Chapter 13

MONEY AND BANKING

FUNDAMENTAL QUESTIONS

1. What is money?

   Money is anything that is generally acceptable to sellers in exchange for goods and services. Money serves as a medium of exchange, a unit of account, a store of value, and a standard of deferred payment.

2. How is the U.S. money supply defined?

   There are three definitions of the U.S. money supply. The narrowest definition, the **M1 money supply**, consists of currency, travelers' checks, demand deposits, and other checkable deposits. M2 adds savings deposits, small-denomination time deposits, and retail money market mutual fund balances. M3 equals M2 plus large time deposits, repurchase agreements, Eurodollar deposits, and institution-only money market mutual fund balances.

3. How do countries pay for international transactions?

   Countries use the foreign exchange market to convert national currencies to pay for trade. They also use **international reserve assets**, like gold, or **international reserve currencies**, like the dollar.

4. Why are banks considered intermediaries?

   Banks act as middlemen between savers and borrowers. They accept deposits from savers and use those deposits to make loans to borrowers.

5. How does international banking differ from domestic banking?

   Domestic banking is heavily regulated, whereas international banking is not. Because they are not restricted by regulations, international banks can usually offer depositors and borrowers better terms than can domestic banks.

6. How do banks create money?

   Banks create money by making loans up to the amount of their excess reserves. The banking system can increase the money supply by the **deposit expansion multiplier** times the excess reserves in the system.

Key Terms

money
liquid asset
currency substitution
credit
M1 money supply
transactions account
international reserve asset
international reserve currency
European currency unit (ECU)
composite currency
special drawing right (SDR)
Federal Deposit Insurance Corporation (FDIC)
Eurocurrency market (offshore banking)
international banking facility (IBF)
fractional reserve banking system
ROSCAS
hawala
required reserves
excess reserves
deposit expansion multiplier

Quick-Check Quiz

Section 1: What Is Money?

1. Which of the following is *not* one of the functions of money?
   a. a medium of exchange
   b. a unit of account
   c. a resource for production
   d. a store of value
   e. a standard of deferred payment

2. A $34 price tag on a sweater is an example of money functioning as a
   a. medium of exchange.
   b. unit of account.
   c. resource for production.
   d. store of value.
   e. standard of deferred payment.

3. For money to function as a store of value, it is most important that it have which of the following properties?
   a. durability
   b. divisibility
   c. portability
   d. ability to be easily identified as genuine
   e. optimal scarcity

4. Which of the following is *not* a component of the M1 money supply?
   a. demand deposits
   b. other checkable deposits
   c. currency
   d. certificates of deposit
   e. travelers' checks

5. Which of the following is *not* a transactions account?
   a. negotiable order of withdrawal
   b. credit union share draft account
   c. savings account
   d. automated transfer system account
   e. demand deposit at a commercial bank

6. In 2003 currency represented ___________ percent of the M1 money supply.
   a. 1
   b. 52
   c. 30
   d. 36
   e. 10

7. Which of the following accounts are offered by savings and loans?
   a. negotiable orders of withdrawal
   b. credit union share draft accounts
   c. money market deposit accounts
   d. automated transfer system accounts
   e. demand deposits at commercial banks

8. Demand deposits made up ___________ percent of the M1 money supply in 2003.
   a. 1
   b. 28
   c. 30
   d. 71
   e. 25

9. Which of the following is *not* a component of the M2 money supply?
   a. retail money market mutual fund balances
   b. small-denomination time deposits
   c. checkable deposits
   d. savings deposits
   e. large time deposits

10. Which of the following is *not* a component of the M3 money supply?
   a. Eurodollar deposits
   b. value of stocks and bonds
   c. RPs
   d. institution-only money market mutual fund balances
   e. M2

11. A German investor deposits 1,000 euros in an American time deposit account. The exchange rate is then €1 = $.87. After six months, the investor cashes in the dollar deposit only to obtain 900 euros. If interest earnings are zero, what must be the new exchange rate at the time of withdrawal?
   a. €1 = $.97
   b. €1 = $1
   c. €1 = $.90
   d. €1 = $.783
   e. €1 = $9.70

Section 2: Banking

1. Which of the following statements is *false?*
   a. The 1980 Depository Institutions Deregulation and Monetary Control Act was intended to stimulate competition among financial intermediaries.
   b. The 1980 Depository Institutions Deregulation and Monetary Control Act narrowed the distinctions between commercial banks and thrifts.
   c. The 1980 Depository Institutions Deregulation and Monetary Control Act eliminated many of the differences between state banks and national banks.
   d. The 1980 Depository Institutions Deregulation and Monetary Control Act created the Federal Deposit Insurance Corporation.
   e. The 1980 Depository Institutions Deregulation and Monetary Control Act permitted thrift institutions to offer many of the same services as commercial banks.

