Financial Markets and Institutions 14th edition Madura Solutions Manual

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Solution and Answer Guide

Madura, Financial Markets and Institutions 14e, © 2025, 9780357988299; Chapter 2: Determination of Interest Rates

TABLE OF CONTENTS

Outline

Loanable Funds Theory

Household Demand for Loanable Funds

Business Demand for Loanable Funds

Government Demand for Loanable Funds

Foreign Demand for Loanable Funds

Aggregate Demand for Loanable Funds

Supply of Loanable Funds

Equilibrium Interest Rate

Factors That Affect Interest Rates

Impact of Economic Growth on Interest Rates

Impact of Inflation on Interest Rates

Impact of Monetary Policy on Interest Rates

Impact of the Budget Deficit on Interest Rates

Impact of Foreign Flows of Funds on Interest Rates

Forecasting Interest Rates

Key Concepts

1. Explain the loanable funds theory by deriving demand and supply schedules for loanable funds.
2. Explain the Fisher effect and tie it in with loanable funds theory by explaining how inflation affects the demand and supply schedules for loanable funds.
3. Provide additional applications (especially current events) one at a time to help illustrate how events can affect the demand and supply schedules, and therefore influence interest rates.
4. Explain how forecasts of interest rates are needed to make financial decisions, which require forecasts of shifts in the demand and supply schedules for loanable funds.

5. Introduce several possible events simultaneously to illustrate how difficult it can be to forecast interest rate movements when several events are occurring at once.

POINT/COUNTERPOINT:

DOES A LARGE FISCAL BUDGET DEFICIT RESULT IN HIGHER INTEREST RATES?

POINT: No. In some years (such as 2020), the fiscal budget deficit was large and interest rates were very low.

COUNTERPOINT: Yes. When the federal government borrows large amounts of funds, it can crowd out other potential borrowers, and the interest rates are bid up by the deficit units.

WHO IS CORRECT? Use the Internet to learn more about this issue and then formulate your own opinion.

ANSWER: A large budget deficit does not automatically cause high interest rates. However, it does result in a large demand for funds, which will place upward pressure on interest rates unless there are offsetting forces.

QUESTIONS

1. **Interest Rate Movements** Explain why interest rates changed as they did over the past year. (LO2)

   ANSWER: This exercise should force students to consider how the factors that influence interest rates have changed over the last year and assess how these changes could have affected interest rates. Students should elaborate on economic factors, the Fed's actions, and other situations that influence interest rates.

2. **Interest Elasticity** Explain what is meant by interest elasticity. Would you expect federal government demand for loanable funds to be more or less interest-elastic than household demand for loanable funds? Why? (LO1)

   ANSWER: Interest elasticity of supply represents a change in the quantity of loanable funds supplied in response to a change in interest rates. Interest elasticity of demand represents a change in the quantity of loanable funds demanded in response to a change in interest rates.

   The federal government demand for loanable funds should be less interest elastic than the consumer demand for loanable funds, because the government's planned borrowings will likely occur regardless of the interest rate. Conversely, the quantity of loanable funds by consumers is more responsive to the interest rate level.

3. **Impact of Government Spending** If the federal government planned to expand the space program, how might this change affect interest rates? (LO1)

   ANSWER: An expanded space program would (1) force the federal government to increase its budget deficit, and (2) possibly force any firms involved in facilitating the program to borrow more funds. Consequently, there is a greater demand for loanable funds. The additional spending could cause higher income and additional saving. Yet, this impact is not likely to be as great. The likely overall impact would therefore be upward pressure on interest rates.

4. **Impact of a Recession** Explain why interest rates tend to decrease during recessionary periods. Review historical interest rates to determine how they react to recessionary periods. Explain this reaction. (LO1, LO2)

   ANSWER: During a recession, firms and consumers reduce their amount of borrowing. The demand for loanable funds decreases and interest rates decrease as a result.

5. **Impact of the Economy** Explain how the expected interest rate in 1 year depends on your expectation of economic growth and inflation. (LO2)

   ANSWER: The interest rate in the future should increase if economic growth and inflation are expected to rise or decrease if economic growth and inflation are expected to decline.

6. **Impact of the Money Supply** Would increasing the money supply growth place upward or downward pressure on interest rates? (LO1, LO2)

   ANSWER: If one believes that higher money supply growth will not cause inflationary expectations, the additional supply of funds places downward pressure on interest rates. However, if one believes that inflation expectations do erupt as a result, demand for loanable funds will also increase, and interest rates could increase (if the increase in demand more than offsets the increase in supply).

7. **Impact of Exchange Rates on Interest Rates** Assume that if the U.S. dollar strengthens, it can place downward pressure on U.S. inflation. Based on this information, how might expectations of a strong dollar affect the demand for loanable funds in the United States and U.S. interest rates? Is there any reason to think that expectations of a strong dollar could also affect the supply of loanable funds? Explain. (LO1, LO2)

   ANSWER: As a strong U.S. dollar dampens U.S. inflation, it can reduce the demand for loanable funds and therefore reduce interest rates. The expectations of a strong dollar could also increase the supply of funds because it may encourage saving (there is less concern to purchase goods before prices rise when inflationary expectations are reduced). In addition, foreign investors may invest more funds in the United States if they expect the dollar to strengthen, because that could increase their return on investment.

8. **Nominal versus Real Interest Rate** What is the difference between the nominal interest rate and real interest rate? What is the logic behind the implied positive relationship between expected inflation and nominal interest rates? (LO2)

   ANSWER: The nominal interest rate is the quoted interest rate, while the real interest rate is defined as the nominal interest rate minus the expected rate of inflation.

   Investors require a positive real return, which suggests that they will only invest funds if the nominal interest rate is expected to exceed inflation. In this way, the purchasing power of invested funds increases over time. As inflation rises, nominal interest rates should rise as well since investors would require a nominal return that exceeds the inflation rate.

9. **Real Interest Rate** Estimate the real interest rate over the last year. If financial market participants overestimate inflation in a particular period, will real interest rates be relatively high or low? Explain. (LO2)

   ANSWER: This exercise forces students to measure last year's nominal interest rate and inflation rate.

