

Final challenge: Review  
Eco 403, Fall 2009

The following questions are taken from past challenges. The format is 4-5 short answer and 2-3 longer questions. The formulas provided below will also be provided on the challenge. All questions come from the notes. Also review chapters BM:4.3-4.4,11.3,12,14.5-14.7,15.1,15.2,15.5, DC:p494-512,18 the third homework, the Phillips curve article, and this review sheet. The following formulas will be provided.

The quiz is Wednesday May 6 2-4:30 in the SB308.

### Monetary Misperceptions

$$U = NR + k \cdot a (\pi_t^e - \pi_t), \quad AS = Y = Y^* + a (P - P^e)$$

### Foreign Exchange and Reserves

$$F_t = F_{t-1} + E \cdot \Delta H, \quad e = \frac{P \cdot E}{P^f}$$

### Money Supply

$$M = Hk(R) \quad \Delta M = \Delta Hk(R)$$

### Evaluation of Inflation Targets

$$\Delta M + \Delta V = \pi + \Delta Y$$

### Currency Boards

$$rrH = \frac{1}{E} \cdot F_t, \quad rrH = P_s \cdot S$$

## Short answer questions (1-2 sentences)

### Question 1

In the 1800's the U.S. had a currency board tied to gold (a gold standard). The gold rush then dramatically increased gold reserves. Assume the Lucas monetary misperceptions model.

- a. Assuming no other change in policy, explain what happens to the money supply, inflation, unemployment, and the price of gold in the short run.
- b. Graphically illustrate the effect on inflation and unemployment in the short and long run on the Phillips curve graph.

### Question 2

In 1999, the Bank of Canada published an inflation target of 1-3%. The money supply growth for 1999 was 7.7%, and real GDP grew at a 4.5% rate. Assuming velocity was constant, according to the quantity theory, was the money growth consistent with the inflation target? Explain.

### Question 3

- a. Define Gresham's Law.
- b. Explain the difference between Colonial Pounds, Bills of Credit, and Bills of credit whose convertibility to silver was suspended.
- c. According to Gresham's law, which currency would be the medium of exchange? What would happen to the other currencies? Explain.

## Longer Questions

### Question 4

Consider the case of Ecuador in the late 1990s. Suppose Ecuador had an exchange rate target of 0.2 units of foreign currency (dollars) per Sucre (the local currency). That is  $E^* = 0.2$ . Foreign reserves were \$2 Billion dollars. Next a steep drop in oil prices caused Ecuador's budget deficit to rise significantly since Ecuador relies on oil taxes to finance expenditures. The combination of low oil prices, low agricultural output, and the Latin American debt crises (which decreased foreign investment in Ecuador) put the economy in recession with high unemployment.

- a. Give two ways the government can finance Ecuador's budget deficit. Explain the most likely option.

- b. As a result of implementing the most likely policy in part (a), foreign reserves dropped to \$1.5 Billion. Explain why. (hint: what must the government do in the foreign exchange market to counter the effect of part (a)?). At the end of the day, how is the Ecuadorian government paying for its expenses?
- c. As a result of part (b), a speculative attack occurred. Show the graphically the effect of a speculative attack on the foreign exchange market graph. Be sure to label the change in high powered money on the graph.
- d. As a result of (c), reserves fell from \$1.5 to \$1 Billion in just a few months. Compute the change in the (Sucre) high powered money supply as a result of the speculative attack.
- e. Suppose the outstanding high powered money supply is now \$25 billion Sucre. To end the speculative attack, suppose the government adopts a currency board. Calculate a new exchange rate for the currency board such that the reserve ratio equals one. Did investors profit from the speculative attack?
- f. Give two difficulties with a currency board in this case.