2. Which of the following statements is true?
   a. The laws regulating international banks typically are very restrictive, whereas domestic banks go relatively unregulated.
   b. Offshore banking, called the Eurocurrency market, refers to international banking transactions among the seven western European industrial powers.
   c. Offshore banks are typically able to offer a higher return on deposits and a lower rate on loans than domestic banks.
   d. International banking is dominated by the United States and the United Kingdom.
   e. U.S. banks that participate in international banking on U.S. soil are subject to the same regulations as domestic banks.

3. Which of the following statements is *false?*
   a. The FDIC does not permit banks to fail, for fear of causing a bank panic.
   b. Many states permit entry to banks located out of state.
   c. A Eurodollar is a dollar-denominated deposit outside the U.S. banking industry.
   d. International banking is riskier than domestic banking.
   e. International banking facilities are not physical entities.

Section 3: Banks and the Money Supply

1. Deposits at the Third National Bank are $200,000, and the reserve requirement is 10 percent. Cash reserves equal $50,000. Required reserves equal
   a. $40,000.
   b. $20,000.
   c. $50,000.
   d. $30,000.
   e. $10,000.

2. Deposits at the ABC Bank are $600,000, and the reserve requirement is 20 percent. Cash reserves equal $160,000. Excess reserves equal
   a. $120,000.
   b. $160,000.
   c. $32,000.
   d. $40,000.
   e. $128,000.

3. Deposits at the XYZ Bank are $400,000, and the reserve requirement is 20 percent. Cash reserves equal $6,000. The deposit expansion multiplier is
   a. .20.
   b. .80.
   c. 5.
   d. 1.25.
   e. 1.

4. The deposit expansion multiplier will be larger the
   a. smaller the reserve requirement.
   b. greater the currency drain.
   c. greater the percentage of excess reserves held by banks.
   d. larger the bank.
   e. greater the value of the assets held by the bank.

5. The Golden State Bank has cash reserves of $110,000, deposits of $200,000, and loans of $90,000. The reserve requirement is 5 percent. This bank can make additional loans up to the amount of
   a. $4,500.
   b. $10,000.
   c. $5,500.
   d. $100,000.
   e. $190,000.

6. Suppose that excess reserves in the Stranda National Bank are $15,000 and the reserve requirement is 4 percent. The maximum amount that the deposits can be increased is
   a. $60,000.
   b. $600.
   c. $375,000.
   d. $15,000.
   e. $72,000.

7. Banks increase the money supply by
   a. cashing checks.
   b. making loans.
   c. providing currency.
   d. printing money.
   e. printing money and coining currency.

8. A bank has $200,000 in deposits and $10,000 in cash. The reserve requirement is 4 percent. The bank's required reserves are ___________ , and its excess reserves are ___________ .
   a. $400; $199,600
   b. $199,600; $400
   c. $8,000; $192,000
   d. $2,000; $8,000
   e. $8,000; $2,000

9. The QRS Bank is holding cash reserves of $68,000 on deposits of $1,360,000. If the reserve requirement is 3 percent, then the QRS Bank is holding excess reserves of
   a. $27,200.
   b. $1,292,000.
   c. $2,040.
   d. $40,800.
   e. $38,760.

Practice Questions and Problems

Section 1: What Is Money?

1. ___________ is anything that is generally acceptable to sellers in exchange for goods and services.
2. A(n) ___________ asset is an asset that can easily be exchanged for goods and services.
3. List the four functions of money.