   If inflation is overestimated, the real interest rate will be relatively high. Investors had required a relatively high nominal interest rate because they expected inflation to be high (according to the Fisher effect). Students can also discuss negative real rates if the inflation rate is very high while nominal rates are relatively low.

10. **Forecasting Interest Rates** Why do forecasts of interest rates made by experts differ? (LO3)

   ANSWER: Various factors related to the supply and demand of loanable funds may influence interest rates, and changes in these factors will affect interest rate movements. Experts disagree about how various factors will change. They also disagree about the specific influence these factors have on interest rates.

Advanced Questions

11. **Impact of Stock Market Crises** During periods when investors suddenly become fearful that stocks are overvalued, they dump their stocks, and the stock market experiences a major decline. During these periods, interest rates also tend to decline. Use the loanable funds framework discussed in this chapter to explain how a massive selloff of stocks leads to lower interest rates. (LO1)

   ANSWER: When investors shift funds out of stocks, they move them into money market securities, causing an increase in the supply of loanable funds. Assuming the demand for loanable funds remains unchanged, interest rates would fall.

12. **Impact of Expected Inflation** How might expectations of higher prices in the United States affect the demand for loanable funds, the supply of loanable funds, and interest rates in the United States? Offer a logical explanation of why such an impact on interest rates in the United States might spread to other countries. (LO1, LO2)

    ANSWER: The expectations of higher prices will cause concern about the possible increase in inflation. Since higher inflation can increase interest rates, it will cause an expectation of higher interest rates in the United States. Firms and government agencies may borrow more funds now before prices increase and before interest rates increase. Consumers may use their savings now to buy products before the prices increase. Therefore, the demand for loanable funds should increase, the supply of loanable funds should decrease, and interest rates should increase in the United States.

    The higher interest rates in the United States might encourage institutional investors in some other countries to invest some of their funds in the United States, which reduces the supply of funds that is available within each of those countries, and therefore could cause interest rates to rise in each of those countries.

13. **Global Interaction of Interest Rates** Why might you expect the interest rate movements of various industrialized countries to be more highly correlated in recent years than they were in earlier years? (LO2)

    ANSWER: Interest rates among countries are expected to be more highly correlated in recent years because financial markets are more geographically integrated. More international financial flows will occur to capitalize on higher interest rates in foreign countries, which affects the supply and demand conditions in each market. As funds leave a country with low interest rates, this places upward pressure on that country's interest rates. The international flow of funds caused this type of reaction.

14. **Impact of War** War tends to cause significant reactions in financial markets. Why might a war in the Middle East place upward pressure on U.S. interest rates? Why might some investors expect a war like this to place downward pressure on U.S. interest rates? (LO2)

    ANSWER: A war places upward pressure on U.S. interest rates because it may (1) increase inflationary expectations in the United States if oil prices increase abruptly, and (2) increase the expected U.S. budget deficit as government expenditures are necessary to boost military support. However, it may also cause some analysts to revise their forecasts of economic growth downward. The slower economy reflects a reduced corporate demand for funds, which by itself places downward pressure on interest rates. If inflation was not a concern, the Fed may attempt to increase money supply growth to stimulate the economy. However, the inflationary pressure can restrict the Fed from increasing the money supply to stimulate the economy (since any stimulative policy could cause higher inflation).

15. **Impact of September 11** Offer an argument for why the terrorist attack on the United States on September 11, 2001, could have placed downward pressure on U.S. interest rates. Offer an argument for why those attacks could have placed upward pressure on U.S. interest rates. (LO1, LO2)

    ANSWER: The terrorist attack could cause a reduction in spending related to travel (airlines, hotels), and would also reduce the expansion by those types of firms. This reflects a decline in the demand for loanable funds and places downward pressure on interest rates. Conversely, the attack increases the amount of government borrowing needed to support a war and therefore places upward pressure on interest rates.

16. **Impact of Government Spending** Jayhawk Forecasting Services analyzed several factors that could affect interest rates in the future. Most factors were expected to place downward pressure on interest rates. Jayhawk also expected that although the annual budget deficit was to be cut by 40 percent from the previous year, the deficit would still be very large. Because Jayhawk believed that the deficit's impact would more than offset the effects of other factors, it forecast interest rates to increase by 2 percent. Comment on Jayhawk's logic. (LO2)

    ANSWER: A reduction in the deficit should free up some funds that had been used to support the government borrowings. Thus, there should be additional funds available to satisfy other borrowing needs. Given this situation plus the other information, Jayhawk should have forecasted lower interest rates.

17. **Decomposing Interest Rate Movements** The interest rate on a one-year loan can be decomposed into a one-year risk-free (free from default risk) component and a risk premium that reflects the potential for default on the loan in that year. A change in economic conditions can affect the risk-free rate and the risk premium. The risk-free rate is usually affected by changing economic conditions to a greater degree than the risk premium. Explain how a weaker economy will likely affect the risk-free component, the risk premium, and the overall cost of a one-year loan obtained by (1) the Treasury, and (2) a corporation. Will the change in the cost of borrowing be more pronounced for the Treasury or for the corporation? Why? (LO2)

    ANSWER: The weaker economy will likely reduce the risk-free component and will increase the risk premium. The overall cost of borrowing is reduced for a loan to the Treasury and a loan to a corporation. There is a partial offsetting effect on the interest rate of the loan to the corporation. However, the Treasury does not have risk of default, so there is no effect on the risk premium on a loan to the Treasury. The weaker economy will have a more pronounced impact on the interest rate of the loan to the Treasury, because there is no offsetting effect.

18. **Forecasting Interest Rates Based on Prevailing Conditions** Consider the prevailing conditions for inflation (including oil prices), the economy, the budget deficit, and the Fed's monetary policy that could affect interest rates. Based on these conditions, do you think interest rates will likely increase or decrease during this semester? Offer some logic to support your answer. Which factor do you think will have the greatest impact on interest rates? (LO2)

    ANSWER: This question is open-ended. It requires students to apply the concepts that were presented in this chapter in order to develop their own view. This question can be useful for class discussion because it will likely lead to a variety of answers, which reflects the dispersed opinions of market participants.

