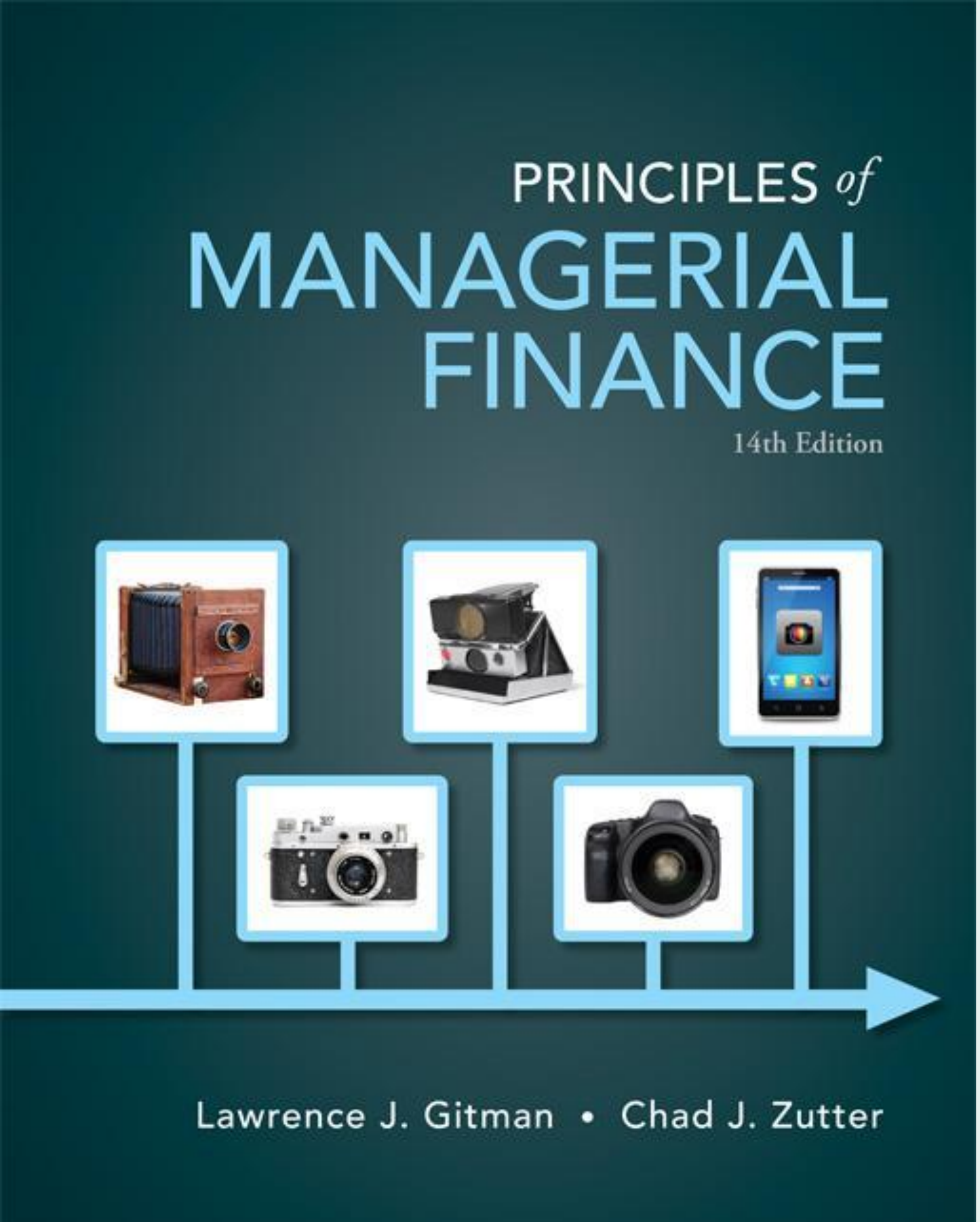


Chapter 2

The Financial Market Environment

Financial Institutions & Markets

Firms that require funds from external sources can obtain them in three ways:

1. through a financial institution
2. through financial markets
3. through private placements

Financial Institutions & Markets: Financial Institutions

- Financial institutions are **intermediaries** that channel the savings of individuals, businesses, and governments into loans or investments.
- The key suppliers and demanders of funds are individuals, businesses, and governments.
- In general, individuals are net suppliers of funds, while businesses and governments are net demanders of funds.

