CHAPTER 27

THE FEDERAL RESERVE SYSTEM AND MONETARY POLICY

Chapter in a Nutshell

The experiences of our early banking system cried out for the introduction of central banking. Overindulging banks chronically issued too much currency, kept too few reserves, and engaged in too many high-risk loans, all of which tended routinely to undermine the fragile, fledgling money economy in the United States. The Federal Reserve System came into existence in 1913 only after a history of failed attempts at central banking.

The money supply in 18th-century colonial America consisted of a variety of foreign currencies and coins. Paper money — the Continental, American money for the first time — was introduced during the revolutionary period, only to be devalued quickly by massive overprinting. After independence, the number of state-chartered banks grew dramatically. Some feared that these state banks would issue too many bank notes (promissory notes that could be redeemed for gold or silver) and rekindle inflation. In order to counter this fear, the First Bank of the United States was established in 1791.

But it didn't last long. Opponents of the First Bank saw it as unconstitutional and a feared money monopoly. Congress refused to rechart it. Soon after, the number of state banks and the amount of currency in circulation rose dramatically. Again, the money system was in trouble and a second try at central banking — the Second Bank of the United States — followed. Although widely regarded as having done a credible job, it too was unceremoniously discarded by Andrew Jackson during his second administration in the mid-1830s. Apart from the National Bank Act during the Civil War, the history of banking in the United States from the 1830s to the eve of World War I is one of growing banking power over the economy but without control or direction.

The Panic of 1907 that followed the Knickerbocker Trust disaster prompted U.S. political leaders to reconsider the need for a central bank. What emerged in 1913 was the Federal Reserve System (the Fed). The Fed is composed of twelve district Federal Reserve banks, each owned by member banks that contribute 3 percent of their capital to the district bank. The main purpose of the Fed is to safeguard our money system. The Fed's Board of Governors consists of seven members appointed by the President for fourteen-year terms. The chairman of the board is a member who is appointed for a four-year term. The district banks are also headed by boards of directors. The Federal Open Market Committee, one of the Fed's most important operating bodies, consists of twelve members, including the seven-member Board of Governors, the president of the New York Fed, and four other district presidents who rotate. The Federal Open Market Committee controls the money supply via open market operations, the purchase and sale of government bonds.

Among the Fed's tasks is to decide how much money to have printed by the Bureau of Engraving and Printing. The Fed also serves as a bankers' bank, keeping much of the commercial banks' reserves on deposit in its vaults, providing them with currency and loans, and clearing many of the billions of checks that travel cross-country through the banking system.

However, the Fed's principal goal is to manage the money supply. It has three operating tools at its disposal to achieve that goal. They are changing the legal reserve requirement, changing the discount rate, and engaging in open market operations. Suppose the Fed, worried about inflationary pressures in the economy, decides to decrease the money supply. What does the Fed do? It can raise the legal reserve requirement, which would force banks to hold a greater proportion of their deposits on reserve. In this way, banks lend out less, and the money supply decreases. Or the Fed can raise the discount rate (the rate it charges member banks who borrow from the Fed), which makes banks' borrowing from it less attractive. If they borrow...
less, the money supply decreases. Or the Fed may resort to its most effective and most frequently used monetary tool, open market operations. The Fed can sell government securities to the public, to member banks, and to corporations, which draws money out of the banking system, thus decreasing the money supply.

These same instruments can be used to increase the money supply, although their effectiveness in this direction is somewhat weaker. The Fed can lower the legal reserve requirement, making more reserves available for loans. Note, though, that the Fed can make reserves available, but it can’t make people borrow. Similarly, the Fed can lower the discount rate, but banks still have to want to borrow to make that policy work. The Fed’s best move here is to buy government securities on the open market, which will put more money in the hands of the securities’ sellers. They may deposit the money in their banks, but someone still has to borrow.

An alternative to controlling the money supply in order to manage the money economy is for the Fed to control the interest rate, allowing the money supply to take its course. It uses the same tools — the reserve requirement, discount rate, and open market operations — to increase or decrease the interest rate. A number of ancillary tools, including stock market margin requirements and moral suasion, are available to the Fed.

