

1 Companies make investments in securities to provide a safety cushion of available funds and store a temporary excess of cash. Companies invest in other companies to earn a return, to secure influence, or to gain control.

2 For accounting purposes, stocks and bonds purchased as investment securities are classified as trading, available-for-sale, or held-to-maturity investments, or as equity investments.

3 The cost of an investment includes the purchase price plus any brokerage fees. Interest and dividends received on trading and available-for-sale securities are reported as revenue. When a security is sold, the gain or loss on the sale is called a realized gain or loss.

4 Both trading and available-for-sale securities are reported in the balance sheet at market value. Unrealized gains and losses are reported in the income statement for trading securities and as an equity adjustment for available-for-sale securities.

5 Held-to-maturity securities are reported in the balance sheet at amortized cost, which reflects the gradual

adjustment of the book value of the investment from its original cost to its ultimate maturity value.

6 When a company owns between 20 and 50 percent of another company, the equity method is used to account for the investment. Income from the investment is computed as the investing company's share of the net income of the investee. Dividends received are viewed as a partial return of the original amount invested.

7 Consolidated financial statements are prepared when a parent owns more than 50 percent of one or more subsidiaries. All of the assets, liabilities, revenues, and expenses of the parent and the majority-owned subsidiaries are added in preparing the consolidated financial statements.

8 A derivative is a contract that derives its value from the movement of some price, exchange rate, or interest rate. Derivatives are often used to hedge risk. Derivatives are reported in the balance sheet at their fair value. Unrealized gains and losses on derivatives are sometimes deferred in order to match them with the income effect of the item being hedged.

Investments in Securities

Born in 1930 in Omaha, Nebraska, Warren Buffett has lived most of his life not far from the house in which he grew up.¹ He attended the Wharton School at the University of Pennsylvania but dropped out because he didn't think he was learning anything. He did receive a bachelor's degree from the University of Nebraska and applied for admission to do graduate work at Harvard but was rejected. Instead, Buffett earned a master's degree in economics at Columbia. It was at Columbia that Buffett was exposed to the investing philosophy of Professor Benjamin Graham, which focused on company fundamentals, such as demonstrated earnings power, a strong balance sheet, and favorable macroeconomic trends.

Buffett began his professional career as a stock trader, eventually creating an investment fund called the Buffett Partnership, which earned a 32 percent average annual return over its life from 1956 to 1969. Buffett also began purchasing shares in a small textile manufacturer called Berkshire Hathaway. In 1948 Berkshire Fine Spinning and Hathaway Manufacturing were two

1. Lowe, Janet, *Warren Buffett Speaks: Wit and Wisdom from the World's Greatest Investor* (New York: John Wiley, 1997).

important industrial firms in New England. If the firms had been merged, they would have had combined earnings of \$18 million, which, at the time, was a considerable amount.² By comparison, IBM had earnings of \$28 million in the same year, and the earnings of Time, Inc., were just \$9 million. Berkshire and Hathaway did merge in 1955, but by then their prospects had begun to dim. Buffett's first 2,000 shares of Berkshire Hathaway stock cost just \$7.50 per share (plus \$0.10 per share in commissions).

In conjunction with his behind-the-scenes partner, Charlie Munger³, Warren Buffett has transformed Berkshire Hathaway from a textile manufacturer into a holding company that both controls a number of diverse operating businesses and also invests heavily in the stocks of other companies. A selection of the companies controlled by Berkshire Hathaway, along with some of Berkshire Hathaway's major investments, is included in Exhibit 12-1.

EXHIBIT 12-1 Berkshire Hathaway's Operations and Investments

Companies Owned by Berkshire Hathaway

	<u>Industry</u>
GEICO	Property and casualty insurance
FlightSafety International	Aviation training
See's Candies	Candy
Kirby	Vacuum cleaners
Nebraska Furniture Mart, R.C. Willey, and Star Furniture	Home furnishings
The Buffalo News	Newspaper publishing
Dexter Shoe Company	Shoes
Helzberg Diamonds	Retail jewelry stores
International Dairy Queen	Fast food and dairy desserts
Benjamin Moore	Paint manufacturer and retailer
Acme Building Brands	Manufacturer of bricks
Shaw Industries	Carpet manufacturer
Johns Manville Corp.	Manufacturer of insulation

Companies in Which Berkshire Hathaway Has Invested

	<u>Ownership Percentage</u>
American Express Company	11.4%
The Coca-Cola Company	8.1
The Gillette Company	9.1
The Washington Post Company	18.3
Wells Fargo & Company	3.2

This information is as of the end of 2000.

And how has Berkshire Hathaway's stock performed under Warren Buffett's leadership? On May 22, 2001, the company's stock closed at \$67,700 per share! And how has Buffett done personally? He receives a salary of only \$100,000 a year (making him the lowest-paid executive among the nation's top 200 companies). But don't feel sorry for Mr. Buffett—he was smart enough to purchase a large number of Berkshire Hathaway shares when the price was low, and he still owns 35 percent of the shares outstanding. In fact, Buffett has promised Berkshire Hathaway

2. Warren Buffett, Berkshire Hathaway, Chairman's Letter to the Shareholders, 1977.

3. Robert Lenzner and David S. Fondiller, "The Not-So-Silent Partner," *Forbes*, January 22, 1996, p. 78.

shareholders that he will keep at least 99 percent of his personal wealth tied up in the prospects of the company. According to the 2000 Forbes 400 listing, Buffett's personal worth of \$25.6 billion ranks him number four on the list of the world's richest people, behind his close friend Bill Gates (\$60 billion), Lawrence Ellison (Oracle, \$47 billion), and Paul Allen (\$28 billion).



Warren Buffett writes the best chairman's letter to shareholders in corporate America. A historical collection of these letters is included in Berkshire Hathaway's Web site at www.berkshirehathaway.com. Look at the 1994 letter and find out whom Warren Buffett quoted on the dangers of hard work.

Berkshire Hathaway has invested in some companies to the extent that it owns them outright (such as GEICO insurance). In other cases, Berkshire Hathaway's share ownership is more of a passive investment (such as with Coca-Cola), though any investment in which Warren Buffett is involved is never totally passive. The accounting rules understandably require different accounting practices for ownership investments as compared with passive investments; those practices are described in this chapter. First, we will examine how securities are classified and what implications these different classifications hold for accounting practice. We then describe the proper accounting for the purchase, receipt of revenue, sale, and valuation of investment securities. We also introduce the equity method of accounting and discuss when its application is appropriate. The chapter also includes a brief discussion of consolidated financial statements. The chapter concludes with an introduction to the topic of derivative instruments, which are an innovative form of investment that allows companies to manage their risks.

Exhibit 12-2 highlights the financial statement items that will be discussed in this chapter. Investment securities are classified as either current or long-term assets, depending on how long management intends to hold the securities. The periodic cash income from investment securities is reported as either interest or dividend revenue in the income statement. In addition, the income statement includes realized gains and losses from the sale of securities and unrealized, or paper, gains and losses from certain securities. As discussed in Chapters 4 and 5, other unrealized gains and losses are shown as direct adjustments to reported stockholders' equity. The buying and selling of investment securities is shown on the statement of cash flows as either an operating or investing activity, depending on the type of security. Finally, derivative instruments can be either assets or liabilities; the treatment of the gains and losses created by these items is discussed at the end of the chapter and depends on whether and how the derivative is used by a company to hedge risk.

A timeline illustrating the issues associated with the purchase of investment securities is included in Exhibit 12-3. As discussed in this chapter, the method of accounting for an investment is determined by the reason management made the investment in the first place. For example, investments are normally reported in the balance sheet at their current market value unless management has determined that the investments are to be held for the long term.

EXHIBIT 12-2 Financial Statement Items Covered in This Chapter

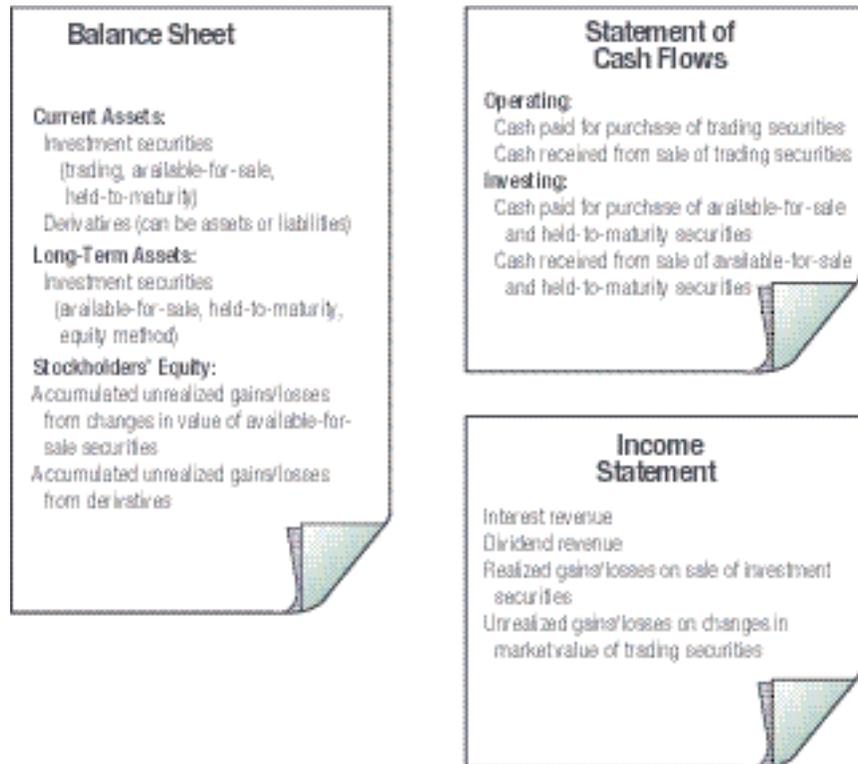


EXHIBIT 12-3 Timeline of Business Issues Involved with Investment Securities

Determine	Purchase	Classify	Earn	Monitor	Sell
the purpose of the investment	the investment securities	the investment for accounting purposes	a return on the securities	changes in the market value of the securities	the securities

Why Companies Invest in Other Companies

(Key Point #1)

Companies invest in the debt and equity securities of other companies for a host of reasons. Five of the more common reasons are discussed in this section.

Safety Cushion

As mentioned in Chapter 4, Microsoft holds more cash and short-term investments than just about any company. As of June 30, 2000, Microsoft reported holding \$23.798 billion in cash and short-term investments. Of this amount, only \$849 million was actually composed of cash; the remainder was a mixture of certificates of deposit, U.S. Treasury securities, corporate notes and bonds, and other short-term interest-earning securities. In essence, Microsoft has stored a substantial amount of cash in the form of interest-earning loans to banks, governments, and other corporations. In *Time* magazine (January 13, 1997), it was reported that Bill Gates has a

rule that Microsoft must always have a large enough liquid investment balance to operate for a year without any revenue. Thus, this large investment balance is a safety cushion to ensure that Microsoft can continue to operate even in the face of extreme adversity. Other companies have much smaller safety cushions, but the general principle is that investments are sometimes made to give a company a ready source of funds on which it can draw when needed.

Cyclical Cash Needs

Some companies operate in a seasonal business environment that involves cyclical inventory buildup requiring a large amount of cash, followed by lots of sales and cash collections. For example, the following is an excerpt from the January 31, 2001, 10-K filing of Toys R Us, the large retail toy chain:

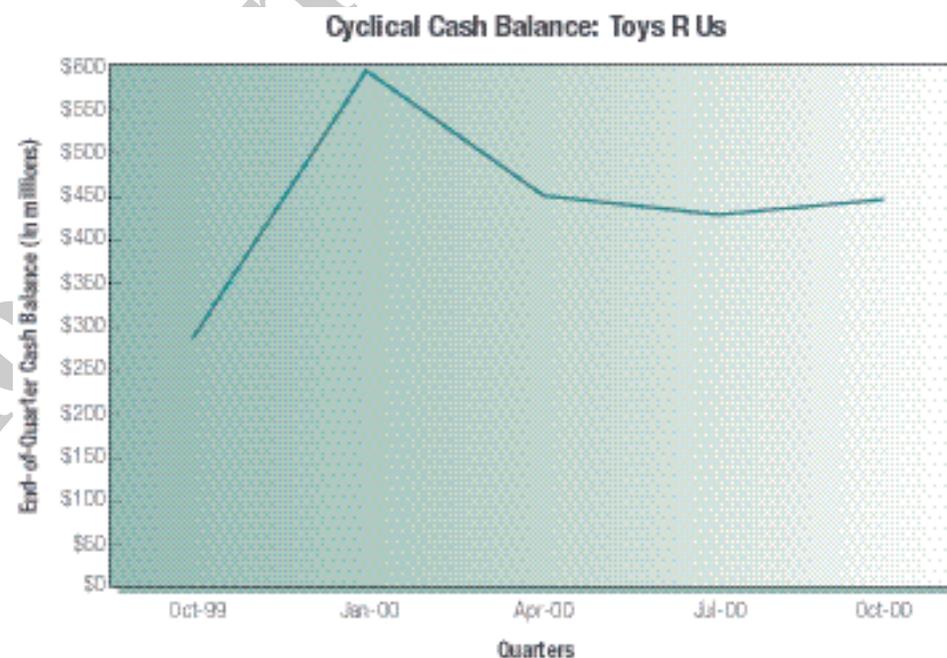
The seasonal nature of the business typically causes cash to decline from the beginning of the year through October as inventory increases for the Holiday selling season and funds are used for construction of new stores, remodelings and other initiatives that normally occur in this period. The fourth quarter, including the Holiday season, accounted for approximately 42% of net sales in 2000 and 1999 and 44% in 1998, respectively.

The fluctuation in the cash balance for Toys R Us during 1999 and 2000 is shown in Exhibit 12-4. During those periods when excess cash exists for a company such as Toys R Us, the company can invest that money and earn a return. Of course, most companies are not satisfied with the low interest rates offered by bank deposits and have turned to alternative investments. Investing in the stocks (equity) and bonds (debt) of other companies allows a firm to store its cyclical cash surplus and earn a higher rate of return by accepting a higher degree of risk.

FYI

Another way to handle cyclical cash needs is to arrange lines of credit with banks. The lines of credit can be used for automatic borrowing as cash is needed, and then the loans can be repaid when cash is plentiful.

EXHIBIT 12-4 Cyclical Cash Balance: Toys R Us



Investment for a Return

Another reason that companies invest in the stocks and bonds of other companies is simply to earn money. Although companies owned by the Berkshire Hathaway holding company employ 112,000 employees who provide a variety of products and services, Berkshire Hathaway is still commonly viewed as making its money through investments. This is because, as of December 31, 2000, Berkshire Hathaway had invested an average of \$47,059 in stocks and bonds for each ownership share outstanding. In other words, with a share of Berkshire Hathaway stock selling for \$67,700, over two thirds of the amount required to buy a share of Berkshire Hathaway stock represents an indirect investment, through Berkshire Hathaway, in the stocks and bonds that Warren Buffett and Charlie Munger have decided are good investments. Berkshire Hathaway's investment criteria are listed in Exhibit 12-5.

EXHIBIT 12-5 Berkshire Hathaway's Acquisition Criteria

BERKSHIRE HATHAWAY INC. ACQUISITION CRITERIA

1. Large purchases (at least \$50 million of before-tax earnings)
2. Demonstrated consistent earning power (future projections are of no interest to us, nor are "turnaround" situations)
3. Businesses earning good returns on equity while employing little or no debt
4. Management in place (we can't supply it)
5. Simple businesses (if there's lots of technology, we won't understand it)
6. An offering price (we don't want to waste our time or that of the seller by talking, even preliminarily, about a transaction when price is unknown)

Berkshire Hathaway is the exception; most U.S. corporations engage in only a small amount of investment solely for the purpose of earning a return because companies like Microsoft, Intel, and McDonald's are not experts in investing. Instead, they are good at creating software, developing computer chips, and selling hamburgers. Thus, it makes sense for those companies to concentrate on operating decisions relative to their respective businesses rather than spending valuable management time trying to figure out the stock and bond markets.

Consider an extreme example of a company whose sole purpose is to invest in the debt and equity securities of other companies. TIAA-CREF is the short name for the combination of the Teachers Insurance and Annuity Association [TIAA] and the College Retirement Equities Fund [CREF]. TIAA-CREF is the largest private retirement system in the world, covering 2 million staff members of over 8,000 colleges and universities in the United States. The odds are good that the retirement plan for your instructor in this financial accounting class is maintained, in whole or in part, through TIAA-CREF. TIAA invests primarily in corporate and government bonds; CREF invests primarily in stocks. As of December 31, 2000, the market value of the combined TIAA and CREF portfolios was \$290 billion. The 2000 annual report for CREF alone contains over 100 pages detailing the individual debt and equity investments.

FYI

With reference to the pension plan discussion in Chapter 10, the TIAA-CREF retirement plans are defined contribution plans, meaning that the participants themselves bear the risk of poor investment performance.