Commercial Banks, Investment Banks, and the Shadow Banking System

- **Commercial banks** are institutions that:
  - provide savers with a secure place to invest their funds
  - offer loans to individual and business borrowers
- **Investment banks** are institutions that:
  - assist companies in raising capital
  - advise firms on major transactions such as mergers or financial restructurings
  - engage in trading and market making activities

Commercial Banks, Investment Banks, and the Shadow Banking System (cont.)

- The **Glass-Steagall Act** was an act of Congress in 1933 that created the federal deposit insurance program and separated the activities of commercial and investment banks. It was repealed it 1999 by Congress.
- The **shadow banking system** describes a group of institutions that:
  - engage in lending activities, much like traditional banks
  - but do not accept deposits
  - are not subject to the same regulations as traditional banks

Matter of Fact

- Consolidation in the U.S. Banking Industry:
  - The U.S. banking industry has been going through a long period of consolidation.
  - According to the FDIC, the number of commercial banks in the United States declined from 11,463 in 1992 to 6,048 in 2013, a decline of 47%.
  - The decline is concentrated among small, community banks, which larger institutions have been acquiring at a rapid pace.

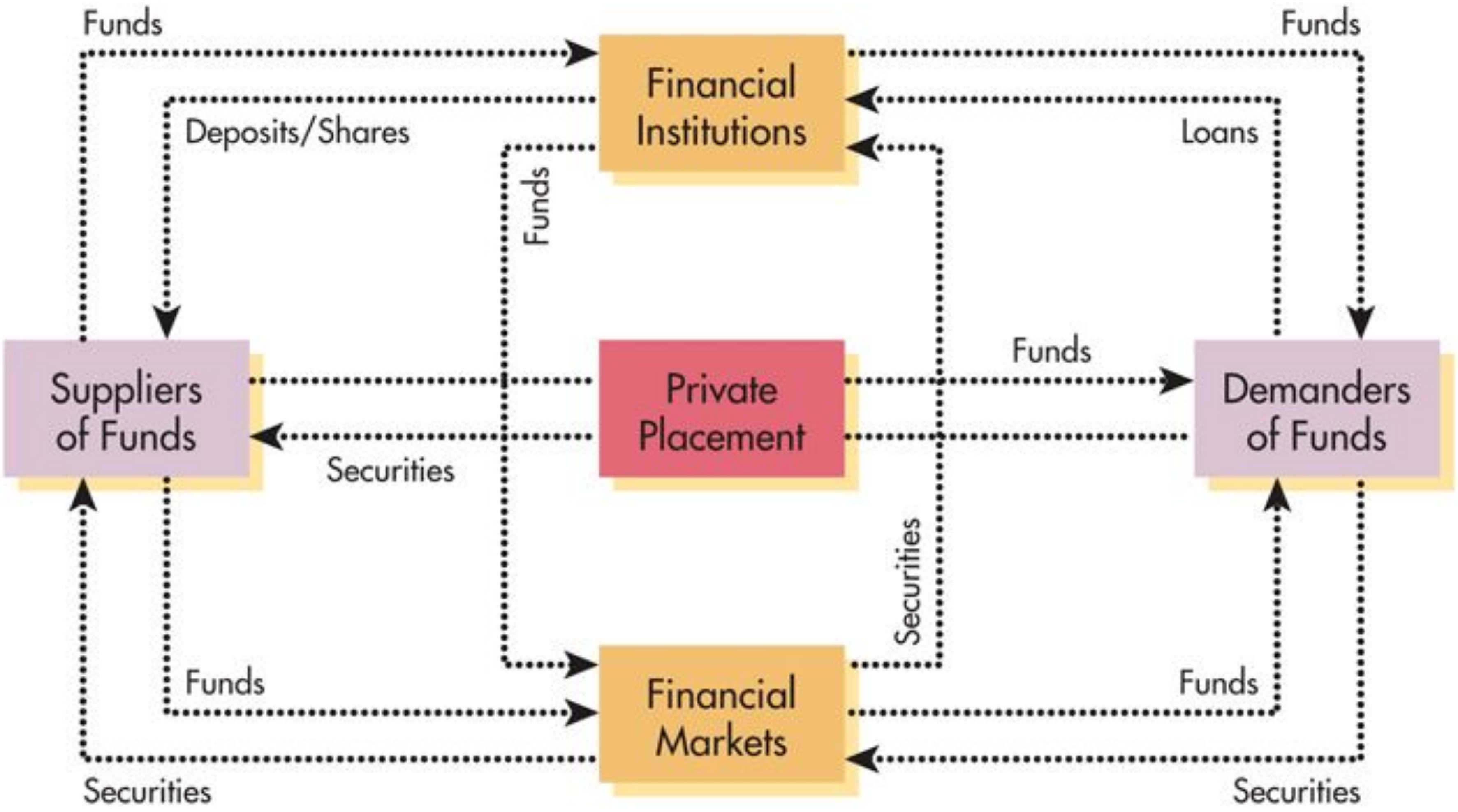
Financial Institutions & Markets: Financial Markets