The Fed tends to be more effective at fighting inflation in high employment periods than it is at combating unemployment during recessions. Occasionally, the Fed and the government pursue conflicting policies, one encouraging economic expansion while the other discourages it. Remember, the Fed is charged with managing the money economy. If it senses inflationary pressures mounting, it may curb economic activity even if that means creating unemployment. That’s where the government steps in if it wants to protect jobs. It can use its fiscal policy to lower rates of unemployment at the same time the Fed uses its monetary policy to contain inflation. In this situation, they work at cross purposes. They did so through the mid-1980s when the Fed maintained higher interest rates while the government ran large, expansionary budget deficits.

After you study this chapter, you should be able to:

- Provide an account of the history of money and banking in the United States.
- Describe the organizational structure of the Federal Reserve System.
- List the functions of the Fed.
- Discuss the tools of monetary policy at the Fed’s disposal.
- Contrast a money supply target with an interest rate target as policy options for the Fed.
- Show how the Fed can use countercyclical monetary policy to influence the macroeconomy.
- Explain how the Fed and the government can have conflicting economic policy goals.

Concept Check — See how you do on these multiple-choice questions.

In which market does the Open Market Committee make trades?

1. The principal function of the Federal Open Market Committee is to
   a. set the discount rate
   b. determine the reserve requirement
   c. purchase goods and services required by the Federal Reserve System on the open market
   d. buy and sell U.S. government bonds to influence the money supply
   e. set the federal funds rate
Should the money supply increase or decrease if we are in the downturn phase of the business cycle?

2. If the Fed pursues a countercyclical monetary policy in the downturn phase of the business cycle, then the Federal Open Market Committee will
   a. lower the discount rate
   b. lower the reserve requirement
   c. purchase U.S. government bonds
   d. lower the federal funds rate
   e. sell U.S. government bonds

Sometimes banks find it convenient to borrow. The Fed is the bankers’ bank. What is the discount rate?

3. The discount rate is
   a. a lower interest rate that commercial banks charge their best customers
   b. the interest rate banks are charged when they borrow from the Fed
   c. the same as the federal funds rate
   d. the interest rate that district Federal Reserve banks charge each other for loans
   e. the interest rate that commercial banks charge each other for loans

As you think about this question, remember that lowering the reserve requirement makes excess reserves available for banks to lend.

4. If the Fed lowers the reserve requirement, we can be certain that the intention is to
   a. increase the money supply and lower interest rates
   b. decrease the inflation rate
   c. increase the money supply and increase interest rates
   d. lower the price of government bonds
   e. decrease the excess reserves held by member banks

What are the functions of the Fed?

5. All of the following are functions of the Federal Reserve System except
   a. printing money
   b. holding the reserves of member banks
   c. controlling the money supply
   d. setting stock market margin requirements
   e. printing state bank notes

Am I on the Right Track?

Your answers to the questions above should be d, c, b, a, and e. Approaching this chapter in a step-wise fashion, you should first learn the basics of U.S. monetary history and the reasons for the creation of the Federal Reserve System in 1913. It is important to understand the structure of the Fed. Then you should become well-versed in the tools of monetary policy that the Fed uses. Be certain that you are clear about how each tool should be used under different economic circumstances. Finally, it is important to understand how monetary policy and fiscal policy relate to each other. The economic goals of the Fed are sometimes in conflict with those pursued by Congress and the president.
Key Terms Quiz — Match the terms on the left with their definitions in the column on the right.

