

Chapter 10

MONEY, BANKING, AND FINANCE

Macroeconomics in Context (Goodwin, et al.)

Chapter Overview

In this chapter, you will be introduced to a standard treatment of money and the banking system as well as the role that banks play in our financial system. You will get an overview of the relationship between money and the average price level, and will learn about the role and functions of money, different types of money, and the concept of liquidity as it applies to money. The chapter explores various types of banks and the role they play in money creation. The functions of finance are introduced along with nonbank financial institutions, financialization, and speculative bubbles. The final section of the chapter presents the theory of financial instability. The appendix provides a brief overview of the 2008 financial crisis and regulatory reforms to prevent future crises.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe the consequences of inflation and deflation.
2. Describe the functions and types of money.
3. Describe the measures of the money supply and explain the liquidity continuum.
4. Explain the basic workings of private banks including the use of balance sheets.
5. Explain how banks create money.
6. Describe the categories and functions of nonbank financial institutions.
7. Explain the concept of “financialization” and provide examples.
8. Explain the concept of “speculative bubble” and illustrate it with concrete examples.
9. Describe Minsky’s theory of financial instability to explain the occurrence of financial crisis and understand the role of regulation in managing instability.

Key Terms

monetary policy

barter

deflation

liquidity

credit money

commodity money

exchange value

intrinsic value

gold standard

fiat money

M1

M2

financial intermediary

economic liability

bank reserves

fractional reserve system

required reserves

excess reserves

portfolio investment

leverage

non-bank financial institution

collective investment vehicle

hedge fund

pension fund
insurance company
securities broker
mortgage broker

shadow banking
subprime mortgage
securitization
moral hazard

Active Review

Fill in the Blank

1. The fact that money can be immediately used in exchange, whereas valuable jewelry cannot, illustrates the fact that money is very _____.
2. The measure of the money supply that includes currency in circulation, checking accounts, saving accounts, share accounts, and money market accounts is called _____.
3. When the aggregate price level falls economists use the term _____ to describe the situation.
4. When something contains *intrinsic value* and also serves as a medium of exchange it is known as _____.
5. The _____ definition of the money supply is broad enough to include retail money market funds, certificates of deposit, savings and share accounts, as well as checkable deposits and currency.
6. A medium of exchange that is valuable because a government says that it has value is known as _____.
7. Institutions that accept funds and provide loans are known as _____.
8. Vault cash and deposits at the Federal Reserve both count towards _____, a term that describes funds not lent out or invested by a private bank.
9. When banks are only required to hold a fraction of their deposits on reserve they are part of _____.
10. The portion of bank reserves that a bank must keep on reserve are known as _____.
11. The portion of bank reserves that banks are permitted to lend or invest are known as _____.

12. The use of debt to increase the potential rate of return on one's own investment is called _____.
13. One alternative to saving money in a bank is to use a _____, which is a category of pooled funds.
14. A _____ is a type of pooled fund that often engages in highly speculative investments and is generally restricted to wealthy clients.
15. An agent responsible for finding a buyer for sellers of different securities is known as a _____.
16. The theory that unregulated markets will always produce instability and crisis is referred to as the _____.
17. In Minsky's theory, the three financial profiles that account for the different margins of safety are _____, _____, and _____.
18. (Appendix) The process of pooling various kinds of loans, slicing and sorting them according to their risk levels, and repackaging them into financial instruments is known as _____.
19. (Appendix) Mortgages given to people with poor credit are known as _____.
20. (Appendix) The availability of government bailouts for large firms can encourage excessive risk-taking, a phenomenon known as _____.
21. (Appendix) The major financial reform passed in the wake of the 2007-9 crisis was the _____ bill.

True or False

22. When a government finances its expenditures by printing money rather than collecting taxes, this can lead to "too much money chasing too few goods" and hyperinflation.
23. Coins and paper money have in some periods been commodity money and in other periods fiat money.
24. Nelson takes a \$100 bill he had in his wallet and deposits it into his checking account. Thus, M1 increases by \$100.
25. (Appendix) High mortgage rates contributed to the development of the housing bubble.