- **Financial markets** are forums in which suppliers of funds and demanders of funds can transact business directly.
- Transactions in short term marketable securities take place in the money market while transactions in long-term securities take place in the capital market.
- A **private placement** involves the sale of a new security directly to an investor or group of investors.
- Most firms, however, raise money through a **public offering** of securities, which is the sale of either bonds or stocks to the general public.

Financial Institutions & Markets: Financial Markets (cont.)

- The **primary market** is the financial market in which securities are initially issued; the only market in which the issuer is directly involved in the transaction.
- **Secondary markets** are financial markets in which preowned securities (those that are not new issues) are traded.

Figure 2.1 Flow of Funds



The Money Market

- The **money market** is created by a financial relationship between suppliers and demanders of short-term funds.
- Most money market transactions are made in **marketable securities** which are short-term debt instruments, such as:
  - U.S. Treasury bills issues by the federal government
  - commercial paper issued by businesses
  - negotiable certificates of deposit issued by financial institutions
- Investors generally consider marketable securities to be among the least risky investments available.

The Money Market (cont.)

- The international equivalent of the domestic (U.S.) money market is the **Eurocurrency market**.
- The Eurocurrency market is a market for short-term bank deposits denominated in U.S. dollars or other marketable currencies.
- The Eurocurrency market has grown rapidly mainly because it is unregulated and because it meets the needs of international borrowers and lenders.
- Nearly all Eurodollar deposits are time deposits.

The Capital Market

- The **capital market** is a market that enables suppliers and demanders of long-term funds to make transactions.
- The key capital market securities are bonds (long-term debt) and both common and preferred stock (equity, or ownership).
  – **Bonds** are long-term debt instruments used by businesses and government to raise large sums of money, generally from a diverse group of lenders.
  – **Common stock** are units of ownership interest or equity in a corporation.
  – **Preferred stock** is a special form of ownership that has features of both a bond and common stock.

The Capital Market

Lakeview Industries, a major microprocessor manufacturer, has issued a 9 percent coupon interest rate, 20-year bond with a $1,000 par value that pays interest semiannually.

- Investors who buy this bond receive the contractual right to $90 annual interest (9% coupon interest rate × $1,000 par value) distributed as $45 at the end of each 6 months (1/2 × $90) for 20 years.
- Investors are also entitled to the $1,000 par value at the end of year 20.

Focus on Practice

Berkshire Hathaway – Can Buffett Be Replaced?

- Since the early 1980s, Berkshire Hathaway's Class A common stock price has climbed from $285/share to $114,000/share.
- The company is led by Chairman Warren Buffett (83) and Vice-Chairman Charlie Munger (89).
- The share price of BRKA has never been split. Why might the company refuse to split its shares to make them more affordable to average investors?

Broker Markets and Dealer Markets

Broker markets are securities exchanges on which the two sides of a transaction, the buyer and seller, are brought together to trade securities.