19. **Impact of Economic Crises on Interest Rates** When economic crises in countries are due to a weak economy, local interest rates tend to be very low. However, if the crisis is caused by an unusually high rate of inflation, the interest rate tends to be very high. Explain why. (LO2)

    ANSWER: A weak economy causes a reduction in the demand for loanable funds, because corporations reduce their expansion plans as they anticipate a reduced demand for their products. The reduced demand for loanable funds results in lower interest rates.

    However, if a crisis is caused by high inflation, corporations and households engage in heavy borrowing and spending before prices rise further. Thus, the strong demand for loanable funds places upward pressure on interest rates.

20. **U.S. Interest Rates during the Credit Crisis** During the credit crisis of 2008 and 2009, U.S. interest rates were extremely low, which enabled businesses to borrow at a low cost. Holding other factors constant, this should have resulted in a higher number of feasible projects, which should have encouraged businesses to borrow more money and expand. Yet, many businesses that had access to loanable funds were unwilling to borrow during the credit crisis. What other factor changed during this period that more than offset the potentially favorable effect of the low interest rates on project feasibility, therefore discouraging businesses from expanding? (LO2)

    ANSWER: Businesses recognized that the cash flows to be generated from their projects would be low because the demand for their products and services was limited. Households could not afford to purchase more products. Thus, while low interest rates allow businesses to borrow funds cheap, many possible projects were not feasible because the expected cash flows were not sufficient.

21. **Political Influence on Interest Rates** Offer an argument for why a political regime that favors a large government will cause interest rates to be higher. Offer at least one example of why a political regime that favors a large government will cause interest rates to be lower. (*Hint:* Recognize that the

government intervention in the economy can influence other factors that affect interest rates.) (LO2)

ANSWER: A political regime that favors a large government will have more government expenditures. Assuming that taxes are not affected, the fiscal budget deficit will be larger. As the government borrows more to cover the fiscal budget deficit, it increases the demand for loanable funds, and this causes interest rates to be higher.

However, if the government's programs improve economic conditions, this could affect other factors that influence interest rates. For example, if the economic conditions are improved as a result of the government programs, this might result in more income to households and lower income, and lower unemployment (lower unemployment compensation paid by the government). Under these conditions, a larger government will not necessarily result in a larger fiscal budget deficit.

22. **Impact of Stock Market Uncertainty** Consider a period in which stock prices are very high, such that investors begin to think that stocks are overvalued and their valuations are very uncertain. If investors decide to move their money into much safer investments, how do you think this would affect general interest rate levels? In your answer, use the loanable funds framework to explain how the supply or demand for loanable funds would be affected by the investor actions, and how this would affect general interest rate. (LO1)

    ANSWER: If investors sell their stocks, they receive cash and may deposit their cash in banks. This results in an increase in the supply of loanable funds, which places downward pressure on interest rates.

23. **Impact of the European Economy** Use the loanable funds framework to explain how European economic conditions might affect U.S. interest rates. (LO1, LO2)

    ANSWER: Weak European conditions could weaken U.S. economic conditions, because the economies are integrated through international trade and investment. If the European economy causes economic conditions in the United States to weaken, it can reduce the demand for loanable funds in the United States. In addition, the weak European economy might cause European firms to borrow fewer funds from the U.S. market. Either of the forces explained here reflect a decline in the demand for loanable funds, which places downward pressure on interest rates.

24. **U.S. Interest Rates during the Covid-19 Pandemic** During the Covid-19 pandemic, U.S. interest rates were extremely low. Explain how the low interest rates affected businesses' and households' behavior to borrow. (LO2)

    ANSWER: With low interest rates, businesses likely borrowed more money to benefit from the low credit availability and to allow them absorb the economic shock created by the unexpected healthcare situation. However, most likely households did not borrow more as one would have expected, and that is due partly to social distancing and widespread business closures, and partly to the uncertainties associated with the pandemic's unpredictable nature.

25. **Impact of Rising Inflation** Explain how in 2022, the rising inflation and higher prices in the United States affected the demand for loanable funds, the supply of loanable funds, and interest rates in the United States (LO1)

    ANSWER: The high inflation and the rising prices in 2022 increased the expectations of higher interest rates. Firms and government agencies may have borrowed more funds before prices interest rates increase, which would have increased the demand for loanable funds. Consumers may have used their savings to buy products before the prices increased; therefore, the supply of loanable funds decreased. Those two likely actions result in higher interest rates in the United States.

Critical Thinking Question

Forecasting Interest Rates Given your knowledge of how interest rates are influenced by various factors reflecting the demand for funds and the supply of funds available in the credit markets, write a short essay to explain how and why interest rates will change over the next three months.

ANSWER: There is no perfect answer, but the exercise forces students to consider how factors that affect U.S. interest rates might change, and then understand how those changes would affect interest rates in the United States. This exercise will help them understand how forecasts by experts are created, and also that a forecast of interest rates can be wrong because of inaccurate forecasts of the factors that affect interest rates.

Interpreting Financial News

Interpret the following comments made by Wall Street analysts and portfolio managers.

a. "The flight of funds from bank deposits to U.S. stocks will pressure interest rates."

As the supply of loanable funds declines (due to bank deposit withdrawals), there will be upward pressure on interest rates.

b. "Since Japanese interest rates have recently declined to very low levels, expect a reduction in U.S. interest rates."

As Japanese interest rates decline, Japanese savers invest more loanable funds in the United States, which places downward pressure on U.S. interest rates.

c. "The cost of borrowing by U.S. firms is dictated by the degree to which the federal government spends more than it taxes."

As the federal government spends more than it taxes, it borrows the difference; the greater the amount borrowed, the higher the pressure on U.S. interest rates.