Investment for Influence

For companies in which Berkshire Hathaway is a large shareholder, Warren Buffett is not content to be a passive investor. For example, he is on the board of directors of The Coca-Cola Company, The Gillette Company, and The Washington Post

Company, three of the Berkshire Hathaway investments listed in Exhibit 12-1. In general, companies may invest in other companies for many reasons other than to earn a return. The ability to ensure a supply of raw materials, to influence the board of directors, or to diversify their product offerings are other reasons for companies to invest in other companies. For example, The Coca-Cola Company does not bottle its own soft drinks; that bottling franchise is owned by independent bottlers all over the world. However, to ensure that the bottling segment of the soft drink supply chain remains predictably open to it, Coca-Cola owns sizeable portions of a number of the major bottlers of Coke. Some of these bottlers, their location, and Coca-Cola's ownership percentage are listed in Exhibit 12-6. To summarize, large investments in other companies are often made for business reasons in order to be able to exercise influence over the conduct of that company's operations.

FYI

In early 1999, President Clinton proposed that a portion of individuals' Social Security contributions be used to invest in stocks of U.S. corporations. The proposal was applauded by some as offering a way to increase the investment return on individuals' Social Security contributions. Others, including Federal Reserve Chairman Alan Greenspan, opposed the proposal because the large government investments might increase the potential for the influence of the federal government, as a major investor, over corporate operating decisions.

FYI

The FASB is considering whether to relax the 50 percent ownership definition of control. For example, even though The Coca-Cola Company owns just 40 percent of its major bottler, Coca-Cola Enterprises, it still seems likely that the board of directors of The Coca-Cola Company can almost unilaterally determine the operating decisions of the bottler.

EXHIBIT 12-6 The Coca-Cola Company's Ownership of Major Bottlers

Bottler	Location	Coca-Cola's Ownership Percentage
Coca-Cola Enterprises	United States; largest bottler of Coca-Cola products in the world	40%
Coca-Cola Amatil	Australia, New Zealand, Pacific Islands, Central and Eastern Europe	38
Coca-Cola FEMSA	Mexico and Argentina	30
Panamco	Central and South America	24

Purchase for Control

Warren Buffett first invested in GEICO insurance in 1951, soon after graduating from Columbia.⁴ He describes the company as his "first business love," partly stemming from his admiration of its basic strategy of being the low-cost provider of a necessary product. In 1976 Buffett decided that Berkshire Hathaway should buy a large number of GEICO shares. By 1995 Berkshire Hathaway owned almost 50 percent of GEICO and obviously exercised significant influence over the operation of the company. In 1995 Buffett decided to buy the remaining shares of GEICO, making GEICO a wholly owned subsidiary of Berkshire Hathaway.

The 50 percent ownership mark is an important threshold—if one owns less than 50 percent of the shares of a company, one can influence but not absolutely control decisions within that company. However, once one owns more than 50 percent of a company's shares, one can make all of that company's operating, investing, and financing decisions. The remaining shareholders, those who own, in total, less than 50 percent of the shares, are called minority interest shareholders. For accounting purposes, a central parent company is required to report the results of all of its subsidiaries of which it owns more than 50 percent as if the parent and subsidiaries were one company. For example, Berkshire Hathaway has a controlling interest in dozens of different subsidiaries incorporated in many different states and even in different countries. The financial performance of all of these subsidiaries is included in the financial statements of the parent, Berkshire Hathaway. Thus, the reason that financial statements of most large corporations are called consolidated financial statements is because they include aggregated, or consolidated, results for both the parent and all of its majority-owned subsidiaries.

4. Warren Buffett, Berkshire Hathaway, Chairman's Letter to the Shareholders, 1995.

Classification of Investment Securities

(Key Point #2)

For accounting purposes, investment securities are treated differently depending on why the securities were purchased in the first place. This section includes a general description of the characteristics of debt and equity securities, along with discussion of the different ways that securities can be classified for accounting purposes.

Difference between Debt and Equity Securities

Two general types of securities are purchased by companies. These securities are called equity securities and debt securities, or more commonly, stocks and bonds. **Debt securities** are nothing more than a method through which one company or individual loans money to another. To “buy” a debt security from the company issuing the security is the same as loaning the company money. The debt security carries with it the promise of interest payments and the repayment of the principal amount. Once issued, these securities are then often traded on public exchanges such as the New York Bond Exchange. Investors often prefer debt securities to equity securities because of the certainty of the income stream (interest) and because of the relative safety (low risk) of debt as an investment. Investors in corporate debt securities have priority over investors in equity both for the interest payments each year and for the return of principal if the issuing corporation gets into financial difficulty. A common type of debt securities is bonds issued by corporations; bonds are discussed in detail from the issuer’s standpoint in Chapter 13.

FYI

Berkshire Hathaway holds its annual shareholder meeting in Omaha, Nebraska. The festivities typically include a night at the ballpark where Warren Buffett (25 percent owner) throws out the first pitch for the Omaha Golden Spikes (a AAA minor league team).

Equity securities, on the other hand, represent actual ownership interest in a corporation and are also traded on public exchanges. The owner of equity securities is allowed to vote on such corporate matters as executive compensation policies, who will serve on the board of directors of the corporation, and who will be the outside auditor. In addition to voting, the owner of stock often receives a return on that investment in the form of a dividend. A second type of return often accumulates to the shareholder as well—appreciation in stock price, also called capital gains. Many investors invest in a company, not for the dividend, but for the potential increase in stock price. High-tech companies, such as Microsoft, typically do not pay dividends, instead electing to funnel their profits back into the company. Microsoft has not yet paid any dividends to the owners of its common stock. Similarly, Berkshire Hathaway has not paid a cash dividend since 1967. However, since 1967 Berkshire Hathaway shareholders have earned an average annual return of 23.6 percent.

Over the long term, investors in equity securities will earn higher average returns than will investors in debt securities to compensate them for the higher risk associated with an equity investment. This higher risk to equity holders arises because, as mentioned above, holders of debt securities have priority over equity holders when it comes to receiving periodic cash interest payments and repayment of principal.

Accounting Classification of Investment Securities

As mentioned earlier, investors can purchase investments securities, either stocks or bonds, with a variety of goals in mind. Some may purchase to receive interest or dividend payments or to realize quick gains on price changes, whereas others may invest for more long-term reasons. Accounting standard setters have developed different methods of accounting for investments depending on the intentions of the holder of the security. The different accounting classifications of investment securities are discussed below.

Trading Securities **Trading securities** are those investment securities purchased with the intent to take advantage of short-term price changes. Most U.S. companies, with the exception of financial institutions, do not classify their investments as trading securities because to do so implies that the company is actively engaged in securities trading. In its 2000 annual report, Berkshire Hathaway disclosed that it had no investment securities that it classified as trading securities.

Available-for-Sale Securities **Available-for-sale securities** are those investment securities that are purchased as a store of wealth for the reasons discussed earlier—for safety, to hold excess cash temporarily, or just to earn a normal long-run return. The purchase of available-for-sale securities is then a more passive investment than an investment in trading securities; the intent is to earn a normal return, not to make a quick return by guessing which way the market is going. Most U.S. corporations, with the exception of financial institutions, classify most or all of their investment securities as available for sale. For example, Microsoft disclosed in 2000 that all of its short-term investments, totaling \$19.0 billion, are classified as available for sale. Similarly, IBM disclosed in 2000 that all of its \$159 million in investment securities were classified as available for sale. For Berkshire Hathaway, total available-for-sale securities at December 31, 2000, were \$70.186 billion.

CAUTION

Note that equity securities cannot be classified as held to maturity because equity securities do not have maturity dates.

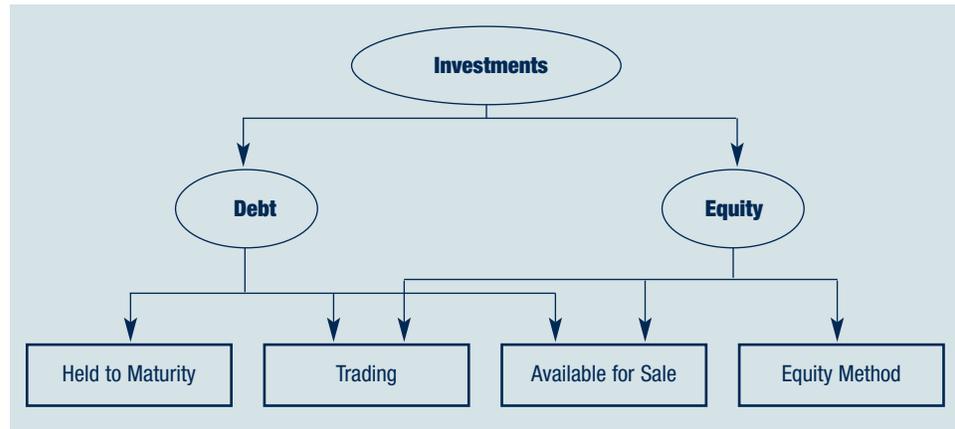
Held-to-Maturity Securities If a debt security is purchased with the intent of holding the security until it matures, it is classified as a **held-to-maturity security**. As with trading securities, this classification is not common outside financial institutions. For example, Berkshire Hathaway has no held-to-maturity securities, except for \$1.826 billion in debt securities held by financial businesses controlled by Berkshire Hathaway. As discussed later in the chapter, the significance of classifying a security as held to maturity is that the security is then reported in the balance sheet at its historical cost instead of its current market value.

CAUTION

There is a danger here of mixing up similar-sounding terms. *Equity securities* are just shares of stock. *Equity method securities* are investments in shares of stock that are accounted for using the equity method.

Equity Method Securities If one company invests in the stock of another in order to be able to exercise ownership influence, then that investment in stock is accounted for using the equity method. When using the **equity method**, an investing company records income from its investment when the investee earns net income, NOT when the investee subsequently distributes a portion of those profits in the form of dividends. This unique characteristic of the equity method is illustrated with numerical examples later in the chapter. It has arbitrarily been determined that ownership influence exists when one company owns at least 20 percent of the shares of another. Thus, the bottling companies partially owned by The Coca-Cola Company, as listed in Exhibit 12-6, are all accounted for using the equity method because Coca-Cola owns more than 20 percent of each. If ownership exceeds 50 percent, then a controlling interest is assumed and consolidated financial statements are prepared. With consolidation, the parent company (the acquiring company) and the subsidiary company (the acquired company) are required to combine their financial statements into one set of statements as if they were one economic entity. Such combined statements are called **consolidated financial statements**. The preparation of consolidated financial statements is introduced later in this chapter.

To summarize, Exhibit 12-7 outlines the major classifications of investments in debt and equity securities. The specific rules for accounting for investments in each category will be discussed in subsequent sections of this chapter.

EXHIBIT 12-7 Classifications of Debt and Equity Securities

Purchasing, Selling, and Earning a Return on Trading and Available-for- Sale Securities (Key Point #3)

The accounting for the purchase and sale of securities, along with the receipt of periodic interest and dividend payments, is quite straightforward. Those topics are covered in this section. The more complex rules for recording changes in the market values of securities are covered in the following section.

Accounting for the Purchase of Securities

Investments in securities, like all other assets, are recorded at cost when purchased whether the security being purchased is debt or equity or whether it is being held with the intent to sell it quickly or hold it for the long term. Cost includes the market price of the security plus any extra expenditures required in making the purchase (such as a stockbroker's fee).

To illustrate the accounting for securities, we will use the following information. On January 1, 2003, Far Side Inc. purchased the following securities:

<u>Security</u>	<u>Type</u>	<u>Classification</u>	<u>Cost</u>
A	Bond	Trading	\$ 5,000
B	Stock	Trading	27,500
C	Stock	Trading	10,000
Trading security portfolio			<u>\$42,500</u>
D	Bond	Available for sale	\$17,000
E	Stock	Available for sale	9,200
Available-for-sale security portfolio			<u>\$26,200</u>

Securities A, B, and C were purchased by Far Side's management with the intent of earning a return on short-term price fluctuations. Therefore, those securities are classified as trading. Securities D and E were purchased to earn a return on excess cash but are not part of an active trading program; accordingly, they have been classified by management as available for sale.

Accounting for Interest and Dividends

The accounting for dividends and interest received on trading and available-for-sale securities is relatively straightforward. Cash received relating to interest and dividends is recorded as Interest revenue and Dividend revenue, respectively. Interest earned but not yet received or dividends that have been declared but not paid are also recorded as revenue, with the simultaneous recognition of a corresponding receivable. Continuing the Far Side example, interest and dividends received during 2003 relating to the investments in Securities A through E were as follows:

<u>Security</u>	<u>Interest</u>	<u>Dividends</u>
A	\$ 225	
B		\$ 825
C		-0-
D	850	
E		644
Total	<u>\$1,075</u>	<u>\$1,469</u>

With the receipt of \$2,544 in interest and dividends, Far Side will report Interest revenue of \$1,075 and Dividend revenue of \$1,469 on its income statement. Typically, no distinction is made between the interest and dividends received on trading securities and those received on available-for-sale securities. In 2000, Berkshire Hathaway reported total interest and dividend income of \$2.686 billion.

Realized Gains and Losses on the Sale of Securities

Suppose that Far Side sells all of its investment in Security B for \$28,450 on October 31, 2003. Recall that Security B was purchased for \$27,500, indicating that the security has increased in value. The \$950 gain ($\$28,450 - \$27,500$) will be reported on the income statement as a realized gain from the sale of securities. A gain or loss is said to be realized when it is confirmed and verified through the actual sale of the security. For example, if Security B had been sold for less than \$27,500, a realized loss would have been recorded. **Realized** gains and losses from the sale of securities are included in the income statement, sometimes grouped together with interest and dividend revenue. Berkshire Hathaway reports realized gains and losses on investments separate from interest and dividend revenue; in 2000 Berkshire Hathaway had a net realized investment gain of \$3.955 billion.

Recognizing and Recording the Changing Value of Securities

(Key Point #4)

The great accounting controversy associated with investment securities is whether a given security should be reported in the balance sheet at its market value or its historical cost. Until 1993 accounting tradition prevailed and investment securities were reported at historical cost. In 1993 the FASB adopted a new rule requiring most investment securities to be reported at current market value. Specifically, in the case of trading and available-for-sale securities, changes in market value are recorded on the books of the investor. For held-to-maturity securities and equity securities accounted for using the equity method, changes in value are not recorded. To illustrate the accounting for changes in the value of securities, we will continue the Far Side example. On December 31, 2003, the following market values were available for Securities A, C, D, and E (with Security B having been sold on October 31):

<u>Security</u>	<u>Type</u>	<u>Classification</u>	<u>Cost</u>	<u>Market Value (12/31/03)</u>
A	Bond	Trading	\$ 5,000	\$ 6,200
C	Stock	Trading	10,000	9,000
Trading security portfolio			<u>\$15,000</u>	<u>\$15,200</u>
D	Bond	Available for sale	\$17,000	\$16,700
E	Stock	Available for sale	9,200	9,250
Available-for-sale security portfolio			<u>\$26,200</u>	<u>\$25,950</u>

Changes in the Value of Trading Securities

At the end of 2003, Far Side computes the market value of its trading securities portfolio and compares it to the historical cost of the portfolio. In this instance, market value is \$200 greater than historical cost. To reflect this change in market value, Far Side reports the securities in the balance sheet at their \$15,200 market value and reports a \$200 (\$15,200 – \$15,000) gain in the income statement. This gain is **unrealized**, meaning that the securities have changed in value and are still being held. In common usage, unrealized gains and losses are called paper gains and losses.

Changes in the Value of Available-for-Sale Securities

The value of Far Side's available-for-sale portfolio as of December 31, 2003, is \$25,950, suggesting that the value of the securities has declined by \$250 (\$26,200 – \$25,950) since their original purchase. As with trading securities, available-for-sale securities are reported in the balance sheet at their market value. Accordingly, Far Side's available-for-sale portfolio would be reported at \$25,950 in the December 31, 2003, balance sheet. The \$250 decline in value represents an unrealized loss. However, changes in the value of available-for-sale securities are not reported in the income statement but are instead reported as direct adjustments to stockholders' equity. This provision represents a compromise by the FASB in response to fears expressed by companies that requiring all unrealized gains and losses to be reported in the income statement would increase the volatility of reported earnings. Accordingly, this treatment of unrealized gains and losses on available-for-sale securities allows those securities to be reported in the balance sheet at current market value while at the same time keeping the unrealized gains and losses out of the income statement.

As mentioned earlier, Berkshire Hathaway classifies the bulk of its investment securities as available for sale. As of December 31, 2000, Berkshire Hathaway's available-for-sale portfolio had experienced a net unrealized gain of \$27.364 billion (\$70.186 billion – \$42.822 billion), distributed as shown on the following page.

On its December 31, 2000, balance sheet, Berkshire Hathaway reported an addition to equity of \$17.543 billion. The difference between the \$27 billion unrealized gain and the \$18 billion addition to equity is explained by the recognition of a deferred income tax liability. This deferred tax liability is recognized by Berkshire Hathaway to reflect the expected income tax payments that will have to be made if and when the investments are sold and the unrealized gains become realized, taxable gains.

<u>(in millions)</u>	<u>Cost</u>	<u>Market Value (12/31/00)</u>
American Express	\$ 1,470	\$ 8,329
Coca-Cola	1,299	12,188
Gillette	600	3,468
Wells Fargo	319	3,067
Other equity securities	6,714	10,567
Debt securities	<u>32,420</u>	<u>32,567</u>
TOTAL	<u>\$42,822</u>	<u>\$70,186</u>

Statement of Comprehensive Income The unrealized gains and losses on available-for-sale securities are not reported in the income statement, but, as stated in Chapter 5, are reported in the statement of comprehensive income. The statement of comprehensive income includes traditional net income, or earnings, as well as unrealized gains and losses stemming from changes in market conditions unrelated to the business operations of a company. The unrealized gains and losses from available-for-sale securities are an important item in the statement of comprehensive income. For Berkshire Hathaway, the statement of comprehensive income for 2000 is as follows, with the amounts in millions:

TEST YOUR INTUITION

For Berkshire Hathaway, is the statement of comprehensive income more or less important than it is for the average company? Explain.

