

Homework 4: Economics 105 - Chapters 9, 10 and section 1 of ch. 11

Due in class 11/10/03

- 1) AS-AD analysis: As part of the Y2K problem a couple years ago, it was feared that bank computers and ATMs might malfunction on January 1, 2000. The Federal Reserve was actually quite concerned about this. Analyze this situation in terms of aggregate demand and aggregate supply curves from chapter 9 (based on the quantity theory of demand where price is fixed in the short run but flexible in the long run). Regard this as a fall in money velocity that is temporary, just affecting the short run but returning to normal in the long run.
 - a) Which should the Federal Reserve worry about: a possible recession or excessive inflation?
 - b) Discuss what monetary policy actions you would suggest to prevent any such problems.

- 2) Supply shocks: Suppose war in the Middle East causes the price of oil to rise dramatically. Consider this as a temporary supply shock, and use the AD-AS graphs of chapter 9 to discuss the effects on price level and output in the short run and long run.

- 3) Keynesian Cross: Assume the consumption function is $C = 100 + .75(Y-T)$, and that $G = 100$, $T = 100$, $I = 100$. Suppose that the Republicans in Congress persuade Clinton to accept a tax cut to ward off an impending recession. But suppose they are also committed to a balanced budget, so that taxes and government spending both are cut from 100 to 50. Do these two opposing fiscal policy actions completely cancel each other out? Explain the economic intuition for why or why not?

- 4) IS-Curve: Assume that the consumption function is $C = 1000 + 0.5(Y - T)$ and the investment function is $I = 1000 - 2r$. Suppose that government spending and taxes are each set at 2000.
 - a) What is the formula for the IS curve? (Hint: substitute for C, I and G in the equation $Y = C + I + G$ and then write an equation for r as a function of Y.)
 - b) What is the slope of this IS curve? Does it slope up or down?
 - c) If investment were more responsive to the interest rate than is true in the investment equation above, would this make the IS curve steeper or flatter? What is the economic reason for this?

- 5) IS-LM: Japan has been trying to fight a recession with expansionary monetary policy. But it seems not to have been very effective, and output has not risen very much.
 - a) Graphically illustrate the short-run effect of an expansionary monetary policy in an IS-LM graph. Be sure to label the axes, the curves, and use arrows showing the direction the curves shift. Also mark the initial equilibrium as point '1', and the short-run equilibrium as point '2'.
 - b) What is likely to happen to the levels of the interest rate, output, consumption, and investment?
 - c) How would the movements in the variables above change if investment behavior in Japan is not very responsive to changes in the interest rate? Could this help explain why monetary policy has not had a big effect on output there? (Hint: think about your answer to 4c above.)

- 6) IS-LM policy: Two of your friends are arguing about whether the 1990-91 recession was caused by the cut in defense spending or by tight monetary policy. It is true that both military spending and money supply decreased during this time, but data suggests that the interest rate fell significantly during the recession. Use the IS-LM graphs to discuss both arguments, and conclude which is more likely, given the data on the interest rate.

(10/30/03)