assume that the Citibank trading room is dealing on the following quotations Spot Sterling = $1.5000, Euro-Sterling interest rate = 11.00% p.a. Euro-$ interest rate = 6.00% p.a. and that Barclays Bank is quoting Forward Sterling at $1.4550.

   a. Describe the transactions you would make to earn risk-free covered interest arbitrage profits?

   b. How much profit would you expect to make?

9. What is the short-run effect on the exchange rate of an increase in domestic real GNP (y), given expectations about future exchange rates?