

CHAPTER

1

INTRODUCTION TO FINANCIAL REPORTING

USERS OF FINANCIAL STATEMENTS INCLUDE A company's managers, stockholders, bondholders, security analysts, suppliers, lending institutions, employees, labor unions, regulatory authorities, and the general public. They use the financial reports to make decisions. For example, potential investors use the financial reports as an aid in deciding whether or not to buy the stock. Suppliers use the financial reports to decide whether or not to sell merchandise to a company on credit. Labor unions use the financial reports to help determine their demands when they negotiate for employees. Management could use the financial reports to determine the company's profitability.

Demand for financial reports exists because users believe that the reports help them in decision making. In addition to the

financial reports, users often consult competing information sources, such as new wage contracts and economy-oriented releases.

This book concentrates on using financial accounting information properly. Users must have a basic understanding of generally accepted accounting principles and traditional assumptions of the accounting model in order to recognize the limits of financial reports.

The ideas that underlie financial reports have developed over several hundred years. This development continues today to meet the needs of a changing society. A review of the evolution of generally accepted accounting principles and the traditional assumptions of the accounting model should help the reader understand the financial reports and thus analyze them better.

**DEVELOPMENT
OF GENERALLY
ACCEPTED
ACCOUNTING
PRINCIPLES
(GAAP)**

Generally accepted accounting principles (GAAP) are accounting principles that have substantial authoritative support: The accountant must be familiar with acceptable reference sources in order to decide whether any particular accounting principle has substantial authoritative support.

The formal process of developing accounting principles that exist today in the United States began with the Securities Acts of 1933 and 1934. Prior to these securities acts, the New York Stock Exchange (NYSE), which was established in 1792, was the primary mechanism for establishing specific requirements for the disclosure of financial information. These requirements could be described as minimal and only applied to corporations whose shares were listed on the NYSE. The prevailing view of management was that financial information was for management's use.

The stock market crash of 1929 provoked widespread concern about external financial disclosure. Some alleged that the stock market crash was substantially influenced by the lack of adequate financial reporting requirements to investors and creditors. The Securities Act of 1933 was designed to protect investors from abuses in financial reporting that developed in the United States. This act was intended to regulate the initial offering and sale of securities in interstate commerce.

In general, the Securities Exchange Act of 1934 was intended to regulate securities trading on the national exchanges, and it was under this authority that the **Securities and Exchange Commission (SEC)** was created. In effect, the SEC has the authority to determine GAAP and to regulate the accounting profession. The SEC has elected to leave much of the determination of GAAP and the regulation of the accounting profession to the private sector. At times, the SEC will issue its own standards.

Currently the SEC issues Regulation S-X, which describes the primary formal financial disclosure requirements for companies. The SEC also issues Financial Reporting Releases (FRRs) that pertain to financial reporting requirements. Regulation S-X and FRRs are part of GAAP and are used to give the SEC's official position on matters relating to financial statements. The formal process that exists today is a blend of the private and public sectors.

A number of parties in the private sector have played a role in the development of GAAP. The American Institute of Certified Public Accountants (AICPA) and the Financial Accounting Standards Board (FASB) have had the most influence.

American Institute of Certified Public Accountants (AICPA)

The **AICPA** is a professional accounting organization whose members are certified public accountants (CPAs). During the 1930s, the AICPA had a special committee working with the New York Stock Exchange on matters of common interest. An outgrowth of this special committee was the establishment in 1939 of two standing committees, the **Committee on Accounting Procedures** and the **Committee on Accounting Terminology**. These committees were active from 1939 to 1959 and issued 51 Accounting Research Bulletins (ARBs). These committees took a problem-by-problem approach, because they tended to review an issue only when there was a problem related to that issue. This method became known as the brushfire approach. They were only partially successful in developing a well-structured body of accounting principles. ARBs are part of GAAP.

In 1959, the AICPA replaced the two committees with the **Accounting Principles Board (APB)** and the **Accounting Research Division**. The Accounting Research Division provided research to aid the APB in making decisions regarding accounting principles. Basic postulates would be developed that would aid in the development of accounting principles, and the entire process was intended to be based on research prior to an APB decision.

However, the APB and the Accounting Research Division were not successful in formulating broad principles.

The combination of the APB and the Accounting Research Division lasted from 1959 to 1973. During this time, the Accounting Research Division issued 14 Accounting Research Studies. The APB issued 31 Opinions (APBOs) and 4 Statements (APBSs). The Opinions represented official positions of the Board, whereas the Statements represented the views of the Board but not the official opinions. APBOs are part of GAAP.

Various sources, including the public, generated pressure to find another way of developing GAAP. In 1972, a special study group of the AICPA recommended another approach—the establishment of the **Financial Accounting Standards Board (FASB)**. The AICPA adopted these recommendations in 1973.

Financial Accounting Standards Board (FASB)

The structure of the FASB is as follows: A panel of electors is selected from nine organizations. They are the AICPA, the Financial Executives Institute, the Institute of Management Accountants, the Financial Analysts Federation, the American Accounting Association, the Security Industry Association, and three not-for-profit organizations. The electors appoint the board of trustees that governs the **Financial Accounting Foundation (FAF)**. There are 16 trustees.

The FAF appoints the **Financial Accounting Standards Advisory Council (FASAC)** and the FASB. The FAF also is responsible for funding the FASAC and the FASB.

There are approximately 30 members of the FASAC. This relatively large number is to obtain representation from a wide group of interested parties. The FASAC is responsible for advising the FASB. There are seven members of the FASB. Exhibit 1-1 illustrates the structure of the FASB.

The FASB issues four types of pronouncements:

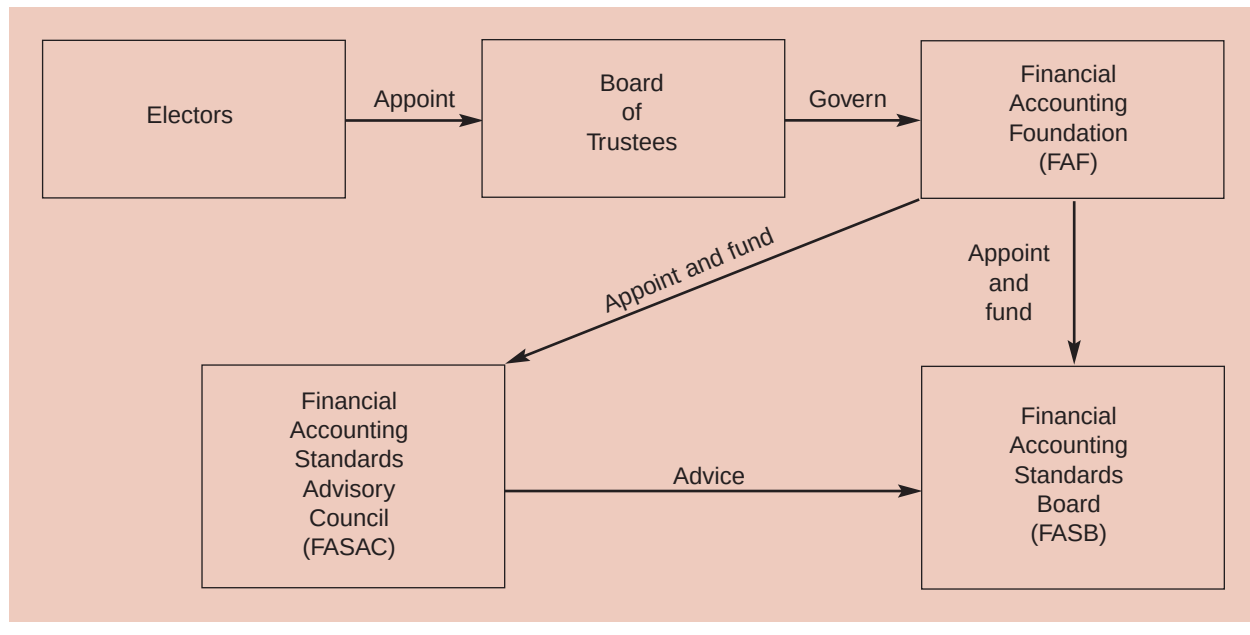
1. **Statements of Financial Accounting Standards (SFASs).** These Statements establish GAAP for specific accounting issues.
2. **Interpretations.** These pronouncements provide clarifications to previously issued standards, including SFASs, APB Opinions, and Accounting Research Bulletins. The interpretations have the same authority and require the same majority votes for passage as standards (a supermajority of five or more of the seven members). Interpretations are part of GAAP.
3. **Technical bulletins.** These bulletins provide timely guidance on financial accounting and reporting problems. They may be used when the effect will not cause a major change in accounting practice for a number of companies and when they do not conflict with any broad fundamental accounting principle. Technical bulletins are part of GAAP.
4. **Statements of Financial Accounting Concepts (SFACs).** These Statements provide a theoretical foundation upon which to base GAAP. They are the output of the FASB's Conceptual Framework project, but they are not part of GAAP.

Operating Procedure for Statements of Financial Accounting Standards (SFAS)

The process of considering a SFAS begins when the Board elects to add a topic to its technical agenda. The Board receives suggestions and advice on topics from many sources, including the FASAC, the SEC, the AICPA, and industry organizations.

EXHIBIT 1-1

STRUCTURE OF THE FASB



For its technical agenda, the Board considers only “broken” items. In other words, the Board must be convinced that a major issue needs to be addressed in a new area or an old issue needs to be reexamined.

The Board must rely on staff members for the day-to-day work on projects. A project is assigned a staff project manager, and informal discussions frequently take place among Board members, the staff project manager, and staff. In this way, Board members gain an understanding of the accounting issues and the economic relationships that underlie those issues.

On projects with a broad impact, a **Discussion Memorandum (DM)** or an **Invitation to Comment** is issued. A Discussion Memorandum presents all known facts and points of view on a topic. An Invitation to Comment sets forth the Board’s tentative conclusions on some issues related to the topic or represents the views of others.

The Discussion Memorandum or Invitation to Comment is distributed as a basis for public comment. There is usually a 60-day period for written comments, followed by a public hearing. A transcript of the public hearing and the written comments become part of the public record. Then the Board begins deliberations on an **Exposure Draft (ED)** of a proposed Statement of Financial Accounting Standards. When completed, the Exposure Draft is issued for public comment. The Board may call for written comments only, or it may announce another public hearing. After considering the written comments and the public hearing comments, the Board resumes deliberations in one or more public Board meetings. The final Statement must receive affirmative votes from five of the seven members of the Board. The Rules of Procedure require dissenting Board members to set forth their reasons in the Statement. Developing a Statement on a major project generally takes at least two years, sometimes much longer. Some people believe that the time should be shortened to permit faster decision making.

The FASB standard-setting process includes aspects of accounting theory and political aspects. Many organizations, companies, and individuals have input into the process. Some

input is directed toward achieving a standard less than desirable in terms of a strict accounting perspective. Often the end result is a standard that is not the best representation of economic reality.

FASB Conceptual Framework

The Conceptual Framework for Accounting and Reporting was on the agenda of the FASB from its inception in 1973. The Framework is intended to set forth a system of inter-related objectives and underlying concepts that will serve as the basis for evaluating existing standards of financial accounting and reporting.

Under this project, the FASB has established a series of pronouncements, **Statements of Financial Accounting Concepts (SFACs)**, intended to provide the Board with a common foundation and the basic reasons for considering the merits of various alternative accounting principles. SFACs do *not* establish GAAP; rather, the FASB eventually intends to evaluate current principles in terms of the concepts established.

To date, the Framework project has issued seven Concept Statements:

1. *Statement of Financial Accounting Concepts No. 1*, “Objectives of Financial Reporting by Business Enterprises.”
2. *Statement of Financial Accounting Concepts No. 2*, “Qualitative Characteristics of Accounting Information.”
3. *Statement of Financial Accounting Concepts No. 3*, “Elements of Financial Statements of Business Enterprises.”
4. *Statement of Financial Accounting Concepts No. 4*, “Objectives of Financial Reporting by Nonbusiness Organizations.”
5. *Statement of Financial Accounting Concepts No. 5*, “Recognition and Measurement in Financial Statements of Business Enterprises.”
6. *Statement of Financial Accounting Concepts No. 6*, “Elements of Financial Statements” (a replacement of No. 3).
7. *Statement of Financial Accounting Concepts No. 7*, “Using Cash Flow Information and Present Value in Accounting Measurements.”