Short Answer

26. Why is inflation harmful to an economy?
27. Why is deflation harmful to an economy?
28. What are the three roles of money? And what are two types of money?
29. Identify the components of M1 and M2.
30. Explain the difference between *required reserves* and *excess reserves*.
31. Explain the difference between a *commercial bank* and an *investment bank*.
32. What was the Glass-Steagall Act? Why was it originally passed? Why have some economists argued that elements of the Act should be restored?
33. How does Minsky's theory explain the occurrence of financial instability in the economic system?
34. (Appendix) What were some of the factors leading to the housing bubble?
35. (Appendix) What were the major fiscal and monetary policy responses to the crisis?

Problems

1. Jane Doe has the following assets.

- \$100 in her wallet
- \$800 in her checking account
- \$1,000 in her savings account
- A \$300 outstanding credit card bill.
- \$3,000 in a small certificate of deposit
- A car worth \$5,000.
- A house, worth \$200,000.

- a. Identify which are in M1, which are in M2, or in neither M1 nor M2.
- b. Suppose she takes the \$100 in her wallet and deposits it in her checking account. What is the change in M1 and M2?
- c. Suppose she takes \$400 from her checking account and purchases a certificate of deposit. What is the change in M1 and M2?

2. Assume a required reserve ratio of 0.10 to complete the following.

Assets		Liabilities & Net Worth	
Reserves	\$ 150 million	Deposits	\$ 500 million
Loans	\$ 250 million	Bank Capital	\$ 25 million
Bonds	\$ 125 million		
TOTAL:	525 Million	TOTAL:	\$ 525 Million

- a) Calculate the initial *required reserves* for this bank.
- b) Calculate the initial *excess reserves* for this bank.
- c) Convert all of the excess reserves into loans. Construct the new balance sheet.

Self Test

1. Which of the following is *not* a reason why an unexpected episode of inflation is harmful to an economy?
 - A. It wipes out the value of people's savings.
 - B. It hurts people on fixed incomes, such as retired people who receive non-indexed pensions.
 - C. It redistributes wealth from debtors to creditors.
 - D. It creates menu costs.
 - E. It creates uncertainty, which makes financial planning for the future more difficult.
2. Hyperinflation ...
 - A. is often defined as any annual inflation rate higher than 10 percent.
 - B. describes the German economy after World War II.
 - C. can be become so severe that people resort to barter.
 - D. means that people tend to save money much more aggressively.
 - E. none of these statements is accurate.
3. According to the textbook, why is deflation harmful to an economy?
 - A. It redistributes wealth from debtors to creditors.
 - B. creates menu costs.
 - C. It creates uncertainty, which makes financial planning for the future more difficult.
 - D. It can lead to cutbacks in borrowing and spending, which can slow down the economy.
 - E. All of the above.
4. Which of the following is NOT a function of money?
 - A. A hedge against inflation.
 - B. A unit of account.
 - C. A store of value.
 - D. A medium of exchange.
 - E. All of these are functions of money.
5. Which of the following is NOT a type of money described in the textbook?
 - A. Fishhooks as money.
 - B. Fiat money.
 - C. Commodity money.
 - D. Silver coins as money.
 - E. All of these are types described in the text.

6. "Fiat money" refers to ...
- A. Older U.S. coins that contain a high (90%) silver content.
 - B. A creative alternative to modern money (such as cigarettes in a prisoner of war camp.)
 - C. Money that is valuable because a government says it has value.
 - D. Paper money backed by gold or other precious metals.
 - E. None of these is fiat money.
7. Which of the following is the most liquid?
- A. A \$20 bill in your pocket
 - B. A gold necklace
 - C. Three shares of Microsoft stock
 - D. A certificate of deposit (CD) in your bank.
 - E. A new Toyota Prius automobile
8. Which of these sequences best captures the liquidity continuum?
- A. Checking accounts, precious metal, real estate, share of stock
 - B. Checking accounts, precious metal, share of stock, real estate
 - C. Checking accounts, share of stock, precious metal, real estate
 - D. Checking accounts, share of stock, real estate, precious metal
 - E. Precious metal, checking accounts, share of stock, real estate
9. Which of the following is *not* one of the characteristics necessary for commodity money to be used as money?
- A. It must be durable.
 - B. It must be portable.
 - C. It must be generally acceptable.
 - D. It must be differentiated.
 - E. It must be scarce.
10. Which of the following is *not* included as "money" in M1?
- A. Currency in circulation
 - B. Checkable deposits
 - C. Money in savings account
 - D. The use of a credit card
 - E. The use of debit cards that take funds from a checking account

