Lab 13 – Money, The Fed, and Fiscal/Monetary Policy

Money

1. Money serves four basic functions: 1) Medium of Exchange 2) Standard of Value 3) Standard of Deferred Payment 4) Store of Value.
2. Measuring the money stock:
    a. M1 =

    b. M2 = M1 +

    c. M3 = M2 +

3. Demand for Money –

4. Changes in Demand for Money:
    a. Changes in Real GDP –

    b. Changes in Price Level –

    c. Changes in transaction costs –

5. Supply of Money –

6. Determined by the government, this implies an inelastic supply in the short run and an upward sloping curve in the long run.

The Fed

1. The Fed can influence money supply in three main ways.
    a.

        i. The legal percentage of a bank's checkable deposits that must be retained.

    b.

        i. The rate of interests that the Fed charges banks that borrow directly from the Fed.

    c.

        i. Buying and selling government securities on the open market.

Bank Reserves

1. Required Reserves Ratio – the percentage the bank must retain of checkable deposits.
    a. Suppose the RR is 10%. You deposit $200 into your checking account. The bank must retain $200*10%=$____. This leaves $______ for it to loan out.
        i. If the bank reserves equaled its required level before you deposit, then the bank would have $______ excess reserves.
    b. The bank will likely loan out the $______. If the person that the bank loans the money to puts it into a checking account perhaps at another bank, that bank would have to retain $______*10%=$____. This leaves $______ for that bank to lend out.
    c. A formula for calculating the increase in money stock resulting from this process is:

2. Discount Rate
    a. When Federal Reserve banks make loans to creditworthy institutions, they create deposits for those institutions.
        i. Deposits at the Fed are part of the reserves of banks, so these loans increase the reserves available to the banking system.
            1. Therefore, discount loans to banks have the potential to increase the money stock by a multiple of the amounts loaned.
        ii. A decrease in the discount rate will increase excess reserves and the supply of loanable funds (MS ___________).
        iii. An increase in the discount rate will decrease excess reserves and the supply of loanable funds (MS ___________).
3. Open Market Operations
    a. Most preferred method of the Fed.
    b. At any given time, there are a certain number of bonds held by both the Fed and US banks. The Fed can choose to buy or sell these bonds.
        i. If the Fed buys bonds, it puts money into the economy and thus increases money supply. Banks are receiving money, their balances in the accounts at the Fed are increased, in exchange for the bonds.
        ii. If the Fed sells bonds it is taking money out of the economy and thus decreasing the money supply. The banks give the Fed money (out of their reserve accounts) and receive bonds.
        iii. Through this process the Fed can affect the money supply successfully.

Velocity of Money

1. The velocity of money is a measure of how many times the average dollar is spent over the course of a year.
2. The formula divides the money stock into nominal domestic formula:

3. Another expression commonly used is derived from above. It is MV=PQ, where MV is the nominal dollar expenditure during the year and PQ is the nominal dollar income during the year. Since income must equal expenditure at the macroeconomic level, the equation of exchange is an identity. If a change occurs in any term, another term will immediately adjust to maintain this identity.

Monetary Policy

1. Actions taken by central banks to influence the money supply or interest rates in attempts to stabilize the economy.
2. Expansionary Monetary Policy – occurs when the Fed __________ the monetary base or its rate of growth by __________ excess reserves into the banking system (usually through open market purchases). Short term interest rates ___________.
3. Contractionary Monetary Policy – occurs when the Fed ____________ the monetary base or its rate of growth by ____________ excess reserves available to depository institutions. Short-term interest rates ____________.
4. Monetarists argue that changes in the money stock are the predominant influence on nominal GDP and nominal income in a nation. They believe if predictions about changes in velocity are reasonably accurate, monetary policy can be used in the long run to control the rate of inflation.