Net earnings for 2000	\$ 3,328
Net unrealized appreciation of investments	455
Foreign currency translation losses	(161)
Other	<u>26</u>
Total comprehensive income	<u>\$ 3,648</u>

Note that the unrealized gain amount included in the statement of comprehensive income does not agree with the amount reported in the balance sheet. This is because the comprehensive income amount reflects just the additional unrealized gain experienced during 2000, whereas the equity adjustment in the balance sheet is the accumulated amount of unrealized gain experienced over the years.

Computation of Overall Rate of Return

Refer back to the Far Side example for 2003. How well did Far Side's investment portfolios perform in 2003? To answer this question, we need to compute an overall rate of return on the portfolios, which involves dividing the return on the portfolio during the year by the beginning balance in the portfolio. The rates of return of Far Side's trading and available-for-sale portfolios for 2003 are computed as follows:

	<u>Trading</u>	<u>Available for Sale</u>
Dividend revenue	\$ 825	\$ 644
Interest revenue	225	850
Realized gains (losses)	950	-0-
Unrealized gains (losses)	200	(250)
Total return for 2003	<u>\$ 2,200</u>	<u>\$ 1,244</u>
Rate of return	\$ 2,200	\$ 1,244
(Return / Beginning balance)	\$42,500	\$26,200
	5.2%	4.7%

Looking at these calculations, you can see from the low rates of return that the performance of neither of Far Side's portfolios matched Warren Buffett's standard. Also note that the unrealized loss on the available-for-sale portfolio is included in the calculation even though that loss is not reported in the income statement. This rate-of-return calculation is a financial ratio, and as such we are free to make it as useful as possible. Because the unrealized loss represents an economic loss, whether the accountants choose to account for it as such, it makes sense to include it in our evaluation of the performance of the portfolios.

Subsequent Changes in Value

In subsequent periods, the value of the trading and available-for-sale securities will rise or fall depending on company and market conditions. These changes in value would be recorded using a procedure similar to that discussed in the previous section with one modification. Rather than adjust from historical cost to current market value, consideration would have to be given to adjustments made in prior periods. To illustrate, assume the following for Far Side's investment portfolios for 2004. *Note:* Security E was sold for \$9,000 during 2004.

Security	Type	Classification	Cost	Market Value (12/31/03)	Market Value (12/31/04)
A	Bond	Trading	\$ 5,000	\$ 6,200	\$ 5,500
C	Stock	Trading	10,000	9,000	8,000
Trading security portfolio			<u>\$15,000</u>	<u>\$15,200</u>	<u>\$13,500</u>
D	Bond	Available for sale	\$17,000	\$16,700	\$18,000
E	Stock	Available for sale	9,200	9,250	sold
Available-for-sale security portfolio			<u>\$26,200</u>	<u>\$25,950</u>	<u>\$18,000</u>

At the end of 2004, the relevant comparison to use in computing unrealized gains and losses for Far Side's trading portfolio during 2004 is not the original cost but is the market value of the portfolio at the end of 2003. Any unrealized gains and losses occurring before December 31, 2003, have already been recorded, so the comparison to original cost is no longer relevant. The unrealized loss on the trading portfolio for 2004, and its method of reporting, is as follows:

Trading (\$13,500 – \$15,200)	\$1,700 unrealized loss	Income Statement
-------------------------------	-------------------------	------------------

The \$200 realized loss on the sale of Security E is computed by comparing the \$9,000 sales proceeds to the \$9,200 original cost. For the purpose of computing the realized loss, market values (such as the \$9,250 market value on December 31, 2003) between the purchase of the security and its sale are irrelevant. Realized gains and losses, whether for trading or available-for-sale securities, are reported in the income statement in the year of the sale.

For Far Side's available-for-sale portfolio, the computation of the unrealized gain or loss for 2004 is somewhat complicated by the fact that Security E was sold during the year. The unrealized gain for the year is computed as follows:

Cumulative unrealized gain (loss), end of year (\$18,000 – \$17,000)	\$1,000
Plus: Cumulative unrealized loss, beginning of year	<u>250</u>
Unrealized gain (loss) for the year	<u>\$1,250</u>

Computing Overall Rate of Return

Below are realized and unrealized gain and loss data for the available-for-sale investment portfolios for four U.S. companies for 2000. All numbers are in millions.

	Net Realized Gains (Losses)	Net Unrealized Gains (Losses)	Beginning Investment Balance
Berkshire Hathaway	\$3,955	\$ 473	\$67,994
Coca-Cola	0	(33)	246
Intel	3,348	(5,532)	13,146
Dell Computers	307	(730)	3,044

Questions

1. Compute the rate of return on the available-for-sale portfolio for each company. Ignore the impact of interest and dividend revenue.
2. What is the impact of ignoring interest and dividend revenue in the computation of the rate of return in (1)? In what situations is this a serious omission?
3. Using the available information, decide which company had the best-managed available-for-sale portfolio in 2000. Explain your answer.
4. Reconsider your answer in (3). What criteria should be used in evaluating the manager of an available-for-sale portfolio?

TEST YOUR INTUITION

Total interest and dividend revenue for 2004 was \$785 for the trading security portfolio and \$2,400 for the available-for-sale security portfolio. Compute the overall rate of return for the two portfolios for 2004.

The \$1,250 unrealized gain on the available-for-sale portfolio for 2004 is a combination of two things: the \$1,300 unrealized gain from the increase in the value of Security D during the year (\$18,000 – \$16,700) less the elimination of the \$50 unrealized gain on Security E from the prior year (\$9,250 – \$9,200) necessitated by the fact that Security E has now been sold. The \$1,000 cumulative unrealized gain on the available-for-sale portfolio as of the end of 2004 would be shown as a balance sheet equity adjustment under the heading Accumulated other comprehensive income. The \$1,250 unrealized gain for the year would be reported as part of comprehensive income (but not regular net income) for the year.

Accounting for Held-to-Maturity Securities

(Key Point #5)

Held-to-maturity securities are debt securities that the investing company intends to hold until the formal maturity date. For example, suppose you were to buy \$10,000 of Disney's 100-year bonds that mature in 2093; to classify them as held to maturity you would have to fully intend to refrain from selling them until 2093. During the interim, you would collect interest on the bonds, and at the maturity date you would collect the maturity value of the bonds. Thus, with a held-to-maturity investment, the investing company is certain (assuming that the debt-issuing company does not default on its obligation) of the future cash amounts that will flow from the investment.

As mentioned earlier, the difference between held-to-maturity securities, on the one hand, and trading and available-for-sale securities, on the other, is that held-to-maturity securities are not reported in the balance sheet at market value. The rationale behind this approach is that, because the held-to-maturity securities will never be sold before they mature, the market value during the interval between purchase and maturity is irrelevant. The accounting for held-to-maturity securities will be illustrated below using a bond investment as an example of an investment in debt securities. Note that there are other types of debt securities, such as short-term notes.

Purchase of a Bond

Bonds can be purchased at amounts either above face value (at a **premium**), below face value (at a **discount**), or at face value. The **face**, or **maturity, value** is the amount that will be received by the owner of the bonds when the bonds mature. What determines the bond's purchase price is the rate of interest promised to bondholders (the stated rate) as compared with the market rate of interest on similar investments (the market rate). If the market rate exceeds the bond's stated rate of interest, the price of the bond will have to go down to attract investors. If the stated rate exceeds the market rate, then the price of the bond will go up as investors flock to this better interest rate.

Regardless of the purchase price, an investment in bonds, like all other assets, is initially recorded at cost. The cost is the total amount paid to acquire the bonds, which includes the actual price paid for the bonds and any other purchasing expenditures, such as commissions or brokers' fees.

To illustrate, assume that Far Side Inc. purchased Security F and classified it as held to maturity. Security F consists of twenty \$1,000 bonds of Chicago Company. The bonds were issued on January 1, 2003, and will mature five years from the date of issuance on December 31, 2007. The bonds will pay interest at a stated annual rate of 12 percent, with payments to be made annually on December 31. Assuming that the market rate on bonds of similar risk is 16 percent, the appropriate purchase price of the bond can be shown to be \$17,381. Bond valuation is discussed further in Chapter 13 and involves the present value computations illustrated in Appendix B. Intuitively, the purchase price of \$17,381 is lower than the total face value of the bonds of \$20,000 because investors expect a discount on the purchase price because the fixed interest rate of 12 percent paid on the bond is lower than the 16 percent that investors expect to earn on investments of similar risk.

Recognizing Interest Revenue

Far Side paid a discounted price of \$17,381 for the \$20,000 in Chicago Company bonds and expects to earn a return of 16 percent over the life of the investment. Every year, Far Side will receive \$2,400 ($\$20,000 \times 0.12$) in interest, and at the end of five years Far Side will receive the \$20,000 maturity value of the bonds. Two accounting challenges exist with respect to these bonds:

- How can the reported amount of interest revenue be adjusted to reflect the fact that Far Side will actually be earning 16 percent on its original \$17,381 investment instead of 12 percent on the \$20,000 maturity value of the bonds?
- How can the book value of the investment be gradually increased over five years from the \$17,381 original cost to the \$20,000 that will ultimately be received in five years?

These two challenges are met by an accounting process called **amortization of a bond discount or premium**. The calculations are displayed in Exhibit 12-8. During 2003, Far Side receives \$2,400 in interest on the Chicago Company bonds. However, reported interest revenue should be equal to \$2,781, which represents a 16 percent return on Far Side's investment of \$17,381. The \$381 ($\$2,781 - \$2,400$) is added to both the reported interest revenue for the year and to the investment balance. Accordingly, the adjusted investment balance to be reported in Far Side's balance sheet at the end of 2003 is \$17,762 ($\$17,381 + \381). The same accounting adjustment is made in 2004, the only difference being that the reported interest

revenue is now computed based on a 16 percent return on the adjusted investment balance of \$17,762.

FYI

This amortization process is completely unrelated to the amortization of the cost of intangible assets discussed in Chapter 11. However, it is exactly the same as the amortization of a mortgage loan, which will be covered in Chapter 13.

EXHIBIT 12-8 Amortization of Bond Discount

	Interest Received ($\$20,000 \times 0.12$)	Interest Revenue ($\text{Balance} \times 0.16$)	Amortization of Discount ($\text{Revenue} - \text{Received}$)	Investment Balance
January 1, 2003	—	—	—	\$17,381
December 31, 2003	\$2,400	\$2,781	\$381	17,762
December 31, 2004	2,400	2,842	442	18,204
December 31, 2005	2,400	2,913	513	18,717
December 31, 2006	2,400	2,995	595	19,312
December 31, 2007	2,400	3,088	688	20,000

Note: Interest revenue in the final year is rounded.

The Far Side example just discussed assumed that the Chicago Company bonds were purchased at a discount. Depending on market interest rates, it is also possible that bonds will be issued at premium, meaning that the investor will pay more for the bonds than their face value. If that is the case, the exact same amortization procedure is used to adjust interest revenue and the investment balance. The only difference is that the amortization of the premium reduces interest revenue and the investment balance each year.

During the five-year life of the Chicago Company bonds, their value will fluctuate each time there is a change in the market rate of interest. Because Far Side has classified this bond investment as held to maturity, these market value fluctuations are not reflected in the financial statements. However, if a held-to-maturity investment is sold prior to maturity (which shouldn't happen very often as the investment is expected to be held to maturity), then a realized gain or loss is recognized on the income statement. The amount of the realized gain or loss is the difference between the carrying value of the investment at the time of the sale and the selling price.

Accounting for Equity Method Securities

(Key Point #6)

When enough of the outstanding common stock of a company is purchased by another company, the acquiring company may have the ability to significantly influence the operating decisions of the investee. If the ability to influence is present, then accounting standards require the use of the equity method in accounting for the investment. As stated previously, significant influence is presumed if a company owns between 20 percent and 50 percent of another company.

Underlying Concepts

The two concepts underlying the equity method are (1) the use of the accrual method rather than the cash method for accounting for investment returns and (2) the prevention of manipulation of the timing of income by companies having significant influence over investees. Both of these concepts are discussed below.

Accrual Assume that you owned 25 percent of the outstanding common stock of Microsoft during Microsoft's 2000 fiscal year. If you were to measure your income from the investment by the cash dividends received during the year, your income

TEST YOUR INTUITION

What other method of measuring income from your Microsoft investment would be possible? *Hint:* It has been discussed earlier in this chapter.

would be \$0, which would grossly understate the performance of your investment for the year. However, the fundamental notion of accrual accounting is that income is measured and reported when it occurs, not necessarily when the cash is collected. During fiscal 2000, Microsoft reported net income of \$9.421 billion. Using the equity method, you would report 2000 investment income from your Microsoft investment of \$2.355 billion, which represents your 25 percent share of Microsoft's 2000 income.

Prevention of Manipulation The equity method assumes that significant influence can be exerted. Thus, the accounting procedures prevent the investing company from manipulating earnings by dictating the dividend policy of the investee. If dividend payments are reported as revenue, an influential investor could increase its income by putting pressure on the investee to pay larger and more frequent dividends.

Illustrating the Equity Method

There are three things to remember in applying the equity method:

1. As with all investments, the investment asset is originally recorded at its acquisition cost.
2. Each year, the investor's share of the investee's reported net income is shown as revenue in the income statement and as an increase in the recorded balance in the investment account.
3. Cash dividends received are recorded as a return of investment, thus reducing the investment balance.

To illustrate the accounting for the equity method we will use the following information: Kimball Inc. purchases 20 percent (2,000 shares) of Holland Enterprises' outstanding common stock (10,000 shares), paying \$100 per share. Later in the year, Kimball receives a dividend of \$2.50 per share; at year-end Kimball receives Holland's income statement showing that the company earned \$50,000 for the year. To ensure that you understand how the equity method differs from the accounting demonstrated earlier in the chapter, we will proceed with 2 scenarios: (1) Kimball is not able to exercise significant influence on Holland and, as a result, classifies the security as available for sale, and (2) Kimball is able to exercise significant influence and uses the equity method. The accounting for this purchase of stock and subsequent events is shown in Exhibit 12-9. It is assumed that the Holland stock is selling for \$113 per share at year-end. In the left column, we see the financial statement impact assuming the Holland stock is considered a security available for sale. In the right column, the equity method is illustrated.

EXHIBIT 12-9 Equity Method Illustrated

Available-for-Sale Accounting		Equity Method Accounting	
Investment Account		Investment Account	
Cost	\$200,000	Cost	\$200,000
Market adjustment (2,000 shares × [\$113 – \$100])	26,000	Share of net income (\$50,000 × 0.20)	+ 10,000
		Receipt of dividends (2,000 shares × \$2.50)	– 5,000
Ending balance	<u>\$226,000</u>	Ending balance	<u>\$205,000</u>
Income from Investment		Income from Investment	
Dividend revenue (2,000 shares × \$2.50)	\$ 5,000	Share of net income (\$50,000 × 0.20)	\$ 10,000
The \$26,000 unrealized gain is not reported in the income statement for an available-for-sale security.		The change in market value of securities is ignored when using the equity method.	

Note that unlike the procedure with trading and available-for-sale securities, the market value of the securities is ignored when accounting for influential investments using the equity method. Instead, income is recognized in proportion to the amount of income reported by the investee. And, as mentioned above, when the equity method is used, the receipt of dividends is viewed as a return of a portion of the amount invested.

Although accounting for the holding of equity method securities is different from the accounting for an available-for-sale or trading security, accounting for the sale of a stock investment is the same regardless of the classification. If the selling price exceeds the balance in the investment account, the difference is recognized as a gain. If the selling price is less than the recorded investment balance, the difference is recognized as a loss.

An important thing to note about the equity method is that it summarizes a lot of information in just one number on the income statement and one number on the balance sheet. For example, as mentioned earlier, The Coca-Cola Company owns 40 percent of Coca-Cola Enterprises, the largest bottler of Coca-Cola in the world. The Coca-Cola Company accounts for its investment using the equity method. In its 2000 income statement, The Coca-Cola Company reported its share of the income of Coca-Cola Enterprises' net income as \$94 million. This number significantly understates the magnitude of the operations of Coca-Cola Enterprises; total sales for the company for 2000 were \$14.750 billion. Similarly, although The Coca-Cola Company reports just \$707 million in its balance sheet as its share of the net assets of Coca-Cola Enterprises, the total assets of Coca-Cola Enterprises at the end of 2000 were \$22.162 billion. To repeat, the equity method condenses a lot of information into just one number on the income statement and one number on the balance sheet.

For review, the accounting for trading, available-for-sale, held-to-maturity, and equity method securities is summarized in Exhibit 12-10. A brief discussion of the controversy faced by the FASB in requiring most investment securities to be reported in the balance sheet at market value is given in Business Context 12-1.

FYI

The investment in Coca-Cola Enterprises that was reported in The Coca-Cola Company's balance sheet at \$707 million in 2000 had an actual market value of over \$3.2 billion!