11. Which of the following is NOT a component of the M2 definition of the money supply?
- A. Certificates of deposit
 - B. Checking account deposits
 - C. Retail money market funds
 - D. Savings account
 - E. All of these are components of the M2 definition of the money supply.
12. Which of these would be an INCORRECT use a balance sheet for a private bank?
- A. A “government bonds” entry listed as an asset.
 - B. A “deposits” entry listed as a liability.
 - C. A “loans” entry listed as an asset.
 - D. Both (b) and (c) are incorrect.
 - E. All three of (a), (b), AND (c) are correct entries.
13. Which of these is NOT an example of a bank type described in the textbook?
- A. Goldman Sachs investment bank
 - B. Washington Mutual Savings and Loan
 - C. Service Federal Credit Union
 - D. The Federal Reserve
 - E. All of these are examples of bank types described in the textbook.
14. The Glass-Steagall Act ...
- A. was passed in 2009 to prevent future financial crises.
 - B. was strengthened in 1999 to increase financial regulation.
 - C. was passed in the late 1980s in response to the Savings & Loan crisis.
 - D. was passed in the 1930s to increase financial regulation.
 - E. None of these is correct.
15. Which of these is NOT an example of leverage?
- A. An investment bank increases its liabilities to speculate on derivatives.
 - B. A local entrepreneur borrows heavily to finance the cost of starting a new business.
 - C. General Motors issues new stock to raise funds for a new factory.
 - D. Microsoft issues commercial bonds to finance production of a new product.
 - E. All of these are examples of leverage.
16. A hedge fund is an example of ...
- A. a financial intermediary
 - B. a nonbank financial institution
 - C. an investment bank
 - D. a pension fund
 - E. None of these.

17. Nonbank institutions ...

- A. have been growing in importance in our financial system.
- B. often provide much more attractive alternatives to traditional savings accounts.
- C. are typically subject to less government regulation than traditional banks.
- D. include pension funds and insurance companies.
- E. All of these statements are accurate.

18. Speculative bubbles ...

- A. generally form for psychological and economic reasons.
- B. are an important source of economic growth.
- C. generally occur due to a general lack of liquidity.
- D. are generally associated with tight credit conditions.
- E. None of these statements is true.

19. The 'efficient market hypothesis is based on all the following assumptions *except*:

- A. Individuals are rational decision-makers.
- B. Markets are perfectly competitive.
- C. Individual decision-making is influenced by their expectations.
- D. Individuals possess complete information about the market price of assets.
- E. (a) and (c)

20. According to Minsky, during an economic expansion

- A. financial firms move from speculative financing to hedge financing.
- B. financial firms become more confident and take higher risks.
- C. financial firms move from hedge financing to Ponzi financing.
- D. financial firms become stronger.
- E. Both (b) and (c).