1. bank note _____ a. policy directives used by the Fed to moderate swings in the business cycle
2. countercyclical monetary policy _____ b. the central bank of the United States
3. state-chartered bank _____ c. the interest rate on loans in the federal funds market
4. reserve requirement _____ d. a commercial bank that receives its charter from the comptroller of the currency subject to federal law
5. nationally chartered bank _____ e. the buying and selling of government bonds by the Federal Open Market Committee
6. federal funds market _____ f. the Fed's principal decision-making body, charged with executing the Fed's open market operations
7. Federal Reserve System (the Fed) _____ g. the minimum amount of reserves the Fed requires a bank to hold, based on a percentage of the bank's total deposit liabilities
8. federal funds rate _____ h. a promissory note, issued by a bank, pledging to redeem the note for a specific amount of gold or silver
9. Federal Open Market Committee _____ i. the market in which banks lend and borrow reserves from each other for very short periods of time, usually overnight
10. open market operations _____ j. the maximum percentage of the cost of a stock that can be borrowed from a bank or any other financial institution, with the stock offered as collateral
11. discount rate _____ k. a commercial bank that receives its charter or license from a state government subject to the laws of that state
12. margin requirement _____ l. the interest rate the Fed charges banks that borrow reserves from it

True-False Questions — If a statement is false, explain why.

1. Continental notes, issued by the Continental Congress to finance the American Revolution, were paper money backed by gold. (T/F)

2. Alexander Hamilton was in favor of a central bank, while the idea of a central bank was opposed by Jefferson and Madison. (T/F)

3. The Fed's primary goal, as mandated by Congress, is to promote full employment in the economy. (T/F)

4. At the very top of the Federal Reserve System is the Open Market Committee. (T/F)

5. Open market operations refer to the Fed's intervention in the stock market when it perceives that a decrease in stock prices might endanger the stability of the economy. (T/F)

6. In the event that a bank, at the close of a banking day, discovers it is short of required reserves, it can borrow the needed reserves from its district Federal Reserve bank, paying the discount rate. (T/F)
7. The biggest money problem faced in the United States from the late 18th century through the 19th century was the reluctance of banks to issue enough paper money. (T/F)

8. The most effective and frequently used tool the Fed has at its disposal to change the money supply is its open market operations. (T/F)

9. When the Fed sells a $1000 government security to your local bank, the only change in your bank’s balance sheet is in the composition of its assets; its liabilities remain unchanged. (T/F)

10. The Fed is often called the bankers’ bank because commercial banks can make deposits in it and borrow from it. (T/F)

11. District Federal Reserve banks play a vital role in clearing the millions of checks that are written daily by people and businesses. (T/F)

12. A newly elected president has the opportunity to appoint a new chairman of the Federal Reserve Board of Governors and to replace the board with new members. (T/F)

13. The Federal Open Market Committee can increase the money supply by buying government securities. (T/F)

14. Because the Fed gets its policy cues from government, its monetary policy is always coordinated with the government's own fiscal policy. (T/F)

15. Because the Fed does not know the exact position of the demand curve for money in the money market, it cannot target both the money supply and the interest rate at the same time. (T/F)

**Multiple-Choice Questions**

1. When the United States’ first central bank, the First Bank of the United States, was established in 1791
   a. no other country had a central bank
   b. the U.S. monetary system was plagued by the hoarding of bank notes
   c. unanimous support for the bank was given by Congress
   d. there were many other nationally chartered banks that served the functions of a central bank
   e. there were already central banks functioning in England, Holland, and Sweden

2. The National Bank Act of 1864, passed during the Civil War, legislated
   a. the establishment of an early version of the Fed
   b. funds for the South to reconstruct
   c. the creation of the comptroller of the currency
   d. a significant increase in taxes to win the Civil War
   e. greater competition in the banking industry
3. Financial panics in the United States in the late 19th century were sometimes started by country banks that
   a. made risky loans to farmers who had purchased land and equipment at inflated prices
   b. failed because they kept inadequate reserves
   c. had abandoned their national charters for state charters
   d. issued too many Greenbacks
   e. withdrew deposits at city banks in the spring to make loans to farmers

4. The Fed must choose either an interest rate target or a money supply target because it cannot control the
   a. money supply
   b. interest rate
   c. money demand
   d. supply of government bonds
   e. the margin requirement

5. All of the following are characteristics of the Fed except
   a. it is owned by its member banks
   b. all nationally chartered banks must be members of the Fed
   c. there are 12 district Federal Reserve banks
   d. it is better at combating recessions than inflation
   e. the Fed chairman is appointed by the president

