

## **Economics 101b; Fall 2003; Problem Set 4**

*Due in section October 7*

1. Economists say that a government can raise real revenue--real power to buy goods and services--through the "inflation tax." Who is it that pays this inflation tax? How is it that the government collects it?
2. Suppose that real GDP is \$12,000 billion, the velocity of money is 6, and the money stock is \$2,500 billion. What is the price level?
3. Suppose that the rate of labor force growth is 3% per year but the efficiency of labor is stable, and the economy is on its steady state growth path. Suppose also that the rate of growth of the nominal money stock is 10% per year. Do you think that it is likely that the inflation rate is less than 5% per year? Why or why not?
4. What would the Federal Reserve have to do if it wanted to raise the monetary base today by \$10 billion? What do you guess would happen to the price of short-term government bonds if the Federal Reserve did this?
5. Suppose that in the flexible-price full-employment model the government increases taxes and government purchases by equal amounts. The tax increase reduces consumption spending. What happens qualitatively (tell the direction of change only) to investment, net exports, the exchange rate, the real interest rate, and potential output?
6. What happens according to the flexible-price full-employment model if the intercept  $C_0$  of the consumption function rises. Explain qualitatively (tell the direction of change only) what happens to consumption, investment, net exports, the exchange rate, the real interest rate, and potential output.
7. Explain qualitatively the direction in which consumption, investment, government purchases, net exports, the exchange rate, the real interest rate, and potential output move in the flexible-price full-employment model if the government raises taxes.

8. Give three examples of changes in economic policy or in the economic environment that would shift the total savings curve on the flow-of-funds diagram to the left.

9. Give three examples of changes in the economic environment or in economic policy that would increase the equilibrium real exchange rate.

10. Suppose that the relevant parameters of the economy are:

$t = 0.33$  Tax rate of one-third.

$I_r = 90$  A 1-percentage-point fall in the interest rate raises investment spending by \$90 billion a year.

$C_y = 0.75$  A marginal propensity to consume of three-quarters.

$\epsilon_r = 10$  With an initial value for the real exchange rate  $e$  set at the traditional indexed value of 100, a 1-percentage-point change in the interest rate difference vis-à-vis abroad generates a 10 percent shift in the exchange rate.

$X_\epsilon = 6$  A 10 percent change in the exchange rate leads to a \$60 billion-a-year change in exports.

And suppose that an irrational exuberance causes a stock market boom that leads consumers to increase their spending by \$200 billion at a constant level of disposable income. What would be the increase in interest rates in response to such an exuberance-driven consumption boom?

11. In the economy presented in question 10, suppose that total GDP is \$10 trillion and that the government does not want real interest rates to rise and investment to fall in response to the stock market-generated consumption boom. What kinds of policies can the government undertake? How successful will they be?

12. When President Bill Clinton took office, he spent essentially all his political capital on his first-year effort to raise taxes and cut spending by \$300 billion a year in an economy with an annual GDP of \$6 trillion. What, qualitatively and quantitatively, does the flexible-price full-employment model say should have been the consequences of these policies if the relevant parameters of the economy are those given in question 10?