- Trading takes place on centralized trading floors of national exchanges, such as NYSE Euronext, as well as regional exchanges.

Broker Markets and Dealer Markets (cont.)

- **Dealer markets**, such as Nasdaq, are markets in which the buyer and seller are not brought together directly but instead have their orders executed by securities dealers that "make markets" in the given security.
  - The *dealer market* has no centralized trading floors. Instead, it is made up of a large number of *market makers* who are linked together via a mass-telecommunications network.
- As compensation for executing orders, market makers make money on the spread (bid price – ask price).

Matter of Fact

According to the World Federation of Exchanges, in 2012:

1. NYSE Euronext is the largest stock market in the world, as measured by the total market value of securities listed on that market. NYSE Euronext has listed securities worth more than $14.1 trillion in the U.S. and $2.1 trillion in Europe.
2. The second largest exchange is Nasdaq, with listed securities valued at $4.6 trillion.
3. The Tokyo Stock Exchange has securities valued at $3.5 trillion.
4. The fourth largest exchange, the London Stock Exchange, has securities valued at $3.3 trillion.

International Capital Markets

- In the **Eurobond market**, corporations and governments typically issue bonds denominated in dollars and sell them to investors located outside the United States.
- The **foreign bond market** is a market for bonds issued by a foreign corporation or government that is denominated in the investor’s home currency and sold in the investor’s home market.
- The **international equity market** allows corporations to sell blocks of shares to investors in a number of different countries simultaneously.

The Role of Capital Markets

- From a firm's perspective, the role of capital markets is to be a liquid market where firms can interact with investors in order to obtain valuable external financing resources.
- From investors' perspectives, the role of capital markets is to be an efficient market that allocates funds to their most productive uses.
- An **efficient market** allocates funds to their most productive uses as a result of competition among wealth-maximizing investors <u>and</u> determines and publicizes prices that are believed to be close to their true value.

The Role of Capital Markets (cont.)

- Advocates of **behavioral finance**, an emerging field that blends ideas from finance and psychology, argue that stock prices and prices of other securities can deviate from their true values for extended periods.
- Examples of the principle that stock prices sometimes can be wildly inaccurate measures of value include:
  - the huge run up and subsequent collapse of the prices of Internet stocks in the late 1990s
  - the failure of markets to accurately assess the risk of mortgage-backed securities in the more recent financial crisis

Focus on Ethics

- The Ethics of Insider Trading
  - Bryan Shaw received inside information on Herbalife and Skechers from Scott London, a KPMG auditor. Using this information, Shaw made $1.3 million in trading profits. He pleaded guilty to insider trading charges in 2013.
  - Laws prohibiting insider trading were established in the United States in the 1930s. These laws are designed to ensure that all investors have access to relevant information on the same terms.
  - Some market participants believe that insider trading should be permitted, arguing that information about the trades of insiders would be useful information to the market.
- If efficiency is the goal of financial markets, is allowing or disallowing insider trading more unethical?
- Does allowing insider trading create an ethical dilemma for insiders?

The Financial Crisis: Financial Institutions and Real Estate Finance

- **Securitization** is the process of pooling mortgages or other types of loans and then selling claims or securities against that pool in a secondary market.
- **Mortgage-backed securities** represent claims on the cash flows generated by a pool of mortgages and can be purchased by individual investors, pension funds, mutual funds, or virtually any other investor.
- A primary risk associated with mortgage-back securities is that homeowners may not be able to, or may choose not to, repay their loans.