   ____

   ____

   ____

   ____

4. ___________ is the direct exchange of goods and services for other goods and services.
5. The use of money as a medium of exchange lowers ___________ costs.
6. Money eliminates the need for a ___________ , which is necessary for barter to work.
7. For money to be an effective medium of exchange, it must be ___________ and ___________ .
8. The use of money as a unit of account lowers ___________ costs.
9. For money to be an effective store of value, it must be ___________ .
10. ___________ is the use of foreign money as a substitute for domestic money when the domestic money has a high rate of inflation.

11. ____________ is available savings that are lent to borrowers to spend.
12. List the four components of the M1 money supply.

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13. A checking account at a bank or other financial institution that can be drawn on to make payments is called a ____________ account.
14. Currency represented ____________ percent of the M1 money supply in 2003.
15. The U.S dollar is backed by ____________ . This type of monetary system is called a ____________ monetary system.
16. Money that has an intrinsic value is called ____________ money.
17. ____________ is the tendency to hoard currency as its commodity value increases.
18. Travelers' checks account for ____________ percent of the M1 money supply.
19. ____________ pay no interest and must be paid immediately on the demand of the depositor.
20. ____________ are checking accounts at financial institutions that pay interest and give the depositor check-writing privileges.
21. ____________ (NOW) accounts are interest-bearing checking accounts offered by savings and loan institutions.
22. ____________ (ATS) accounts are accounts at commercial banks that combine an interest-bearing savings account with a non-interest-bearing checking account.
23. Credit unions offer their members interest-bearing checking accounts called ____________ .
24. ____________ are nonprofit savings and loan institutions.
25. Demand deposits made up ____________ percent of the M1 money supply in 2003.
26. List the four components of the M2 money supply.

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27. A ____________ is an agreement between a bank and a customer under which the customer buys U.S. government securities from the bank and later sells them back to the bank.
28. Deposits denominated in dollars but held outside the U.S. domestic bank market are called ____________ deposits.
29. ____________ deposits are deposits at banks and at savings and loans that earn interest but offer no check-writing privileges.
30. Small-denomination time deposits are also called ____________ .

31. ____________ combine the deposits of many individuals and invest them in government Treasury bills and other short-term securities.

32. List the five components of the M3 money supply.

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33. Sales contracts between developed countries are usually invoiced in the national currency of the ____________, whereas sales between a developed and a developing country are usually invoiced in the currency of the ____________.

34. An asset used to settle debts between governments is called an ____________ asset.

35. Currencies that are held to settle debts between governments are called ____________ currencies.

36. The ____________ was a unit of account used by the industrial nations of Western Europe to settle debts between them (prior to the euro).

37. A ____________ currency is a unit of account whose value is an average of the values of certain national currencies.

38. The value of the ____________ is an average of the values of the U.S. dollar, the French franc, the German mark, the Japanese yen, and the U.K. pound.

Section 2: Banking

1. Thrift institutions include ____________, ____________, and ____________.
2. ____________ banks are banks chartered by the federal government, whereas ____________ banks are chartered under state law.
3. A bank was allowed to operate in only one location in a ____________ banking state.
4. The ____________ is a federal agency that insures deposits in commercial banks so that depositors do not lose their deposits when a bank fails.
5. The international deposit and loan market is often called the ____________ or ____________.
6. Typically, domestic banks are subject to ____________ regulations, whereas offshore banks are subject to ____________ regulation.
7. ____________ (Domestic, Offshore) banks are usually able to offer better terms to their customers.
8. Eurodollar transactions are ____________ (more risky, less risky) than domestic transactions in the United States because of the lack of regulation and deposit insurance.
9. A bank ____________ occurs when depositors, fearing a bank's closing, rush to withdraw their funds.
10. ____________ are permitted to take part in international banking activities on U.S. soil.

11. The __________ (1980) eliminated many of the differences between commercial banks and thrift institutions and between state banks and national banks.
12. __________ is an instrument for financing Islamic investment.