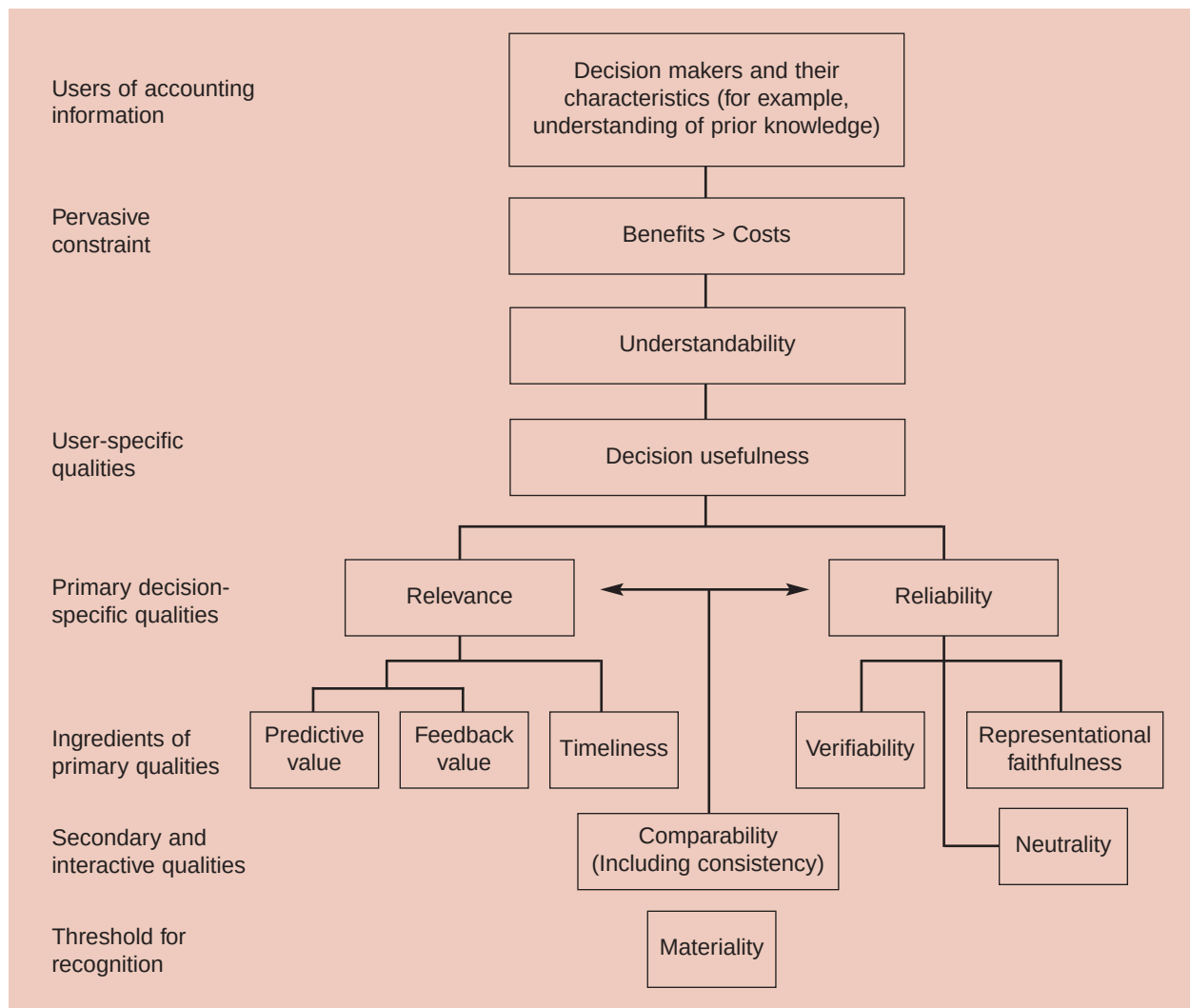
SFAC No. 7, issued in February 2000, provides general principles for using present values for accounting measurements. It describes techniques for estimating cash flows and interest rates and applying present value in measuring liabilities.

Concepts Statement No. 1, issued in 1978, deals with identifying the objectives of financial reporting for business entities and establishes the focus for subsequent concept projects for business entities. Concepts Statement No. 1 pertains to general-purpose external financial reporting and is not restricted to financial statements. Listed below is a summary of the highlights of Concepts Statement No. 1.¹

1. Financial reporting is intended to provide information useful in making business and economic decisions.
2. The information should be comprehensible to those having a reasonable understanding of business and economic activities. These individuals should be willing to study the information with reasonable diligence.
3. Financial reporting should be helpful to users in assessing the amounts, timing, and uncertainty of future cash flows.
4. The primary focus is information about earnings and its components.
5. Information should be provided about the economic resources of an enterprise and the claims against those resources.

Issued in May 1980, “Qualitative Characteristics of Accounting Information” (SFAC No. 2) examines the characteristics that make accounting information useful for investment, credit, and similar decisions. Those characteristics of information that make it a desirable commodity can be viewed as a hierarchy of qualities, with *understandability* and *usefulness for decision making* of most importance. See Exhibit 1-2.

Relevance and **reliability**, the two primary qualities, make accounting information useful for decision making. To be relevant, the information needs to have *predictive* and feedback value and must be *timely*. To be reliable, the information must be *verifiable*, subject to representational faithfulness, and *neutral*. **Comparability**, which includes consistency, interacts with relevance and reliability to contribute to the usefulness of information.

EXHIBIT 1-2
A HIERARCHY OF ACCOUNTING QUALITIES


Source: “Qualitative Characteristics of Accounting Information.” Adapted from Figure 1 in FASB Statement of Financial Accounting Concepts No. 2 (Stamford, CT: Financial Accounting Standards Board, 1980).

The hierarchy includes *two constraints*. To be useful and worth providing, the information should have *benefits that exceed its cost*. In addition, all of the qualities of information shown are *subject to a materiality threshold*.

SFAC No. 6, “Elements of Financial Statements,” which replaced SFAC No. 3 in 1985, defines ten interrelated elements directly related to measuring performance and financial status of an enterprise. The ten elements are defined as follows:²

1. **Assets.** Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.
2. **Liabilities.** Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.
3. **Equity.** Equity is the residual interest in the assets of an entity that remains after deducting its liabilities:

$$\text{Equity} = \text{Assets} - \text{Liabilities}$$

4. **Investments by owners.** Investments by owners are increases in equity of a particular business enterprise resulting from transfers to the enterprise from other entities of something of value to obtain or increase ownership interests (or equity) in it. Assets, most commonly received as investments by owners, may also include services or satisfaction or conversion of liabilities of the enterprise.
5. **Distribution to owners.** Distribution to owners is a decrease in equity of a particular business enterprise resulting from transferring assets, rendering services, or incurring liabilities by the enterprise to owners. Distributions to owners decrease ownership interest (or equity) in an enterprise.
6. **Comprehensive income.** Comprehensive income is the change in equity (net assets) of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners.
7. **Revenues.** Revenues are inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity’s ongoing major or central operations.
8. **Expenses.** Expenses are outflows or other consumption or using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity’s ongoing major or central operations.
9. **Gains.** Gains are increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period except those that result from revenues or investments by owners.
10. **Losses.** Losses are decreases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period except those that result from expenses or distributions to owners.

“Objectives of Financial Reporting by Nonbusiness Organizations” (SFAC No. 4) was completed in 1980. Organizations that fall within the focus of this statement include churches, foundations, and human-service organizations. Performance indicators for nonbusiness organizations include formal budgets and donor restrictions. These types of indicators are not ordinarily related to competition in markets.

Issued in 1984, “Recognition and Measurement in Financial Statements of Business Enterprises” (SFAC No. 5) indicates that an item, to be recognized, should meet four criteria, subject to the cost-benefit constraint and materiality threshold:³

1. **Definition.** The item fits one of the definitions of the elements.
2. **Measurability.** The item has a relevant attribute measurable with sufficient reliability.
3. **Relevance.** The information related to the item is relevant.
4. **Reliability.** The information related to the item is reliable.

This concept statement identifies *five* different *measurement attributes* currently used in practice and recommends the composition of a full set of financial statements for a period.

The following are five different measurement attributes currently used in practice:⁴

1. Historical cost (historical proceeds)
2. Current cost
3. Current market value
4. Net realizable (settlement) value
5. Present (or discounted) value of future cash flows

This concept statement probably accomplished little, relating to measurement attributes, because a firm, consistent position on recognition and measurement could not be agreed upon. It states: “Rather than attempt to select a single attribute and force changes in practice so that all classes of assets and liabilities use that attribute, this concept statement suggests that use of different attributes will continue.”⁵

SFAC No. 5 recommended that a full set of financial statements for a period should show the following:⁶

1. Financial position at the end of the period
2. Earnings (net income)
3. Comprehensive income (total nonowner change in equity)
4. Cash flows during the period
5. Investments by and distributions to owners during the period

At the time of issuance of SFAC No. 5, financial position at the end of the period and earnings (net income) were financial statements being presented. Comprehensive income, cash flows during the period, and investments by and distributions to owners during the period are financial statements (disclosures) that have been subsequently developed. All of these financial statements (disclosures) will be extensively covered in this book.

The FASB Conceptual Framework for Accounting and Reporting project represents the most extensive effort undertaken to provide a conceptual framework for financial accounting. Potentially, the project can have a significant influence on financial accounting.

**ADDITIONAL
INPUT—
AMERICAN
INSTITUTE OF
CERTIFIED
PUBLIC
ACCOUNTANTS
(AICPA)**

As indicated earlier, the AICPA played the primary role in the private sector in establishing GAAP prior to 1973. However, the AICPA continues to play a substantial part, primarily through its Accounting Standards Division. The Accounting Standards Executive Committee (AcSEC) serves as the official voice of the AICPA in matters relating to financial accounting and reporting standards.

The Accounting Standards Division publishes numerous documents considered as sources of GAAP. These include Industry Audit Guides, Industry Accounting Guides, and Statements of Position (SOPs).

Industry Audit Guides and Industry Accounting Guides are designed to assist auditors in examining and reporting on financial statements of companies in specialized industries, such as insurance. SOPs are issued to influence the development of accounting standards. Some SOPs are revisions or clarifications to recommendations on accounting standards contained in Industry Audit Guides and Industry Accounting Guides.

Industry Audit Guides, Industry Accounting Guides, and SOPs are considered a lower level of authority than FASB Statements of Financial Accounting Standards (SFASs), FASB Interpretations, APB Opinions, and Accounting Research Bulletins. However, since the Industry Audit Guides, Industry Accounting Guides, and SOPs deal with material not covered in the primary sources, they, in effect, become the guide to standards for the areas they cover. They are part of GAAP.

EMERGING ISSUES TASK FORCE (EITF)

The FASB established the Emerging Issues Task Force (EITF) in July 1984 to help identify emerging issues affecting reporting and problems in implementing authoritative pronouncements. The Task Force has 15 members—senior technical partners of major national CPA firms and representatives of major associations of preparers of financial statements. The FASB's Director of Research and Technical Activities serves as Task Force chairperson. The SEC's Chief Accountant and the chairperson of the AICPA's Accounting Standards Executive Committee participate in Task Force meetings as observers.

The SEC's Chief Accountant has stated that any accounting that conflicts with the position of a consensus of the Task Force would be challenged. Agreement of the Task Force is recognized as a consensus if no more than two members disagree with a position.

Task Force meetings are held about once every six weeks. Issues come to the Task Force from a variety of sources, including the EITF members, the SEC, and other federal agencies. The FASB also brings issues to the EITF in response to issues submitted by auditors and preparers of financial statements.

The EITF statements have become a very important source of GAAP. The Task Force has the capability to review a number of issues within a relatively short period of time, in contrast to the lengthy deliberations that go into an SFAS.