EXHIBIT 12-10 Summary of Accounting for Investment Securities

Classification of Investment	Types of Securities	Balance Sheet Reporting	Reporting of Changes in Market Value
Trading	Debt and equity	Market value	Income statement
Available for sale	Debt and equity	Market value	Equity adjustment
Held to maturity	Debt only	Amortized cost	Ignored
Equity method	Equity only	Cost adjusted for share of net income and dividends.	Ignored

Consolidated Financial Statements

(Key Point #7)

The equity method is used when an investor is able to exercise significant influence over an investee's operations. If the investor is able to control decisions made by the investee, then consolidated financial statements are appropriate. The objective of consolidated financial statements is to reflect in one set of financial statements the results of all companies owned or controlled by the parent corporation.

To show how consolidation works, a simple example of a parent company that owns part or all of three other companies will be used. The income statement and balance sheet data for the four companies are shown on the following page:

The FASB Votes to Put a Stop to Cherry-Picking

It was no small feat when the FASB finally issued Statement No. 115, "Accounting for Certain Investments in Debt and Equity Securities." The standard was strongly opposed by banks and insurance companies because of the anticipated negative effects on profits. The banking and insurance industries also objected to having to value the asset side of the balance sheet at market value while not being allowed to value the liability side at market as well. These debates were not restricted to the business world. Even among the FASB members there was a great deal of disagreement over the issue of marking securities to market value. At one time the FASB thought it had the issues worked out only to have one member surprise his colleagues by changing his vote at the last minute. The member stated that the "FASB should go back to the drawing board and take another look at this proposal."

Meanwhile, the SEC continued to insist on a movement toward market value accounting. The SEC had wanted market value disclosures as a means of providing financial statement users with more and better information about a firm's securities portfolio. The SEC was also concerned with a phenomenon known as "cherry-picking." Cherry-picking occurs when securities whose prices have increased are sold, resulting in realized gains, while securities whose prices have declined are maintained at their historical cost. The issuance

of FASB Statement No. 115 directly addressed this issue by requiring many securities to be valued at market.

Finally, in September of 1993, the FASB voted 5–2 to adopt Statement No. 115. The SEC quickly hailed the new standard, saying that it would "clarify the rules of the road" and lessen "enforcement actions."

Questions

1. Should intense lobbying by certain industry groups be allowed to influence the FASB?
2. The SEC has long urged the FASB to issue standards relating to market value accounting. Should pressure from the SEC be allowed to significantly influence the FASB?
3. What is wrong with cherry-picking? If an investment's value has increased, why shouldn't a firm be allowed to record that increase?

Sources: Lee Berton, "FASB Balks on Current-Market Rules for Banks as Member Switches His Vote," *The Wall Street Journal*, January 16, 1992, p. A3.

Lee Berton, "FASB Votes to Make Banks and Insurers Value Certain Bonds at Current Price," *The Wall Street Journal*, September 19, 1993, p. A3.

	Percentage of the Parent's Ownership			
	PARENT	100% SUB1	80% SUB2	30% SUB3
Assets				
Cash	\$ 48	\$ 20	\$ 20	\$ 20
Accounts receivable	200	80	80	80
Plant and equipment	500	100	100	100
Investment in Sub 1 (\$120 × 1.00)	120			
Investment in Sub 2 (\$120 × 0.80)	96			
Investment in Sub 3 (\$120 × 0.30)	36			
Total assets	\$1,000	\$ 200	\$200	\$ 200
Liabilities				
	600	80	80	80
Equity				
	400	120	120	120
Revenues				
Sales	\$4,790	\$2,000	\$2,000	\$2,000
Income from Sub 1 (\$100 × 1.00)	100			
Income from Sub 2 (\$100 × 0.80)	80			
Income from Sub 3 (\$100 × 0.30)	30			
Expenses				
	3,000	1,900	1,900	1,900
Net income	<u>\$2,000</u>	<u>\$ 100</u>	<u>\$ 100</u>	<u>\$ 100</u>

Note that in the parent company's books, ownership of all three subsidiaries has been accounted for using the equity method. So in each case the parent reports an investment asset equal to its share of the net assets, or equity, of the subsidiary, and investment income equal to its share of the net income of the subsidiary.

The objective of consolidation is to create financial statements for the parent and its controlled subsidiaries to report their performance as if they were one company. Operationally, this means that the individual assets, liabilities, revenues, and expenses of the parent and all subsidiaries of which it owns more than 50 percent are added together and included in the consolidated financial statements. Companies of which the parent owns less than 50 percent but more than 20 percent are accounted for using the equity method, as described in the preceding section. The consolidated balance sheet and income statement for the parent company and its subsidiaries are given below.

PARENT COMPANY AND SUBSIDIARIES
Consolidated Balance Sheet

Assets	
Cash ($\$48 + \$20 + \$20$)	\$ 88
Accounts receivable ($\$200 + \$80 + \$80$)	360
Plant and equipment ($\$500 + \$100 + \$100$)	700
Investment in Sub 3 ($\$120 \times 0.30$)	36
Total assets	<u>\$1,184</u>
Liabilities ($\$600 + \$80 + \$80$)	
Minority interest ($\$120 \times 0.20$)	24
Equity	400
Total liabilities and equities	<u>\$1,184</u>

PARENT COMPANY AND SUBSIDIARIES
Consolidated Income Statement

Revenues	
Sales ($\$4,790 + \$2,000 + \$2,000$)	\$8,790
Income from Sub 3 ($\$100 \times 0.30$)	30
Expenses ($\$3,000 + \$1,900 + \$1,900$)	(6,800)
Minority interest income ($\$100 \times 0.20$)	(20)
Net income	<u>\$2,000</u>

FYI

Minority interest on the consolidated balance sheet is an interesting creature because it is not exactly a liability, but it also doesn't represent an equity investment by the controlling shareholders. Most U.S. companies include minority interest with the liabilities, although many just report it in no-man's-land between the liabilities and equities, letting the financial statement user decide how he or she wants to classify it.

You should note four things concerning these consolidated results:

1. The consolidated balance sheet and income statement include ALL assets, liabilities, revenues, and expenses of the parent and the subsidiaries it controls. Thus, even though the parent owns only 80 percent of Sub 2, all of that subsidiary's assets, liabilities, revenues, and expenses are included in the consolidated total. An example of the intuition here is that the parent, with its 80 percent ownership, completely *controls* the assets of Sub 2 even though it doesn't own them completely.
2. NONE of the individual assets, liabilities, revenues, and expenses of Sub 3 are included in the consolidated financial statements because that subsidiary is not controlled by the parent. Instead, the parent's ownership of 30 percent of Sub 3 is accounted for using the equity method.

FYI

Both the equity method and consolidation can be made more complex if the acquiring company pays more for its investment than its share of the underlying net assets of the acquired company. These complications are left for intermediate and advanced-level accounting classes.

3. The fact that all of the assets, liabilities, revenues, and expenses of Sub 2 have been included in the consolidated total and yet the parent owns only 80 percent of that subsidiary is reflected in the **minority interest** items. In the consolidated balance sheet, minority interest is the amount of equity investment made by outside shareholders to consolidated subsidiaries that are not 100 percent owned by the parent. In the consolidated income statement, minority interest income (shown as a subtraction) reflects the amount of income belonging to outside shareholders of consolidated subsidiaries that are not 100 percent owned.
4. Total consolidated equity of \$400 in this example is the same as total equity reported by the parent. Consolidated equity can be thought of as the amount invested by the group of shareholders who control the entire consolidated economic entity; this group of shareholders comprises the shareholders of the parent company. Of course, some of this equity investment, along with some funds borrowed by the parent, has been used to purchase 100 percent of Sub 1, 80 percent of Sub 2, and 30 percent of Sub 3. But to add portions of the equity of each of those subsidiaries in computing consolidated equity would essentially result in double-counting the original investment made by the parent shareholders.

Derivatives

(Key Point #8)

Procter and Gamble (P&G) is a sophisticated marketer of consumer products such as Tide, Pampers, Folgers, and Crest. Apparently this sophistication doesn't always extend to P&G's understanding of derivative financial instruments. In November 1993, P&G agreed to buy a complex derivative that would give P&G lower current interest payments in exchange for an agreement to make higher payments in the future depending on the future level of interest rates.⁵ When interest rates increased after the derivative was purchased, P&G learned a rough lesson about the risk associated with speculative derivatives. After the smoke had cleared, the increased interest payments from the derivative arrangement had cost P&G \$195.5 million. A note written by former P&G chairman Edwin Artzt after this fiasco stated that the officials who bought the derivative were "like farm boys at a country carnival."⁶

In addition to Procter and Gamble, many other organizations and entities have lost large amounts of money by trading in derivatives: Gibson Greetings, Barings PLC, Dell Computer, Orange County (California), Odessa College, and on and on. The combination of the complexity of derivatives, which are frequently misunderstood even by corporate treasurers and portfolio managers, and the lack of disclosure about derivatives creates a dangerous environment in which users of financial statements can be completely unaware of huge company risks. This is exactly the type of situation the SEC was created to address. Accordingly, in recent years the FASB, with the blessing and prodding of the SEC, has significantly improved the accounting for, and disclosure of, derivative instruments. This section briefly introduces the topic of derivatives by explaining the general nature of derivatives, the types of risks faced by companies and how different types of derivatives can be used to hedge those risks, and the accounting issues associated with derivatives.

5. Kelley Holland, Linda Himelstein, and Zachary Schiller, "The Bankers Trust Tapes," *Business Week*, October 16, 1995, p. 106.

6. Carol J. Loomis, "'Like Farm Boys at a Country Carnival'," *Fortune*, November 27, 1995, p. 34.

Types of Risks

Most firms use derivatives as a tool for managing risk. Accordingly, before discussing the different types of derivatives, we will briefly outline the various types of risks.

Price Risk Price risk is the uncertainty about the future price of an asset. Firms can be exposed to price risk with existing assets, such as financial securities or inventory, or with assets to be acquired in the future, such as equipment to be purchased next month.

Credit Risk Credit risk is the uncertainty of whether the party on the other side of an agreement will abide by the terms of the agreement. The most common example of credit risk is the uncertainty over whether a credit customer will ultimately pay his or her account. Banks are in the business of properly evaluating credit risk, and the success or failure of a bank largely depends on how good the bank's credit analysts are at identifying who will repay a loan and who won't. Credit risk analysis is a specialized skill, and many retail companies, through the acceptance of credit card purchases, have contracted their credit risk analysis to Visa, MasterCard, Discover, and American Express.

Interest Rate Risk Interest rate risk is the uncertainty about future interest rates and their impact on future cash flows as well as on the fair value of existing assets and liabilities. A variable-rate mortgage is a good illustration of one type of interest rate risk. The periodic interest payments on the variable-rate mortgage will fluctuate in the future depending on the level of future interest rates. A fixed-rate mortgage is a good example of another type of interest rate risk. If interest rates decrease, then the holder of a fixed-rate mortgage is locked into paying an above-market interest rate—this is the downside of obligating yourself to a fixed stream of interest payments when there is a possibility that interest rates may go down in the future.

Exchange Rate Risk Exchange rate risk is the uncertainty about future U.S. dollar cash flows arising when assets and liabilities are denominated in a foreign currency. For example, many compensation packages for U.S. citizens working in foreign countries include an end-of-contract bonus payment if the employee sticks it out and stays on the foreign assignment for the entire length of the contract. If this bonus is denominated in the currency of the foreign country, then the employee knows with certainty the future amount of his or her foreign currency bonus, but the U.S. dollar value bonus depends on the exchange rate prevailing when the bonus is received. U.S. multinational firms face the same risk when sales, purchases, loans, and investments are denominated in foreign currencies.

Some risk is an unwanted side effect of doing business. For example, the variation in the cost of jet fuel is a nuisance and a worry to the major airlines. Similarly, fluctuations in the U.S. dollar–Japanese yen exchange rate wreak havoc on the competitive plans of both U.S. and Japanese car manufacturers. On the other hand, managing risk is the very reason for the existence of some businesses. Much of the revenue generated by a bank arises because the bank has expertise in evaluating and managing credit, interest rate, and exchange rate risk. The following sections discuss derivatives and hedging from the standpoint of a manufacturing, retailing, or service firm that is trying to use these techniques to reduce the risks that arise as part of doing business. Coverage of the more complicated risk management strategies of banks and financial institutions is outside the scope of this text.

FYI

Other types of risk include liquidity risk, theft risk, competitive risk, and business cycle risk. See Johnson and Swieringa, "Derivatives, Hedging and Comprehensive Income," *Accounting Horizons*, December 1996, p. 109.

FYI

The three types of derivatives discussed here are only a sample of the types of derivatives that financial engineers have created. Other types of derivatives include options, swaptions, collars, and so forth.

Types of Derivatives

A **derivative** is a contract that derives its value from the movement of the price, exchange rate, or interest rate on some other underlying asset or financial instrument. In addition, a derivative does not require a firm to take delivery or make delivery of the underlying asset or financial instrument. For example, you may have heard about the buying and selling of pork belly futures. These contracts (futures contracts are explained below) can qualify as derivatives because, fortunately, they do not require the holder to either deliver or take delivery of a truckload of pork bellies. Instead, derivative contracts are almost always settled by cash payments, not with the delivery of soybeans, gold, Japanese yen, or another of the items that can underlie a derivative contract.

Common types of derivatives are forwards, swaps, and futures. Each type is explained below.

Forward Contract A **forward contract** is an agreement between two parties to exchange a specified amount of a commodity, security, or foreign currency at a specified date in the future with the price or exchange rate being set now. To illustrate, assume that on November 1, 2003, Clayton Company sold machine parts to Maruta Company for ¥30,000,000 to be received on January 1, 2004. The current exchange rate is ¥120 = \$1. To be assured of the dollar amount that will be received, Clayton enters into a forward contract with a large bank agreeing that on January 1 Clayton will deliver ¥30,000,000 to the bank and the bank will give U.S. dollars in exchange at the rate of ¥120 = \$1, or \$250,000 (¥30,000,000/¥120 per \$1). This forward contract guarantees the U.S. dollar amount that Clayton will receive from the receivable denominated in Japanese yen.

Operationally, this forward contract would usually be settled as follows: Given the exchange rate on January 1, 2004, if ¥30,000,000 is worth less than \$250,000, the bank will pay Clayton the difference in cash (U.S. dollars). If ¥30,000,000 is worth more than \$250,000, Clayton pays the difference to the bank in cash. Therefore, no yen need be delivered as part of the contract; the contract is settled with a U.S. dollar cash payment.

The impact of the forward exchange contract is shown in the following table:

	Exchange Rate on January 1		
	¥118=\$1	¥120=\$1	¥122=\$1
Value of ¥30,000,000	\$254,237	\$250,000	\$245,902
Clayton receipt (payment) to settle forward contract	(4,237)	-0-	4,098
Net U.S. dollar receipt by Clayton	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>

CAUTION

Don't forget that one of the characteristics of a derivative, whether it relates to yen, wheat, pork bellies, or stock index levels, is that it can be, and usually is, settled in the end with a cash payment instead of with actual delivery of the underlying item.

TEST YOUR INTUITION

Is there any credit risk with a forward contract?

If Clayton is nervous about exchange rate changes, why agree to denominating the transaction in Japanese yen in the first place? The answer is that some types of transactions and some products are routinely negotiated in terms of a certain currency. For example, almost all crude oil sales are denominated in U.S. dollars, regardless of the countries of the companies conducting the transaction. In addition, if denominating a sale in a certain currency will make the customer feel more comfortable, companies are likely to follow the policy that “the customer is always right.”

Swap A **swap** is a contract in which two parties agree to exchange payments in the future based on the movement of some agreed-upon price or rate. A common type of swap is an interest rate swap. In an **interest rate swap**, two parties agree to

exchange future interest payments on a given loan amount; usually, one set of interest payments is based on a fixed interest rate and the other is based on a variable interest rate. To illustrate, assume that Pratt Company has a good working relationship with a bank that issues only variable-rate loans. Pratt takes advantage of its connections at the bank and on January 1, 2003, receives a two-year, \$100,000 loan, with interest payments occurring at the end of each year. The interest rate for the first year is the prevailing market rate of 10 percent, and the rate in the second year will be equal to the market interest rate on January 1 of that year. Pratt is reluctant to bear the risk associated with the uncertainty about what the interest payment in the second year will be. So Pratt enters into an interest rate swap agreement with another party whereby Pratt agrees to pay a fixed interest rate of 10 percent on the \$100,000 loan amount to that party in exchange for receiving from that party a variable amount based on the prevailing market rate multiplied by \$100,000. This is called a pay-fixed, receive-variable swap.

Instead of exchanging the entire amount of the interest payments called for under the swap contract, Pratt would probably settle the agreement by exchanging a small cash payment depending on what has happened to interest rates. Accordingly, Pratt will receive an amount equal to [$\$100,000 \times (\text{Jan. 1, 2004, interest rate} - 10 \text{ percent})$] if the January 1, 2004, interest rate is greater than 10 percent and will pay the same amount if the rate is less than 10 percent. The interest swap payment will be made in 2004. To see the impact of this interest rate swap, consider the following table:

	Interest Rate on January 1, 2004		
	7%	10%	13%
Variable interest payment	(\$ 7,000)	(\$10,000)	(\$13,000)
Receipt (payment) for interest rate swap	(3,000)	-0-	3,000
Net interest payment in 2004	(\$10,000)	(\$10,000)	(\$10,000)

FYI

The difference between a forward contract and a futures contract is similar to the difference between investing as a partner in a company and buying stock in a company.

When you invest, you personally negotiate the amount you will invest and your percentage ownership, and you know who sold you the investment. When you buy stock, you buy a standardized chunk of a company, and because the shares are purchased through an exchange, you have no idea who owned the shares before you bought them.