Section 3: Banks and the Money Supply

1. In a __________ banking system, banks keep less than 100 percent of their deposits on reserve.
2. A financial statement that records a firm's assets and liabilities is called a __________ .
3. __________ are what the firm owns, and __________ are what the firm owes.
4. In the United States, reserve requirements are set by the __________ .
5. __________ reserves are the cash reserves a bank must keep on hand or on deposit with the Fed.
6. __________ reserves are total reserves minus required reserves.
7. A bank is __________ when it has zero excess reserves.
8. The deposit expansion multiplier equals __________ (formula).
9. The deposit expansion multiplier tells us the __________ (maximum, minimum) change in total deposits when a new deposit is made.
10. If people withdraw deposits from banks, __________ occurs and the deposit expansion multiplier will be less than the reciprocal of the reserve requirement.
11. Any single bank can lend only up to the amount of its __________ .
12. Banks increase the money supply by __________ .
13. McDougall Bank and Trust has vault cash in the amount of $300,000, loans of $900,000, and deposits of $1,200,000.

    a. Prepare a balance sheet for this bank.

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    ____

    b. If the bank maintains a reserve requirement of 5 percent, what is the largest new loan it can make?

    ____

    c. What is the maximum amount the deposits can be increased by the banking system due to McDougall Bank and Trust's new loan? __________

14. The State Bank of Oswald has cash reserves of $5,000, loans of $495,000, and deposits of $500,000. The bank maintains a reserve requirement of 1 percent.

   a. Calculate this bank's excess reserves.

   ____

   b. The bank receives a new deposit of $100,000. What is the largest loan the bank can make?

   ____

   c. What is the maximum amount the deposits can be increased as a result of the State Bank of Oswald's new loan? ___________

15. ___________ are a common form of informal financial arrangement in many developing countries.

16. A ___________ network can be an effective source of financing for terrorist activities, since no names or addresses of the sources or recipients of the money exist.

Thinking About and Applying Money and Banking

I. Sorting Out the Monetary Aggregates

Put M3 next to items that are included *only* in M3, M2 next to items included in M2 and M3, and M1 next to items common to all three monetary aggregates.

________ RPs
________ Demand deposits
________ Savings deposits
________ Large time deposits
________ Institution-only money market mutual funds
________ Currency
________ Eurodollars
________ Small-denomination time deposits
________ Demand deposits
________ Retail money market mutual funds
________ Other checkable deposits
________ Travelers' checks

II. The Components of the Monetary Aggregates

The table below lists the components of the monetary aggregates in billions of dollars.

Large time deposits	356.7
Travelers' checks	8.1
Institution-only money market mutual funds	178.0
Savings deposits	1,135.0
Demand deposits	406.5
Other checkable deposits	420.0
Eurodollars	52.2
Currency	357.3
RPs	100.8
Retail money market mutual funds	372.1
Small-denomination time deposits	826.9

Calculate M1, M2, and M3.

M1 ____________________

M2 ____________________

M3 ____________________

Chapter 13 Homework Problems

Name ______________________________

1. In terms of its function within an economy, what is money?

2. What are the four functions of money?

3. What are the four components of the M1 money supply?

4. How do banks create money?

5. a. The Bank of Dimmenland was fully loaned up until it received a new deposit of $10,000. Like all banks in this economy, the Bank of Dimmenland has its reserve ratio set by law at 5 percent. How much are the Bank of Dimmenland's excess reserves now, and how large a loan can it make?

b. The Bank of Dimmenland makes a loan of $9,500 to Randy Haydon, who pays $9,500 to Family Motors to buy a used BMW. Family Motors deposits the $9,500 in the Bank of Clarkville. How much excess reserves does the Bank of Clarkville gain from the deposit, and how large a loan can it make based on those excess reserves?

c. What is the deposit expansion multiplier for this economy, and by how much can the initial deposit of $10,000 expand the money supply in this economy?

If your instructor assigns these problems, write your answers above, then tear out this page and hand it in.

Answers

Quick-Check Quiz

Section 1: What Is Money?

1\. c; 2. b; 3. a; 4. d; 5. c; 6. b; 7. a; 8. e; 9. c; 10. b; 11. d
If you missed any of these questions, you should go back and review Section 1 of Chapter 13.

Section 2: Banking

1\. d; 2. c; 3. a
If you missed any of these questions, you should go back and review Section 2 of Chapter 13.

Section 3: Banks and the Money Supply

1\. b; 2. d; 3. c; 4. a; 5. d; 6. c; 7. b; 8. e; 9. a
If you missed any of these questions, you should go back and review Section 3 of Chapter 13.

