27 THE MONETARY SYSTEM

LEARNING OBJECTIVES:

By the end of this chapter, students should understand:

- what money is and what functions money has in the economy.
- what the Federal Reserve System is.
- how the banking system helps determine the supply of money.
- what tools the Federal Reserve uses to alter the supply of money.

KEY POINTS:

1. The term *money* refers to assets that people regularly use to buy goods and services.

2. Money serves three functions. As a medium of exchange, it provides the item used to make transactions. As a unit of account, it provides the way in which prices and other economic values are recorded. As a store of value, it provides a way of transferring purchasing power from the present to the future.

3. Commodity money, such as gold, is money that has intrinsic value: It would be valued even if it were not used as money. Fiat money, such as paper dollars, is money without intrinsic value: It would be worthless if it were not used as money.

4. In the U.S. economy, money takes the form of currency and various types of bank deposits, such as checking accounts.

5. The Federal Reserve, the central bank of the United States, is responsible for regulating the U.S. monetary system. The Fed chairman is appointed by the President and confirmed by Congress every four years. He is the lead member of the Federal Open Market Committee, which meets about every six weeks to consider changes in monetary policy.

6. The Fed controls the money supply primarily through open-market operations. The purchase of government bonds increases the money supply, and the sale of government bonds decreases the money supply. The Fed can also expand the money supply by lowering reserve requirements or decreasing the discount rate, and it can contract the money supply by raising reserve requirements or increasing the discount rate.

7. When banks loan out some of their deposits, they increase the quantity of money in the economy. Because of this role of banks in determining the money supply, the Fed's control of the money supply is imperfect.

CHAPTER OUTLINE:

I. The Meaning of Money

A. Definition of **Money: the set of assets in an economy that people regularly use to buy goods and services from other people**.

B. The Functions of Money

1. Money serves three functions in our economy.

a. Definition of **Medium of Exchange: an item that buyers give to sellers when they want to purchase goods and services**.

b. Definition of **Unit of Account: the yardstick people use to post prices and record debts**.

c. Definition of **Store of Value: an item that people can use to transfer purchasing power from the present to the future**.

2. Definition of **Liquidity: the ease with which an asset can be converted into the economy's medium of exchange**.

a. Money is the most liquid asset available.
b. Other assets (such as stocks, bonds, and real estate) vary in their liquidity.

c. When people decide in what forms to hold their wealth, they have to balance the liquidity of each possible asset against the asset's usefulness as a store of value.

C. The Kinds of Money

1. Definition of **Commodity Money: money that takes the form of a commodity with intrinsic value**.

2. Definition of **Fiat Money: money without intrinsic value that is used as money because of government decree**.

3. *In the News: Money on the Island of Yap*

a. Limestone is used as money on this small island in Micronesia.

b. This is an article from *The Wall Street Journal* detailing the use of this form of money.

D. Money in the U.S. Economy

1. The quantity of money circulating in the United States is sometimes called the money stock.

2. Included in the measure of the money stock are currency, demand deposits and other monetary assets.

   a. Definition of **Currency: the paper bills and coins in the hands of the public**.

   b. Definition of **Demand Deposits: balances in bank accounts that depositors can access on demand by writing a check**.

Table 27-1

3. Table 27-1 shows the monetary assets included in two important measures of the money stock, M1 and M2.

4. *I: Credit Cards, Debit Cards, and Money*

   a. Credit cards are not a form of money; when a person uses a credit card, he or she is simply deferring payment for the item.

   b. Because using a debit card is like writing a check, the account balances that lie behind debit cards are included in the measures of money.

5. *Case Study: Where Is All the Currency?*

   a. If we divide the amount of outstanding currency in the United States by the adult population, we find that the average adult should have approximately $2,240 in currency.

   b. Of course, most adults carry a much smaller amount.

   c. One explanation is that a great deal of U.S. currency may be held in other countries.

   d. Another explanation is that large amounts of currency may be held by criminals because transactions made using currency leave no paper trail.

II. The Federal Reserve System

A. Definition of **Federal Reserve (Fed): the central bank of the United States**.

B. Definition of **Central Bank: An institution designed to oversee the banking system and regulate the quantity of money in the economy**.

C. The Fed's Organization

1. The Fed was created in 1914 after a series of bank failures.

2. The Fed has a Board of Governors with seven members who serve 14-year terms.

    a. The Board of Governors has a chairman who is appointed for a four-year term.

    b. The current chairman is Alan Greenspan.

3. The Federal Reserve System is made up of 12 regional Federal Reserve Banks located in major cities around the country.

4. One job that the Fed does is the regulation of banks to ensure the health of the nation's banking system.

5. The second job of the Fed is to control the quantity of money available in the economy.

    a. Definition of **<u>Money Supply</u>: the quantity of money available in the economy**.

    b. Definition of **<u>Monetary Policy</u>: the setting of the money supply by policymakers in the central bank**.

D. The Federal Open Market Committee

1. The Federal Open Market Committee (FOMC) consists of the 7 members of the Board of Governors and 5 of the 12 regional Federal Reserve District Banks.

2. The FOMC meets about every six weeks in order to discuss the condition of the economy and consider changes in monetary policy.