The interest rate swap agreement has changed Pratt's uncertain future interest payment into a payment of \$10,000 no matter what the prevailing interest rates are in 2004. Why didn't Pratt just go out and get a fixed-rate loan in the first place? Sometimes, as in this case because of Pratt's special relationship with the bank, it is easier to get one type of loan or investment security than another. A derivative instrument can effectively change the loan that you got into the loan that you want.

Futures Contract A **futures contract** is a contract that is traded on an exchange and allows a company to buy a specified quantity of a commodity, currency, or financial security at a specified price on a specified future date. A futures contract is very similar to a forward contract, the difference being that a forward contract is a private contract negotiated between two parties whereas a futures contract is a standardized contract that is sponsored by a trading exchange and can be traded among different parties many times in a single day. So with a forward contract, you know the party with whom you will be exchanging cash to settle the contract; with a futures contract, all these cash settlements are handled through the exchange and you never know, or care, who is on the other side of the contract.

As an example of the use of a futures contract, assume that Hyrum Bakery uses 1,000 bushels of wheat every month. On December 1, 2003, Hyrum decides to protect itself against price movements for its January 1, 2004, wheat purchase because long-term spring weather forecasts often come out in December, causing wide fluctuations in wheat prices. To protect against these fluctuations, Hyrum buys a

futures contract on December 1 that obligates Hyrum to purchase 1,000 bushels of wheat on January 1, 2004, at a price of \$4 per bushel (which is also the prevailing price of wheat on December 1). This is a standardized, exchange-traded futures contract, so Hyrum has no idea who is on the other side of the agreement; that is, Hyrum doesn't know who is promising to deliver the wheat.

As with other derivatives, a wheat futures contract is usually settled by a cash payment at the end of the contract instead of by actual delivery of the wheat. Settlement of Hyrum's futures contract would be as follows: If the price of wheat is less than \$4 per bushel on January 1, Hyrum will make a cash payment of that difference, multiplied by 1,000 bushels. If the price of wheat is greater than \$4 per bushel on January 1, Hyrum will receive a cash payment equal to that difference multiplied by 1,000 bushels. The effect of the futures contract is illustrated in the table below:

FYI

Hedging future purchases is where derivative use sometimes gets abused. The people in the corporate finance office start to think that they can forecast changes in wheat prices, so they buy futures contracts far in excess of that needed to hedge future wheat purchases. These extra contracts are speculations on the movement of wheat prices, and they expose the company to substantial speculative risk.

	Wheat Price on January 1		
	<u>\$3.80</u>	<u>\$4.00</u>	<u>\$4.20</u>
Cost to purchase 1,000 bushels	(\$3,800)	(\$4,000)	(\$4,200)
Hyrum receipt (payment) to settle futures contract	(200)	-0-	200
Net cost of January wheat	<u>(\$4,000)</u>	<u>(\$4,000)</u>	<u>(\$4,000)</u>

Types of Hedging Activities

The preceding illustrations of the different types of derivatives—forwards, swaps, and futures—also illustrated how these derivatives are used in hedging activities. Broadly defined, **hedging** is the structuring of transactions to reduce risk. Hedging occurs naturally as part of many business activities. For example:

- In the retail sale of gasoline, one risk to the gasoline retailer is that movement in worldwide oil prices will cause variation in the cost to purchase gasoline. This cost of goods sold risk is partially offset by the fact that the retail selling price of gasoline also goes up when oil prices rise. So the increase in the cost is offset by the increase in the selling price.
- Banks are vulnerable to interest rate increases because rate increases increase the amount of money banks must pay to get the use of depositors' money. However, this risk is hedged because an interest rate increase also allows a bank to raise the rates it charges on its loans.
- Multinational companies can be impacted by changes in exchange rates. If a U.S. multinational has a subsidiary in France, then a decline in the value of the French franc will cause the dollar value of the subsidiary's franc-denominated assets to decline. But this loss is partially offset because the dollar value of the subsidiary's franc-denominated liabilities will also decline.

Derivatives can be used in hedging activities. This is accomplished through the acquisition of a derivative with the characteristic that changes in the value of the derivative are expected to offset changes in the value of the item being hedged. Let's review how derivatives were used as hedges in each of the derivative illustrations given in the preceding section:

- Clayton forward: The forward currency contract was entered into to offset changes in the dollar value of the receivable denominated in Japanese yen.

- Pratt swap: The interest rate swap was structured to offset changes in the variable interest payments.
- Hyrum future: The wheat futures contract was acquired to offset movements in the expected purchase price of the next month's supply of wheat.

The next section illustrates the proper accounting for derivatives, particularly those designated as hedges.

Accounting for Derivatives and for Hedging Activities

Several factors combined in 1993 and 1994 to move the accounting for derivatives to the top of the FASB's agenda. First was the tremendous proliferation in the use of derivatives by U.S. businesses. Second were the derivative-related catastrophes experienced by companies such as Procter and Gamble. And third was the urging by the SEC for improvement in the accounting for derivatives. In 1997 the FASB released the statement (No. 133) that forms the basis for accounting for derivatives.

Overview The accounting difficulty caused by derivatives is illustrated in the simple matrix below:

	<u>Historical Cost</u>	<u>Subsequent Changes in Value</u>
Traditional assets and liabilities	FOCUS	Frequently ignored
Derivatives	Small or zero	EVERYTHING

As shown in the matrix, the historical cost focus of traditional accounting is misplaced with derivatives because derivatives often have little or no up-front historical cost. With derivatives, the subsequent changes in prices or rates are critical to determining the value of the derivative, and yet these changes are frequently ignored in traditional accounting.

Because derivatives do not mesh well with the traditional accounting model, the FASB has endorsed a different approach. The FASB's approach to the accounting for derivatives is based on two simple notions:

1. Derivatives should be reported in the balance sheet at their fair value as of the balance sheet date. No other measure of value is relevant for derivatives.
2. When a derivative is used to hedge risk, the gains and losses on the derivative should be reported in the same income statement in which the income effects on the hedged item are reported. This sometimes requires unrealized gains and losses being temporarily deferred, or stored, in an accumulated other comprehensive income account that is reported as part of equity.

The accounting for derivatives will be illustrated using the information from the three derivative examples used earlier.

Clayton Forward On November 1, 2003, Clayton Company sold machine parts to Maruta Company for ¥30,000,000 to be received on January 1, 2004. On the same date, Clayton also entered a yen forward contract. Assume now that the actual exchange rate on December 31, 2003, is ¥119 = \$1. At this exchange rate, Clayton will be required to make a \$2,101 payment [(¥30,000,000/119) – \$250,000] on January 1, 2004, to settle the forward contract. Accordingly, on December 31, 2003, Clayton has a \$2,101 payable under the forward contract. Offsetting this

FYI

The accounting is quite simple for speculative derivatives that are not intended to hedge risk. All changes in the fair value of speculative derivatives are recognized as gains or losses in the income statement in the period in which the value changes.

impact of the exchange rate change is the fact that the yen receivable now has a \$2,101 [$(¥30,000,000/119) - \$250,000$] increased dollar value. The impact of the change in the yen exchange rate on both the yen receivable and the value of the forward contract is accounted for as follows:

	Impact of Change in Yen Exchange Rate	
	2003 Balance Sheet	2003 Income Statement
Underlying item	Increase of \$2,101 in the value of the yen receivable	Exchange gain of \$2,101
Derivative	Creation of a \$2,101 liability under the forward contract	Loss on forward contract of \$2,101

FYI

After the fact, hedging is not always a good idea. In the Clayton example, the forward contract hedge wipes out the gain on the increase in the value of the yen receivable. The advantage of a hedge is that it reduces volatility, but that sometimes means canceling out gains.

The forward contract liability is reported at its fair value of \$2,101 in the December 31, 2003, balance sheet. In addition, the \$2,101 loss on the forward contract is included in the 2003 income statement, thus offsetting the gain reported from the increase in dollar value of the yen receivable. This accounting treatment accurately reflects the intent of the forward contract hedge—unrealized gains and losses from changes in value of the forward contract are meant to offset similar changes in value in the item of concern, the yen receivable.

Pratt Swap On January 1, 2003, Pratt Company received a two-year, \$100,000 variable-rate loan and also entered into an interest rate swap agreement. Assume now that the actual market interest rate on December 31, 2003, is 11 percent. This means that the amount of interest Pratt will have to pay on its variable-rate loan will increase to \$11,000 ($\$100,000 \times 0.11$) in 2004. Also, with the rate at 11 percent, Pratt will receive a \$1,000 payment [$\$100,000 \times (11\% - 10\%)$] in 2004 under the swap agreement. Accordingly, on December 31, 2003, Pratt has a \$1,000 receivable under the swap agreement. The impact of the change in interest rates on the interest rate swap and on reported interest expense is accounted for as follows:

	Impact of Change in Interest Rates	
	2003 Balance Sheet	2003 Income Statement
Underlying item	No change in the reported loan balance	No impact on 2003 interest expense; the impact will show up in 2004 interest expense
Derivative	Creation of a \$1,000 receivable under the interest rate swap	Deferred gain of \$1,000 on the interest rate swap; gain recognized in 2004 to offset increased interest expense

The interest rate swap asset is reported at its fair value of \$1,000 in the December 31, 2003, balance sheet. However, the \$1,000 gain from the increase in the value of the swap is not included in the 2003 income statement. The swap is intended to offset changes in interest expense in 2004. Accordingly, the gain on the swap is deferred so that it can be offset against the increased interest expense to be reported in 2004. The deferral of the gain merely means that it is temporarily reported as an increase in equity under the title Accumulated other comprehensive income. The deferred gain would also be included as an addition in the statement of comprehensive income (but not in the normal income statement) for 2003.

Hyrum Future On December 1, 2003, Hyrum Company decided to hedge against potential fluctuations in the price of wheat for its forecasted January 2004 purchases and bought a futures contract entitling and obligating Hyrum to purchase 1,000 bushels of wheat on January 1, 2004, for \$4.00 per bushel. Assume that the actual price of wheat on December 31, 2003, is \$4.40 per bushel. At this price, Hyrum will receive a \$400 payment [$1,000 \text{ bushels} \times (\$4.40 - \$4.00)$] on January 1, 2004, to settle the futures contract. Accordingly, on December 31, 2003, Hyrum has a \$400 receivable under the futures contract. The impact of the change in wheat prices on the wheat futures contract and on the anticipated cost of wheat purchases in January 2004 is accounted for as follows:

	Impact of Change in Wheat Prices	
	2003 Balance Sheet	2003 Income Statement
Underlying item	No impact; the higher-priced wheat won't be purchased until January 2004	No impact on 2003 cost of goods sold; the impact will show up in 2004 cost of goods sold
Derivative	Creation of a \$400 receivable under the wheat futures contract	Deferred gain of \$400 on the wheat futures contract; gain recognized in 2004 to offset increased cost of goods sold

CAUTION

It is NOT the case that derivative losses are reported immediately and derivative gains are deferred. If wheat prices had declined, Hyrum would have experienced a loss on the wheat futures contract, which would have been deferred until 2004.

The wheat futures asset is reported at its fair value of \$400 in the December 31, 2003, balance sheet. However, the \$400 gain from the increase in the value of the futures contract is not included in the 2003 income statement. The futures contract is intended to offset changes in the purchase price of wheat in January 2004. Accordingly, the gain on the futures contract is deferred so that it can be offset against the increased cost of goods sold to be reported in 2004. As with the interest rate swap discussed above, the deferral of the gain means that it is temporarily reported as an increase in equity under the title Accumulated other comprehensive income.

The deferred gain on the futures contract is included in the computation of earnings for 2004. To the extent that the wheat inventory is used to make bread and that bread is sold in 2004, the gain on the futures contract will offset the increased cost of goods sold arising from the increase in the price of wheat to \$4.40 per bushel.

Notional Amounts

An amount that is often disclosed in connection with derivatives is the notional amount of the derivative contract. The **notional amount** can be thought of as the amount of U.S. dollars that would change hands if the derivative contract were fulfilled to the letter. For example, the notional amount of the Hyrum wheat futures contract is \$4,000 ($1,000 \text{ bushels} \times \$4 \text{ futures contract price}$), as this is the amount of cash that would change hands if Hyrum were to purchase wheat under the futures contract. Of course, this almost never happens; instead, Hyrum would merely make or receive a smaller cash payment to reflect the effect of the change in wheat prices on the value of the futures contract. The notional amount of derivative instruments is often reported and is frequently misleading because notional amounts grossly overstate both the fair value and the potential cash flows of derivatives.

FYI

A favorite ploy of financial reporters is to report the notional amount of derivatives in order to exaggerate their importance.



Data Mining 12-2

Derivatives: Fair Value and Notional Value

Below are notional value and fair value data for interest rate and exchange rate derivatives held by five U.S. multinational companies. All numbers are in millions.

	Interest Rate Swaps		Foreign Currency Forwards and Futures	
	Total Notional Value	Net Fair Value	Total Notional Value	Net Fair Value
Boeing	\$ 949	\$ 0	\$ 731	\$ (18)
Coca-Cola	1,775	2	2,925	105
Disney	5,343	(83)	2,580	16
General Electric	112,038	(603)	52,388	(580)
McDonald's	2,900	16	463	(6)

Negative numbers in the fair value columns represent net liabilities. All data are for fiscal 2000.

Questions

1. Add up the total notional value and fair value of the interest rate swaps for all five companies. Compute what percentage the net fair value is relative to the total notional value. Comment.
2. Repeat (1) for the foreign currency forwards and futures.
3. In 2000, Boeing generated 34 percent of its revenue by selling to airlines and other customers outside the United States. This represented over \$17 billion in sales to foreign customers. In this light, it appears that the foreign currency derivative contracts entered into by Boeing are quite small, even when one considers the notional value. Comment on why you think Boeing engages in so little foreign currency hedging.
4. In general, what happened to the value of the U.S. dollar relative to the value of foreign currencies between the time these five companies entered into their foreign currency forwards and futures and the time the net fair value of these derivatives was computed? Explain what assumptions underlie your answer.

Review of Key Points

1. Companies make investments in securities in order to provide a safety cushion of available funds and to store a temporary excess of cash. Companies invest in other companies in order to earn a return, to secure influence, or to gain control.

Security investments that may seem similar on the surface may be motivated by very different company needs. Companies in cyclical businesses sometimes find themselves with excess cash that must be temporarily invested. Some companies specifically maintain an investment portfolio with the intent of supplementing corporate profits through the return on the portfolio. Sizeable investments in equity securities are sometimes made in order to be able to exert ownership influence over a key supplier or customer. Purchase of over 50 percent of the common stock of another company provides control over that company.

2. For accounting purposes, stocks and bonds purchased as investment securities are classified as trading, available-for-sale, or held-to-maturity investments, or as equity investments.

For accounting purposes, securities are classified depending upon the intent of management. If management's intent is to hold the investment until maturity (debt) or to influence the decisions of an investee (equity), then the held-to-maturity (debt) and equity method (equity) classifications are appropriate. If the securities are part of a portfolio that is being actively managed, they are

classified as trading securities. Securities that are available for conversion into cash but which are invested with a general buy-and-hold approach are classified as available for sale.

3. **The cost of an investment includes the purchase price plus any brokerage fees. Interest and dividends received on trading and available-for-sale securities are reported as revenue. When a security is sold, the gain or loss on the sale is called a realized gain or loss.**

Investments in debt and equity securities are recorded at cost, which includes the fair value of the security plus brokerage fees or commissions. When purchased, the security is classified into one of four categories: trading, available-for-sale, held-to-maturity, or equity method securities. Realized gains and losses on the sale of securities are computed by comparing the book value of the security with the price at which it is sold.

4. **Both trading and available-for-sale securities are reported in the balance sheet at market value. Unrealized gains and losses are reported in the income statement for trading securities and as an equity adjustment for available-for-sale securities.**

Unrealized gains and losses result from changes in the market value of trading and available-for-sale securities during the year. These gains and losses are called unrealized because the securities themselves have not yet been sold. The unrealized gains and losses on available-for-sale securities are not included in the computation of net income but instead are shown as part of the accumulated other comprehensive income in the equity section of the balance sheet. Unrealized gains and losses on available-for-sale securities are also reported in the statement of comprehensive income.

5. **Held-to-maturity securities are reported in the balance sheet at amortized cost, which reflects the gradual adjustment of the book value of the investment from its original cost to its ultimate maturity value.**

Depending on the level of the market interest rate relative to the stated interest rate on a debt security, the value of the debt security can be more or less than the maturity value of the security. When a held-to-maturity debt security is purchased at a premium or a discount, the premium or discount is systematically amortized over the period remaining until the debt security matures. This amortization process results in an annual adjustment of the reported amount of interest revenue and in a gradual adjustment of the book value of the investment from its purchase price to its maturity value.

6. **When a company owns between 20 percent and 50 percent of another company, the equity method is used to account for the investment. Income from the investment is computed as the investing company's share of the net income of the investee. Dividends received are viewed as a partial return of the original amount invested.**

When one company owns between 20 percent and 50 percent of another company, the investment is accounted for using the equity method. The investor's reported income from the investment is equal to the net income of the investee multiplied by the percentage of shares owned by the investor. Dividends received reduce the balance in the investment account. By using the equity method, the investing company reports income when it is earned by the investee, not when the earnings are distributed in the form of cash dividends. The equity method condenses a lot of information into just one number on the income statement and one number on the balance sheet of the investing company.