The Financial Crisis: Falling Home Prices and Delinquent Mortgages

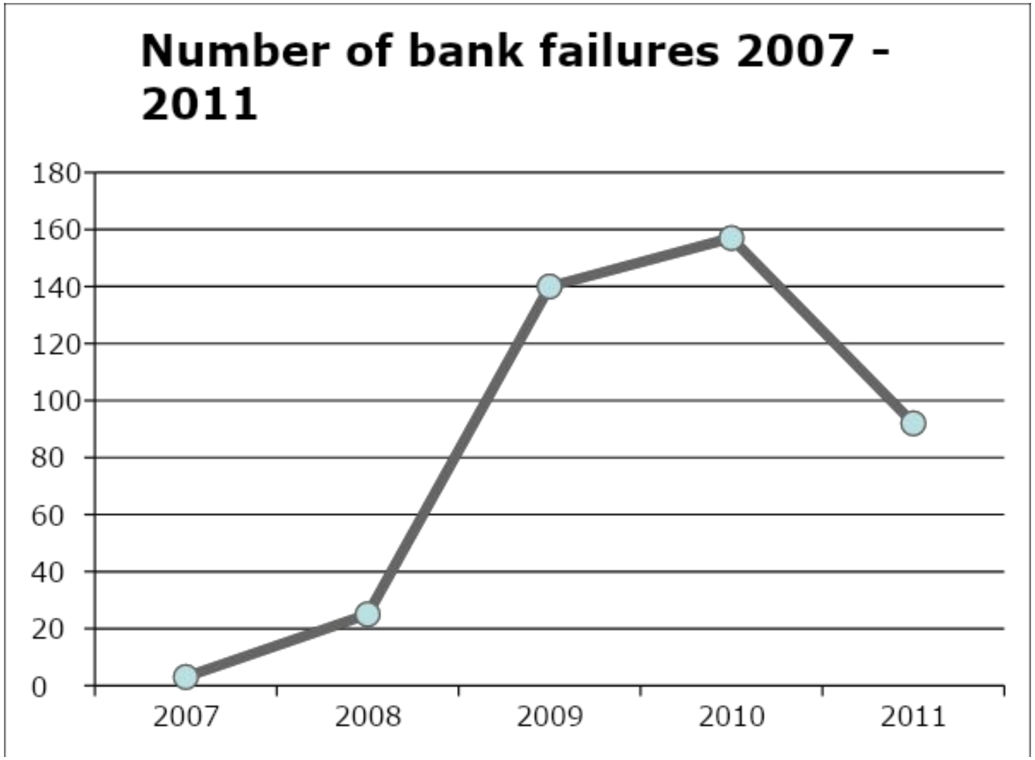
- Rising home prices between 1987 and 2006 kept mortgage default rate low.
- Lenders relaxed standards for borrowers and created subprime mortgages.
- As housing prices fell from 2006 to 2009, many borrowers had trouble making payments, but were unable to refinance.
- As a result, there was a sharp increase in the number of delinquencies and foreclosures.