EITF statements are considered to be less authoritative than the sources previously discussed in this chapter. However, since EITF addresses issues not covered by the other sources, its statements become important guidelines to standards for the areas they cover.

TRADITIONAL ASSUMPTIONS OF THE ACCOUNTING MODEL

The FASB's Conceptual Framework was influenced by several underlying assumptions. Some of these assumptions were addressed in the Conceptual Framework, and others are implicit in the Framework. These assumptions, along with the Conceptual Framework, are considered when a GAAP is established. Accountants, when confronted with a situation lacking an explicit standard, should resolve the situation by considering the Conceptual Framework and the traditional assumptions of the accounting model.

In all cases, the reports are to be a "fair representation." Even when there is an explicit GAAP, following the GAAP is not appropriate unless the end result is a "fair representation." Following GAAP is not an appropriate legal defense unless the statements represent a "fair representation."

Business Entity

The concept of separate **entity** means that the business or entity for which the financial statements are prepared is separate and distinct from the owners of the entity. In other words, the entity is viewed as an economic unit that stands on its own.

For example, an individual may own a grocery store, a farm, and numerous personal assets. To determine the economic success of the grocery store, we would view it separately from the other resources owned by the individual. The grocery store would be treated as a separate entity.

A corporation such as the Ford Motor Company has many owners (stockholders). The entity concept enables us to account for the Ford Motor Company entity separately from the transactions of the owners of the Ford Motor Company.

Going Concern or Continuity

The **going-concern assumption**, that the entity in question will remain in business for an indefinite period of time, provides perspective on the future of the entity. The going-concern assumption deliberately disregards the possibility that the entity will go bankrupt or be liquidated. If a particular entity is in fact threatened with bankruptcy or liquidation, then the going-concern assumption should be dropped. In such a case, the reader of the financial statements is interested in the liquidation values, not the values that can be used when making the assumption that the business will continue indefinitely. If the going-concern assumption has not been used for a particular set of financial statements, because of the threat of liquidation or bankruptcy, the financial statements must clearly disclose that the statements were prepared with the view that the entity will be liquidated or that it is a failing concern. In this case, conventional financial report analysis would not apply.

Many of our present financial statement figures would be misleading if it were not for the going-concern assumption. For instance, under the going-concern assumption, the value of prepaid insurance is computed by spreading the cost of the insurance over the period of the policy. If the entity were liquidated, then only the cancellation value of the policy would be meaningful. Inventories are basically carried at their accumulated cost. If the entity were liquidated, then the amount realized from the sale of the inventory, in a manner other than through the usual channels, usually would be substantially less than the cost. Therefore, to carry the inventory at cost would fail to recognize the loss that is represented by the difference between the liquidation value and the cost.

The going-concern assumption also influences liabilities. If the entity were liquidating, some liabilities would have to be stated at amounts in excess of those stated on the conventional statement. Also, the amounts provided for warranties and guarantees would not be realistic if the entity were liquidating.

The going-concern assumption also influences the classification of assets and liabilities. Without the going-concern assumption, all assets and liabilities would be current, with the expectation that the assets would be liquidated and the liabilities paid in the near future.

The audit opinion for a particular firm may indicate that the auditors have reservations as to the going-concern status of the firm. This puts the reader on guard that the statements are misleading if the firm does not continue as a going concern. For example, the 1994 annual report of Brown Disc Products Company indicated a concern over the company's ability to continue as a going concern.

The Brown Disc Products Company's annual report included these comments in Note 1 and the auditor's report.

Note 1 (in Part)

BASIS OF PRESENTATION—The accompanying financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and the liquidation of liabilities in the normal course of business. However, Brown Disc has sustained substantial operating losses in recent years. In addition, total liabilities exceed total assets as of June 30, 1994. These factors, among others, adversely affect the ability of Brown Disc to continue as a going concern. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amount and classification of liabilities that might be necessary should Brown Disc be unable to continue as a going concern.

Auditor's Report (in Part)

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company emerged from bankruptcy proceedings on May 5, 1993. The Company had a net capital deficiency as of June 30, 1994, and losses have continued subsequent to emerging from bankruptcy. These factors, among others, raise substantial doubt about its ability to continue as a going concern. Management's plans concerning these matters are also described in Note 1. The financial statements do not include any adjustments that might arise from the outcome of this uncertainty.

Time Period

The only accurate way to account for the success or failure of an entity is to accumulate all transactions from the opening of business until the business eventually liquidates. Many years ago, this time period for reporting was acceptable, because it would be feasible to account for and divide up what remained at the completion of the venture. Today, the typical business has a relatively long duration, so it is not feasible to wait until the business liquidates before accounting for its success or failure.

This presents a problem: Accounting for the success or failure of the business in midstream involves inaccuracies. Many transactions and commitments are incomplete at any particular time between the opening and the closing of business. An attempt is made to eliminate the inaccuracies when statements are prepared for a period of time short of an entity's life span, but the inaccuracies cannot be eliminated completely. For example, the entity typically carries accounts receivable at the amount expected to be collected. Only when the receivables are collected can the entity account for them accurately. Until receivables are collected, there exists the possibility that collection cannot be made. The entity will have outstanding obligations at any time, and these obligations cannot be accurately accounted for until they are met. An example would be a warranty on products sold. An entity may also have a considerable investment in the production of inventories. Usually, until the inventory is sold in the normal course of business, the entity cannot accurately account for the investment in inventory.

With the time period assumption, we accept some inaccuracies of accounting for the entity short of its complete life span. We assume that the entity can be accounted for with reasonable accuracy for a particular period of time. In other words, the decision is made to accept some inaccuracy, because of incomplete information about the future, in exchange for more timely reporting.

Some businesses select an accounting period, known as a **natural business year**, that ends when operations are at a low ebb in order to facilitate a better measurement of income

and financial position. Other businesses use the **calendar year** and thus end the accounting period on December 31. Some select a 12-month accounting period, known as a **fiscal year**, which closes at the end of a month other than December. The accounting period may be shorter than a year, such as a month. The shorter the period of time, the more inaccuracies we typically expect in the reporting.

Monetary Unit

Accountants need some standard of measure to bring financial transactions together in a meaningful way. Without some standard of measure, accountants would be forced to report in such terms as 5 cars, 1 factory, and 100 acres. This type of reporting would not be very meaningful.

There are a number of standards of measure, such as a yard, a gallon, and money. Of the possible standards of measure, accountants have concluded that money is the best for the purpose of measuring financial transactions.

Different countries call their monetary units by different names: Germany uses the **mark**, France uses the **franc**, and Japan uses the **yen**. Different countries also attach different values to their money—1 mark is not equal to 1 yen. Thus, financial transactions may be measured in terms of money in each country, but the statements from various countries cannot be compared directly or added together until they are converted to a common monetary unit, such as the U.S. dollar.

In various countries, the stability of the monetary unit has been a problem. The loss in value of money is called **inflation**. In some countries, inflation has been more than 300% per year. In countries where inflation has been significant, financial statements are adjusted by an inflation factor that restores the significance of money as a measuring unit. However, a completely acceptable restoration of money as a measuring unit cannot be made in such cases because of the problems involved in determining an accurate index. To indicate one such problem, consider the price of a car in 1991 and in 2001. The price of the car in 2001 would be higher, but the explanation would not be simply that the general price level has increased. Part of the reason for the price increase would be that the type and quality of the equipment have changed between 1991 and 2001. Thus, an index that relates the 2001 price to the 1991 price is a mixture of inflation, technological advancement, and quality changes.

The rate of inflation in the United States prior to the 1970s was relatively low. Therefore, it was thought that an adjustment of money as a measuring unit was not appropriate, because the added expense and inaccuracies of adjusting for inflation were greater than the benefits. During the 1970s, however, the United States experienced double-digit inflation. This made it increasingly desirable to implement some formal recognition of inflation.

In September 1979, the FASB issued *Statement of Financial Accounting Standards No. 33*, “Financial Reporting and Changing Prices,” which required that certain large, publicly held companies disclose certain supplementary information concerning the impact of changing prices in their annual reports for fiscal years ending on or after December 25, 1979. This disclosure later became optional in 1986. Currently no U.S. company provides this supplementary information.

Historical Cost

SFAC No. 5 identified five different measurement attributes currently used in practice: historical cost, current cost, current market value, net realizable value, and present value. Often, historical cost is used in practice because it is objective and determinable. A deviation

from historical cost is accepted when it becomes apparent that the historical cost cannot be recovered. This deviation is justified by the conservatism concept. A deviation from historical cost is also found in practice where specific standards call for another measurement attribute such as current market value, net realizable value, or present value.

Conservatism

The accountant is often faced with a choice of different measurements of a situation, with each measurement having reasonable support. According to the concept of **conservatism**, the accountant must select the measurement with the least favorable effect on net income and financial position in the current period.

To apply the concept of conservatism to any given situation, there must be alternative measurements, each of which must have reasonable support. The accountant cannot use the conservatism concept to justify arbitrarily low figures. For example, writing inventory down to an arbitrarily low figure in order to recognize any possible loss from selling the inventory constitutes inaccurate accounting and cannot be justified under the concept of conservatism. An acceptable use of conservatism would be to value inventory at the lower of historical cost or market value.

The conservatism concept is used in many other situations, such as writing down or writing off obsolete inventory prior to sale, recognizing a loss on a long-term construction contract when it can be reasonably anticipated, and taking a conservative approach in determining the application of overhead to inventory. In estimating the lives of fixed assets, a conservative view is taken. Conservatism requires that the estimate of warranty expense reflects the least favorable effect on net income and the financial position of the current period.

Realization

Accountants face a problem of when to recognize revenue. All parts of an entity contribute to revenue, including the janitor, the receiving department, and the production employees. The problem becomes how to determine objectively the contribution of each of the segments toward revenue. Since this is not practical, accountants must determine *when* it is practical to recognize revenue.

In practice, revenue recognition has been the subject of much debate. This has resulted in fairly wide interpretations. The issue of revenue recognition has represented the basis of many SEC enforcement actions. In general, the point of recognition of revenue should be the point in time when revenue can be reasonably and objectively determined. It is essential that there be some uniformity regarding when revenue is recognized, so as to make financial statements meaningful and comparable.

Point of Sale Revenue is usually recognized at the point of sale. At this time, the earning process is virtually complete, and the exchange value can be determined.

There are times when the use of the point-of-sale approach does not give a fair result. An example would be the sale of land on credit to a buyer who does not have a reasonable ability to pay. If revenue were recognized at the point of sale, there would be a reasonable chance that sales had been overstated because of the material risk of default. In such cases, there are other acceptable methods of recognizing revenue that should be considered, such as the following:

1. End of production
2. Receipt of cash

3. Revenue recognized during production
4. Cost recovery

End of Production The recognition of revenue at the completion of the production process is acceptable when the price of the item is known and there is a ready market. The mining of gold or silver is an example, and the harvesting of some farm products would also fit these criteria. If corn is harvested in the fall and held over the winter in order to obtain a higher price in the spring, the realization of revenue from the growing of corn should be recognized in the fall, at the point of harvest. The gain or loss from the holding of the corn represents a separate consideration from the growing of the corn.

Receipt of Cash The receipt of cash is another basis for revenue recognition. This method should be used when collection is not capable of reasonable estimation at the time of sale. The land sales business, where the purchaser makes only a nominal down payment, is one type of business where the collection of the full amount is especially doubtful. Experience has shown that many purchasers default on the contract.

During Production Some long-term construction projects recognize revenue as the construction progresses. This exception tends to give a fairer picture of the results for a given period of time. For example, in the building of a utility plant, which may take several years, recognizing revenue as work progresses gives a fairer picture of the results than does having the entire revenue recognized in the period when the plant is completed.

Cost Recovery The cost recovery approach is acceptable for highly speculative transactions. For example, an entity may invest in a venture search for gold, the outcome of which is completely unpredictable. In this case, the first revenue can be handled as a return of the investment. If more is received than has been invested, the excess would be considered revenue.

In addition to the methods of recognizing revenue described in this chapter, there are many other methods that are usually industry specific. Being aware of the method(s) used by a specific firm can be important to your understanding of the financial reports.