Managing in Financial Markets

As the treasurer of a manufacturing company, your job is to forecast the direction of interest rates. Your company plans to borrow funds, and it may use the forecast of interest rates to determine whether it should obtain a loan with a fixed interest rate or a floating interest rate. The following information can be considered when assessing the future direction of interest rates:

- Economic growth has been high over the last 2 years, but you expect that it will be stagnant over the next year.
- Inflation has been 3 percent over each of the last few years, and you expect that it will be about the same over the next year.
- The federal government has announced major cuts in its spending, which should have a major impact on the budget deficit.
- The Federal Reserve is not expected to affect the existing supply of loanable funds over the next year.
- The overall level of savings by households is not expected to change.

a. Given the preceding information, assess how the demand for and the supply of loanable funds would be affected, if at all, and predict the future direction of interest rates.

The demand for loanable funds should decline in response to (1) stagnant economic growth (because a relatively low level of borrowing will be needed), and (2) a major cut in government spending. The supply of loanable funds should remain unchanged because the savings level is not expected to change, and the Fed is not expected to affect the existing money supply. Given a large decline in the demand for loanable funds and no significant change in the supply of loanable funds, U.S. interest rates should decline.

b. Your company can obtain a 1-year loan at a fixed-rate of 8 percent or a floating-rate loan that is currently at 8 percent but for which the interest rate would be revised every month in accordance with general interest rate movements. Which type of loan is more appropriate based on the information provided?

Since interest rates are expected to decline, you should prefer the floating-rate loan. As interest rates decline, the rate charged on this type of loan would decline.

c. Assume that Canadian interest rates have abruptly risen just as you have completed your forecast of future U.S. interest rates. Consequently, Canadian interest rates are now 2 percentage points above U.S. interest rates. How might this specific situation place pressure on U.S. interest rates? Considering this situation along with the other information provided, would you change your forecast of the future direction of U.S. interest rates?

This situation could encourage U.S. individuals and firms to withdraw their savings from U.S. financial institutions and send their funds to Canada to earn a higher interest rate (although they would have to convert their U.S. dollars into Canadian dollars and are therefore exposed to exchange rate risk). To the extent that savings are withdrawn from U.S. financial institutions, there would be a reduction in the supply of loanable funds in the United States. Consequently, this specific situation places upward pressure on the U.S. interest rates.

While this specific situation places upward pressure on U.S. interest rates, the economic growth and the budget deficit are expected to place downward pressure on interest rates. Therefore, you would still forecast a decline in U.S. interest rates, unless you believe that the impact of the Canadian situation would overwhelm the impact of the economic growth and the budget deficit.

PROBLEMS

1. **Nominal Rate of Interest** Suppose the real interest rate is 5 percent and the expected inflation is 4 percent. What would you expect the nominal rate of interest to be?

ANSWER:

$$i = E(\text{INF}) + i_r$$

$$i = 4\% + 5\% = 9\%$$

2. **Real Interest Rate** Suppose that Treasury bills are currently paying 7 percent and the expected inflation is 2 percent. What is the real interest rate?

ANSWER:

$$i = E(\text{INF}) + i_r$$

$$i_r = i - E(\text{INF})$$

$$i_r = 7\% - 2\% = 5\%$$

Flow of Funds Exercise

How the Flow of Funds Affects Interest Rates

Recall that Carson Company has obtained substantial loans from finance companies and commercial banks. The interest rate on the loans is tied to market interest rates and is adjusted every six months. Thus, Carson's cost of obtaining funds is sensitive to interest rate movements. Given its expectations that the U.S. economy will strengthen, Carson plans to grow in the future by expanding and by making acquisitions. Carson expects that it will need substantial long-term financing to pay for this growth, and it plans to borrow additional funds either through loans or by issuing bonds. The company is also considering the possibility of issuing stock to raise funds in the next year.

a. Explain why Carson should be very interested in future interest rate movements.

The future interest rate movements affect Carson's cost of obtaining funds and therefore may affect the value of its stock.

b. Given Carson's expectations, do you think the company anticipates that interest rates will increase or decrease in the future? Explain.

Carson expects the U.S. economy to strengthen and therefore should expect that interest rates will increase (assuming other things held constant).

c. If Carson's expectations of future interest rates are correct, how would this affect its cost of borrowing on its existing loans and on future loans?

Carson's cost of borrowing will increase, because the interest rate on prevailing and future loans would be tied to market interest rates.

d. Explain why Carson's expectations about future interest rates may affect its decision about when to borrow funds and whether to obtain floating-rate or fixed-rate loans.

If Carson expects rising interest rates, it may prefer to lock in today's interest rate for a period that reflects the length of time that it will need funds. In this way, the cost of funds borrowed would be insulated from the changes in market interest rates.

Instructor Manual

Madura, Paskelian, Financial Markets and Institutions, Core 9780357988299; Chapter 1: Role of Financial Markets and Institutions

Table of Contents

Chapter Objectives

The following objectives are addressed in this chapter:

LO1 Describe the types of financial markets that facilitate the flow of funds.
LO2 Describe the types of securities traded within financial markets.
LO3 Describe the role of financial institutions within financial markets.
LO4 Explain how financial institutions are exposed to systemic risk.
LO5 Describe the role of fintech in financial markets.

Chapter Outline

Role of Financial Markets

- Accommodating Corporate Finance Needs
- Accommodating Investment Needs

Securities Traded in Financial Markets

- Money Market Securities
- Capital Market Securities
- Derivative Securities
- Valuation of Securities
- Securities Regulations on Financial Disclosure
- International Financial Markets

Role of Financial Institutions

- Role of Depository Institutions
- Role of Nondepository Financial Institutions
- Comparison of Roles among Financial Institutions
- Relative Importance of Financial Institutions
- Consolidation of Financial Institutions

Systemic Risk Among Financial Institutions

The Emergence of Fintech

[return to top]

Additional Discussion Questions

POINT/COUNTER-POINT:

Will Computer Technology Cause Financial Intermediaries to Become Extinct?

POINT: Yes. Financial intermediaries benefit from access to information. As information becomes more accessible, individuals will have the information they need before investing or borrowing funds. They will not need financial intermediaries to make their decisions.