Answers to Active Review Questions

1. liquid
2. M1
3. deflation
4. commodity money
5. M2
6. fiat money
7. financial intermediaries
8. bank reserves
9. fractional reserve system
10. required reserves
11. excess reserves
12. leverage
13. collective investment vehicle
14. hedge fund
15. securities broker
16. financial instability hypothesis
17. hedge, speculative, and Ponzi
18. securitization
19. sub-prime mortgages
20. moral hazard
21. Dodd-Frank
22. True.
23. True.
24. False, M1 remains unchanged. There has just been a change in the composition of M1, but the size of M1 remains the same.
25. False. It was *low* mortgage rates that feed the growth of the housing bubble.
26. Inflation is harmful because: it wipes out the value of people's savings; it hurts people on fixed incomes; it redistributes wealth from creditors to debtors; it creates menu costs; and it creates uncertainty, making financial planning for the future more difficult.
27. Deflation is a problem because: it redistributes wealth from debtors to creditors, it creates menu costs; it creates uncertainty, making financial planning for the future more difficult; and it can lead to cutbacks in borrowing and spending, which can slow down the economy.
28. The three roles of money are: medium of exchange, store of value, and unit of account. Two types of money are commodity money and fiat money. Commodity money is a good that is used as money that is also valuable in itself. Fiat money is a medium of exchange used as money because the government declares it as such and people accept it.
29. M1 consists of currency in circulation, checkable deposits, and other liquid accounts, such as savings, shares, and money market.
M2 consists of all of M1, plus savings accounts, and other funds such as small certificates of deposit and retail money market funds.
30. Banks generate much of their profit from the use of other peoples' money. Checking account deposits entrusted to banks are also known as "demand deposits" because the depositors have access to their money whenever they want. Consequently banks

are obligated to hold a minimal portion of these deposits in liquid reserves. This portion is a percentage (set by the Federal Reserve in the U.S.) of total deposits and is known as **required reserves**. All of the reserves a bank has beyond this category of required reserves are referred to as **excess reserves**.

31. **Commercial banks** provide retail services to individuals and businesses. These are the institutions that we typically associate with checking accounts and lending. **Investment banks** are institutions that focus on underwriting and issuing securities. They do not provide traditional banking functions.
32. The Glass-Steagall Act was a 1933 legislative attempt to provide greater stability for the banking system through increased government regulation. It contained a number of provisions including the separation of commercial banking from investment banking. Some economists have argued that a “firewall” such as the one provided by Glass-Steagall should be restored between institutions that are federally insured (by the FDIC) and investment banks because of differences in risk-taking across the two types of banks.
33. Minsky’s theory argues that uncertainty about the future and expectations of market participants play a key role in determining the value of assets. When the economy is just recovering from a crisis investors will be cautious and maintain large safety margins. However, as the economy gains strength, investors will become more optimistic and pursue risky activities, which weakens the financial system and makes it more credit-dependent and vulnerable to crisis.
34. Factors leading to the housing bubble included a period of low interest rates, unprecedented expansion of credit including sub-prime mortgages, and speculation in the housing market driving prices even higher.
35. After the immediate responses of bailouts for endangered financial institutions, the Federal government instituted large-scale stimulus spending to prevent a collapse in aggregate demand and to promote economic recovery. At the same time, the Federal Reserve engaged in an extraordinarily expansionary monetary policy, purchasing hundreds of billions of dollars’ worth both of Treasury bonds (traditional expansionary policy) and other financial assets (“quantitative easing”).

Answers to Problems

1.
 - a. The following are in M1, M2, or neither:
 - \$100 in her wallet = M1
 - \$800 in her checking account = M1
 - \$1,000 in her savings account = M2
 - A \$300 outstanding credit card bill = Neither
 - \$3,000 in a small certificate of deposit = M2
 - A car worth \$5,000 = Neither
 - A house, worth \$200,000 = Neither

b. M1 and M2 remain unchanged, since both cash and checking account deposits are counted in both M1 and M2.

c. M1 decreases by \$400, and M2 remains unchanged.

2.

a. Required Reserves = reserve ratio * deposits
 = (0.10) * 500 million
 = \$ 50 million

b. Excess Reserves = total reserves – required reserves
 = 150 million – 50 million
 = \$ 100 million

c.

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Reserves	\$ 50 million	Deposits	\$ 500 million
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Answers to Self Test Questions

- | | |
|-------|-------|
| 1. C | 11. E |
| 2. C | 12. B |
| 3. E | 13. E |
| 4. A | 14. D |
| 5. E | 15. C |
| 6. C | 16. B |
| 7. A | 17. E |
| 8. C | 18. A |
| 9. D | 19. C |
| 10. D | 20. E |

(note on #1: Inflation redistributes wealth from creditors to debtors)