6. Which of the following actions by the Fed would cause the money supply to decrease?
   a. a decrease in the discount rate
   b. open market sales of government securities
   c. a decrease in the federal funds rate
   d. a decrease in the legal reserve requirement
   e. a statement by the Fed Chairman that he expects next year’s corporate profits to be unusually high

7. The Federal Reserve Act of 1913 created the Federal Reserve System, not the Federal Reserve Bank, because
   a. the United States already had experience with a central bank, and it didn't work
   b. the government wanted to keep the entire money system, not just the banks, under its control
   c. Congress wanted a decentralized central bank
   d. state-chartered and nationally chartered banks were already operating in the economy
   e. the government planned to link the central bank to the Department of the Treasury

8. The federal funds rate is determined by
   a. supply and demand in the money market
   b. the discount rate
   c. nationally chartered banks, although it applies as well to state-chartered banks
   d. the Fed through purchases and sales of government securities
   e. the Department of the Treasury

9. Monetary policy is more effective at curbing inflation than reducing unemployment because during
    periods of high unemployment
   a. banks are more reluctant to lend to businesses and businesses are more reluctant to borrow
   b. businesses may wish to borrow, but banks are reluctant to lend
   c. the Fed can rely on the self-correcting behavior of the labor market
   d. providing easier credit never stimulates borrowing
   e. the government will act, making the Fed's participation unnecessary and even interfering
10. The main role of the Federal Reserve System is to safeguard the country's money system by
   a. controlling the money supply, interest rates, and the price level
   b. doing thorough monthly audits of all nationally chartered banks
   c. encouraging district Feds to monitor all business transactions that exceed $1,000,000
   d. putting in place monetary policy that helps Congress cut the deficit
   e. keeping very conservative bankers on the Board of Governors

11. During a period of inflation, an appropriate pair of policies for the Fed to implement would be to
   a. lower the federal funds rate by purchasing government securities
   b. increase the federal funds rate by purchasing government securities
   c. raise the legal reserve requirement and lower the discount rate
   d. sell government securities and raise the discount rate
   e. raise the discount rate and lower the legal reserve requirement

12. Moral suasion and controlling stock market margin requirements are two of the
   a. strongest tools used by the Fed to control the money supply
   b. ancillary tools used by the Fed to control the money supply
   c. tools that are quite effective at fine-tuning monetary policy
   d. tools used only to decrease the money supply
   e. tools used only to increase the money supply

13. When the Fed raises the legal reserve requirement, it
   a. may force banks to call in loans and convert them to reserves
   b. decreases the amount of reserves banks are obligated to hold
   c. creates the conditions for bank loan expansion
   d. makes government securities more attractive because interest rates fall
   e. lowers the discount rate that the Fed charges commercial banks

14. When the Fed buys government securities in the open market, the effect on the asset positions of
   commercial banks is
   a. negative, forcing banks to call in loans and converting them to reserves
   b. positive, decreasing the amount of reserves banks are obligated to hold
   c. to increase bank reserves, which allow banks to increase lending
   d. a substitution of stocks and corporate bonds for government securities
   e. to increase banks' assets, but, at the same time, their liabilities

15. The most likely place for a commercial bank to go to increase its reserves for short periods is
   a. its district Federal Reserve bank
   b. the federal open market committee
   c. the federal funds market
   d. the Department of the Treasury
   e. Knickerbocker Trust

16. All of the following are roles played by the Fed as a bankers' bank except
   a. clearing checks
   b. providing currency
   c. providing loans
   d. providing customers for commercial loans
   e. holding the reserves of member banks
17. A central bank could moderate the extremes in the business cycle by _____________________ during an economic downturn and ______________________ during an upswing in the business cycle.
   a. decreasing the money supply; increasing the money supply
   b. raising interest rates; lowering interest rates
   c. increasing the money supply; decreasing the money supply
   d. closely examining bank balance sheets; largely ignoring bank regulation
   e. setting prices higher; decreasing the price level

18. The U.S. Bureau of Printing and Engraving in Washington, D.C., prints our currency
   a. but the Department of the Treasury determines when and how much to put into the economy
   b. and determines how much of it should be introduced into the economy
   c. but district Federal Reserve banks determine when and how much to put into the economy
   d. but the Federal Open Market Committee determines when and how much to put into the economy
   e. but the government, through fiscal policy, determines when and how much to put into the economy.