COUNTER-POINT: No. Individuals rely not only on information, but also on expertise. Some financial intermediaries specialize in credit analysis so that they can make wise choices when offering loans. Surplus units will continue to provide funds to financial intermediaries rather than make direct loans, because they are not capable of credit analysis, even if more information about prospective borrowers is available. Some financial intermediaries no longer have physical buildings for customer service, but they still require agents who have the expertise to assess the creditworthiness of prospective borrowers.

WHO IS CORRECT? Use the Internet to learn more about this issue and then formulate your own opinion.

ANSWER: Computer technology may reduce the need for some types of financial intermediaries such as brokerage firms, because individuals can make transactions on their own (if they prefer to do so). However, loans will still require financial intermediaries because of the credit assessment that is needed.

Questions

1. **Surplus and Deficit Units.** Explain the meaning of surplus units and deficit units. Provide an example of each. Which types of financial institutions do you deal with? Explain whether you are acting as a surplus unit or a deficit unit in your relationship with each financial institution.

   ANSWER: Surplus units provide funds to the financial markets while deficit units obtain funds from the financial markets. Surplus units include households with savings, while deficit units include firms or government agencies that borrow funds.

   This exercise allows students to realize that they constantly interact with financial institutions, and that they often play the role of a deficit unit (on car loans, tuition loans, etc.).

2. **Types of Markets.** Distinguish between primary and secondary markets. Distinguish between money and capital markets.

   ANSWER: Primary markets are used for the issuance of new securities while secondary markets are used for the trading of existing securities.

   Money markets facilitate the trading of short-term (money market) instruments while capital markets facilitate the trading of long-term (capital market) instruments.

3. **Imperfect Markets.** Distinguish between perfect and imperfect security markets. Explain why the existence of imperfect markets creates a need for financial intermediaries.

   ANSWER: With perfect financial markets, all information about any securities for sale would be freely available to investors, information about surplus and deficit units would be freely available, and all securities could be unbundled into any size desired. In reality, markets are imperfect, so that surplus and deficit units do not have free access to information, and securities cannot be unbundled as desired.

   Financial intermediaries are needed to facilitate the exchange of funds between surplus and deficit units. They have the information to provide this service and can even repackage deposits to provide the amount of funds that borrowers desire.

4. **Efficient Markets.** Explain the meaning of efficient markets. Why might we expect markets to be efficient most of the time? In recent years, several securities firms have been guilty of using inside information when purchasing securities, thereby achieving returns well above the norm (even when accounting for risk). Does this suggest that the security markets are not efficient? Explain.

   ANSWER: If markets are efficient then prices of securities available in these markets properly reflect all information. We should expect markets to be efficient because if they weren't, investors would capitalize on the discrepancy between what prices are and what they should be. This action would force market prices to represent the appropriate prices as perceived by the market.

   Efficiency is often defined with regard to publicly available information. In this case, markets can be efficient, but investors with inside information could possibly outperform the market on a consistent basis. A stronger version of efficiency would hypothesize that even access to inside information will not consistently outperform the market.

5. **Securities Laws.** What was the purpose of the Securities Act of 1933? What was the purpose of the Securities Exchange Act of 1934? Do these laws prevent investors from making poor investment decisions? Explain.

   ANSWER: The Securities Act of 1933 was intended to assure complete disclosure of relevant financial information on publicly offered securities and prevent fraudulent practices when selling these securities. The Securities Exchange Act of 1934 extended the disclosure requirements to secondary market issues. It also declared a variety of deceptive practices illegal but does not prevent poor investments.

6. **International Expansion.** Discuss why many financial institutions have expanded internationally in recent years. What advantages can be obtained through an international merger of financial institutions?

   ANSWER: Many financial institutions have expanded internationally to capitalize on their expertise. Commercial banks, insurance companies, and securities firms have expanded through international mergers. An international merger between financial institutions enables the merged company to offer the services of both entities to its entire customer base.

7. **Stock Valuation.** What type of information do investors rely on in order to determine the proper value of stocks?

   ANSWER: Since the valuation of a stock at a future point in time is uncertain, so is the selling price of a stock at a future point in time. Investors often rely on financial statements by firms in order to assess how stock prices might change in the future. In particular, investors rely on accounting reports of a firm's revenue, expenses, and earnings as a basis for estimating its future cash flows. Firms with publicly traded stock are required to disclose financial information and financial statements.

8. **Securities Firms.** What are the functions of securities firms? Many securities firms employ brokers and dealers. Distinguish between the functions of a broker and those of a dealer and explain how each type of professional is compensated.

   ANSWER: Securities firms provide a variety of functions (such as underwriting and brokerage) that either enhances a borrower's ability to borrow funds or an investor's ability to invest funds.

   Brokers are commonly compensated with commissions on trades, while dealers are compensated on their positions in particular securities. Some dealers also provide brokerage services.

9. **Misvaluation of Marijuana Stocks.** Explain why some stocks in the marijuana industry were misvalued when several states legalized the recreational use of marijuana.

   ANSWER: Recently, as several states legalized the recreational use of marijuana, some companies with very little experience in any business related to marijuana announced that they were positioned to capitalize on the expected growth in this market. Many investors wanted to benefit from this potential growth and quickly purchased the stocks of companies in the industry. However, some investors did not carefully check the business plan, operations, or financial condition of these companies. Consequently, the strong demand by investors for stocks of marijuana companies without much experience caused their stock prices to increase dramatically, only to crash upon a closer review.

10. **Marketability.** Commercial banks use some funds to purchase securities and other funds to make loans. Why are the securities more marketable than the loans in the secondary market?

    ANSWER: Securities are more standardized than loans and therefore can be more easily sold in the secondary market. The excessive documentation on commercial loans limits a bank’s ability to sell loans in the secondary market.

11. **Depository Institutions.** Explain the primary use of funds for commercial banks versus savings institutions.

    ANSWER: Savings institutions have traditionally concentrated in mortgage lending, while commercial banks have concentrated in commercial lending. Savings institutions are now allowed to diversify their asset portfolio to a greater degree and will likely increase their concentration in commercial loans (but not to the same degree as commercial banks).