The Financial Crisis: Falling Home Prices and Delinquent Mortgages

Figure 2.2 House Prices Soar and then Crash

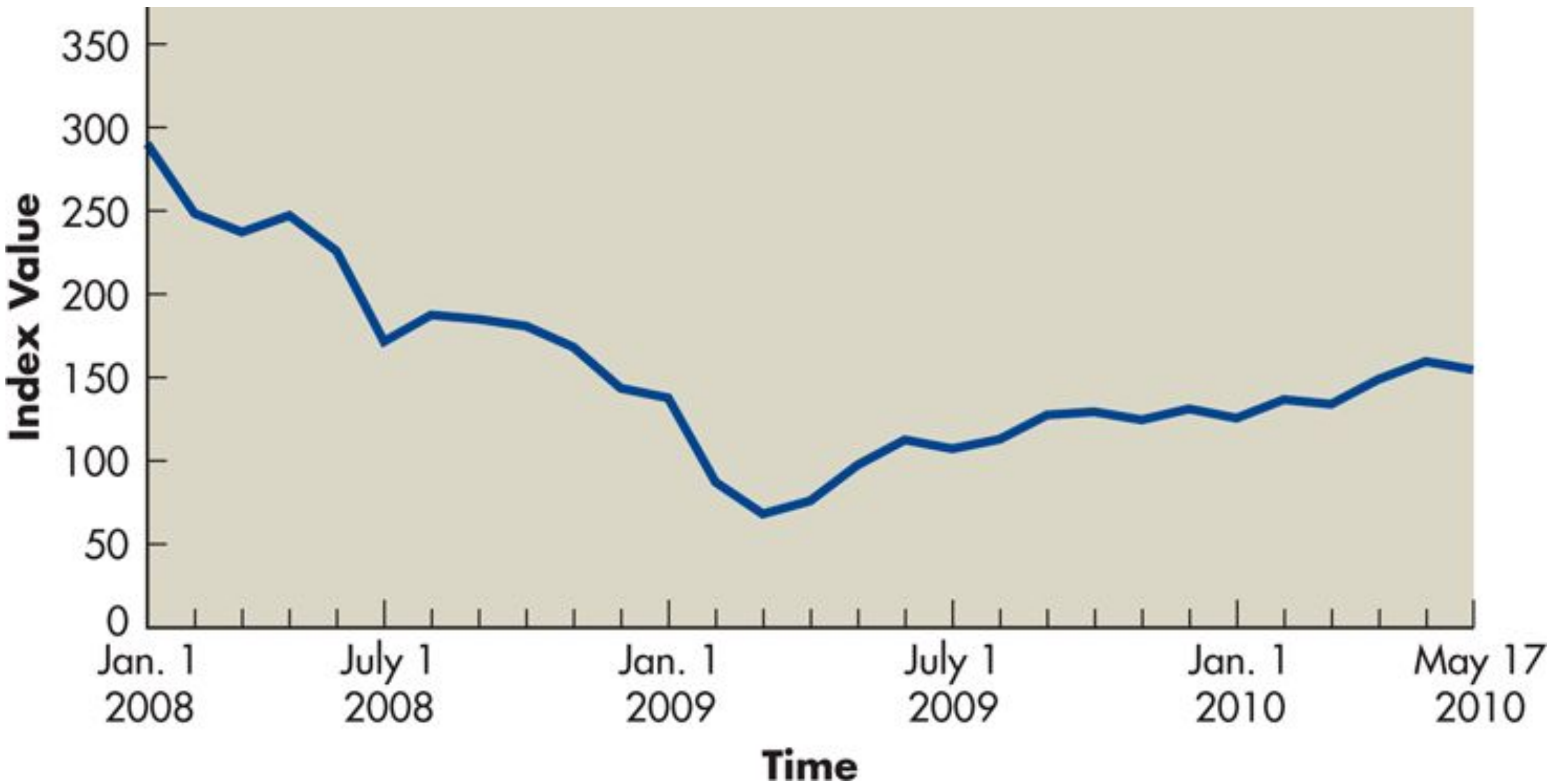
The Financial Crisis: Crisis of Confidence in Banks

The price of bank stocks fell 81% between January 2008 and March 2009.



The Financial Crisis: Crisis of Confidence in Banks

Figure 2.3 Bank Stocks Plummet During Financial Crisis



The Financial Crisis: Spillover Effects and the Great Recession

- As banks came under intense financial pressure in 2008, they tightened their lending standards and dramatically reduced the quantity of loans they made.
- Corporations found that they could no longer raise money in the money market, or could only do so at extraordinarily high rates.
- As a consequence, businesses began to hoard cash and cut back on expenditures, and economic activity contracted.

Regulation of Financial Institutions and Markets: Regulations Governing Financial Institutions

- The Glass-Steagall Act (1933) established **the Federal Deposit Insurance Corporation (FDIC)** which provides insurance for deposits at banks and monitors banks to ensure their safety and soundness.
- The Glass-Steagall Act also prohibited institutions that took deposits from engaging in activities such as securities underwriting and trading, thereby effectively separating commercial banks from investment banks.

Regulation of Financial Institutions and Markets: Regulations Governing Financial Institutions

- The **Gramm-Leach-Bliley Act (1999)** allows business combinations (e.g. mergers) between commercial banks, investment banks, and insurance companies, and thus permits these institutions to compete in markets that prior regulations prohibited them from entering.
- Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010, but it has not been fully implemented.

Regulation of Financial Institutions and Markets: Regulations Governing Financial Markets

- The **Securities Act of 1933** regulates the sale of securities to the public via the primary market.
  - Requires sellers of new securities to provide extensive disclosures to the potential buyers of those securities.
- The **Securities Exchange Act of 1934** regulates the trading of securities such as stocks and bonds in the secondary market.
  - Created the **Securities Exchange Commission**, which is the primary government agency responsible for enforcing federal securities laws.
  - Requires ongoing disclosure by companies whose securities trade in secondary markets (e.g., 10-Q, 10-K).
  - Imposes limits on the extent to which “insiders” can trade in their firm’s securities.