Matching

The revenue realization concept involves when to recognize revenue. Accountants need a related concept that addresses when to recognize the costs associated with the recognized revenue: the **matching concept**. The basic intent is to determine the revenue first and then match the appropriate costs against this revenue.

Some costs, such as the cost of inventory, can be easily matched with revenue. When we sell the inventory and recognize the revenue, the cost of the inventory can be matched against the revenue. Other costs have no direct connection with revenue, so some systematic policy must be adopted in order to allocate these costs reasonably against revenues. Examples are research and development costs and public relations costs. Both research and development costs and public relations costs are charged off in the period incurred. This is inconsistent with the matching concept because the cost would benefit beyond the current period, but it is in accordance with the concept of conservatism.

Consistency

The **consistency concept** requires the entity to give the same treatment to comparable transactions from period to period. This adds to the usefulness of the reports, since the

reports from one period are comparable to the reports from another period. It also facilitates the detection of trends.

Many accounting methods could be used for any single item, such as inventory. If inventory were determined in one period on one basis and in the next period on a different basis, the resulting inventory and profits would not be comparable from period to period.

Entities sometimes need to change particular accounting methods in order to adapt to changing environments. If the entity can justify the use of an alternative accounting method, the change can be made. The entity must be ready to defend the change—a responsibility that should not be taken lightly in view of the liability for misleading financial statements. Sometimes the change will be based on a new accounting pronouncement. When an entity makes a change in accounting methods, the justification for the change must be disclosed, along with an explanation of the effect on the statements.

Full Disclosure

The accounting reports must disclose all facts that may influence the judgment of an informed reader. If the entity uses an accounting method that represents a departure from the official position of the FASB, disclosure of the departure must be made, along with the justification for it.

Several methods of disclosure exist, such as parenthetical explanations, supporting schedules, cross-references, and footnotes. Often, the additional disclosures must be made by a footnote in order to explain the situation properly. For example, details of a pension plan, long-term leases, and provisions of a bond issue are often disclosed in footnotes.

The financial statements are expected to summarize significant financial information. If all the financial information is presented in detail, it could be misleading. Excessive disclosure could violate the concept of full disclosure. Therefore, a reasonable summarization of financial information is required.

Because of the complexity of many businesses and the increased expectations of the public, full disclosure has become one of the most difficult concepts for the accountant to apply. Lawsuits frequently charge accountants with failure to make proper disclosure. Since disclosure is often a judgment decision, it is not surprising that others (especially those who have suffered losses) would disagree with the adequacy of the disclosure.

Materiality

The accountant must consider many concepts and principles when determining how to handle a particular item. The proper use of the various concepts and principles may be costly and time-consuming. The **materiality concept** involves the relative size and importance of an item to a firm. A material item to one entity may not be material to another. For example, an item that costs \$100 might be expensed by General Motors, but the same item might be carried as an asset by a small entity.

It is essential that material items be properly handled on the financial statements. Immaterial items are not subject to the concepts and principles that bind the accountant. They may be handled in the most economical and expedient manner possible. However, the accountant faces a judgment situation when determining materiality. It is better to err in favor of an item being material than the other way around.

A basic question when determining whether an item is material is: “Would this item influence an informed reader of the financial statements?” In answering this question, the accountant should consider the statements as a whole.

Industry Practices

Some industry practices lead to accounting reports that do not conform to the general theory that underlies accounting. Some of these practices are the result of government regulation. For example, some differences can be found in highly regulated industries, such as insurance, railroad, and utilities.

In the utility industry, an allowance for funds used during the construction period of a new plant is treated as part of the cost of the plant. The offsetting amount is reflected as other income. This amount is based on the utility's hypothetical cost of funds, including funds from debt and stock. This type of accounting is found only in the utility industry.

In some industries, it is very difficult to determine the cost of the inventory. Examples include the meat-packing industry, the flower industry, and farming. In these areas, it may be necessary to determine the inventory value by working backward from the anticipated selling price and subtracting the estimated cost to complete and dispose of the inventory. The inventory would thus be valued at a net realizable value, which would depart from the cost concept and the usual interpretation of the revenue realization concept. If inventory is valued at net realizable value, then the profit has already been recognized and is part of the inventory amount.

The accounting profession is making an effort to reduce or eliminate specific industry practices. However, industry practices that depart from typical accounting procedures will probably never be eliminated completely. Some industries have legitimate peculiarities that call for accounting procedures other than the customary ones.

Transaction Approach

The accountant records only events that affect the financial position of the entity and, at the same time, can be reasonably determined in monetary terms. For example, if the entity purchases merchandise on account (on credit), the financial position of the entity changes. This change can be determined in monetary terms as the inventory asset is obtained and the liability, accounts payable, is incurred.

Many important events that influence the prospects for the entity are not recorded and, therefore, are not reflected in the financial statements because they fall outside the transaction approach. The death of a top executive could have a material influence on future prospects, especially for a small company. One of the company's major suppliers could go bankrupt at a time when the entity does not have an alternative source. The entity may have experienced a long strike by its employees or have a history of labor problems. A major competitor may go out of business. All these events may be significant to the entity. They are not recorded because they are not transactions. When projecting the future prospects of an entity, it is necessary to go beyond current financial reports.

Cash Basis

The **cash basis** recognizes revenue when cash is received and recognizes expenses when cash is paid. The cash basis usually does *not* provide reasonable information about the earning capability of the entity in the short run. Therefore, the cash basis is usually *not* acceptable.

Accrual Basis

The **accrual basis** of accounting recognizes revenue when realized (realization concept) and expenses when incurred (matching concept). If the difference between the

accrual basis and the cash basis is not material, the entity may use the cash basis as an alternative to the accrual basis for income determination. Usually, the difference between the accrual basis and the cash basis is material.

A modified cash basis is sometimes used by professional practices and service organizations. The modified cash basis adjusts for such items as buildings and equipment.

The accrual basis requires numerous adjustments at the end of the accounting period. For example, if insurance has been paid for in advance, the accountant must determine the amounts that belong in prepaid insurance and insurance expense. If employees have not been paid all of their wages, the unpaid wages must be determined and recorded as an expense and as a liability. If revenue has been collected in advance, such as rent received in advance, this revenue relates to future periods and must, therefore, be deferred to those periods. At the end of the accounting period, the unearned rent would be considered a liability.

The use of the accrual basis complicates the accounting process, but the end result is more representative of an entity's financial condition than the cash basis. Without the accrual basis, accountants would not usually be able to make the time period assumption—that the entity can be accounted for with reasonable accuracy for a particular period of time.

The following illustration indicates why the accrual basis is generally regarded as a better measure of a firm's performance than the cash basis.

Assumptions:

1. Sold merchandise (inventory) for \$25,000 on credit this year. The merchandise cost \$12,500 when purchased in the prior year.
2. Purchased merchandise this year in the amount of \$30,000 on credit.
3. Paid suppliers of merchandise \$18,000 this year.
4. Collected \$15,000 from sales.

Accrual Basis		Cash Basis	
Sales	\$ 25,000	Receipts	\$ 15,000
Cost of sales (expenses)	(12,500)	Expenditures	(18,000)
Income	<u>\$ 12,500</u>	Loss	<u>\$ (3,000)</u>

The accrual basis indicates a profitable business, whereas the cash basis indicates a loss. The cash basis does not reasonably indicate when the revenue was earned or when to recognize the cost that relates to the earned revenue. The cash basis does indicate when the receipts and payments (disbursements) occurred. The points in time when cash is received and paid do not usually constitute a good gauge of profitability. However, knowing the points in time is important; the flow of cash will be presented in a separate financial statement (statement of cash flows).

In practice, the accrual basis is modified. Immaterial items are frequently handled on a cash basis, and some specific standards have allowed the cash basis.

USING THE INTERNET

The **Internet** is a global collection of computer networks linked together and available for your use. Information passes easily among these networks because all connected networks use a common communication protocol. The Internet includes local, regional, national, and international backbone networks.

There are many reasons for using the Internet. Some of these reasons include: (1) retrieving information, (2) finding information, (3) sending and receiving electronic mail, (4) conducting research, and (5) accessing information databases.

Companies' Internet Web Sites

The majority of publicly held companies in the United States have established a web site on the Internet. The contents of these web sites vary. A few companies only provide advertisements and product information. In these cases, a phone number may be given to order more information. Other companies provide limited financial information, such as total revenues, net income, and earnings per share. These companies may also provide advertisements and a phone number for more information. The majority of companies provide comprehensive financial information and possibly advertisements. The comprehensive financial information may include the annual report and quarterly reports. It may also include the current stock price and the history of the stock price.

Helpful Web Sites

There are a number of web sites that can be very useful when performing analysis. Many of these web sites have highlighted text or graphics that can be clicked to go to another related site. Several excellent web sites follow:

1. SEC Edgar Database
www.sec.gov
The Securities and Exchange Commission provides a web site that includes its Edgar Database. This site allows users to download publicly available electronic filings submitted to the SEC from 1994 to the present. By citing the company name, you can select from a menu of recent filings. This will include the 10-K report and the 10-Q.
2. Rutgers Accounting Web
www.rutgers.edu/accounting/
This site provides links to many other accounting sites. RAW provides rapid access to many accounting sites without separately targeting each site. These include Edgar, the International Accounting Network, and many other accounting resources. Accounting organizations include the American Accounting Association, American Institute of Certified Public Accountants, and Institute of Management Accountants.
3. Report Gallery
www.reportgallery.com
This site lists web sites and annual reports of publicly traded companies.
4. Financial Accounting Standards Board (FASB)
www.fasb.org
Many useful items can be found here including publications, technical projects, and international activities.
5. General Services Administration
www.info.gov
This site serves as an entry point to find state, federal, and foreign government information.
6. IBM investor resources site
www.ibm.com/investor
This site attempts to give a good understanding of financials. There are many education-related items at this site. It includes a glossary and Internet links.
7. Yahoo Finance
www.finance.yahoo.com
There are over 8,000 message board topics. This is an especially good financial site.
8. Virtual Finance Library
www.cob.ohio-state.edu/dept/fin/
Contains substantial financial information.

9. Financial markets/stock exchanges
 - a. American Stock Exchange
www.amex.com
 - b. Chicago Mercantile Exchange
www.cme.com
 - c. NASDAQ Stock Market
www.nasdaq.com
 - d. New York Stock Exchange
www.nyse.com

The contents of the financial markets/stock exchange sites vary and are expanding.

SUMMARY

This chapter has reviewed the development of generally accepted accounting principles (GAAP) and the traditional assumptions of the accounting model. You need a broad understanding of GAAP and the traditional assumptions to reasonably understand financial reports. The financial reports can be no better than the accounting principles and the assumptions of the accounting model that are the basis for preparation.

QUESTIONS

- Q 1-1.** Discuss the role of each of the following in the formulation of accounting principles:
 - a. American Institute of Certified Public Accountants
 - b. Financial Accounting Standards Board
 - c. Securities and Exchange Commission
- Q 1-2.** How does the concept of consistency aid in the analysis of financial statements? What type of accounting disclosure is required if this concept is not applied?
- Q 1-3.** The president of your firm, Lesky and Lesky, has little background in accounting. Today he walked into your office and said, "A year ago we bought a piece of land for \$100,000. This year inflation has driven prices up by 6%, and an appraiser just told us we could easily resell the land for \$115,000. Yet our balance sheet still shows it at \$100,000. It should be valued at \$115,000. That's what it's worth. Or, at a minimum, at \$106,000." Respond to this statement with specific reference to accounting principles applicable in this situation.
- Q 1-4.** Identify the accounting principle(s) applicable to each of the following situations:
 - a. Tim Roberts owns a bar and a rental apartment and operates a consulting service. He has separate financial statements for each.
 - b. An advance collection for magazine subscriptions is reported as a liability titled Unearned Subscriptions.
 - c. Purchases for office or store equipment for less than \$25 are entered in Miscellaneous Expense.
 - d. A company uses the lower of cost or market for valuation of its inventory.
 - e. Partially completed television sets are carried at the sum of the cost incurred to date.
 - f. Land purchased 15 years ago for \$40,500 is now worth \$346,000. It is still carried on the books at \$40,500.
 - g. Zero Corporation is being sued for \$1,000,000 for breach of contract. Its lawyers believe that the damages will be minimal. Zero reports the possible loss in a footnote.
- Q 1-5.** A corporation like General Motors has many owners (stockholders). Which concept enables the accountant to account for transactions of General Motors, separate and distinct from the personal transactions of the owners of General Motors?