19. A Fed policy to increase the money supply in order to increase real GDP works best when the money demand
   a. and investment demand curves are steep
   b. and investment demand curves are flat
   c. curve is flat and the investment demand curve is steep
   d. curve shifts to the right and the investment demand curve shifts to the left
   e. curve is steep and the investment demand curve is flat

20. The Fed's use of moral suasion to control inflation
   a. is very effective because people know that fiscal policy doesn’t work
   b. is always tried before the Fed resorts to other tools of monetary policy
   c. is inherently weak because it relies on voluntary compliance
   d. is preferred by banks because they might otherwise have to pay a higher discount rate at the Fed
   e. is only used in combination with the Fed's other tools of monetary policy

The following questions relate to the global, applied, and interdisciplinary perspectives in the text.

21. Canada opted for a zero reserve requirement for its commercial banks in the 1990s because
   a. Canadian bankers are risk lovers
   b. the United States has a zero reserve requirement and Canada typically mimics U.S. policy
   c. banks are able to end each day with zero cash reserves
   d. if the bank ends up with negative cash balances, it can borrow from the Bank of Canada
   e. Canada is conducting economic experiments by changing the reserve requirement over time

22. The Department of Treasury determines the interest rate on government securities by
   a. fixing it at the same level that European securities earn
   b. auctioning securities to those who will accept the lowest interest rates
   c. taking advice from the Fed Chairman
   d. open market operations
   e. matching the rate established in the federal funds market

23. The largest asset for United States commercial banks is
   a. loans
   b. cash
   c. government securities
   d. gold
   e. foreign securities
24. The impression one gets on reading an account of how the FOMC makes monetary policy decisions is that
   a. they are highly autocratic, dominated by the Fed Chairman
   b. they are highly technocratic, dominated by staffers who are highly skilled econometricians
   c. the approach is different in every meeting
   d. there is much discussion, questioning, careful study of options, and a vote on which policy to adopt
   e. heated arguments are the rule rather than the exception

25. The basic reason that 75 percent of U.S. currency is held in $100 and $50 bills in foreign countries is that
   a. dollars are an excellent store of value compared to many foreign currencies that are highly unstable
   b. drug transactions are typically conducted in U.S. currency
   c. foreign tourists who have visited the U.S. take the bills home as souvenirs
   d. American tourists in foreign countries spend their dollars there
   e. Americans hardly use currency any longer, so it is more useful in foreign countries that lack cash

Fill in the Blanks

1. The failure to renew the charter for the First Bank of the United States was due primarily to opposition
   from ________________ and ________________ states.

2. The main goal of the Fed is to provide the economy with an appropriate ________________
   consistent with a stable ________________.

3. The Fed tends to be more effective in controlling ________________ during periods of
   ________________ than in combating ________________ during periods of
   ________________.

4. If the Fed chooses to target the money supply, then it cannot simultaneously target the
   ________________ because it cannot control ________________.

Discussion Questions

1. How stable were financial institutions in the United States prior to the establishment of the Federal Reserve
   System? Provide examples.

2. Why is monetary policy a more effective tool for controlling inflation than for controlling unemployment?
3. Outline the institutional structure of the Federal Reserve System. Why are there 12 district banks in the Fed instead of one central bank?

4. Describe the tools used by the Fed to influence the money supply and interest rates.

5. When might the Fed use a money supply target? When is it more likely to employ an interest rate target? Why?

Everyday Applications

Suppose we were considering the establishment of a central bank in the United States now just as we did in the period from 1907 to 1913. Would there be as much political pressure to create 12 district banks today as there was in the early part of this century? Consider the ways that changes in banking technology have reduced the need for decentralization in a central banking system even for a large country like the United States.

Economics Online

The Federal Reserve Board of Governors has an extraordinarily extensive Web site (http://www.federalreserve.gov). Among the items that you can browse at this site are the transcripts of Federal Open Market Committee meetings, speeches by Federal Reserve Board members, press releases, enforcement actions, consumer information, and reports to Congress. There is a lot to explore. Have fun.