3. The primary way in which the Fed increases or decreases the supply of money is through open market operations (which involve the purchase or sale of government bonds).

    a. If the Fed wants to increase the supply of money, it creates dollars and uses them to purchase government bonds from the public.

    b. If the Fed wants to lower the supply of money, it sells government bonds from its portfolio to the public. Money is then taken out of the hands of the public and the supply of money falls.

III. Banks and the Money Supply

A. The Simple Case of 100-Percent-Reserve Banking

1. Example: Suppose that currency is the only form of money and the total amount of currency is $100.

2. A bank is created as a safe place to store currency; all deposits are kept in the vault until the depositor withdraws them.

a. Definition of **<u>Reserves</u>: deposits that banks have received but have not loaned out**.

b. Under the example described above, we have 100-percent-reserve banking.

3. The financial position of the bank can be described with a T-account:

FIRST NATIONAL BANK			
Assets		**Liabilities**	
Reserves	$100.00	Deposits	$100.00

4. Note that the money supply in this economy is unchanged.

a. Before the bank was created, the money supply consisted of $100 worth of currency.

b. Now, with the bank, the money supply consists of $100 worth of deposits.

5. This means that, if banks hold all deposits in reserve, banks do not influence the supply of money.

B. Money Creation with Fractional-Reserve Banking

1. Definition of **<u>Fractional-Reserve Banking</u>: a banking system in which banks hold only a fraction of deposits as reserves**.

2. Definition of **<u>Reserve Ratio</u>: the fraction of deposits that banks hold as reserves**.

3. Example: Same as above, but First National decides to set its reserve ratio equal to 10% and loan out the remainder of the deposits.

4. The bank's T-account would look like this:

FIRST NATIONAL BANK			
Assets		**Liabilities**	
Reserves	$10.00	Deposits	$100.00
Loans	90.00		

5. When the bank makes these loans, the money supply changes.

   a. Before the bank made any loans, the money supply was equal to the $100 worth of deposits.

   b. Now, after the loans, deposits are still equal to $100, but borrowers now also hold $90 worth of currency from the loans.

   c. Therefore, when banks hold only a fraction of deposits in reserve, banks create money.

6. Note that, while new money has been created, so has debt. There is no new wealth created by this process.

C. The Money Multiplier

1. The creation of the money does not stop at this point.

2. Borrowers usually borrow money to purchase something and then the money likely becomes redeposited elsewhere.

3. Suppose a person borrowed the $90 to purchase something and the funds then get redeposited in Second National Bank. Here is this bank's T-account (assuming that it also sets its reserve ratio to 10%):

SECOND NATIONAL BANK			
Assets		**Liabilities**	
Reserves	$9.00	Deposits	$90.00
Loans	81.00		

4. If the $81 in loans becomes redeposited in another bank, this process will go on and on.

5. Each time the money is deposited and a bank loan is created, more money is created.

6. Definition of **<u>Money Multiplier</u>: the amount of money the banking system generates with each dollar of reserves**.

$$\boxed{\text{money multiplier} = 1/\text{reserve ratio}}$$

D. The Fed's Tools of Monetary Control

1. Definition of **<u>Open Market Operations</u>: the purchase and sale of U.S. government bonds by the Fed**.

   a. If the Fed wants to increase the supply of money, it creates dollars and uses them to purchase government bonds from the public.

   b. If the Fed wants to lower the supply of money, it sells government bonds from its portfolio to the public. Money is then taken out of the hands of the public and the supply of money falls.

   c. If the sale or purchase of government bonds affects the amount of deposits in the banking system, the effect will be made larger by the money multiplier.

   d. Open market operations are easy for the Fed to conduct and are therefore the tool that the Fed uses most often.

2. Definition of **<u>Reserve Requirements</u>: regulations on the minimum amount of reserves that banks must hold against deposits**.

   a. This can affect the size of the money supply through changes in the money multiplier.

   b. The Fed rarely uses this tool because of the disruptions in the banking industry that would be caused by frequent alterations of reserve requirements.

3. Definition of **<u>Discount Rate</u>: the interest rate on the loans that the Fed makes to banks**.

   a. When a bank cannot meet its reserve requirements, it may borrow reserves from the Fed.

   b. A higher discount rate discourages banks from borrowing at the Fed and likely encourages banks to hold onto larger amounts of their reserves. This in turn lowers the money supply.

   c. A lower discount rate encourages banks to lend their reserves (and borrow from the Fed). This will increase the money supply.

   d. The Fed also uses discount lending to help financial institutions that are having difficulties.

E. Problems in Controlling the Money Supply

1. The Fed does not control the amount of money that consumers choose to deposit in banks.

   a. The more money that households deposit, the more reserves the banks have, and the more money the banking system can create.

   b. The less money that households deposit, the smaller the amount of reserves banks have, and the less money the banking system can create.

2. The Fed does not control the amount that bankers choose to lend.

   a. The amount of money created by the banking system depends on loans being made.

   b. If banks choose to hold onto a greater level of reserves than required by the Fed (called excess reserves), the money supply will fall.

3. *Case Study: Bank Runs and the Money Supply*

   a. Bank runs create a large problem under fractional-reserve banking.

   b. Since the bank only holds a fraction of its deposits in reserve, it will not have the funds to satisfy all of the withdrawal requests from its depositors.

   c. Today, deposits are guaranteed through the Federal Depository Insurance Corporation (FDIC).