Fiscal Policy

1. The use of government spending and taxing for the specific purpose of stabilizing the economy.
2. Expansionary Fiscal Policy – when the government acts to ____________ aggregate demand by adjusting its budget during the year by ___________ its purchases, ___________ transfer payments or ___________ taxes, or a mixture of these actions. This can serve to ____________ equilibrium RGDP and/or _____________ cyclical unemployment.
3. Contractionary Fiscal Policy – when the government acts to ____________ aggregate demand by __________ spending, _____________ taxes, or both.

Problems

1. An oil price shock results in a sharp increase in the price level. Other things being equal, this will
    a. increase the demand for money.
    b. decrease the demand for money.
    c. have no effect on the demand for money.
    d. either increase or decrease the demand for money. The actual effect can't easily be predicted.

2. In a given year, which of the following is likely to cause a decline in short-term interest rates?
    a. Increases in the demand for loanable funds in credit markets.
    b. Open market purchases of government securities by the Fed during the year.
    c. A decrease in the supply of loanable funds in credit markets.
    d. Open market sales of government securities by the Fed.
    e. An increase in the demand for money.

3. Federal Reserve purchases of securities from banks __________ the money stock and sales of securities to banks __________ the money stock.
    a. increase, decrease
    b. increase, also increase
    c. decrease, increase
    d. decrease, also decrease

4. What effect do open market sales have on the money supply curve?
    a. They cause a movement downward along the supply curve.
    b. They shift it to the left.
    c. They cause a movement upward along the supply curve.
    d. They shift it to the right.

5. When the Fed sells government securities, it's expected that
    a. the quantity of money held by the public will decrease and the real interest rate will decrease.
    b. the quantity of money held by the public will increase and the real interest rate will remain constant.
    c. the quantity of money held by the public will increase and the real interest rate will decrease.
    d. the quantity of money held by the public will increase and the real interest rate will increase.
    e. the quantity of money held by the public will decrease and the real interest rate will increase.

6. An economic analyst observes that a typical individual this year is holding a smaller quantity of money for transaction purposes than was held last year, yet the level of per capita consumption expenditures remained constant. It would be safe to conclude that
   a. the velocity of money must have decreased.
   b. the level of unemployment must have decreased.
   c. the economic analyst made a mistake in collecting this information--these two observations could not both be correct.
   d. the velocity of money must have increased.
   e. the level of unemployment must have increased.

7. A major difference between the classical model and the monetarist model is that the monetarists
   a. ignore the velocity of money, while classical economists argued that the velocity of money is constant.
   b. argue that the velocity of money is a predictable function of other economic variables, while the classical school held that the velocity of money is a constant.
   c. argue that the velocity of money is a constant, while the classical school held that the velocity of money was a predictable function of other economic variables.
   d. argue that monetary policy is always ineffective in affecting real output levels, while classical economists argued that monetary policy has a significant effect on real GDP.
   e. believe that the primary determinant of the inflation rate is the rate of growth in the money supply, while classical economists argued that the inflation rate is primarily affected by real economic variables.

8. Suppose that, in the past few months, short-term interest rates, such as the federal funds rate, have been increasing and the M1 money stock has been decreasing. During this period, the Fed has most likely been engaged in
   a. open market purchases of government securities.
   b. open market sales of government securities.
   c. an expansionary monetary policy.
   d. Both (a) and (c).

9. Which fiscal policy can be used to stimulate aggregate demand?
   a. Decrease the money supply.
   b. Decrease expenditures, and increase taxes.
   c. Decrease taxes, and increase expenditures.
   d. All of the above.

10. Suppose the economy is experiencing a recessionary GDP gap of $1,250 billion and the marginal respending rate (MRR) is 0.6. An appropriate government fiscal policy to eliminate the recessionary gap would be to
    a. increase purchases by $500 billion.
    b. reduce purchases by $500 billion.
    c. increase purchases by $750 billion.
    d. increase purchases by $2,083 billion.
    e. reduce purchases by $750 billion.