Answers to Questions

Key Terms Quiz

a. 2  
   b. 7  
   c. 8  
   d. 5  
   e. 10

f. 9  
g. 4  
h. 1  
i. 6  
j. 12

k. 3  
l. 11
True-False Questions

1. False. Continental notes were not backed by gold or silver so as the quantity of notes in circulation increased, their value depreciated. In 1777 they traded 2 for 1 against silver, but by 1781 they traded 1,000 to 1 against silver.

2. True

3. False. The primary goal for the Fed is to provide a money supply that is consistent with stable prices.

4. False. At the very top of the Fed is the Board of Governors.

5. False. Open market operations refer to the purchase and sale of bonds by the Federal Open Market Committee in order to influence the money supply and interest rates.

6. True

7. False. The greater problem for banks in the United States during the late 18th and 19th centuries was their tendency to issue too much paper money.

8. True

9. True

10. True

11. True

12. False. The chairman of the Fed serves a four-year term and can be reappointed for up to 14 years.

13. True

14. False. The Fed’s policies and the policy favored by Congress and the president may be different. For example, the Fed’s primary concern is maintaining low or zero inflation, while Congress and the president may want to keep unemployment at a low level. Monetary and fiscal policy would then work in opposite directions.

15. True

Multiple-Choice Questions

1. e
2. c
3. e
4. c
5. d
6. b
7. c
8. d
9. a
10. a
11. d
12. b
13. a
14. c
15. c
16. d
17. c
18. c
19. e
20. c
21. d
22. b
23. a
24. c
25. a

Fill in the Blanks

1. southern; western
2. money supply; price level
3. inflation; prosperity; unemployment; recession
4. interest rate; money demand

Discussion Questions

1. The banking system was chronically unstable prior to the establishment of the Federal Reserve System. Among the most notable examples of instability are the suspension of specie payments by most banks in 1814 prior to the establishment of the Second Bank of the United States and the Knickerbocker Trust crisis in 1907. The problem that a central bank could have helped to solve was the tendency of banks to issue more currency than their reserves could support. A central bank could have forced banks to effectively back their notes with specie — that is, to redeem bank notes with specie on presentation. A central bank could also have provided loans of specie to banks when depositors’ demand for specie exceeded the banks’ reserves. Without a central bank, bank failures tended to occur in waves with no mechanism for stopping the withdrawal of deposits from the nation's banks. For example, as a result of withdrawals of deposits sparked by the Knickerbocker Trust disaster, investment projects had to be suspended and sound businesses were left without credit and forced into bankruptcy. A severe recession was the result.
2. In order to lower the unemployment rate, the Fed would have to increase the money supply and lower the interest rate so that investment increases. There are two possible stumbling blocks in this process. First, while the Fed can make reserves for lending available to banks, it cannot force banks to lend these reserves. As we learned in the previous chapter, it is by lending that the money supply increases. The second potential stumbling block is that the reserves may not be borrowed. Neither the Fed nor banks can make investors borrow funds to pursue productive projects.

Controlling inflation is easier. In this case, the Fed simply reduces the money supply, causing interest rates to rise, investment and consumption spending to fall, and aggregate demand to fall as a result. If the aggregate demand curve intersected the aggregate supply curve along its vertical segment, a decrease in aggregate demand would lower the price level and inflation.

3. The Fed is controlled by a seven-member board with one member appointed as the chair. The board members have 14-year terms, and the chair serves for four years with the potential for reappointments for up to 14 years. The Fed Open Market Committee consists of the board and five of the district Fed Presidents, one of whom must be the New York Fed president. District Fed presidents rotate on and off the Open Market Committee. Open market operations are the purchase and sale of government securities by the Fed. There are 12 district Feds to better serve the regions of the United States and to diffuse power throughout the Federal Reserve System.