12. **Credit Unions.** With regard to the profit motive, how are credit unions different from other financial institutions?

    ANSWER: Credit unions are non-profit financial institutions.

13. **Nondepository Institutions.** Compare the main sources and uses of funds for finance companies, insurance companies, and pension funds.

    ANSWER: Finance companies sell securities to obtain funds, while insurance companies receive insurance premiums and pension funds receive employee/employer contributions. Finance companies use funds to provide direct loans to consumers and businesses. Insurance companies and pension funds purchase securities.

14. **Mutual Funds. What is the function of a mutual fund? Why are mutual funds** popular among investors? How does a money market mutual fund differ from a stock or bond mutual fund?

    ANSWER: A mutual fund sells shares to investors, pools the funds, and invests the funds in a portfolio of securities. Mutual funds are popular because they can help individuals diversify while using professional expertise to make investment decisions.

    A money market mutual fund invests in money market securities, whereas other mutual funds normally invest in stocks or bonds.

15. **Secondary Market for Debt Securities.** Why is it important for long-term debt securities to have an active secondary market?

    ANSWER: An active secondary market is especially desirable for debt securities that have a long-term maturity because it allows investors flexibility to sell them at any time prior to maturity. Many investors would not even consider investing in long-term debt securities if they were forced to hold these securities until maturity.

[return to top]

Additional Activities and Assignments [Remove if N/A]

Advanced Questions

16. **Comparing Financial Institutions.** Classify the types of financial institutions mentioned in this chapter as either depository or nondepository. Explain the general difference between depository and nondepository institutions as sources of funds. It is often stated that all types of financial institutions have begun to offer services that were previously offered only by certain types. Consequently, many financial institutions are becoming more similar. Nevertheless, performance levels still differ significantly among types of financial institutions. Why?

    ANSWER: Depository institutions include commercial banks, savings and loan associations, and credit unions. These institutions differ from nondepository institutions in that they accept deposits. Nondepository institutions include finance companies, insurance companies, pension funds, mutual funds, and money market funds.

Even though financial institutions are becoming more similar, they often differ distinctly from each other in terms of sources and uses of funds. Therefore, their performance levels differ as well.

17. **Financial Intermediation.** Look in a recent business periodical for news about a recent financial transaction that involves two financial institutions. For this transaction, determine the following:
    a. How will each institution's balance sheet be affected?
    b. Will either institution receive immediate income from the transaction?
    c. Who is the ultimate user of funds?
    d. Who is the ultimate source of funds?

    ANSWER: This exercise will force students to understand how the balance sheet and income statement of a financial institution are affected by various transactions. When a financial institution simply acts as an intermediary, income (fees or commissions) is earned, but the institution's asset portfolio is not significantly affected.

18. **Role of Accounting in Financial Markets.** Integrate the roles of accounting, regulations, and financial market participation. That is, explain how financial market participants rely on accounting, and why regulatory oversight of the accounting process is necessary.

    ANSWER: Financial market participants rely on financial information that is provided by firms. The financial statements of firms must be audited to ensure that they accurately represent the financial condition of the firm. However, if the accounting standards are stringent, financial market participants can benefit from strong accounting skills that may allow them to more properly interpret financial statements.

19. Factors That Influence Liquidity. Which factors influence a security's liquidity?

    ANSWER: Debt securities with shorter maturities are more liquid. Debt securities and stocks with a more active secondary market are more liquid.

20. **Impact of Credit Crisis on Institutions.** Explain why mortgage defaults during the credit crisis in 2008 and 2009adversely affected financial institutions that did not originate the mortgages. What role did these institutions play in financing the mortgages?

ANSWER: Some financial institutions participated by issuing mortgage-backed securities that represented mortgages originated by mortgage companies. Mortgage-backed securities performed poorly during the credit crisis in 2008 because of the high default rate on mortgages. Some financial institutions that held a large amount of mortgage-backed securities suffered major losses at this time.

21. **Impact of Fraudulent Financial Reporting on Market Liquidity** Explain why financial markets may be less liquid if companies are not forced to provide accurate financial reports.

    ANSWER: If companies are allowed to engage in fraudulent financial reporting by exaggerating earnings or hiding debt, this could cause investors to overpay when purchasing securities issued by those companies. If investors recognize that they cannot trust financial disclosure by companies, they may be unwilling to participate in financial markets. The lack of trust can cause markets to be less liquid, because of very limited investor participation.

22. **Impact of a Country's Laws on Its Market Liquidity** Describe how a country's laws can influence the degree of its financial market liquidity.

    ANSWER: The financial markets are much more developed in some countries than in others, and they also vary in terms of their liquidity. Each country has its own laws regarding shareholder rights. Investors may be more willing to participate in their local country's financial markets if they have the right to take civil action against a local firm that engaged in fraudulent financial disclosure. Each country also has its own level of enforcement of securities laws. Investors may be more willing to participate in their local country's financial markets if they believe that their local government enforces the securities laws that are imposed in that country.

23. **Global Financial Market Regulations.** Assume that countries A and B are of similar size, that they have similar economies, and that the government debt levels of both countries are within reasonable limits. Assume that the regulations in country A require complete disclosure of financial reporting by issuers of debt in that country, whereas regulations in country B do not require much disclosure of financial reporting. Explain why the government of country A is able to issue debt at a lower cost than the government of country B.

    ANSWER: Investors are more willing to invest in debt securities issued by the government of country A because there is more transparent information that would suggest country A can cover its payments owed on its debt. If the government of Country B does not disclose its financial information, investors cannot assess the financial condition and ability of the government to cover its payments owed on its debt. Thus, they are less willing to invest in debt securities issued by country B, so country B will have to offer a higher yield to entice investors.

24. **Influence of Financial Markets** Some countries do not have well established markets for debt securities or equity securities. Why do you think this can limit the development of the country, business expansion, and growth in national income in these countries?

    ANSWER**:** Businesses rely on financial markets to expand. If they cannot issue debt or equity securities, they cannot obtain funding to expand. Local investors who have money to invest will likely invest their money in other countries if the financial markets are not developed in their home market. Thus, they will essentially help other countries grow instead of helping their own country grow.

