Department of Economics **Boğaziçi University**

EC 205 Macroeconomics I

Fall 2023

Problem Session 5

1. An economy begins in long-run equilibrium, and then a change in government regulations allows banks to start paying interest on checking accounts. Recall that the money stock is the sum of currency and demand deposits, including checking accounts, so this regulatory change makes holding money more attractive.

a. How does this change affect the demand for money?

b. If the Fed keeps the money supply constant, what will happen to output and prices in the short run and in the long run?

c. If the goal of the Fed is to stabilize the price level, should the Fed keep the money supply constant in response to this regulatory change? If not, what should it do? Why?

d. If the goal of the Fed is to stabilize output, how would your answer to part (c) change?

2. Assume that the long-run aggregate supply curve is vertical at Y = 3000 (due to fixed factors of production), while the short-run aggregate supply curve is horizontal at P = \$1 (due to sticky prices)

The aggregate demand curve is given as Y = 2(M/P) and M = 1500.

a. If the economy is initially in its long-run equilibrium, what are the values of P and Y?

b. What is the velocity of money in this case?

c. Suppose because banks start paying interest on checking accounts, the aggregate demand function shifts to Y = (1.5)(M/P). What are the short-run values of P and Y?

d. What is the velocity of money in this case?

e. With the new aggregate demand function, once the economy adjusts to long-run equilibrium, what are P and Y?

f. What is the velocity now?

3. Explain the impact of an increase in the money supply in the short run and in the long run.

4. Let's examine how the goals of the Fed influence its response to shocks. Suppose that in scenario A the Fed cares only about keeping the price level stable and in scenario B the Fed cares only about keeping output and employment at their natural levels. Explain how in each scenario the Fed would respond to the following.

a. An exogenous decrease in the velocity of money.

b. An exogenous increase in the price of oil.

5. Why is it easier for the Fed to deal with demand shocks than with supply shocks?