4. The Fed can change the legal reserve requirement. An increase in the legal reserve requirement reduces the reserves available to banks to make loans and so decreases the money supply. A decrease in the legal reserve requirement makes more reserves available to banks for lending. The Fed can change the discount rate, the rate at which banks borrow from the district banks. An increase in the discount rate makes it more expensive for banks to borrow, so it has the effect of decreasing the money supply and increasing interest rates throughout the economy. A decrease in the discount rate has the opposite effect. The Fed can use open market operations to change the money supply and interest rates. By selling government bonds, the Fed reduces reserves available to banks to make loans, so the money supply shrinks and interest rates increase. By purchasing government bonds, the Fed increases reserves available to banks to make loans, so the money supply can increase and interest rates will fall. The Fed uses open market operations to control the federal funds rate, the interest rate at which banks make loans to and borrow from one another in the federal funds market. To raise the federal funds rate, the Fed sells government securities and to lower the federal funds rate the Fed buys government securities. The margin requirement is the maximum percentage of a stock’s value that can be borrowed when the stock is being purchased. By increasing the margin requirement, the Fed reduces the amount of borrowing to buy stocks and limits the money supply somewhat. Moral suasion is a technique that relies on people’s voluntary compliance to the Fed’s wishes. The Fed chair may urge banks to restrict lending, or firms to hold the prices of their goods constant, to combat inflation.

5. The Fed is most inclined to use a money supply target when inflation is a serious problem. By restricting the money supply, the interest rate will rise, the quantity of investment and aggregate demand will fall, and the price level should fall. An interest rate target is preferred to fight unemployment since, by lowering interest rates, investment and aggregate demand can be stimulated. The Fed’s countercyclical policy works in either case no matter which target it chooses. However, in the last few decades, the money supply target has been preferred for battling inflation, and the interest rate target has been preferred for reducing unemployment.
Homework Questions

True-False Questions — If a statement is false, explain why.

1. The United States monetary system was stable before the creation of the Federal Reserve System in 1913. (T/F)

2. Congress owns the twelve district banks in the Federal Reserve System. (T/F)

3. The tool used most frequently by the Fed to control the money supply is open market operations. (T/F)

4. The Fed is able to target both the money supply and the interest rate through open market purchases and sales of government securities. (T/F)

5. The Fed can increase the margin requirement when it wants to encourage lending to stock market investors. (T/F)

Multiple Choice Questions

1. Which of the following is not a function of the Fed?
   a. printing money
   b. bankers' bank/lender of last resort
   c. controlling the money supply
   d. clearing checks
   e. encouraging responsible behavior with respect to money matters

2. All of the following are mechanisms the Fed can use to increase the money supply except
   a. selling government bonds on the open market
   b. buying government bonds on the open market
   c. lowering the federal funds rate
   d. lowering the discount rate
   e. lowering the margin requirement on loans to purchase stocks

3. When the government tries to finance a deficit by issuing new government securities while, at the same time, the Fed pursues policies to encourage more borrowing by businesses,
   a. the government and the Fed should raise the interest rate
   b. the Fed should buy the government's new securities issues
   c. the government's policy and the Fed's policy will both tend to raise interest rates
   d. the new government securities issues will lower the interest rate, which is what the Fed wants anyway
   e. the Fed should lower the interest rate, which will allow the government to sell the new securities more easily.
4. One source of instability in the banking system, prior to the establishment of the Fed, was the relationship between country banks and city banks, where country banks would deposit excess reserves in the city banks in the fall and, in the spring,
   a. the city banks would force the country banks to borrow from them at high interest rates
   b. country banks would fail since they could not meet demands for specie from their depositors over the winter
   c. city banks would find lending opportunities in manufacturing activities
   d. country banks would withdraw their deposits to provide loans to farmers, leaving city banks unstable
   e. the money supply would grow enormously due to all the new lending

5. Because the Fed cannot control money demand it is impossible
   a. to know how many new Federal Reserve notes to print
   b. to target the money supply
   c. to target the interest rate
   d. to lower interest rates, but it is possible to raise them
   e. to simultaneously target both the money supply and the interest rate

**Discussion Questions/Problems**

1. Sketch a graph of the business cycle and list the monetary policies that are appropriate during downturns and during periods of prosperity.

2. What are open market operations? How do they work?