Business Taxes

- Both individuals and businesses must pay taxes on income.
- The income of sole proprietorships and partnerships is taxed as the income of the individual owners, whereas corporate income is subject to corporate taxes.
- Both individuals and businesses can earn two types of income—ordinary income and capital gains income.
- Under current law, tax treatment of ordinary income and capital gains income change frequently due frequently changing tax laws.

Table 2.1
Corporate Tax Rate Schedule

Range of taxable income			Tax calculation: Base tax	+	(Marginal rate	×	amount over base bracket)	
$ 0	to	$ 50,000	$ 0	+	(15%	×	amount over	$ 0)
50,000	to	75,000	7,500	+	(25	×	amount over	50,000)
75,000	to	100,000	13,750	+	(34	×	amount over	75,000)
100,000	to	335,000	22,250	+	(39	×	amount over	100,000)
335,000	to	10,000,000	113,900	+	(34	×	amount over	335,000)
10,000,000	to	15,000,000	3,400,000	+	(35	×	amount over	10,000,000)
15,000,000	to	18,333,333	5,150,000	+	(38	×	amount over	15,000,000)
Over 18,333,333			6,416,667	+	(35	×	amount over	18,333,333)

Business Taxes: Ordinary Income

- Ordinary income is earned through the sale of a firm's goods or services and is taxed at the rates depicted in Table 2.1 on the previous slide.

<u>Example</u>

Webster Manufacturing Inc. has before-tax earnings of $250,000.

Tax = $22,500 + [0.39 × ($250,000 – $100,000)]

Tax = $22,500 + (0.39 × $150,000)

Tax = $22,500 + $58,500 = <u>$80,750</u>

Business Taxation: Marginal versus Average Tax Rates

- A firm's **marginal tax rate** represents the rate at which additional income is taxed.
- The **average tax rate** is the firm's taxes divided by taxable income.

Example

What are Webster Manufacturing's marginal and average tax rates?

Marginal Tax Rate = 39%

Average Tax Rate = $80,750/$250,000 = 32.3%

Business Taxation: Interest and Dividend Income

- For corporations only, 70% of all dividend income received from an investment in the stock of another corporation in which the firm has less than 20% ownership is excluded from taxation.
- This exclusion moderates the effect of **double taxation**, which occurs when after-tax corporate earnings are distributed as cash dividends to stockholders, who then must pay personal taxes on the dividend amount.
- Unlike dividend income, all interest income received is fully taxed.

Business Taxation: Tax-Deductible Expenses

- In calculating taxes, corporations may deduct operating expenses and interest expense but not dividends paid.
- This creates a built-in tax advantage for using debt financing as the following example will demonstrate.

Example

Two companies, Debt Co. and No Debt Co., both expect in the coming year to have EBIT of $200,000. During the year, Debt Co. will have to pay $30,000 in interest expenses. No Debt Co. has no debt and will pay not interest expenses.

Business Taxation: Tax-Deductible Expenses (cont.)

	Debt Co.	No-Debt Co.
Earnings before interest and taxes	$200,000	$200,000
Less: Interest expense	30,000	0
Earnings before taxes	$170,000	$200,000
Less: Taxes (40%)	68,000	80,000
Earnings after taxes	$102,000	$120,000
Difference in earnings after taxes	$18,000	

Business Taxation: Tax-Deductible Expenses (cont.)

- As the example shows, the use of debt financing can increase cash flow and EPS, and decrease taxes paid.
- The tax deductibility of interest and other certain expenses reduces their actual (after-tax) cost to the profitable firm.
- It is the non-deductibility of dividends paid that results in double taxation under the corporate form of organization.

Business Taxation: Capital Gains

- A **capital gain** is the amount by which the sale price of an asset exceeds the asset's purchase price.
- For corporations, capital gains are added to ordinary income and taxed like ordinary income at the firm's marginal tax rate.