7. **Consolidated financial statements are prepared when a parent owns more than 50 percent of one or more subsidiaries. All of the assets, liabilities, revenues, and expenses of the parent and the majority-owned subsidiaries are added in preparing the consolidated financial statements.**

The objective of consolidation is to create financial statements for a parent and its controlled subsidiaries to report their performance as if they were one company. This means that the individual assets, liabilities, revenues, and expenses of the parent and all subsidiaries of which it owns more than 50 percent are added together and included in the consolidated financial statements. The fact that some consolidated subsidiaries are not owned 100 percent by the parent is reflected in minority interest items reported in both the consolidated balance sheet and the consolidated income statement.

8. **A derivative is a contract that derives its value from the movement of some price, exchange rate, or interest rate. Derivatives are often used to hedge risk. Derivatives are reported in the balance sheet at their fair value. Unrealized gains and losses on derivatives are sometimes deferred in order to match them with the income effect of the item being hedged.**

Common types of derivatives are forwards, swaps, and futures. For accounting purposes, the fair value of all derivatives is to be recognized and reported in the balance sheet. When a derivative is used to hedge risk, the gains and losses on the derivative should be reported in the same income statement in which the income effects on the hedged item are reported. This sometimes requires unrealized gains and losses being temporarily deferred in an accumulated other comprehensive income account that is reported as part of equity.

Key Terms

amortization of a bond discount or premium (553)	held-to-maturity securities (546)
available-for-sale securities (546)	interest rate risk (560)
consolidated financial statements (546)	interest rate swap (561)
credit risk (560)	investee (554)
debt securities (545)	maturity value (553)
derivative (561)	minority interest (559)
discount (553)	notional amount (566)
equity method (546)	premium (553)
equity securities (545)	price risk (560)
exchange rate risk (560)	realized (548)
face value (553)	swap (561)
forward contract (561)	trading securities (546)
futures contract (562)	unrealized (549)
hedging (563)	

Questions

- Why might a company invest in the stocks or bonds of another company?
- Identify the similarities and differences between debt securities and equity securities.
- What criteria must be met for a security to be classified as a trading security?
- What criteria must be met for a security to be classified as held to maturity?
- Why can't debt securities be accounted for using the equity method? Why can't equity securities be classified as held to maturity?
- What items are included in the purchase cost of a security?
- How are realized gains and losses created?
- What is the difference between a realized gain or loss and an unrealized gain or loss?
- How are unrealized gains and losses reported for trading securities? For available-for-sale securities?
- Identify the different types of returns an investor can earn when investing in debt and equity securities.
- Smith Corporation owns trading securities with a cost of \$5,200 and a fair value of \$3,600 at the end of the current year. This is the first year the securities have been owned. At what amount should the securities be shown on the year-end balance sheet? How is the firm's income statement for the period affected?
- Now assume that the securities described in question (11) are classified as available for sale. How are the firm's balance sheet and income statement affected?
- Under what circumstances would a bond have a market value greater than its face value? Less than its face value?
- What is the purpose of amortizing a bond premium or discount on a held-to-maturity security?
- What is the general rule used for determining when the equity method should be used?
- Johnston Company received dividends of \$27,500 relating to investments in equity securities. What would be the effect on the income statement of the receipt of the dividends if the securities were classified as: (a) trading, (b) available for sale, and (c) equity method?
- When a security is classified as an equity method security, what events result in the investment account balance increasing? Decreasing?
- Explain why dividends received are not considered revenue when the equity method of accounting for long-term investments is applied.
- Under what circumstances should consolidated financial statements be prepared?
- What financial statement accounts are shown only in consolidated financial statements and never in the financial statements of individual companies?
- Briefly describe the four types of risk discussed in the chapter.
- Why would a company enter into an interest rate swap?
- What is the difference between a forward contract and a futures contract?
- What is hedging? How can derivatives be used to hedge a company's risk?
- What factors make it difficult to account for derivatives using the traditional historical cost accounting model?
- Derivatives are to be reported in the balance sheet at their fair value on the balance sheet date. How are unrealized gains and losses on derivatives recognized in the financial statements?
- What is the notional amount of a derivative? How can the notional amount be misleading?

Exercises

E12-1 *Classifying Securities*

The Balsam-Coldwell Corporation held the following investments at year-end:

- 2,000 shares of Cobweb Corporation common stock purchased at \$45 per share with a current market value of \$62 per share. These shares form part of Balsam-Coldwell's actively traded portfolio.
- 5,000 shares of Doc Rock Corporation common stock purchased about a year and a half ago at \$42 per share. Year-end market value is \$40 per share. These shares may be sold if cash is needed but are not expected to be sold within the next 12 months.
- Ten thousand (10,000) shares of Rolo, Inc., were purchased several years ago at \$10 per share. Rolo, Inc., has 25,000 shares of stock outstanding. Since the purchase, Rolo has reported income totaling \$65,000 and paid dividends of \$32,000.
- Bonds with a face amount of \$100,000 were purchased two years ago at a cost of \$100,000. Balsam-Coldwell intends to hold the securities until they mature.

Required

- How should each of these investments be classified for accounting purposes?
- At what amount should each of these items be listed on the year-end balance sheet of Balsam-Coldwell? Explain your logic.
- How would transactions relating to these securities affect Balsam-Coldwell's income each year?

E12-2 *Issues Relating to a Trading Security*

The following items were taken from the December 31, 2003, balance sheet of Moore Company:

MOORE COMPANY
Partial Balance Sheet
December 31, 2003

Current assets:

Cash	\$ 75,000
Accounts receivable, less allowance for bad debts of \$6,000	140,000
Investment in MAC Corporation (cost, \$25,000)	32,000

The investment in MAC Corporation consisted of 1,000 shares of MAC common stock purchased on November 29, 2003. It is considered a trading security.

- Required**
1. Can the purchase price per share of MAC Corporation's common stock be determined from the data given?
 2. What was the market price per share of MAC Corporation's common stock on December 31, 2003?
 3. On April 1, 2004, Moore Company sold 500 shares of MAC at \$36 per share. How much of a realized gain or loss would be recorded on the date of the sale?
 4. Moore held the remaining 500 shares of MAC throughout the remaining year. At December 31, 2004, MAC was selling at \$33 per share. At what amount should the securities be shown on the December 31, 2004, balance sheet?

E12-3 *Buying and Selling Securities*

At the end of 2002, CIJI Corporation owned two investments that it classified as trading securities. The relevant cost and market data at December 31, 2002, are as follows:

Security	Cost	Market
Lockness, Inc.	\$10,400	\$10,100
Scottish Co.	7,400	7,500

During 2003, CIJI Corporation sold all of its holdings in Lockness for \$10,250. In addition, the firm purchased 500 shares of English Inc. on November 1, 2003, at a price of \$29 per share. The firm considers this to be an available-for-sale investment.

At December 31, 2003, Scottish Company had a market value of \$7,000, and English Inc. had a market value of \$14,200.

- Required**
1. How much realized gain or loss would CIJI Corporation report during 2003 regarding these transactions?
 2. How much unrealized gain or loss would be reported in CIJI Corporation's income statement for 2003?
 3. What is the amount of Accumulated other comprehensive income as of the end of 2003?

E12-4 *Buying and Selling Securities*

During January 2003, Aragorn Inc. purchased the following securities:

Security	Classification	# of Shares	Total Cost
Gimli Corporation stock	Trading	500	\$ 9,000
Legolas International Inc. stock	Available for sale	1,000	22,000
Glorfindel Enterprises stock	Available for sale	2,500	42,500
Mirkwood Co. bonds	Held to maturity	—	24,000
U.S. Treasury bonds	Trading	—	11,000

During 2003, Aragorn received interest from the Mirkwood and U.S. Treasury bonds totaling \$3,630. Dividends received on the stock held amounted to \$1,760. During November 2003, Aragorn sold 300 shares of the Gimli stock at \$17 per share and 500 shares of the Glorfindel stock at \$19 per share.

- Required**
1. How would the interest and dividends received be reported in Aragorn's 2003 financial statements?
 2. Determine the amount of realized gain or loss to be reported for the year.
 3. What additional information is needed to be able to compute the total unrealized gain or loss to be reported in Aragorn's income statement for 2003?

E12-5 *Accounting for Trading and Available-for-Sale Securities*

On February 2, 2003, Suzar Company purchased 500 shares of Mom's Brewery at \$66.00 per share. During 2003 and 2002, the following events occurred regarding this investment:

December 15, 2003: Mom's Brewery declares and pays a \$3.00 per share dividend.

December 31, 2003: The market price of Mom's Brewery's stock is \$59.00 per share at year-end.

December 1, 2004: Mom's Brewery declares and pays a dividend of \$3.10 per share.

December 31, 2004: The market price of Mom's Brewery's stock is \$63.00 per share at year-end.

- Required**
1. Determine the amount at which Suzar will report its investment in Mom's Brewery in the balance sheet at the end of 2003 and 2004 assuming the securities are classified as (a) trading and (b) available for sale.
 2. Determine the effect on the income statements for 2003 and 2004 of the above events assuming the securities are classified as (a) trading and (b) available for sale.
 3. Determine the balance to be reported in the balance sheet account Accumulated other comprehensive income on December 31, 2004, assuming the securities are classified as (a) trading and (b) available for sale.

E12-6 *Application of Fair Value*

During 2001, Ambrosia Corporation made several purchases of equity securities. No securities were owned prior to 2001. None of the purchases represented an interest of 20 percent or more. The cost and market value of these securities are as follows:

	Market Value—December 31			
	Cost	2001	2002	2003
Barkley, Inc.	\$ 2,000	\$ 2,100	\$ 1,500	\$ 1,700
Eldridge Co.	6,000	5,400	5,300	6,400
Showboat Co.	9,000	8,700	8,500	8,800
	<u>\$17,000</u>	<u>\$16,200</u>	<u>\$15,300</u>	<u>\$16,900</u>

- Required**
1. Assuming the securities are considered trading, what would be the unrealized gain or loss reported in year 2001, year 2002, and year 2003? Determine the effect on periodic income for year 2001, year 2002, and year 2003.
 2. Repeat the requirements in part (1) assuming these securities are considered available for sale. Contrast your answer to that in part (1).
 3. Assume that the securities are considered to be available for sale. What amount will be reported in the balance sheet account Accumulated other comprehensive income on December 31, 2003?

E12-7 *Investment in Equity Securities*

During 2003, Litten Company purchased trading securities as a short-term investment. The costs of the securities and their market values on December 31, 2003, are listed below:

Security	Cost	Market Value Dec. 31, 2003
A	\$ 65,000	\$ 81,000
B	100,000	54,000
C	220,000	226,000

Litten had no trading securities in the years before 2003. Before any adjustments related to these trading securities, Litten had net income of \$300,000 in 2003.

- Required**
1. What is net income after making any necessary trading security adjustments?
 2. What would net income be if the market value of Security B were \$95,000?

E12-8 *Held-to-Maturity Securities: Purchased at a Premium*

Rockfeller Inc. purchased fifty \$1,000, 10 percent, 5-year bonds of Glumhammer Company on January 1, 2003. On that date, the market interest rate for bonds of similar riskiness was 8 percent. Rockfeller paid \$53,993 for the bonds and plans to hold the securities until they mature. Interest is payable once a year on December 31.

- Required**
1. How much cash will Rockfeller receive as interest every year on December 31?
 2. How much interest revenue will Rockfeller report for 2003? For 2004?
 3. What will be the book value in the investment account for these bonds as of December 31, 2004?

E12-9 *Held-to-Maturity Securities: Purchased at a Discount*

On their issue date of January 1, 2003, Roosevelt Enterprises purchased twenty \$1,000 10-year bonds issued by Monhaton Inc. at a price of \$17,542. On that date, the market interest rate for bonds of similar riskiness was 10 percent. The bonds pay interest at the end of each year at the stated annual rate of 8 percent. Roosevelt anticipates holding the securities until they mature.

- Required**
1. How much cash will Roosevelt receive at the end of each year?
 2. How much interest revenue will Roosevelt report for 2003? For 2004?
 3. What will be the book value in the investment account for these bonds as of December 31, 2004?
 4. At the end of 2003, the bonds have a market value of \$19,500. How would this increase in value be reflected in Roosevelt's financial statements?

E12-10 *Differences with the Equity Method*

At the beginning of 2003, El Paso Corporation purchased two long-term investments. The first purchase was a 30 percent interest (30,000 shares) in the common stock of Houston Inc. for \$1.5 million. The second purchase was a 15 percent interest (15,000 shares) in the common stock of Lubbock Inc. for \$495,000. Although there is a ready market for the Lubbock shares, El Paso does not intend to sell these securities in the near future. The following data are available regarding these companies:

Company	Reported Income for 2003	Dividends Declared and Paid	Market Price per Share 12/31/03
Houston	\$ 500,000	\$100,000	\$45
Lubbock	1,000,000	300,000	35

- Required**
1. How would each of these securities be classified? Why?
 2. What is the total income reported by El Paso from these two investments for the year ended December 31, 2003?
 3. What is the balance in the investment accounts for these two investments for El Paso at December 31, 2003?

E12-11 *Equity Method Securities*

At the beginning of the current year, Licor Company paid \$510,000 to purchase, as a long-term investment, shares of common stock representing a 30 percent interest in Spy Corporation. This stock represented a 30 percent interest in the book value of Spy Corporation's net assets. During the year, Spy declared and issued dividends totaling \$105,000. Spy reported net income of \$162,000 during the current year.

- Required**
1. How much income would Licor report on its income statement for the current year relating to its investment in Spy Corporation?
 2. What is the balance in the investment in the Spy Corporation account at the end of the current year?

E12-12 *Consolidation versus the Equity Method*

In 1986 The Coca-Cola Company borrowed \$2.4 billion to purchase several large soft drink bottling operations. Then, a separate company, Coca-Cola Enterprises, was formed to bottle and distribute Coke throughout the country. The Coca-Cola Company sold 51 percent of Coca-Cola Enterprises to the public and retained a 49 percent ownership. The \$2.4 billion in debt incurred to finance the purchase was transferred to the balance sheet of Coca-Cola Enterprises.

Although 49 percent ownership does not guarantee control, it did give The Coca-Cola Company significant influence over the bottling company. For example, The Coca-Cola Company determines the price at which it will sell concentrate to Coca-Cola Enterprises and reviews Coca-Cola Enterprises' marketing plan. In addition, The Coca-Cola Company's chief operating officer is chairman of Coca-Cola Enterprises, and six other current or former Coca-Cola Company officials are serving on Coca-Cola Enterprises' board of directors.

Source: The Wall Street Journal, October 15, 1986, pp. 1 and 12.

- Required**
1. From an accounting standpoint, what is the significance of owning more than 50 percent of a company's stock?
 2. Why would The Coca-Cola Company elect to own less than 50 percent of a key bottler?
 3. In the consolidation process, the parent and the subsidiary's individual asset and liability account balances are added together and reported on the consolidated balance sheet, whereas with the equity method, the net investment is reported as an asset on the investor company's balance sheet. Why might The Coca-Cola Company want to avoid consolidation?

E12-13 *Consolidated Financial Statements—Balance Sheet*

Ecotec Inc. purchased 70 percent of the outstanding shares of common stock of Beatrix Company on January 1, 2003, paying \$875,000. On that day, the balance sheets of the two companies immediately after the purchase are as follows:

(in thousands)	Ecotec	Beatrix
Cash	\$ 410	\$ 260
Other current assets	1,875	1,240
Property, plant, & equipment	1,100	850
Investment in Beatrix	875	-0-
Total assets	<u>\$4,260</u>	<u>\$2,350</u>
Current liabilities	\$1,225	\$ 800
Long-term liabilities	775	300
Common stock	800	500
Retained earnings	1,460	750
Total liabilities & equities	<u>\$4,260</u>	<u>\$2,350</u>

- Required**
1. Compute the amount that will be disclosed on the consolidated balance sheet as Minority interest.
 2. Prepare a consolidated balance sheet as of January 1, 2003.

E12-14 Consolidated Financial Statements—Income Statement

On January 1, 2003, Exrock Inc. purchased 80 percent of the outstanding shares of common stock of Udora Company at a price of \$680,000. At the end of 2003, each company prepared separate income statements that are presented below:

(in thousands)	Exrock	Udora
Sales	\$2,850	\$1,115
Income from Udora	72	-0-
Interest revenue	<u>352</u>	<u>34</u>
	\$3,274	\$1,149
Cost of goods sold	1,700	620
Other operating expenses	840	417
Interest expense	<u>115</u>	<u>22</u>
Net income	<u>\$ 619</u>	<u>\$ 90</u>

- Required**
1. Compute the amount that will be reported on the consolidated income statement as Minority interest income.
 2. Prepare a consolidated income statement.
 3. Compare Exrock's reported net income with the consolidated net income. Explain the relationship.

E12-15 Accounting for Futures

Yelrome Company manufactures candy. On December 1, 2003, Yelrome purchased a futures contract that obligates Yelrome to buy 100,000 pounds of sugar on January 1, 2004, at \$0.22 per pound. Yelrome typically purchases 100,000 pounds of sugar each month to use as a raw material in the candy production process. Yelrome purchased the futures contract to hedge against movements in the price of sugar during the month of January 2004. It is likely that the futures contract will be settled with a cash payment rather than with the actual purchase and delivery of sugar.