- Q 1-6.** Zebra Company has incurred substantial financial losses in recent years. Because of its financial condition, the ability of the company to keep operating is in question. Management prepares a set of financial statements that conform to generally accepted accounting principles. Comment on the use of GAAP under these conditions.
- Q 1-7.** Because of assumptions and estimates that go into the preparation of financial statements, the statements are inaccurate and are, therefore, not a very meaningful tool to determine the profits or losses of an entity or the financial position of an entity. Comment.
- Q 1-8.** The only accurate way to account for the success or failure of an entity is to accumulate all transactions from the opening of business until the business eventually liquidates. Comment on whether this is true. Discuss the necessity of having completely accurate statements.
- Q 1-9.** Describe the following terms, which indicate the period of time included in the financial statements:
a. Natural business year b. Calendar year c. Fiscal year
- Q 1-10.** Which standard of measure is the best for measuring financial transactions?
- Q 1-11.** Countries have had problems with the stability of their money. Briefly describe the problem caused for financial statements when money does not hold a stable value.
- Q 1-12.** In some countries where inflation has been material, an effort has been made to retain the significance of money as a measuring unit by adjusting the financial statements by an inflation factor. Can an accurate adjustment for inflation be made to the statements? Can a reasonable adjustment to the statements be made? Discuss.
- Q 1-13.** An arbitrary write-off of inventory can be justified under the conservatism concept. Is this statement true or false? Discuss.
- Q 1-14.** Inventory that has a market value below the historical cost should be written down in order to recognize a loss. Comment.
- Q 1-15.** There are other acceptable methods of recognizing revenue when the point of sale is not acceptable. List and discuss the other methods reviewed in this chapter, and indicate when they can be used.
- Q 1-16.** The matching concept involves the determination of when to recognize the costs associated with the revenue that is being recognized. For some costs, such as administrative costs, the matching concept is difficult to apply. Comment on when it is difficult to apply the matching concept. What do accountants often do under these circumstances?
- Q 1-17.** The consistency concept requires the entity to give the same treatment to comparable transactions from period to period. Under what circumstances can an entity change its accounting methods, provided it makes full disclosure?
- Q 1-18.** Discuss why the concept of full disclosure is difficult to apply.
- Q 1-19.** No estimates or subjectivity is allowed in the preparation of financial statements. Discuss.
- Q 1-20.** It is proper to handle immaterial items in the most economical, expedient manner possible. In other words, generally accepted accounting principles do not apply. Comment, including a concept that justifies your answer.
- Q 1-21.** The same generally accepted accounting principles apply to all companies. Comment.

- Q 1-22.** Many important events that influence the prospect for the entity are not recorded in the financial records. Comment and give an example.
- Q 1-23.** Some industry practices lead to accounting reports that do not conform to the general theory that underlies accounting. Comment.
- Q 1-24.** An entity may choose between the use of the accrual basis of accounting and the cash basis. Comment.
- Q 1-25.** Generally accepted accounting principles have substantial authoritative support. Indicate the problem with determining substantial authoritative support.
- Q 1-26.** Would an accountant record the personal assets and liabilities of the owners in the accounts of the business? Explain.
- Q 1-27.** At which point is revenue from sales on account (credit sales) commonly recognized?
- Q 1-28.** Elliott Company constructed a building at a cost of \$50,000. A local contractor had submitted a bid to construct it for \$60,000.
- At what amount should the building be recorded?
 - Should revenue be recorded for the savings between the cost of \$50,000 and the bid of \$60,000?
- Q 1-29.** Dexter Company charges to expense all equipment that costs \$25 or less. What concept supports this policy?
- Q 1-30.** Which U.S. government body has the legal power to determine generally accepted accounting principles?
- Q 1-31.** What is the basic problem with the monetary assumption when there has been significant inflation?
- Q 1-32.** Explain the matching principle. How is the matching principle related to the realization concept?
- Q 1-33.** Briefly explain the term generally accepted accounting principles.
- Q 1-34.** Briefly describe the operating procedure for Statements of Financial Accounting Standards.
- Q 1-35.** What is the FASB Conceptual Framework for Accounting and Reporting intended to provide?
- Q 1-36.** Briefly describe the following:
- Committee on Accounting Procedures
 - Committee on Accounting Terminology
 - Accounting Principles Board
 - Financial Accounting Standards Board
- Q 1-37.** The objectives of general-purpose external financial reporting are primarily to serve the needs of management. Comment.
- Q 1-38.** Financial accounting is designed to measure directly the value of a business enterprise. Comment.
- Q 1-39.** According to Concepts Statement No. 2, relevance and reliability are the two primary qualities that make accounting information useful for decision making. Comment on what is meant by relevance and reliability.
- Q 1-40.** SFAC No. 5 indicates that, to be recognized, an item should meet four criteria, subject to the cost-benefit constraint and materiality threshold. List these criteria.

- Q 1-41.** There are five different measurement attributes currently used in practice. List these measurement attributes.
- Q 1-42.** Briefly explain the difference between an accrual basis income statement and a cash basis income statement.
- Q 1-43.** The cash basis does not reasonably indicate when the revenue was earned and when the cost should be recognized. Comment.
- Q 1-44.** It is not important to know when cash is received and when payment is made. Comment.

To the Net



1. Go to the FASB web site (www.fasb.org).
 - a. Click on Financial Accounting Standards Board. Then click on Site Map. Click on FASB Facts. Determine the precepts that the FASB follows in the conduct of its activities. Be prepared to discuss.
 - b. Click on FASAC—Financial Accounting Standards Advisory Council. Read the Overview of the FASAC. Be prepared to discuss.
2. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form. Enter the name of a company of your choice. Use the form to obtain the formal address of this company. Contact the company, requesting a copy of their annual report, 10-K, and proxy.

PROBLEMS

- P 1-1.** FASB Statement of Concepts No. 2 indicates several qualitative characteristics of useful accounting information. Below is a list of some of these qualities, as well as a list of statements and phrases describing the qualities.
- | | |
|---|---|
| a. Benefits > costs | f. Verifiability, neutrality, representational faithfulness |
| b. Decision usefulness | g. Comparability |
| c. Relevance | h. Materiality |
| d. Reliability | i. Relevance, reliability |
| e. Predictive value, feedback value, timeliness | |
- ___ 1. Without usefulness, there would be no benefits from information to set against its cost.
 - ___ 2. Pervasive constraint imposed upon financial accounting information.
 - ___ 3. Constraint that guides the threshold for recognition.
 - ___ 4. A quality requiring that the information be timely and that it also have predictive value, or feedback value, or both.
 - ___ 5. A quality requiring that the information have representational faithfulness and that it be verifiable and neutral.
 - ___ 6. These are the two primary qualities that make accounting information useful for decision making.
 - ___ 7. These are the ingredients needed to ensure that the information is relevant.
 - ___ 8. These are the ingredients needed to ensure that the information is reliable.
 - ___ 9. Includes consistency and interacts with relevance and reliability to contribute to the usefulness of information.

Required Place the appropriate letter identifying each quality on the line in front of the statement or phrase describing the quality.

P 1-2. Certain underlying considerations have had an important impact on the development of generally accepted accounting principles. Below is a list of these underlying considerations, as well as a list of statements describing them.

a. Going concern or continuity	i. Industry practices
b. Monetary unit	j. Verifiability
c. Conservatism	k. Consistency
d. Matching	l. Realization
e. Full disclosure	m. Historical cost
f. Materiality	n. Time period
g. Transaction approach	o. Business entity
h. Accrual basis	

- ___ 1. The business for which the financial statements are prepared is separate and distinct from the owners.
- ___ 2. The assumption is made that the entity will remain in business for an indefinite period of time.
- ___ 3. Accountants need some standard of measure to bring financial transactions together in a meaningful way.
- ___ 4. Revenue should be recognized when the earning process is virtually complete and the exchange value can be objectively determined.
- ___ 5. This concept deals with when to recognize the costs that are associated with the recognized revenue.
- ___ 6. Accounting reports must disclose all facts that may influence the judgment of an informed reader.
- ___ 7. This concept involves the relative size and importance of an item to a firm.
- ___ 8. The accountant is required to adhere as closely as possible to verifiable data.
- ___ 9. Some companies use accounting reports that do not conform to the general theory that underlies accounting.
- ___ 10. The accountant records only events that affect the financial position of the entity and, at the same time, can be reasonably determined in monetary terms.
- ___ 11. Revenue must be recognized when it is realized (realization concept), and expenses are recognized when incurred (matching concept).
- ___ 12. The entity must give the same treatment to comparable transactions from period to period.
- ___ 13. The measurement with the least favorable effect on net income and financial position in the current period must be selected.
- ___ 14. Of the various values that could be used, this value has been selected because it is objective and determinable.
- ___ 15. With this assumption, inaccuracies of accounting for the entity short of its complete life span are accepted.

Required Place the appropriate letter identifying each quality on the line in front of the statement describing the quality.

P 1-3.

Required Answer the following multiple-choice questions:

- a. Which of the following is a characteristic of information provided by external financial reports?
 1. The information is exact and not subject to change.
 2. The information is frequently the result of reasonable estimates.
 3. The information pertains to the economy as a whole.
 4. The information is provided at the least possible cost.
 5. None of the above.
- b. Which of the following is not an objective of financial reporting?
 1. Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions.
 2. Financial reporting should provide information to help present and potential investors and creditors and other users in assessing the amounts, timing, and uncertainty of prospective cash receipts from dividends or interest and the proceeds from the sale, redemption, or maturity of securities or loans.
 3. Financial reporting should provide information about the economic resources of an enterprise, the claims against those resources, and the effects of transactions, events, and circumstances that change the resources and claims against those resources.
 4. Financial accounting is designed to measure directly the value of a business enterprise.
 5. None of the above.
- c. According to FASB Statement of Concepts No. 2, which of the following is an ingredient of the quality of relevance?

1. Verifiability	4. Timeliness
2. Representational faithfulness	5. None of the above
3. Neutrality	
- d. The primary current source of generally accepted accounting principles for nongovernment operations is the

1. New York Stock Exchange	4. American Institute of
2. Financial Accounting Standards Board	Certified Public Accountants
3. Securities and Exchange Commission	5. None of the above
- e. What is the underlying concept that supports the immediate recognition of a loss?

1. Matching	4. Conservatism
2. Consistency	5. Going concern
3. Judgment	
- f. Which statement is not true?
 1. The Securities and Exchange Commission is a source of some generally accepted accounting principles.
 2. The American Institute of Certified Public Accountants is a source of some generally accepted accounting principles.
 3. The Internal Revenue Service is a source of some generally accepted accounting principles.
 4. The Financial Accounting Standards Board is a source of some generally accepted accounting principles.
 5. Numbers 1, 2, and 4 are sources of generally accepted accounting principles.
- g. Which pronouncements are not issued by the Financial Accounting Standards Board?

1. Statements of Financial Accounting Standards	4. Interpretations
2. Statements of Financial Accounting Concepts	5. Opinions
3. Technical bulletins	

P 1-4.

Required Answer the following multiple-choice questions:

- a. Which of the following does the Financial Accounting Standards Board not issue?
 1. Statements of Position (SOPs)
 2. Statements of Financial Accounting Standards (SFASs)
 3. Interpretations
 4. Technical bulletins
 5. Statements of Financial Accounting Concepts (SFACs)
- b. According to SFAC No. 6, assets can be defined by which of the following?
 1. Probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.
 2. Probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.
 3. Residual interest on the assets of an entity that remains after deducting its liabilities.
 4. Increases in equity of a particular business enterprise resulting from transfers to the enterprise from other entities of something of value to obtain or increase ownership interests (or equity) in it.
 5. Decrease in equity of a particular business enterprise resulting from transferring assets, rendering services, or incurring liabilities by the enterprise.
- c. According to SFAC No. 6, expenses can be defined by which of the following?
 1. Inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.
 2. Outflows or other consumption or using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations.
 3. Increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period, except those that result from revenues or investments.
 4. Decreases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period, except those that result from expenses or distributions to owners.
 5. Probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.
- d. SFAC No. 5 indicates that an item, to be recognized, should meet four criteria, subject to the cost-benefit constraint and the materiality threshold. Which of the following is not one of the four criteria?
 1. The item fits one of the definitions of the elements.
 2. The item has a relevant attribute measurable with sufficient reliability.
 3. The information related to the item is relevant.
 4. The information related to the item is reliable.
 5. The item has comparability, including consistency.

