Masters Macroeconomics Fall 2015
Homework Assignment Due: 21 October

1. Use the model of the small, open economy to predict the effects of each of the following changes on the trade balance, the real exchange rate, and the nominal exchange rate (assuming that the nominal exchange rate is *not* fixed as it is in a currency union):

a. Consumer confidence increases so that households consume more and save less.
b. World demand for domestically-produced cars goes down (relative to, say, Japanese cars) because of a scandal involving faked emission tests.
c. The domestic central bank expands the money supply greatly.

2. Consider an economy described by the following equations:

$$Y = C + I + G + NX$$
$$Y = \bar{Y} = 5000$$
$$G = 1000$$
$$T = 1000$$
$$C = 250 + 0.75(Y - T)$$
$$I = 1000 - 50r$$
$$NX = 500 - 500\varepsilon$$
$$r = r^* = 5.$$

a. Solve for national saving, investment, the trade balance, and the equilibrium real exchange rate in this economy.
b. Now suppose that the government increases its spending to 1250 with no change in taxes. Find the new equilibrium values of national saving, investment, the trade balance, and the real exchange rate. Explain what has changed (and what has not changed) and why.
c. Now, with $G = 1000$ again, suppose that the world real interest rate rises to 10. Solve for national saving, investment, the trade balance, and the real exchange rate in this situation. Explain what has changed (and what has not changed) and why.

3. Suppose that a friend tells you that traveling in Mexico is much cheaper now than it was five years ago. He says "Five years ago a euro bought 8 pesos; this year a euro buys 16 pesos, so Mexico is a real bargain!" Let's assume that total inflation over this period was 100% in Mexico and 25% in Slovakia.

a. What has been the percentage change in the Slovak nominal exchange rate with respect to Mexico over the period?
b. What has been the percentage change in the Slovak real exchange rate with respect to Mexico over the period?
c. Has it become less expensive for Slovaks to buy goods in Mexico than it was five years ago? Explain your answer in terms of the real and nominal exchange rates.

d. Your friend is not an economist, so explain your answer to the previous question in terms he can understand, perhaps comparing of the cost of a taco in Mexico now and five years ago vs. the cost of a bowl of bryndzové halušky in the Slovak Republic now and five years ago.

4. Suppose that you read in a newspaper that the nominal interest rate is 12% in Sweden and only 8% in the United Kingdom. Assume that real interest rates are equalized between the countries by perfect capital mobility and that purchasing power parity holds.

a. What can you infer about expected inflation in the two countries using the Fisher equation (Chapter 4)?
b. Given your answer from part a, what must be true of the expected change in the nominal exchange rate between the Swedish krona and the British pound?
c. Suppose that a friend proposes a get-rich-quick scheme to borrow from a British bank at 8% interest, deposit the money in a Swedish bank at 12%, and make a 4% profit. Explain to her why this scheme would not work.