

4. In the real business cycle model, suppose that government spending increases temporarily. Determine the equilibrium effects of this. Could business cycles be explained by fluctuations in G ? That is, does the model replicate the key business cycle facts from Chapter 3 when subjected to temporary shocks to government spending? Explain carefully.
5. Suppose that temporary increases in government spending lead to permanent increases in total factor productivity, perhaps because some government spending improves infrastructure and makes private firms more productive. Show that temporary shocks to government spending of this type could lead to business cycles that are consistent with the key business cycle facts, and explain your results.
6. The nominal interest rate cannot be less than zero, since if the nominal interest rate were negative, then no one would want to hold bonds. In terms of our model, this can be represented as the demand for money being perfectly elastic with respect to the nominal interest rate when the nominal interest rate is zero.
 - a. Suppose the nominal interest rate (equal to the real interest rate in the Keynesian sticky wage model) is currently equal to zero. What does this imply about the slope of the LM curve?
 - b. Suppose the nominal interest rate is currently zero and the monetary authority increases the money supply. What are the short-run equilibrium effects?
 - c. At the time of this writing (early 2001), nominal interest rates are at or close to zero in Japan. What implications does this have for Japanese monetary policy?
7. Suppose that the goal of the fiscal authority is to set government spending so as to achieve zero Keynesian unemployment, while the goal of the monetary authority is to achieve stability of the price level. Now, the economy is hit by a temporary decrease in total factor productivity. Show that the goals of the fiscal authority and monetary authority will be in conflict, suggest a remedy for this conflict, and discuss.