- e. SFAC No. 5 identifies five different measurement attributes currently used in practice. Which of the following is not one of the measurement attributes currently used in practice?
 1. Historical cost
 2. Future cost
 3. Current market value
 4. Net realizable value
 5. Present, or discounted, value of future cash flows
- f. Which of the following indicates how revenue is usually recognized?
 1. Point of sale
 2. End of production
 3. Receipt of cash
 4. During production
 5. Cost recovery
- g. Statement of Financial Accounting Concepts No. 1, "Objectives of Financial Reporting by Business Enterprises," includes all of the following objectives, except one. Which objective does it not include?
 1. Financial accounting is designed to measure directly the value of a business enterprise.
 2. Investors, creditors, and others may use reported earnings and information about the elements of financial statements in various ways to assess the prospects for cash flows.
 3. The primary focus of financial reporting is information about earnings and its components.
 4. Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions.
 5. The objectives are those of general-purpose external financial reporting by business enterprises.

P 1-5. The following data relate to Jones Company for the year ended December 31, 1999:

Sales on credit	\$80,000
Cost of inventory sold on credit	65,000
Collections from customers	60,000
Purchase of inventory on credit	50,000
Payment for purchases	55,000
Cash collections for common stock	30,000
Dividends paid	10,000
Payment to salesclerk	10,000

- Required**
- a. Determine income on an accrual basis.
 - b. Determine income on a cash basis.

Case 1-1

Standards Overload?*

Even though accounting records go back hundreds of years, there was little effort to develop accounting standards until the 1900s. The first major effort to develop accounting standards in the United States came in 1939 when the American Institute of Certified Public Accountants formed the Committee on Accounting Procedures.

As the number of standards increased, an issue called “standards overload” emerged. Essentially the charge of “standards overload” is that there are too many accounting standards and that the standards are too complicated. Many individuals charging that standards overload is a problem maintain that more professional judgment should be allowed in financial accounting. Some individuals take a position that selected standards should not apply to nonpublic companies. Others take a position that “little” companies should be exempt from selected standards. There has been some selective exclusion from standards in the past. Examples of selective exclusion are the following:

1. *Statement of Financial Accounting Standards No. 21*, “Suspension of the Reporting of Earnings per Share and Segment Information by Nonpublic Enterprises.”
“Although the presentation of earnings per share and segment information is not required in the financial statements of nonpublic enterprises, any such information that is presented in the financial statements of nonpublic enterprises shall be consistent with the requirements of APB Opinion No. 15 and FASB Statement No. 14.”
2. *Statement of Financial Accounting Standards No. 33*, “Financial Reporting and Changing Prices.”

This statement required supplemental reporting on the effects of price changes. Only large public companies were required to present this information on a supplementary basis.

Required

- a. Financial statements should aid the user of the statements in making decisions. In your opinion, would the user of the statements be aided if there were a distinction between financial reporting standards for public vs. nonpublic companies? Between little and big companies?
- b. In your opinion, would CPAs favor a distinction between financial reporting standards for public vs. nonpublic companies? Discuss.
- c. In your opinion, would small business owner-managers favor a distinction between financial reporting standards for small and large companies? Discuss.
- d. In your opinion, would CPAs in a small CPA firm view standards overload as a bigger problem than CPAs in a large CPA firm? Discuss.
- e. Comment on standards overload, considering *Statement of Financial Accounting Concepts No. 1*, “Objectives of Financial Reporting by Business Enterprises.” Particularly consider the following objective:

Financial reporting should provide information useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions. The information should be comprehensible to those having a reasonable understanding of business and economic activities and willing to study the information with reasonable diligence.

*Note: The standards referenced in this case should not be considered current standards. The financial reporting issues referenced in this case are discussed in later chapters, using current requirements.

Case 1-2**Standard Setting: “A Political Aspect”**

This case consists of a letter from Dennis R. Beresford, chairperson of the Financial Accounting Standards Board, to Senator Joseph I. Lieberman. The specific issue was proposed legislation relating to the accounting for employee stock options.

Permission to reprint the following letter was obtained from the Financial Accounting Standards Board.

August 3, 1993

Senator Joseph I. Lieberman
United States Senate
Hart Senate Office Building
Room 316
Washington, DC 20510

Dear Senator Lieberman:

Members of the Financial Accounting Standards Board (the FASB or the Board) and its staff routinely consult with members of Congress, their staffs, and other government officials on matters involving financial accounting. For example, FASB members and staff met with Senator Levin both before and after the introduction of his proposed legislation, Senate Bill 259, which also addresses accounting for employee stock options.

The attachment to this letter discusses the accounting issues (we have not addressed the tax issues) raised in your proposed legislation, Senate Bill 1175, and issues raised in remarks introduced in the *Congressional Record*. My comments in this letter address an issue that is more important than any particular legislation or any particular accounting issue: why we have a defined process for setting financial reporting standards and why it is harmful to the public interest to distort accounting reports in an attempt to attain other worthwhile goals.

Financial Reporting

Markets are enormously efficient information processors—when they have the information and that information faithfully portrays economic events. Financial statements are one of the basic tools for communicating that information. The U.S. capital market system is well-developed and efficient because of users’ confidence that the financial information they receive is reliable. Common accounting standards for the preparation of financial reports contribute to their credibility. The mission of the FASB, an organization designed to be independent of all other business and professional organizations, is to establish and improve financial accounting and reporting standards in the United States.

Investors, creditors, regulators, and other users of financial reports make business and economic decisions based on information in financial statements. Credibility is critical whether the user is an individual contemplating a stock investment, a bank making lending decisions, or a regulatory agency reviewing solvency. Users count on financial reports that are evenhanded, neutral, and unbiased.

An efficiently functioning economy requires credible financial information as a basis for decisions about allocation of resources. If financial statements are to be useful, they must report economic activity without coloring the message to influence behavior in a particular direction. They must not intentionally favor one party over another. Financial statements must provide a neutral scorecard of the effects of transactions.

Economic Consequences of Accounting Standards

The Board often hears that we should take a broader view, that we must consider the economic consequences of a new accounting standard. The FASB should not act, critics maintain, if a new accounting standard would have undesirable economic consequences. We have been told that the effects of accounting standards could cause lasting damage to American companies and their employees. Some have suggested, for example, that recording the liability for retiree health care or the costs for stock-based compensation will place U.S. companies at a competitive disadvantage. These critics suggest that because of accounting standards, companies may reduce benefits or move operations overseas to areas where workers do not demand the same benefits. These assertions are usually combined with statements about desirable goals, like providing retiree health care or creating employee incentives.

There is a common element in those assertions. The goals are desirable, but the means require that the Board abandon neutrality and establish reporting standards that conceal the financial impact of certain transactions from those who use financial statements. Costs of transactions exist whether or not the FASB mandates their recognition in financial statements. For example, not requiring the recognition of the cost of stock options or ignoring the liabilities for retiree health benefits does not alter the economics of the transactions. It only withholds information from investors, creditors, policy makers, and others who need to make informed decisions and, eventually, impairs the credibility of financial reports.

One need only look to the collapse of the thrift industry to demonstrate the consequences of abandoning neutrality. During the 1970s and 1980s, regulatory accounting principles (RAP) were altered to obscure problems in troubled institutions. Preserving the industry was considered a “greater good.” Many observers believe that the effect was to delay action and hide the true dimensions of the problem. The public interest is best served by neutral accounting standards that inform policy rather than promote it. Stated simply, truth in accounting is always good policy.

Neutrality does not mean that accounting should not influence human behavior. We expect that changes in financial reporting will have economic consequences, just as economic consequences are inherent in existing financial reporting practices. Changes in behavior naturally flow from more complete and representationally faithful financial statements. The fundamental question, however, is whether those who measure and report on economic events should somehow screen the information before reporting it to achieve some objective. In FASB Concepts Statement No. 2, “Qualitative Characteristics of Accounting Information” (paragraph 102), the Board observed:

Indeed, most people are repelled by the notion that some “big brother,” whether government or private, would tamper with scales or speedometers surreptitiously to induce people to lose weight or obey speed limits or would slant the scoring of athletic events or examinations to enhance or decrease someone’s chances of winning or graduating. There is no more reason to abandon neutrality in accounting measurement.

The Board continues to hold that view. The Board does not set out to achieve particular economic results through accounting pronouncements. We could not if we tried. Beyond that, it is seldom clear which result we should seek because our constituents often have opposing viewpoints. Governments, and the policy goals they adopt, frequently change.

Standard Setting in the Private Sector

While the SEC and congressional committees maintain active oversight of the FASB to ensure that the public interest is served, throughout its history the SEC has relied on

the Board and its predecessors in the private sector to establish and improve financial accounting and reporting standards. In fulfilling the Board's mission of improving financial reporting, accounting standards are established through a system of due process and open deliberation. On all of our major projects, this involves open Board meetings, proposals published for comment, "field testing" of proposals, public hearings, and redeliberation of the issues in light of comments.

Our due process has allowed us to deal with complex and highly controversial accounting issues, ranging from pensions and retiree health care to abandonment of nuclear power plants. This open, orderly process for standard setting precludes placing any particular special interest above the interests of the many who rely on financial information. The Board believes that the public interest is best served by developing neutral accounting standards that result in accounting for similar transactions similarly and different transactions differently. The resulting financial statements provide as complete and faithful a picture of an entity as possible.

Corporations, accounting firms, users of financial statements, and most other interested parties have long supported the process of establishing accounting standards in the private sector without intervention by Congress or other branches of government. Despite numerous individual issues on which the FASB and many of its constituents have disagreed, that support has continued. The resulting system of accounting standards and financial reporting, while not perfect, is the best in the world.

Conclusion

We understand that there are a number of people who believe that their particular short-term interests are more important than an effectively functioning financial reporting system. We sincerely hope, however, that you and others in the Congress will review the reasons that have led generations of lawmakers and regulators to conclude that neutral financial reporting is critical to the functioning of our economic system and that the best way to achieve that end is to allow the existing private sector process to proceed. We respectfully submit that the public interest will be best served by that course. As former SEC Chairman Richard Breeden said in testimony to the Senate Banking Committee in 1990:

The purpose of accounting standards is to assure that financial information is presented in a way that enables decision-makers to make informed judgments. To the extent that accounting standards are subverted to achieve objectives unrelated to a fair and accurate presentation, they fail in their purpose.

The attachment to this letter discusses your proposed legislation. It also describes some aspects of our project on stock compensation and the steps in our due process procedures that remain before the project will be completed. In your remarks in the *Congressional Record*, you said that you will address future issues, including an examination of the current treatment of employee stock options, over the next weeks and months. We would be pleased to meet with you or your staff to discuss these topics and the details of our project. I will phone your appointments person in the next two weeks to see if it is convenient for you to meet with me.

Sincerely,

Dennis R. Beresford

Dennis R. Beresford

Enclosure

cc: The Honorable Connie Mack
The Honorable Dianne Feinstein
The Honorable Barbara Boxer
The Honorable Carl S. Levin
The Honorable Christopher J. Dodd
The Honorable Arthur J. Levitt

- Required**
- “Financial statements must provide a neutral scorecard of the effects of transactions.” Comment.
 - “Costs of transactions exist whether or not the FASB mandates their recognition in financial statements.” Comment.
 - In the United States, standard setting is in the private sector. Comment.
 - Few, if any, accounting standards are without some economic impact. Comment.

Case 1-3**Standard Setting: “By the Way of the United States Congress”**

In the summer of 1993, the Senate and the House introduced identical bills to amend the Internal Revenue Code of 1986. Section 4 of these bills addressed stock option compensation and financial reporting.