<u>Example</u>

Ross Company has just sold for $150,000 and asset that was purchased 2 years ago for $125,000. Because the asset was sold for more than its initial purchase price, there is a capital gain of $25,000 ($150,000 - $125,000).

Review of Learning Goals

LG1 Understand the role that financial institutions play in managerial finance.

Financial institutions bring net suppliers of funds and net demanders together to help translate the savings of individuals, businesses, and governments into loans and other types of investments.

LG2 Contrast the functions of financial institutions and financial markets.

Financial institutions collect the savings of individuals and channel those funds to borrowers such as businesses and governments. Financial markets provide a forum in which savers and borrowers can transact business directly.

Review of Learning Goals (cont.)

LG3 Describe the differences between the capital markets and the money markets.

In the money market, savers who want a temporary place to deposit funds where they can earn interest interact with borrowers who have a short-term need for funds. In contrast, the capital market is the forum in which savers and borrowers interact on a long-term basis.

LG4 Explain the root causes and subsequent effects of the 2008 financial crisis and recession.

Financial institutions lowered their standards for lending to prospective homeowners and invested heavily in mortgage-backed securities. When home prices fell and mortgage delinquencies rose, the value of the mortgage-backed securities held by banks plummeted, causing some banks to fail and many others to restrict the flow of credit to business. That contributed to a severe recession in the United States and abroad.

Review of Learning Goals (cont.)

LG5 Understand the major regulations and regulatory bodies that affect financial institutions and markets.

The Glass-Steagall Act created the FDIC and imposed a separation between commercial and investment banks. The Act was designed to limit the risks that banks could take and to protect depositors. Recently, the Gramm-Leach-Bliley Act essentially repealed the elements of Glass-Steagall pertaining to the separation of commercial and investment banks. After the recent financial crisis, much debate has occurred regarding the proper regulation of large financial institutions.

The Securities Act of 1933 focuses on regulating the sale of securities in the primary market, whereas the Securities Exchange Act of 1934 deals with regulations governing transactions in the secondary market. The 1934 Act also created the Securities and Exchange Commission, the primary body responsible for enforcing federal securities laws.

Review of Learning Goals (cont.)

LG6 Discuss business taxes and their importance in financial decisions.

Corporate income is subject to corporate taxes. Corporate tax rates apply to both ordinary income (after deduction of allowable expenses) and capital gains. The average tax rate paid by a corporation ranges from 15 to 35 percent. Corporate taxpayers can reduce their taxes through certain provisions in the tax code: dividend income exclusions and tax-deductible expenses. A capital gain occurs when an asset is sold for more than its initial purchase price; they are added to ordinary corporate income and taxed at regular corporate tax rates.

Chapter Resources on MyFinanceLab

- Chapter Cases
- Group Exercises
- Critical Thinking Problems

Integrative Case: Merit Enterprise Corp.

Merit Enterprise Corporation's CEO would like to dramatically expand the company's production capacity. This would require the company to raise up to $4 billion in addition to the $2 billion of excess cash that they have accumulated. Merit is currently a private company and is considering two options for raising the much needed capital.

Integrative Case: Merit Enterprise Corp.

Option 1 – Merit could approach JPMorgan Chase, a bank that had served Merit well for many years with seasonal credit lines as well as medium-term loans. Lehn believed that JPMorgan was unlikely to make a $4 billion loan to Merit on its own, but it could probably gather a group of banks together to make a loan of this magnitude. However, the banks would undoubtedly demand that Merit limit further borrowing and provide JPMorgan with periodic financial disclosures so that they could monitor Merit's financial condition as it expanded its operations.

Integrative Case: Merit Enterprise Corp.

Option 2 – Merit could convert to public ownership, issuing stock to the public in the primary market. With Merit's excellent financial performance in recent years, Sara thought that its stock could command a high price in the market and that many investors would want to participate in any stock offering that Merit conducted.

Integrative Case: Merit Enterprise Corp.

a. Discuss the pros and cons of option 1, and prioritize your thoughts. What are the most positive aspects of this option, and what are the biggest drawbacks?

b. Do the same for option 2.

c. Which option do you think Sara should recommend to the board and why?