- Required**
1. The sugar futures contract hedges against movements in the price of sugar. Demonstrate this by computing the net cost (including the cash payment associated with the futures contract) of the 100,000 pounds of sugar purchased in January 2004 under three sets of circumstances: when the market price of sugar in January 2004 is \$0.20, \$0.22, and \$0.24.

2. Assume that the price of sugar on December 31, 2003, is \$0.25 per pound. State whether the futures contract will be shown in Yelrome's balance sheet on that date as an asset or liability, and for what amount.
3. Is the gain or loss on the futures contract recognized in the 2003 income statement or deferred until 2004? Explain.

E12-16 Accounting for Swaps

On January 1, 2003, South Platte Company received a two-year \$600,000 loan, with interest payments occurring at the end of each year and the principal to be repaid on December 31, 2004. The interest rate for the first year is the prevailing market rate of 8 percent, and the rate in 2004 will be equal to the market interest rate on January 1, 2004. In conjunction with this loan, South Platte enters into an interest rate swap agreement whereby it will receive a swap payment (based on \$600,000) if the January 1, 2004, interest rate is greater than 8 percent and will make a swap payment if the rate is less than 8 percent. The interest swap payment will be made on December 31, 2008.

- Required**
1. The interest rate swap hedges against movements in interest rates. Demonstrate this by computing the net interest cost (including the cash payment associated with the swap) of South Platte's loan in 2004 under three sets of circumstances: when the market interest rate on January 1, 2004, is 6 percent, 8 percent, and 10 percent.
 2. Assume that the market interest rate on December 31, 2003, is 7 percent. State whether the interest rate swap will be shown in South Platte's balance sheet on that date as an asset or liability, and for what amount.
 3. Is the gain or loss on the interest rate swap recognized in the 2003 income statement or deferred until 2004? Explain.

E12-17 Accounting for Forwards

On September 1, 2003, Ramus Company purchased machine parts from Ho Man Tin Company for 3,000,000 Hong Kong dollars to be paid on January 1, 2004. The exchange rate on September 1 is HK\$7.7=\$1. On the same date, Ramus enters into a forward contract and agrees to purchase HK\$3,000,000 on January 1, 2004, at the rate of HK\$7.7=\$1. It is likely that the forward contract will be settled with a cash payment rather than with the actual purchase of Hong Kong dollars.

- Required**
1. The Hong Kong dollar forward contract hedges against movements in the Hong Kong dollar exchange rate. Demonstrate this by computing the net U.S. dollar cost (including the cash payment associated with the forward contract) of paying off the HK\$3,000,000 account payable on January 1, 2004, under three sets of circumstances: when the exchange rate on January 1, 2004 is HK\$8.0=\$1, HK\$7.7=\$1, and HK\$7.4=\$1.
 2. Assume that the exchange rate on December 31, 2003, is HK\$8.0=\$1. State whether the forward contract will be shown in Ramus's balance sheet on that date as an asset or liability, and for what amount.
 3. Is the gain or loss on the forward contract recognized in the 2003 income statement or deferred until 2004? Explain.

Problems

P12-18 Trading Securities

At the beginning of 2003, Bodyfit Corporation purchased the following securities:

<u>Security</u>	<u>Number of Shares</u>	<u>Total Cost</u>
MG, Inc.	1,000	\$40,000
Drof Co.	500	15,000

During 2003, the following transactions took place:

- March 1: Purchased 200 shares of Joellen, Inc., at \$50 per share.
- March 31: Received dividends of \$2.40 per share on MG, Inc., stock.
- May 2: Sold all of its shares in Drof Co. for \$22.00 per share.
- September 1: Sold 500 shares of MG, Inc., for \$36.00 per share.
- September 30: Received cash dividends of \$2.40 per share (on the remaining shares) on MG, Inc., stock.
- December 1: Purchased ten \$1,000, 12 percent bonds of United, Inc., for \$10,400.
- December 31: Accrued interest for one month on the United, Inc., bonds.
- December 31: You have obtained the following market values as of December 31, 2003:

Joellen, Inc.	\$52 per share
MG, Inc.	\$37 per share
United, Inc., bonds	\$970 per \$1,000 bond

All securities are considered trading securities.

- Required**
- Compute the amount of dividend and interest revenue recognized by Bodyfit for 2003.
 - Compute the amount of realized gain or loss to be reported for 2003.
 - Compute the amount of unrealized gain or loss to be reported for 2003.
 - Analysis:** The prices per share of the stock for the fictitious companies included in this problem are between \$20 and \$60 per share. These are normal prices for shares of U.S. companies. As mentioned in the text of the chapter, the price per share of Berkshire Hathaway stock is over \$60,000. What do you think this implies about the nature of Berkshire Hathaway's shareholders?

P12-19 *Buying and Selling Trading Securities*

Fox Company made the following transactions in the common stock of NOP Company:

July 10, 2001	Purchased 10,000 shares at \$45 per share.
Sep. 29, 2002	Sold 2,000 shares for \$51 per share.
Aug. 17, 2003	Sold 2,500 shares for \$33 per share.

The end-of-year market prices for the shares were as follows:

December 31, 2001	\$47 per share
December 31, 2002	\$39 per share
December 31, 2003	\$31 per share

The NOP stock is classified by Fox Company in the trading securities portfolio.

- Required**
- Determine the amount of (a) realized gain or loss and (b) unrealized gain or loss to be reported in the income statement each year relating to the NOP stock.
 - How would your answer to (1) change if the securities were classified as available for sale? Explain.
 - Analysis:** Given the data in this problem, do you think it is more reasonable for Fox to classify its investment in NOP Company as a trading security or as available for sale? Explain your choice.

P12-20 *Trading and Available-for-Sale Securities*

Lorien Technologies Inc. purchased the following securities during 2002:

Security	Classification	Cost	Market Value (12/31/02)
A	Trading	\$ 5,000	\$ 4,000
B	Trading	7,000	10,000
C	Available for Sale	10,000	8,000
D	Available for Sale	6,000	3,500

The following transactions occurred during 2003:

- a. On January 1, 2003, Lorien purchased Security E for \$12,000. Security E is classified as available for sale.
- b. On March 23, 2003, Security B was sold for \$4,700.
- c. On July 23, 2003, Security C was sold for \$19,500.

The remaining securities had the following market values as of December 31, 2003:

<u>Security</u>	<u>Market Value</u>
A	\$ 4,500
D	5,000
E	13,000

- Required**
1. Determine the amount of (a) realized gain or loss and (b) unrealized gain or loss to be reported from Lorien's trading securities for 2003.
 2. Determine the amount of (a) realized gain or loss and (b) unrealized gain or loss to be reported from Lorien's available-for-sale securities for 2003. Which amounts will appear in the income statement?
 3. **Analysis:** Compute the RATE OF RETURN earned by Lorien Technologies on its investment securities portfolios in 2003. Ignore interest and dividend revenue. Compute just one number, grouping both trading securities and available-for-sale securities for the purposes of this calculation. Use the total beginning market value of both portfolios (\$37,500, which includes the purchase on January 1) as the denominator in your calculation.

P12-21 Valuation of Securities

The investment portfolio of Morris Inc. on December 31, 2002, contains the following equity securities. All of these securities were purchased in 2002.

- Opus Company: 3 percent ownership, 5,000 shares; cost, \$100,000; market value, \$95,000; classified as a trading security.
- Garrod Inc.: 5 percent ownership, 2,000 shares; cost, \$40,000; market value, \$43,000; classified as a trading security.
- Sherrill Inc.: common, 30 percent ownership, 20,000 shares; cost, \$1,140,000; market value, \$1,130,000; Morris exercises significant influence over Sherrill.
- Jennings Company: common, 15 percent ownership, 25,000 shares; cost, \$67,500; market value, \$50,000; classified as an available-for-sale security.

- Required**
1. Determine the unrealized gains and losses for the trading and available-for-sale portfolios for 2002.
 2. How will the differences between cost and market value for the various securities be reflected in the 2002 income statement?
 3. Assume the market values for the investment portfolio at December 31, 2003, were as follows:

Opus Co.	\$ 102,000
Garrod Inc.	43,000
Sherrill Inc.	1,115,000
Jennings Co.	45,000

What amounts would be reported in the 2003 income statement to reflect unrealized gains and losses on these securities?

4. What amount will be shown in the December 31, 2003, balance sheet as an equity adjustment related to the available-for-sale portfolio? Will this amount increase or decrease equity?
5. **Analysis:** Morris owns only 15 percent of Jennings, so the investment is not accounted for using the equity method. However, is it possible for Morris to exert significant influence on Jennings with just 15 percent ownership? Explain.

P12-22 *Realized and Unrealized Gains and Losses*

Included in the information contained in the notes to the financial statements of Grenada Corporation at December 31, 2002 and 2003, is the following information related to investments in trading securities:

	<u>2003</u>	<u>2002</u>
Securities, at cost	\$160,000	\$75,000
Gross unrealized gains	14,300	5,100
Gross unrealized losses	<u>(17,200)</u>	<u>(2,300)</u>
Equity securities, at market	<u>\$157,100</u>	<u>\$77,800</u>

During 2003, the firm sold securities with a cost of \$25,000 for \$38,500. These securities had a fair value of \$30,000 on December 31, 2002.

Required Based on this information, answer the following questions:

- At what amount should the securities be shown on the balance sheet for 2003 and 2002?
- What are the amounts of the unrealized gains or losses, if any, for 2003 that should be included in the income statement?
- What is the amount of realized gain or loss for 2003 that should be included in the income statement?
- What is the cost of the securities purchased by Grenada Corporation during 2003?
- Analysis:** In general, how well did Grenada's investment portfolio perform in 2003? Explain your answer.

P12-23 *Investment Security Classification and Financial Ratios*

A condensed balance sheet for Rockhard Corporation follows:

Current assets	\$175,000
Long-term assets	220,000
Current liabilities	145,000
Long-term liabilities	115,000
Stockholders' equity	135,000

Net income for the current year amounted to \$32,450 on total sales of \$220,000.

Included in current assets are 5,000 shares of Quad, Inc., that Rockhard purchased in the current year at \$10 per share. These shares had a year-end market value of \$6 per share. Rockhard considered these shares to be trading securities and accounted for them correctly.

- Required**
- Calculate the following financial ratios:
 - Current ratio (current assets/current liabilities)
 - Debt ratio (total liabilities/total assets)
 - Return on sales (net income/sales)
 - Now assume that Rockhard's accountant had made an error and that these securities should have been classified as available for sale and also should have been listed in the balance sheet as a long-term investment. Make the necessary corrections and calculate the following ratios:
 - Current ratio
 - Debt ratio
 - Return on sales
 - Analysis:** Comment on the differences in the ratios that you calculated under each assumption and the reasons for these differences.

P12-24 *Held-to-Maturity Securities*

On January 1, 2003, Ryan Company purchased some corporate bonds as an investment. The bonds have a face value of \$100,000, a stated interest rate of 8 percent, and a maturity period of nine years. Interest is paid once a year on the bonds, on December 31. Ryan Company purchased the bonds for \$78,687. The market interest rate associated with the bonds was 12 percent. Ryan Company anticipates holding the bonds until they mature.

Required

1. Were these bonds purchased at a premium or at a discount? Why?
2. How much cash will Ryan receive at the end of each year?
3. How much interest revenue will Ryan report for 2003? For 2004?
4. What will be the book value in the investment account for these bonds as of December 31, 2004?
5. Answer questions (1) through (4) assuming that Ryan purchased the bonds for \$113,603 when the market interest rate on the bonds was 6 percent.
6. **Analysis:** Ryan's auditor is suspicious that Ryan wants to classify these bonds as held to maturity to avoid being required to report them at market value in the financial statements. What evidence could Ryan provide to the auditor to provide support for this classification?

P12-25 *Equity Method Securities*

On January 1, 2002, Jean Luc Company bought 30 percent of the outstanding common stock of Freelance Corporation for \$258,000 cash. Jean Luc accounts for this investment by the equity method. At the end of 2002, Freelance reports net income of \$180,000. During 2002, Freelance declared and paid cash dividends of \$20,000. Freelance Corporation stock had a market value of \$311,000 on December 31, 2002.

At the end of 2003, Freelance reported net income of \$86,000 and paid dividends during the year of \$43,000. The investment had a market value on December 31, 2003, of \$315,000.

Required

1. Compute the balance in the investment account as of (a) December 31, 2002, and (b) December 31, 2003.
2. What amount would be reported in Jean Luc's income statement relating to the investment in Freelance stock for 2002 and 2003?
3. How would the market value of the investment be reflected in the financial statements?
4. Suppose that the Freelance stock investment had been classified as available for sale. What would be the balance in the investment account at the end of each year? How would the changes in the market value of the investment be reflected in the financial statements?
5. **Analysis:** Look back over your answers for (1) through (4). The equity method was created back when investment securities were reported in the financial statements at historical cost, not market value. Because most investment securities are now reported at market value in the financial statements, is the equity method obsolete? Explain.

P12-26 *Equity Method Securities*

At the beginning of 2002, Westbound Inc. purchased a 40 percent interest (representing 50,000 shares) in Earth Company for \$1,400,000 cash. Earth had a good year during 2002 and reported net income of \$400,000. In addition, on June 30, 2002, Earth declared and issued cash dividends totaling \$2 per share. At year-end, the price per share of Earth's stock was \$22.

During 2003, business increased significantly, and Earth reported a net income of \$600,000 for the year. The firm declared and paid dividends of \$2.20 per share. Because of the firm's strong performance, the price per share of its stock at year-end increased to \$40.

Required

1. What would be the balance in the investment-in-Earth-Company account at the end of 2002 and 2003?

2. What amount would be reported on the income statement for 2002 and 2003 relating to income from the investment in Earth Company stock?
3. If this investment were accounted for as an available-for-sale security, how much income would Westbound report from this investment during 2002 and 2003?
4. If this investment were accounted for as a trading security, how much income would Westbound report from this investment during 2002 and 2003?
5. **Analysis:** Why are there different answers for questions (2), (3), and (4)?

P12-27 Consolidated Financial Statements

Parent Company owns parts of three different subsidiaries. The balance sheets and income statements for these four companies are listed below. Note that in the financial statements of Parent Company, its ownership interest in the three subsidiaries has been accounted for using the equity method.

	Percentage of the Parent's Ownership			
	PARENT	90% SUB1	60% SUB2	40% SUB3
Assets				
Cash	48	10	20	80
Accounts receivable	300	90	80	40
Plant and equipment	700	200	100	400
Investment in Sub1	198			
Investment in Sub2	72			
Investment in Sub3	88			
Liabilities	500	80	80	300
Equity	906	220	120	220
<hr/>				
Sales	4,790	2,000	2,000	10,000
Income from Sub1	90			
Income from Sub2	180			
Income from Sub3	80			
Expenses	3,000	1,900	1,700	9,800

- Required*
1. Prepare a consolidated balance sheet for Parent Company and its subsidiaries.
 2. Prepare a consolidated income statement for Parent Company and its subsidiaries.
 3. **Analysis:** Return on sales is net income divided by total sales. Without doing any computations, state what would happen to consolidated return on sales if Sub 3 were consolidated rather than accounted for using the equity method. Explain.

P12-28 Accounting for Swaps

On January 1, 2002, Kindall Company received a five-year, \$2,000,000 loan, with interest payments occurring at the end of each year and the principal to be repaid on December 31, 2006. The interest rate for the first year is the prevailing market rate of 10 percent, and the rate in each succeeding year will be equal to the market interest rate on January 1 of that year. In conjunction with this loan, Kindall enters into an interest rate swap agreement whereby in each year of the loan starting with 2003, Kindall will receive a swap payment (based on \$2,000,000) if the January 1 interest rate is greater than 10 percent and will make a swap payment if the rate is less than 10 percent.

On December 31, 2002, the interest rate is 12 percent, and on December 31, 2003, the interest rate is 9 percent.

- Required**
1. State whether the interest rate swap will be shown in Kindall's balance sheet on December 31, 2002, as an asset or liability, and for what amount.
 2. Is the gain or loss on the interest rate swap recognized in the 2002 income statement or deferred until 2003? Explain.
 3. State whether the interest rate swap will be shown in Kindall's balance sheet on December 31, 2003, as an asset or liability, and for what amount.
 4. What is the amount of gain or loss on the swap for 2003? Is this gain or loss on the interest rate swap recognized in the 2003 income statement or deferred until 2004? Explain.
 5. **Analysis:** Through this swap arrangement, Kindall has essentially converted its loan into a fixed-rate loan. Do fixed-rate loans eliminate all risk associated with variable interest rates? Explain.

P12-29 *Accounting for Forwards*

On October 1, 2003, Megan Rose Cybernetics sold a supercomputer to Cod Computers, with payment to be made on January 1, 2004. At the request of Cod, a New Zealand company, the price of the supercomputer is denominated in New Zealand dollars. The price of the supercomputer is NZ\$16,000,000. Because of recent fluctuations in the value of the New Zealand dollar, on October 1 Megan Rose also negotiated a special forward contract with Angela Investment Bank for Megan Rose to sell NZ\$16,000,000 on January 1, 2004, at an exchange rate of NZ\$1.7=US\$1, which is also the exchange rate on October 1, 2003. It is likely that the forward contract will be settled with a cash payment rather than with the actual sale of New Zealand dollars.