SEC. 4 STOCK OPTION COMPENSATION.

Section 14 of the Securities Exchange Act of 1934 (15 U.S.C. 78n) is amended by adding at the end the following new subsection:

“(h) STOCK OPTION COMPENSATION—The Commission shall not require or permit an issuer to recognize any expense or other charge in financial statements furnished to its security holders resulting from, or attributable to, either the grant, vesting, or exercise of any option or other right to acquire any equity security of such issuer (even if the right to exercise such option or right is subject to any conditions, contingencies or other criteria including, without limitation, the continued performance of services, achievement of performance objectives, or the occurrence of any event) which is granted to its directors, officers, employees, or other persons in connection with the performance of services, where the exercise price of such option or right is not less than the fair market value of the underlying security at the time such option or right is granted.”

- Required**
- The United States Congress is well qualified to debate and set generally accepted accounting principles. Comment.
 - Speculate on why these bills were directed to amend the Securities Exchange Act of 1934.

Case 1-4**Recognizing Revenue and Related Costs—****Consider These Situations (Part I)****A. General Motors Corporation**

General Motors Corporation included the following in its 1998 annual report:

Revenue Recognition (In Part)

Sales are generally recorded when products are shipped or when services are rendered to independent dealers or other third parties. Provisions for normal dealer sales incentives, returns and allowances, and GM Card rebates are made at the time of vehicle sales. Costs related to special sales incentive programs are recognized as reductions to sales when determinable.

Required

- a. Sales are generally recorded by the Corporation when products are shipped to independent dealers. Apparently when does the title pass to the independent dealers? Does this method resemble point of sale?
- b. Provisions for normal dealer sales incentives, returns and allowances, and GM Card rebates are made at the time of vehicle sale. Speculate on the time lag between recognizing sales and the reduction for these items. Would this time lag represent a problem when matching these related costs to revenue?
- c. Costs related to special sales incentive programs are recognized as reductions to sales when determinable. Comment on any matching problem that this may represent.

B. Kodak

Kodak included the following in its 1998 annual report:

Revenue (In Part)

Revenue is recognized from the sale of film, paper, supplies and equipment including sales-type leases for equipment when the product is shipped; from maintenance and the service contracts over the contractual period, or as the services are performed.

Required

- a. Revenue is recognized from the sale of film, paper, supplies and equipment when the product is shipped. Apparently when does title pass for these items?
- b. Revenue is recognized from maintenance and service contracts over the contractual period, or as services are performed. Apparently maintenance and service is performed under contractual situations and noncontractual situations. Comment on the reasonableness of recognizing revenue from contractual situations over the contractual period. Comment on the reasonableness of recognizing revenue from noncontractual situations as services are performed.

C. Compaq

Compaq included the following in its 1998 annual report:

Revenue Recognition. Compaq recognizes products revenue at the time products are shipped to its customers. Provision is made at the time the related revenue is recognized for estimated product returns and price protection which may occur under programs Compaq has with its customers. Compaq provides for the estimated cost of post-sales support and product warranties upon shipment. When other significant obligations remain after products are delivered, revenue is recognized only after such obligations are fulfilled. Services revenue is recognized ratably over the contractual period or as the services are performed.

Required

- a. Compaq recognizes product revenue at the time products are shipped to its customers. What revenue recognition method does this represent?
- b. Provision is made at the time the related revenue is recognized for estimated product returns and price protection which may occur under programs Compaq has with its customers. What concept is Compaq using in order to recognize these costs when the revenue is recognized?

- c. Compaq provides for the estimated cost of post-sales support and product warranties upon shipment. Comment on the appropriateness of this policy.
- d. When other significant obligations remain after products are delivered, revenue is recognized only after such obligations are fulfilled. Comment on the appropriateness of this policy.

Case 1-5

Recognizing Revenue and Related Costs—

Consider These Situations (Part II)

A. UAL Corporation

UAL Corporation (UAL) is a holding company whose principal subsidiary is United Air Lines, Inc. (United).

The UAL 1998 annual report included a description of airline revenues as follows:

Airline Revenues

Passenger fares and cargo revenues are recorded as operating revenues when the transportation is furnished. The value of unused passenger tickets is included in current liabilities.

- Required**
- a. Passenger fares and cargo revenues are recorded as operating revenues when the transportation is furnished. Comment on the appropriateness of this procedure.
 - b. The value of unused passenger tickets is included in current liabilities. Comment on the appropriateness of this procedure.

B. Peco Energy

Peco Energy described revenue recognition in its 1998 annual report as follows:

Revenues

Electric and gas revenues are recorded as service is rendered or energy is delivered to customers. At the end of each month, the Company accrues an estimate for the unbilled amount of energy delivered or services provided to customers.

- Required**
- a. Comment on the difficulty in determining when service is rendered or energy is delivered to customers.
 - b. The Company accrues an estimate for the unbilled amount of energy delivered or services provided to customers. Comment on the difficulty in determining the amount to accrue.

C. Osmonics

In February 1993, Autotrol, prior to acquisition by Osmonics, discovered that a former employee of its French subsidiary had been embezzling funds for several years. The funds were embezzled through the issuing of fraudulent checks by the former employee and the falsifying of value added tax (VAT) returns and diverting the funds received from the French government.

Autotrol's investigation of the embezzlement revealed that approximately \$4,750,000 was embezzled from 1988 to 1992. Of this total, \$2,342,000 related to 1992. The prior

years' financial statements reflected embezzlement losses in the year the embezzlement initially occurred. The Company had net recoveries of \$562,000 in 1993 from insurance and reductions in VAT payable.

- Required**
- How much embezzlement losses were recorded in 1988 to 1991?
 - In what year were the recoveries recorded?
 - Comment on the embezzlement losses and recoveries in terms of revenue recognition and recording of embezzlement losses.

Case 1-6

Cash Basis—Accrual Basis?

1994 Annual Report—Dibrell Brothers Inc.

Note F—Employee Benefits (in Part) Postretirement Health and Life Insurance Benefits

Effective July 1, 1992, the Company adopted Statement of Financial Accounting Standards, No. 106, "Employer's Accounting for Postretirement Benefits Other Than Pensions," for its U.S. operations. Employees retiring from the Company on or after attaining age 55 who have rendered at least ten years of service to the Company are eligible for postretirement health care coverage. The benefits are subject to deductibles, co-payment provisions, and other limitations. The Company reserves the right to change or terminate these benefits at any time.

SFAS 106 requires that the cost of postretirement benefits to the Company be recognized over the service lives of the employees, rather than on the cash basis. Employees of the Company are currently eligible to receive specified company-paid health care and life insurance benefits during retirement.

- Required**
- Prior to July 1, 1992, what was the basis used to account for postretirement health care coverage?
 - Effective July 1, 1992, what was the basis used to account for postretirement health care coverage?
 - Why was the change made for reporting postretirement health care coverage?
 - Assume that this company used the accrual basis of accounting. Speculate on why such a company could report a potentially significant item on a cash basis.

Case 1-7

Going Concern?

1994 Annual Report—Fountain Powerboard Industries Inc.

Note 12—Financial Condition (in Part)

... The Company's financial statements have been prepared on the basis that it is a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The financial statements do not include any adjustments relating to recoverability and classification of assets, or the amounts and clas-

sification of liabilities that might be necessary in the event the company cannot continue in existence.

The Company reported a net loss of \$2,993,344 for Fiscal 1994 and its current liabilities exceeded its current assets by \$9,340,951. The Company's continual existence is dependent upon its ability to achieve profitable operations. The Company's Fiscal 1995 operating plan includes a substantial increase in sales and a restructuring of its operations to reduce its operating costs.

If management cannot achieve the Fiscal 1995 operating plan because of sales shortfalls or greater than anticipated costs and expenses, then the Company may not be able to meet its obligations on a timely basis, its operations may be significantly restricted, and it may not be able to continue on in business as a going concern . . .

Required

- a. What is the going-concern assumption?
- b. Has Fountain Powerboard Industries Inc. prepared financial statements using the going-concern assumption? What appears to be the potential problem with using the going-concern assumption in this case?
- c. What is the significance of the disclosure that this company may not be able to continue as a going concern?

Case 1-8

Economics and Accounting: The Uncongenial Twins*

"Economics and accountancy are two disciplines which draw their raw material from much the same mines. From these raw materials, however, they seem to fashion remarkably different products. They both study the operations of firms; they both are concerned with such concepts as income, expenditure, profits, capital, value, and prices. In spite of an apparently common subject-matter, however, they often seem to inhabit totally different worlds, between which there is remarkably little communication."

"It is not surprising that the economist regards much accounting procedure as in the nature of ritual. To call these procedures ritualistic is in no way to deny or decry their validity. Ritual is always the proper response when a man has to give an answer to a question, the answer to which he cannot really know. Ritual under these circumstances has two functions. It is comforting (and in the face of the great uncertainties of the future, comfort is not to be despised), and it is also an answer sufficient for action. It is the sufficient answer rather than the right answer which the accountant really seeks. Under these circumstances, however, it is important that we should know what the accountant's answer means, which means that we should know what procedure he has employed. The wise businessman will not believe his accountant although he takes what his accountant tells him as important evidence. The quality of that evidence, however, depends in considerable degree on the simplicity of the procedures and the awareness which we have of them. What the accountant tells us may not be true, but, if we know what he has done, we have a fair idea of what it means. For this reason, I am somewhat suspicious of many current efforts to reform accounting in the direction of making it more 'accurate'."

"If accounts are bound to be untruths anyhow, as I have argued, there is much to be said for the simple untruth as against a complicated untruth, for if the untruth is simple,

*Note: This case consists of quotes from the article "Economics and Accounting: The Uncongenial Twins," Kenneth E. Boulding. Professor Boulding was a professor of economics. Source: From *Studies in Accounting Theory*, edited by W.T. Baxter and Sidney Davidson (Homewood, IL: Richard D. Irwin, Inc. 1962), pp. 44-55.

it seems to me that we have a fair chance of knowing what kind of an untruth it is. A known untruth is much better than a lie, and provided that the accounting rituals are well known and understood, accounting may be untrue but it is not lies; it does not deceive because we know that it does not tell the truth, and we are able to make our own adjustment in each individual case, using the results of the accountant as evidence rather than as definitive information.”

- Required**
- Assume that accounting procedures are in the form of ritual. Does this imply that the accountant’s product does not serve a useful function? Discuss.
 - Does it appear that Kenneth Boulding would support complicated procedures and a complicated end product for the accountant? Discuss.
 - Accounting reports must be accurate in order to serve a useful function. Discuss.

Case 1-9

I Often Paint Fakes*

An art dealer bought a canvas signed “Picasso” and traveled all the way to Cannes to discover whether it was genuine. Picasso was working in his studio. He cast a single look at the canvas and said, “It’s a fake.”

A few months later the dealer bought another canvas signed “Picasso.” Again he traveled to Cannes and again Picasso, after a single glance, grunted: “It’s a fake.”

“But cher maitre,” expostulated the dealer, “it so happens that I saw you with my own eyes working on this very picture several years ago.”

Picasso shrugged: “I often paint fakes.”

- Required**
- Assume that the accounting report was prepared using generally accepted accounting principles. Does this imply that the report is exactly accurate? Discuss.
 - In your opinion do accountants paint fakes? Discuss.

*Note: This case consists of a quote from *The Act of Creation*, Arthur Koestler (New York: Macmillan, 1964), p. 82.

Endnotes

- 1 *Statement of Financial Accounting Concepts No. 1*, “Objectives of Financial Reporting by Business Enterprises” (Stamford, CT: Financial Accounting Standards Board, 1978).
- 2 *Statement of Financial Accounting Concepts No. 6*, “Elements of Financial Statements” (Stamford, CT: Financial Accounting Standards Board, 1985).
- 3 *Statement of Financial Accounting Concepts No. 5*, “Recognition and Measurement of Financial Statements of Business Enterprises” (Stamford, CT: Financial Accounting Standards Board, 1984), paragraph 63.
- 4 *Statement of Financial Accounting Concepts No. 5*, paragraph 67.
- 5 *Statement of Financial Accounting Concepts No. 5*, paragraph 70.
- 6 *Statement of Financial Accounting Concepts No. 5*, paragraph 13.

