The Money Supply Process
ECON 4673
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Problems

1. Use T-accounts to show how balance sheets (assets and liabilities) of the Federal Reserve, the banks, and the public change after each of the following events. You should assume the reserves-to-deposits ratio is 10%.

    a. A person gets a $25,000 loan from a bank with the intention of buying an automobile.

    b. A person deposits $400 into his/her checking account at a local bank.

    c. The Fed provides an emergency loan to a bank for $1,000,000.

    d. The Federal Reserve sells $250,000 in securities to Citibank.

    e. First National Bank borrows $500,000 in overnight loans from Bank of America.

2. If a bank depositor withdraws $1,000 of from his checking account, what happens to total reserves, checkable deposits, currency outside of banks, and the monetary base?

3. Evaluate the following statement: “The Federal Reserve can perfectly control the size of the money supply.”

4. What effect might a financial panic have on the money multiplier and the money supply? Why? You may assume the monetary base is held constant.

5. Suppose the Federal Reserve buys $1 million of bonds from First National Bank. If it is common practice for banks to hold 20% of any deposit is held as reserves, what is the total increase in money supply? You can assume the currency-to-deposits ratio is 0.

6. Suppose that currency outside of banks is $500 billion, the amount of checkable deposits is $1,000 billion, and the reserves-to-deposits ratio is 10%.

    a. Calculate the money supply, the amount of total reserves, the currency-to-deposits ratio, and the money multiplier.

    b. Using the information in part (a), calculate the size of the monetary base.