25. **Impact of Systemic Risk** Different types of financial institutions commonly interact. Specifically, they may provide loans to each other, and take opposite positions on many different types of financial agreements, whereby one will owe the other based on a specific financial outcome. Explain why these kinds of relationships cause concerns about systemic risk.

    ANSWER: When financial institutions interact through transactions, the failure of one financial institution can cause financial problems for others. As one financial institution fails, it defaults on payments owed on financial agreements with other financial institutions. Those institutions may have been relying on those payments to cover other obligations to another set of financial institutions. Thus, many financial institutions might be unable to cover their obligations, and this spreads fear that the financial system might collapse.

26. **Uncertainty Surrounding Stock Price** Assume that your publicly traded company attempts to be completely transparent about its financial condition, and provides thorough information about its debt, sales, and earnings every quarter. Explain why there still may be much uncertainty surrounding your company's stock price.

    ANSWER: The value of a company is based on the present value its future cash flows. Investors may attempt to use financial statements to predict future cash flows. But even when investors are presented with information value your company's stock, they may interpret the information in different ways. They commonly derive different interpretations of the same information, which leads to different valuations of the firm, reflects uncertainty surrounding the firm's stock price.

27. Financial Institution's Roles as Intermediaries Explain how each type of financial institution serves as a financial intermediary.

    ANSWER: Deposits from surplus units are transformed by depository institutions into loans for deficit units. Purchases of securities (commercial paper) issued by finance companies that are transformed into finance company loans for deficit units. Purchases of shares issued by mutual funds are used to purchase debt and equity securities of deficit units.

    Because insurance companies and pension funds purchase massive amounts of stocks and bonds, they finance much of the expenditures made by large deficit units, such as corporations and government agencies.

28. **Systemic Risk During a Financial Crisis** Explain why financial institutions are highly exposed to systemic risk during a financial crisis.

    ANSWER: Systemic risk exists because financial institutions invest their funds in similar types of securities and therefore have similar exposure to large declines in the prices of these securities. For example, in the credit crisis of 2008 and 2009, mortgage defaults affected financial institutions in several ways. First, many financial institutions that originated mortgages shortly before the crisis sold them to other financial institutions (i.e., commercial banks, savings institutions, mutual funds, insurance companies, securities firms, and pension funds). Therefore, even financial institutions that were not involved in the mortgage origination process experienced large losses because they purchased the mortgages originated by other financial institutions.

    Second, many other financial institutions that invested in mortgage-backed securities received lower payments as mortgage defaults occurred. Third, some financial institutions (especially securities firms) relied heavily on short-term debt to finance their operations and used their holdings of mortgage-backed securities as collateral. But when the prices of mortgage-backed securities plummeted, they could not issue new short-term debt to pay off the principal on maturing debt.

    Fourth, as mortgage defaults increased, there was an excess of unoccupied housing. There was no need for construction of new homes, so construction companies laid off many employees. The economy weakened and prices of many equity securities declined by more than 40 percent. Thus most financial institutions that invested heavily in equities experienced large losses on their investments during the credit crisis.

Fifth, financial institutions commonly engage in various loan and guarantee arrangements that causes one financial institution to rely on others for payment. Thus, the bankruptcy of one large financial institution can cause defaults on payments to several other financial institutions, which might reduce their ability to cover their respective obligations to other financial institutions. This can result in bankruptcy for many financial institutions.

29. **Fintech Innovations. Describe some of the fintech innovations in the financial markets.**

ANSWER: Fintech introduced many innovative products and services in several areas in the financial markets including online banking, payment systems, investment management, and regulatory compliance. Fintech produced some new products such as cryptocurrencies, digital wallets, robo-advisers, and blockchain-based accounting that changed and revolutionized the traditional role of financial intermediaries.

[return to top]

Critical Thinking Question

Impact of a Financial Crisis on Market Liquidity

During a financial crisis, liquidity in financial markets declines dramatically, and many surplus units no longer participate in financial markets. Nevertheless, if the markets are efficient, securities prices should decline due to existing economic conditions, which should make these securities appealing to potential investors. Yet, many investors typically are no longer willing to participate in the financial markets under these conditions. Write a short essay that explains the logic behind why participants may temporarily disappear during a financial crisis even though security prices are low, causing illiquidity in financial markets.

ANSWER: Even if the market prices reflect existing conditions, a crisis can cause fear that prices will decline substantially. While this might allow the possibility for large profits from pronounced changes in the prices of securities, many market participants may be uncomfortable in a market in which they could lose 30% or more of their investment in a short period of time.

Market illiquidity complicates market conditions, but there is usually another event that occurs first that causes market illiquidity. For example, the defaults on many mortgages in 2008 triggered fear among market participants about the possible continuation of defaults in all debt markets, the likelihood of a weaker economy, and the possible weakness in equity prices. Consequently, the fear encouraged many market participants to discontinue serving as surplus units until economic conditions improved.

Interpreting Financial News

"Interpreting Financial News" tests your ability to comprehend common statements made by Wall Street analysts and portfolio managers who participate in the financial markets. Interpret the following:

a. "The price of Apple stock will not be affected by the announcement that its earnings have increased as expected."

   The earnings level was anticipated by investors, so that Apple's stock price already reflected this anticipation.

b. "The lending operations at Bank of America should benefit from strong economic growth."

   High economic growth encourages expansion by firms which results in a strong demand for loans provided by Bank of America.

c. "The brokerage and underwriting performance at Goldman Sachs should benefit from strong economic growth."

   High economic growth may result in a large volume of stock transactions in which Goldman Sachs may serve as a broker. Also, Goldman Sachs underwrites new securities that are issued when firms raise funds to support expansion; firms are more willing to issue new securities to expand during periods of high economic growth.

Managing in Financial Markets

As the financial manager of a large firm, you plan to borrow $70 million over the next year.

a. What are the more likely alternatives for you to borrow $70 million?