Practice Questions and Problems

Section 1: What Is Money?

1. Money
2. liquid
3. medium of exchange
   unit of account
   store of value
   standard of deferred payment
4. Barter
5. transactions
6. double coincidence of wants
7. portable; divisible
8. information
9. durable
10. Currency substitution
11. Credit
12. currency
    travelers' checks
    demand deposits
    other checkable deposits (OCDs)
13. transactions
14. 52
15. the confidence of the public; fiduciary
16. commodity
17. Gresham's Law
18. less than 1
19. Demand deposits
20. Other checkable deposits (OCDs)

21. Negotiable order of withdrawal
22. Automated transfer system
23. share drafts
24. Mutual savings banks
25. 25
26. M1
    savings deposits
    small-denomination time deposits (certificates of deposit, or CDs)
    retail money market mutual fund balances
27. repurchase agreement
28. Eurodollar
29. Savings
30. certificates of deposit
31. Retail money market mutual fund balances
32. M2
    large time deposits
    RPs
    Eurodollar deposits
    institution-only money market mutual fund balances
33. exporter; developed country
34. international reserve
35. international reserve
36. European currency unit (ECU)
37. composite
38. special drawing right (SDR)

Section 2: Banking

1. savings and loans; mutual savings banks; credit unions
2. National; state
3. unit
4. Federal Deposit Insurance Corporation (FDIC)
5. Eurocurrency market; offshore banking
6. restrictive; little or no
7. Offshore
8. more risky
9. panic
10. International Banking Facilities (IBFs)
11. Depository Institutions Deregulation and Monetary Control Act
12. Murabaha

Section 3: Banks and the Money Supply

1. fractional reserve
2. balance sheet
3. Assets; liabilities
4. Federal Reserve Board
5. Required
6. Excess
7. loaned up
8. 1/reserve requirement
9. maximum
10. currency drain
11. excess reserves
12. making loans
13. a.

Assets		Liabilities	
Cash	\$ 300,000	Deposits	\$1,200,000
Loans	900,000		
Total	\$1,200,000	Total	\$1,200,000

   b. \$240,000
   Required reserves = .05(\$1,200,000) = \$60,000. Excess reserves = total reserves – required reserves = \$300,000 – \$60,000 = \$240,000. Since a bank can make loans up to the amount of its excess reserves, this bank can loan out \$240,000.

   c. \$4,800,000
   The deposit expansion multiplier = 1/reserve requirement = 1/.05 = 20. Change in the money supply = deposit expansion multiplier × excess reserves = 20(\$240,000) = \$4,800,000.

14. a. Required reserves = .01(\$500,000) = \$5,000. Excess reserves = \$5,000 – \$5,000 = 0.
   b. Cash = \$105,000. Deposits = \$600,000. Required reserves = .01(\$600,000) = \$6,000. Excess reserves = \$105,000 – \$6,000 = \$99,000.
   c. Deposit expansion multiplier = 1/.01 = 100. Maximum amount of money that can be created = deposit expansion multiplier × excess reserves = 100(\$99,000) = \$9,900,000.
15. ROSCAS (Rotating Savings and Credit Associations)
16. hawala

Thinking About and Applying Money and Banking

I. Sorting Out the Monetary Aggregates

M3	RPs
M1	Demand deposits
M2	Savings deposits
M3	Large time deposits
M3	Institution-only money market mutual funds
M1	Currency
M3	Eurodollars
M2	Small-denomination time deposits
M1	Demand deposits
M2	Retail money market mutual funds
M1	Other checkable deposits
M1	Traveler's checks

II. The Components of the Monetary Aggregates

M1 = Currency + travelers' checks + demand deposits + other checkable deposits
= 357.3 + 8.1 + 406.5 + 420.0 = 1,191.9

M2 = M1 + savings deposits + small-denomination time deposits + retail money market mutual funds
= 1,191.9 + 1,135.0 + 826.9 + 372.1
= 3,525.9

M3 = M2 + large time deposits + RPs + Eurodollars
+ institution-only money market mutual funds
= 3,525.9 + 356.7 + 100.8 + 52.2 + 178.0
= 4,163.6