- Required**
1. Assume that the exchange rate on December 31, 2003, is NZ\$1.5=\$1. State whether the forward contract will be shown in Megan Rose's balance sheet on that date as an asset or liability, and for what amount.
 2. Is the gain or loss on the forward contract recognized in the 2003 income statement or deferred until 2004? Explain.
 3. Repeat (1) and (2) for Angela Investment Bank, for which the forward contract is a speculation.
 4. **Analysis:** Angela Investment Bank is speculating that the value of the New Zealand dollar will rise between October 1, 2003, and January 1, 2004. Was Angela Investment Bank right? Does Angela Investment Bank contribute any value to the economy, or is this just a sophisticated form of gambling? Explain.

P12-30 *Accounting for Futures*

On October 1, 2003, Jessica Marie Company sold equipment to Gwang Ju Company for 10,000,000 Korean won, with payment to be received in three months on January 1, 2004. The exchange rate on October 1, 2003, is 800 won=\$1. On the same date, Jessica Marie enters into a futures contract and agrees to sell 10,000,000 won on January 1, 2004, at the rate of 800 won=\$1. It is likely that the futures contract will be settled with a cash payment rather than with the actual sale and delivery of Korean won.

On December 31, 2003, the exchange rate is 790 won=\$1.

- Required**
1. State whether the futures contract will be shown in Jessica Marie's balance sheet on December 31, 2003, as an asset or liability, and for what amount.
 2. Is the gain or loss on the futures contract recognized in the 2003 income statement or deferred until 2004? Explain.
 3. What is the notional amount of this futures contract?
 4. **Analysis:** Entering into this futures contract is one way for Jessica Marie Company to hedge its Korean won risk. What are some other ways?

Applications and Extensions

Deciphering Actual Financial Statements

Deciphering 12-1 *McDonald's*

Locate McDonald's 2000 annual report in Appendix A. For this question, focus on the financial statement note titled "Summary of Significant Accounting Policies."

1. What is McDonald's consolidation policy, and what label does McDonald's give to companies for which it uses the equity method to account for the investment?
2. Look at McDonald's description of its approach to "Comprehensive Income" and state whether McDonald's has any available-for-sale securities. Explain your answer.
3. In its description of its "Financial Instruments," McDonald's describes three ways in which it uses financial instruments to manage risk. Identify those three risk management techniques.
4. How does McDonald's account for a derivative when the item that the derivative hedges either matures or is extinguished?

Deciphering 12-2 *Berkshire Hathaway*

The following information comes from the notes to the 2000 financial statements of Berkshire Hathaway.

December 31, 2000			
	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Fair Value</u>
Common stock of:			
American Express Company	\$ 1,470	\$ 6,859	\$ 8,329
The Coca-Cola Company	1,299	10,889	12,188
The Gillette Company	600	2,868	3,468
Wells Fargo & Company	319	2,748	3,067
All other equity securities	6,714	3,853	10,567
	<u>\$10,402</u>	<u>\$27,217</u>	<u>\$37,619</u>
December 31, 1999			
	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Fair Value</u>
Common stock of:			
American Express Company	\$ 1,470	\$ 6,932	\$ 8,402
The Coca-Cola Company	1,299	10,351	11,650
The Gillette Company	600	3,354	3,954
Wells Fargo	349	2,042	2,391
All other equity securities	5,956	5,419	11,375
	<u>\$9,674</u>	<u>\$28,098</u>	<u>\$37,772</u>

Berkshire Hathaway also discloses that it classifies each of these investments as an available-for-sale security.

Using this information, complete the following:

1. Did Berkshire Hathaway purchase any more shares of American Express, Coca-Cola, or Gillette in 2000? Explain your answer.
2. Compute the amount of unrealized gain or loss that occurred in 2000.
3. All of the securities included in the tables in Berkshire Hathaway's note are classified as available for sale. How much of the unrealized gain or loss computed in (2) would be reported in the 2000 income statement?
4. Which of the three investments—American Express, Coca-Cola, or Gillette—performed better, in percentage terms, in 2000?

5. The notes to Berkshire Hathaway's financial statements also contain the following information:

Realized gains (losses) from sales and redemptions of investments are summarized below (in millions):			
	<u>2000</u>	<u>1999</u>	<u>1998</u>
Equity securities:			
Gross realized gains	\$4,467	\$1,507	\$2,087
Gross realized losses	(317)	(77)	(272)
Securities with fixed maturities and other investments:			
Gross realized gains	153	39	602
Gross realized losses	(348)	(104)	(2)
	<u>\$3,955</u>	<u>\$1,365</u>	<u>\$2,415</u>

Recall that all of Berkshire Hathaway's securities are classified as available for sale. What is the effect of the above transactions on 2000's income statement?

Deciphering 12-3 Archer Daniels Midland Company

The investing activities section of the statement of cash flows of Archer Daniels Midland Company (ADM), seller of agricultural commodities and products, is reproduced below.

ARCHER DANIELS MIDLAND COMPANY			
Consolidated Statements of Cash Flows			
Year Ended June 30			
	<u>2000</u>	<u>1999</u>	<u>1998</u>
Investing Activities			
Purchases of property, plant and equipment	\$ (428,737)	\$ (671,471)	\$ (702,683)
Net assets of businesses acquired	(30,422)	(136,021)	(370,561)
Investments in and advances to affiliates	(362,072)	(117,371)	(366,968)
Purchases of marketable securities	(1,101,100)	(635,562)	(1,202,662)
Proceeds from sales of marketable securities	912,923	1,139,466	1,007,373
Increase in other assets	(50,000)	—	—
Total Investing Activities	<u>\$(1,059,408)</u>	<u>\$ (420,959)</u>	<u>\$(1,635,501)</u>

Based on the information given, answer the following questions:

- Based on all the buying and selling activity associated with ADM's marketable securities, how do you think the company classifies the bulk of its \$2.94 billion portfolio of securities—as trading, available for sale, or held to maturity?
- Now take a look at ADM's note relating to its classification of all of its marketable securities.

Marketable Securities The Company classifies all of its marketable securities as available for sale. Available-for-sale securities are carried at fair value, with the unrealized gains and losses, net of income taxes, reported as a component of shareholders' equity.

Was your answer to (1) the same as ADM's classification policy? With the company buying and selling so many investment securities each year for the past three years, are the company's actions consistent with its classification policy? Explain.

- Finally, take a look at a portion of ADM's Consolidated Statements of Shareholders' Equity from its 2000 annual report, shown on the following page.

ARCHER DANIELS MIDLAND COMPANY
Consolidated Statements of Shareholders' Equity

	Common Stock		Reinvested Earnings	Accumulated Other Comprehensive Income (Loss)		Total Shareholders' Equity
	Shares	Amount		Foreign Currency Translation	Unrealized Net Gains (Losses) on Marketable Securities	
Balance July 1, 1997	557,874	\$ 4,192,321	\$ 1,844,744	\$ (107,434)	\$ 120,498	\$ 6,050,129
Comprehensive income						
Net earnings			403,609			
Foreign currency translation				(108,551)		
Change in unrealized net gains (losses) on marketable securities					1,187	
Total comprehensive income						296,245
Cash dividends paid—\$.17 per share			(111,551)			(111,551)
5% stock dividend	28,534	473,948	(473,948)			
Treasury stock purchases	(3,767)	(81,154)				(81,154)
Common stock issued in purchase acquisition	13,953	298,244				298,244
Other	2,627	53,290	(291)			52,999
Balance June 30, 1998	<u>599,221</u>	<u>4,936,649</u>	<u>1,662,563</u>	<u>(215,985)</u>	<u>121,685</u>	<u>6,504,912</u>
Comprehensive income						
Net earnings			265,964			
Foreign currency translation				(83,842)		
Change in unrealized net gains (losses) on marketable securities					(81,859)	
Total comprehensive income						100,263
Cash dividends paid— \$.18 per share			(117,089)			(117,089)
5% stock dividend	29,180	391,889	(391,889)			
Treasury stock purchases	(19,867)	(313,829)				(313,829)
Other	4,261	66,611	(228)			66,383
Balance June 30, 1999	<u>612,795</u>	<u>5,081,320</u>	<u>1,419,321</u>	<u>(299,827)</u>	<u>39,826</u>	<u>6,240,640</u>
Comprehensive income						
Net earnings			300,903			
Foreign currency translation				(97,030)		
Change in unrealized net gains (losses) on marketable securities					(90,646)	
Total comprehensive income						113,227
Cash dividends paid—\$.19 per share			(120,001)			(120,001)
5% stock dividend	30,109	274,473	(274,473)			
Treasury stock purchases	(17,711)	(210,911)				(210,911)
Other	7,103	87,715	(427)			87,288
Balance June 30, 2000	<u>632,296</u>	<u>\$5,232,597</u>	<u>\$1,325,323</u>	<u>\$(396,857)</u>	<u>\$(50,820)</u>	<u>\$6,110,243</u>

See notes to consolidated financial statements.

Did the company's portfolio of marketable securities experience an increase or decrease in value for fiscal 2000? How might the existence of realized gains or losses in 2000 affect your answer? If these securities had been classified as trading, where would this unrealized gain or loss have been included?

Deciphering 12-4 *Boston Celtics*

The note on the following page comes from the 1998 annual report of the Boston Celtics. Use the information contained in the note to answer the following questions:

1. The Celtics sold all of the corporate debt securities during fiscal 1998. Compute the amount for which the U.S. corporate debt securities were sold.

	<u>Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Estimated Fair Value</u>
June 30, 1998:				
U.S. government securities	\$ 1,036,086	\$ 5,360	\$ 0	\$ 1,041,446
	<u>\$ 1,036,086</u>	<u>\$ 5,360</u>	<u>\$ 0</u>	<u>\$ 1,041,446</u>
June 30, 1997:				
U.S. corporate debt securities	\$16,719,000	\$17,734	\$ (30,767)	\$16,705,967
U.S. government securities	25,917,892	42,120	(93,296)	25,866,716
	<u>\$42,636,892</u>	<u>\$59,854</u>	<u>\$(124,063)</u>	<u>\$42,572,683</u>
Gross realized gains and losses on available-for-sale securities are as follows:				
		<u>1998</u>	<u>1997</u>	
U.S. corporate debt securities				
Gross realized gains		\$ 45,249	\$ 521	
Gross realized (losses)		(33,319)	(34,805)	
U.S. government securities				
Gross realized gains		15,433	596,981	
Gross realized (losses)		(45,598)	(201,646)	
Net realized gains (losses)		<u>\$(18,235)</u>	<u>\$361,051</u>	

2. Compute the amount of gain or loss reported on the income statement for 1998. (Note: The Celtics have no trading securities.)
3. Compute the amount of net unrealized gain or loss reported in the partners' capital section of the balance sheet for 1998.

International Financial Statements

Sony

Sony Corporation was organized in 1946 under the name *Tokyo Tsushin Kogyo*. The name *Sony* is a combination of the Latin word *sonus* [sound] and the English word *sonny* and was given to a small transistor radio sold by the company in the United States starting in 1954. The radio was so popular that the entire company changed its name to Sony in 1958.

In its 2000 annual report, Sony included the following note to the financial statements:

9. Marketable securities and securities investments				
March 31, 2001				
(in millions of ¥)	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Fair Value</u>
Available for sale:				
Debt securities	¥883,571	¥ 53,264	¥ 2,396	¥ 934,439
Equity securities	45,868	32,555	8,119	70,304
Total	<u>¥929,439</u>	<u>¥ 85,819</u>	<u>¥10,515</u>	<u>¥1,004,743</u>
March 31, 2000				
(in millions of ¥)	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Fair Value</u>
Available for sale:				
Debt securities	¥697,237	¥ 40,646	¥7,268	¥730,615
Equity securities	25,759	66,905	2,594	90,070
Total	<u>¥722,996</u>	<u>¥107,551</u>	<u>¥9,862</u>	<u>¥820,685</u>

1. In the notes to its English language financial statements, Sony states that those statements “conform with accounting principles generally accepted in the United States.” However, the official accounting records of Sony are maintained using Japanese accounting principles. Why would Sony go to the trouble of preparing a separate set of English language financial statements using U.S. accounting principles?
2. How well did Sony’s investments in equity securities perform in 2000?
3. How well did Sony’s investments in debt securities perform in 2000?

Business Memo

Why Doesn’t the Gain Go on the Income Statement?

You are the controller for Chong Lai Company. You just received a very strongly worded e-mail message from the president of the company. The president has learned that a \$627,000 unrealized gain on a stock investment made by the company last year will not be reported in the income statement because you have classified the security as available for sale. With the gain, the company would report a record profit for the year. Without the gain, profits are actually down slightly from the year before. The president wants an explanation—Now!

It has been your policy for the past several years to routinely classify all investments as available for sale. Your company is not in the business of actively buying and selling stocks and bonds. Instead, all investments are made to strengthen relationships with either suppliers or major customers. As such, your practice is to buy securities and hold them for several years.

Write a one-page memo to the president explaining the rationale behind your policy of security classification.

Research

Classification of Securities

The objective of this exercise is to examine the classification practices for investments in debt and equity securities of several large companies. Your group is to obtain copies of recent annual reports for five large, publicly traded companies. Using these annual reports, examine their financial statements and note disclosures to answer the following questions:

1. How many of the five companies have investments in the securities of other firms?
2. For each of the companies that has investments, how does it classify those securities: as trading, available for sale, or held to maturity, or a combination of the three categories?
3. Do the companies provide any justification for the classification policy that they employ? That is, do the companies state how they determine if a security is to be classified as trading, available for sale, or held to maturity?
4. Examine the stockholders’ equity section of each company’s balance sheet (or a separate statement of stockholders’ equity if it is provided). Do the companies disclose any unrealized gains or losses relating to available-for-sale securities? Did the amount increase or decrease during the most recent year?
5. Can you draw any general conclusions based on your analysis of these five annual reports? Examples might include: “Most companies classify their securities as available for sale” or “Most companies have experienced unrealized gains/losses on their portfolios of trading securities during the past year.”

Ethics Dilemma

Reclassifying Securities for Gain

You are the chief financial officer (CFO) of a large manufacturing company. As CFO, you are responsible for investing excess cash in marketable securities and then handling the accounting for those securities. Your firm has a policy of classifying all securities as being available

for sale. At the end of the year, preliminary financial results indicate that your company will be slightly below targeted net income. The board of directors has given you the task of determining how income might be increased without (and the board emphasized this point) going outside the rules.

You determine that one method of increasing net income would be to classify as trading securities all securities purchased during the year that have experienced an increase in market value.

1. Would this classification achieve the desired results?
2. Do you think this classification scheme is consistent with the intent of the accounting rules?
3. If you were the company's external auditor, what questions might you have regarding this reclassification?

The Debate

Market Values Do Not Belong in the Financial Statements!

Accounting traditionalists opposed the move to report investment securities in the balance sheet at their current market value. These traditionalists complain that inclusion of market values reduces the reliability of the financial statements and introduces an unnecessary amount of variability in the reported numbers. On the other hand, supporters of reporting market values claim that market values are extremely relevant and, for investment securities traded on active markets, are reliable as well.

Divide your group into two teams.

One team represents the Market Value group. Prepare a two-minute oral presentation arguing that the market value of investment securities should be reported in the balance sheet. To do otherwise is to make the statements an anachronistic curiosity rather than a useful tool.

The other team represents the Historical Cost group. Prepare a two-minute oral presentation pleading for a return to strict historical cost in the balance sheet.

Note: Your teams are NOT to make even-handed, reasonable arguments. Each team is an advocate for a position and should do everything possible (short of lying, of course) to present a convincing case.

Cumulative Spreadsheet Project

This spreadsheet assignment is a continuation of the spreadsheet assignments given in earlier chapters. If you completed those spreadsheets, you have a head start on this one.

This assignment is based on the spreadsheet prepared in part (1) of the spreadsheet assignment for Chapter 11. Review that assignment for a summary of the assumptions made in preparing a forecasted balance sheet, income statement, and statement of cash flows for 2004 for Handyman Company. Using those financial statements, complete the following exercise.

Handyman has decided that in 2004 it will create an available-for-sale investment portfolio. Handyman plans to invest \$20 million in a variety of stocks and bonds. (Recall that the numbers in the Handyman spreadsheet are in millions.) As of the end of 2003, Handyman has no investment portfolio. Adapt your spreadsheet to include this expected \$20 million investment portfolio as a current asset in 2004. Ignore the possibility of any interest, dividends, gains, or losses on this portfolio. Answer the following questions.

1. With the assumptions built into your spreadsheet, where will Handyman get the \$20 million in funding necessary to acquire these investment securities?
2. Where in the statement of cash flows did you put the cash outflow associated with the acquisition of these investment securities? Explain your placement.

Internet Search

The history of Berkshire Hathaway was outlined at the beginning of the chapter. Access Berkshire Hathaway's Web site at www.berkshirehathaway.com. Once you've gained access to Berkshire Hathaway's Web site, answer the following questions:

1. Berkshire Hathaway is often described as primarily a holding company, which is a company that has no real operations of its own but instead holds ownership shares of other companies. However, Berkshire Hathaway has a large number of operating subsidiaries. Berkshire Hathaway's Web site offers links to a number of the subsidiaries that it holds. What are some of these subsidiaries?
2. Warren Buffett writes the best chairman's letters to shareholders in corporate America. A historical collection of these letters is included in Berkshire Hathaway's Web site. Look at the 1998 letter and find out what Warren Buffett has to say about the accounting for restructuring charges.
3. Berkshire Hathaway has two classes of common stock. What does the Web site say about the difference between the two?
4. Berkshire Hathaway is constantly making new investments. Search the Web site for recent news releases and identify the most recent investments.