   You could attempt to borrow $70 million from commercial banks, savings institutions, or finance companies in the form of commercial loans. Alternatively, you may issue debt securities.

b. Assuming that you decide to issue debt securities, describe the types of financial institutions that may purchase these securities.

   Financial institutions such as mutual funds, pension funds, and insurance companies commonly purchase debt securities that are issued by firms. Other financial institutions such as commercial banks and savings institutions may also purchase debt securities.

c. How do individuals indirectly provide the financing for your firm when they maintain deposits at depository institutions, invest in mutual funds, purchase insurance policies, or invest in pensions?

   Individuals provide funds to financial institutions in the form of bank deposits, investment in mutual funds, purchases of insurance policies, or investment in pensions. The financial institutions may channel the funds toward the purchase of debt securities (and even equity securities) that were issued by large corporations, such as the one where you work.

[return to top]

Flow of Funds Exercise

Roles of Financial Markets and Institutions

This continuing exercise focuses on the interactions of a single manufacturing firm (Carson Company) in the financial markets. It illustrates how financial markets and institutions are integrated and facilitate the flow of funds in the business and financial environment. At the end of every chapter, this exercise provides a list of questions about Carson Company that require the application of concepts learned within the chapter, as related to the flow of funds.

Carson Company is a large manufacturing firm in California that was created 20 years ago by the Carson family. It was initially financed with an equity investment by the Carson family and ten other individuals. Over time, Carson Company has obtained substantial loans from finance companies and commercial banks. The interest rates on those loans are tied to market interest rates and are adjusted every six months. Thus, Carson's cost of obtaining funds is sensitive to interest rate movements.

The company has a credit line with a bank in case it suddenly needs to obtain funds for a temporary period. It has purchased Treasury securities that it could sell if it experiences any liquidity problems.

Carson Company has assets valued at approximately $50 million and generates sales of nearly $100 million per year. Some of its growth is attributed to its acquisitions of other firms. Because it expects the economy to be strong in the future, Carson plans to grow by expanding its business and making more acquisitions. It expects that it will need substantial long-term financing and plans to borrow additional funds either through obtaining loans or by issuing bonds. It is also considering the issuance of stock to raise funds in the next year. Carson closely monitors conditions in financial markets that could affect its cash inflows and cash outflows and thereby affect its value.

a. In what way is Carson a surplus unit?

   Carson invests in Treasury securities and therefore is providing funds to the Treasury, the issuer of those securities.

b. In what way is Carson a deficit unit?

   Carson has borrowed funds from financial institutions.

c. How might finance companies facilitate Carson's expansion?

   Finance companies can provide loans to Carson so that Carson can expand its operations.

d. How might commercial banks facilitate Carson's expansion?

   Commercial banks can provide loans to Carson so that Carson can expand its operations.

e. Why might Carson have limited access to additional debt financing during its growth phase?

   Carson may have already borrowed up to its capacity. Financial institutions may be unwilling to lend more funds to Carson if it has too much debt.

f. How might securities firms facilitate Carson's expansion?

   First, securities firms could advise Carson on its acquisitions. In addition, they could underwrite a stock offering or a bond offering by Carson.

g. How might Carson use the primary market to facilitate its expansion?

   It could issue new stock or bonds to obtain funds.

h. How might it use the secondary market?

   It could sell its holdings of Treasury securities in the secondary market.

i. If financial markets were perfect, how might this factor have allowed Carson to avoid financial institutions?

   It would have been able to obtain loans directly from surplus units. It would have been able to assess potential targets for acquisitions without the advice of investment securities firms. It would be able to engage in a new issuance of stock or bonds without the help of a securities firm.

j. The loans that Carson has obtained from commercial banks stipulate that Carson must receive the banks' approval before pursuing any large projects. What is the purpose of this condition? Does this condition benefit the owners of the company?

   The purpose is to prevent Carson from using the funds in a manner that would be very risky, as Carson may default on its loans if it takes excessive risk when using the funds to expand its business. The owners of the firm may prefer to take more risk than the lenders will allow, because the owners would benefit directly from risky ventures that generate large returns. Conversely, the lenders simply hope to receive the repayments on the loan that they provided, and do not receive a share in the profits. They would prefer that the funds be used in a conservative manner so that Carson will definitely generate sufficient cash flows to repay the loan.

[return to top]

Internet/Excel Exercises

1. Review the information for the common stock of IBM, using the website finance.yahoo.com. Search for the ticker symbol "IBM." The main goal at this point is to become familiar with the information that you can obtain from this website. Review the data shown for IBM stock. Compare the price of IBM stock based on its last trade with the price range for the year. Is the price near its high or low price?

   What is the total value of IBM stock (Market Cap)?

   What is the average daily trading volume (Avg Volume) of IBM stock?

   Click on "5Y"just above the stock price chart to see IBM's stock price movements over the last five years.

   Describe the trend in IBM's stock over this period. At what points were the stock price the highest and lowest?

2. Repeat the questions in exercise 1 for the Children's Place, Inc. (ticker symbol "PLCE"). Explain how the market capitalization and trading volume for PLCE differ from those for IBM.

[return to top]

WSJ Exercise

Differentiating between Primary and Secondary Markets

Review the different tables relating to stock markets and bond markets that appear in the Wall Street Journal.

Explain whether each of these tables is focused on the primary or secondary markets.

[return to top]

Online Articles with Real-World Examples

Find a recent practical article online that describes a real-world example regarding a specific financial institution or financial market that reinforces one or more concepts covered in this chapter.

If your class has an online component, your professor may ask you to post your summary of the article there and provide a link to the article so that other students can access it. If your class is live, your professor may ask you to summarize your application of the article in class. Your professor may assign specific students to complete this assignment or may allow any students to do the assignment on a volunteer basis.

For recent online articles and real-world examples related to this chapter, consider using the following search terms (be sure to include the prevailing year as a search term to ensure that the online articles are recent):

1. secondary market AND liquidity
2. secondary market AND offering
3. money market
4. bond offering
5. stock offering
6. valuation AND stock
7. market efficiency

8. financial AND regulation
9. financial institution AND operations
10. financial institution AND governance

[return to top]