CHAPTER

2

INTRODUCTION TO FINANCIAL STATEMENTS AND OTHER FINANCIAL REPORTING TOPICS

THIS CHAPTER INTRODUCES FINANCIAL STATEMENTS. Subsequent chapters present a detailed review of the principal financial statements. Chapter 3 covers the balance sheet, Chapter 4 covers the income statement, and Chapter 10 covers the statement of cash flows.

This chapter also reviews the forms of business entities, and the sequence of accounting procedures (called the accounting cycle).

Other financial reporting topics included in this chapter that contribute to the understanding of financial reporting are: the auditor's report, management's responsibility for financial statements, the SEC's integrated disclosure system, the summary annual report, ethics, international accounting standards, consolidated statements, and accounting for business combinations.

**FORMS OF
BUSINESS
ENTITIES**

A business entity may be a **sole proprietorship**, a partnership, or a corporation. A sole proprietorship, a business owned by one person, is not a legal entity separate from its owner, but the accountant treats the business as a separate accounting entity. The profit or loss of the proprietorship goes on the income tax return of the owner. The owner is responsible for the debts of the sole proprietorship.

In the United States, a sole proprietorship may qualify to be treated as a limited liability company (LLC). As an LLC, the owner may limit the liability of the sole proprietor, but may increase the tax exposure of the proprietorship.

A **partnership** is a business owned by two or more individuals. Each owner, called a partner, is personally responsible for the debts of the partnership. The accountant treats the partners and the business as separate accounting entities. The profit or loss of the partnership goes on the individual income tax return of the partners. Like a proprietorship, a partnership may qualify to be treated as an LLC. As an LLC, the owners may limit the liability of the partners, but may increase the tax exposure of the partnership.

In the United States, a **business corporation** is a legal entity incorporated in a particular state. Ownership is evidenced by shares of stock. A corporation is considered to be separate and distinct from the stockholders. The stockholders risk only their investment; they are not responsible for the debts of the corporation.

Since a corporation is a legal entity, the profits or losses are treated as a separate entity on an income tax return. The owners are not taxed until profits are distributed to the owners (dividends). In the United States, some corporations qualify to be treated as a subchapter S Corporation. These corporations do not pay a corporate income tax. The profits or losses go directly on the income tax returns of the owners.

In the United States, most businesses operate as proprietorships, but corporations perform the bulk of business activity. Since the bulk of business activity is carried on in corporations and because much of financial accounting is concerned with reporting to the public, this book focuses on the corporate form of business.

Accounting for corporations, sole proprietorships, and partnerships is the same, except for the owners' equity section of the balance sheet. The owners' equity section for a sole proprietorship consists of the owner's capital account, while the owners' equity section for a partnership has a capital account for each partner. The more complicated owners' equity section for a corporation will be described in detail in this book.

**THE FINANCIAL
STATEMENTS**

The principal financial statements of a corporation are the balance sheet, income statement, and statement of cash flows. Footnotes (notes) accompany these financial statements. To evaluate the financial condition, the profitability, and cash flows of an entity, the user needs to understand the statements and related notes.

Exhibit 2-1 illustrates the interrelationship of the balance sheet, income statement, and statement of cash flows. The most basic statement is the balance sheet. The other statements explain the changes between two balance sheet dates.

Balance Sheet (Statement of Financial Position)

A balance sheet shows the financial condition of an accounting entity as of a particular date. The balance sheet consists of three major sections: assets, the resources of the firm; liabilities, the debts of the firm; and stockholders' equity, the owners' interest in the firm.

ABC COMPANY—THE INTERRELATIONSHIP OF FINANCIAL STATEMENTS

Balance Sheet December 31, 2000		Statement of Cash Flows for the Year Ended December 31, 2001		Balance Sheet December 31, 2001	
Assets		Cash flows from operating activities:		Assets	
Cash	\$25,000	Net Income	\$20,000	Cash	\$40,000
Receivables	20,000	+ Decrease in inventory	10,000	Receivables	20,000
Inventory	30,000	– Decrease in accounts payable	(5,000)	Inventory	20,000
Land	10,000	Net cash flow from operating activities	(25,000)	Land	20,000
Other assets	10,000			Other assets	10,000
Total assets	<u>\$95,000</u>			Total assets	<u>\$110,000</u>
Liabilities		Cash flow from investing activities:		Liabilities	
Accounts payable	\$25,000	– Increase in land	(10,000)	Accounts payable	\$20,000
Wages payable	5,000	Net cash flow from investing activities	(10,000)	Wages payable	5,000
Total liabilities	<u>\$30,000</u>			Total liabilities	<u>\$25,000</u>
Stockholders' equity		Cash flow from financing activities:		Stockholders' equity	
Capital stock	\$40,000	+ Capital stock	10,000	Capital stock	\$50,000
Retained earnings	25,000	– Dividends	(10,000)	Retained earnings	35,000
Total stockholders' equity	<u>\$65,000</u>	Net cash flow from financing activities	-0-	Total stockholders' equity	<u>\$85,000</u>
Total liabilities and stockholders' equity	<u>\$95,000</u>			Total liabilities and stockholders' equity	<u>\$110,000</u>
		Net increase in cash	\$15,000		
		Cash at beginning of year	25,000		
		Cash at end of year	<u>\$40,000</u>		
		Income Statement for the Year Ended December 31, 2001			
		Revenues	\$120,000		
		– Expenses	(100,000)		
		Net Income	<u>\$20,000</u>		
		Statement of Retained Earnings for the Year Ended December 31, 2001			
		Beginning balance	\$25,000		
		+ Net Income	20,000		
		– Dividends	(10,000)		
		Ending balance	<u>\$35,000</u>		

Assets = Liabilities + Stockholders' Equity

In simplistic form, the stockholders' equity of a corporation appears as follows:

Stockholders' Equity	
Common stock	\$200,000
Retained earnings	<u>50,000</u>
	\$250,000

This indicates that stockholders contributed (invested) \$200,000, and prior earnings less prior dividends have been retained in the entity in the net amount of \$50,000 (retained earnings).

Statement of Stockholders' Equity (Reconciliation of Stockholders' Equity Accounts)

Firms are required to present reconciliations of the beginning and ending balances of their stockholders' equity accounts. This is accomplished by presenting a "statement of stockholders' equity." Retained earnings is one of the accounts in stockholders' equity.

Retained earnings links the balance sheet to the income statement. Retained earnings is increased by net income and decreased by net losses and dividends paid to stockholders. There are some other possible increases or decreases to retained earnings besides income (losses) and dividends. For the purposes of this chapter, retained earnings will be described as prior earnings less prior dividends.

Firms usually present the reconciliation of retained earnings within a "statement of stockholders' equity." Some firms present the reconciliation of retained earnings at the bottom of the income statement (combined income statement and retained earnings). In this case, the other stockholders' equity accounts may be reconciled in a statement that excludes retained earnings. An additional review of the statement of stockholders' equity is in Chapter 3.

Income Statement (Statement of Earnings)

The **income statement** summarizes revenues and expenses and gains and losses, ending with net income. It summarizes the results of operations for a particular period of time. Net income is included in retained earnings in the stockholders' equity section of the balance sheet. (This is necessary for the balance sheet to balance.)

Statement of Cash Flows (Statement of Inflows and Outflows of Cash)

The **statement of cash flows** details the inflows and outflows of cash during a specified period of time—the same period that is used for the income statement. The statement of cash flows consists of three sections: cash flows from operating activities, cash flows from investing activities, and cash flows from financing activities.

Footnotes (Notes)

The footnotes to the financial statements are used to present additional information about items included in the financial statements and to present additional financial information. Footnotes are an integral part of financial statements. A detailed review of footnotes is essential to understanding the financial statements.

Certain information must be presented in footnotes. Accounting policies are to be disclosed as the first note or be disclosed in a separate summary of significant accounting

policies (preceding the first note). Accounting policies include such items as the method of inventory valuation and depreciation policies. Other information specifically requiring footnote disclosure is the existence of contingent liabilities and some subsequent events.

Contingent liabilities are dependent upon the occurrence or nonoccurrence of one or more future events to confirm the liability. The settlement of litigation or the ruling of a tax court would be examples of the confirmation of a contingent liability. Signing as guarantor on a loan creates another type of contingent liability.

An estimated loss from a contingent liability should be charged to income, and be established as a liability only if the loss is considered probable and the amount is reasonably determinable. A contingent liability that is recorded is also frequently described in a footnote. A loss contingency that is reasonably possible, but not probable, must be disclosed even if the loss is not reasonably estimable. (This loss contingency is not charged to income or established as a liability.) A loss contingency that is less than reasonably possible does not need to be disclosed, but disclosure may be desirable if there is an unusually large potential loss. Exhibit 2-2 illustrates a contingent liability footnote.

Subsequent events occur after the balance sheet date, but before the statements are issued. Two varieties of subsequent events occur. The first type consists of events related to conditions that existed at the balance sheet date, affect the estimates in the statements, and require adjustment of the statements before issuance. For example, if additional information is obtained indicating that a major customer's account receivable is not collectible, an adjustment would be made. The second type consists of events that provide evidence about conditions that did not exist at the balance sheet date and do not require adjustment of the statements. If failure to disclose these events would be misleading, disclosure should take the form of footnotes or supplementary schedules. Examples of the second type of such events include the sale of securities, the settlement of litigation, or casualty loss. Other examples of subsequent events might be debt incurred, reduced, or refinanced; business combinations pending or effected; discontinued operations; employee benefit plans; and capital stock issued or purchased. Exhibit 2-3 on the next page describes a subsequent event for Microsoft, whose year-end was June 30, 1998.

EXHIBIT 2-2

INTERNATIONAL BUSINESS MACHINES Contingent Liabilities

CONTINGENCIES

The company is subject to a variety of claims and suits that arise from time to time out of the ordinary course of its business, including actions with respect to contracts, intellectual property, product liability and environmental matters. The company does not believe that any such current action will have a material impact on the company's business, financial condition or results of operations.

On February 25, 1993, a class action complaint was filed against the company in the United States District Court for the Southern District of New York alleging, among other matters, that the company disseminated false and misleading statements concerning its financial condition and dividends during certain periods of 1992. On February 3, 1997, Judge Rakoff issued an order granting the company's motion for summary judgment in this case in its entirety. Plaintiffs filed an appeal and on November 17, 1998, the Second Circuit Court of Appeals upheld Judge Rakoff's decision for the company.

EXHIBIT 2-3**MICROSOFT**
Subsequent Events**SUBSEQUENT SALE**

In August 1998, the Company sold a wholly-owned subsidiary, Softimage, Inc. to Avid Technology, Inc. A pretax gain of \$160 million will be recognized in the first quarter of 1999. As part of a transitional service agreement, Microsoft agreed to make certain development tools and management systems available to Avid for use in the Softimage business.

**THE
ACCOUNTING
CYCLE**

The sequence of accounting procedures completed during each accounting period is called the accounting cycle. A broad summary of the steps of the accounting cycle include:

1. Recording transactions
2. Recording adjusting entries
3. Preparing the financial statements

Recording Transactions

A **transaction** is an event that causes a change in a company's assets, liabilities, or stockholders' equity, thus changing the company's financial position. Transactions may be external or internal to the company. External transactions involve outside parties, while internal transactions are confined within the company. For example, sales is an external transaction, while the use of equipment is internal.

Transactions must be recorded in a **journal** (book of original entry). All transactions could be recorded in the general journal. However, companies use a number of special journals to record most transactions. The special journals are designed to improve record keeping efficiency that could not be obtained by using only the general journal. The general journal is then used only to record transactions for which the company does not have a special journal. A transaction recorded in a journal is referred to as a **journal entry**.

All transactions are recorded in a journal (journal entry) and are later posted from the journals to a **general ledger** (group of accounts for a company). After posting, the general ledger accounts contain the same information as the journals, but the information has been summarized by account.

Accounts store the monetary information from the recording of transactions. Examples of accounts include Cash, Land, and Buildings. An accounting system can be computerized or manual. A manual system using T-accounts is usually used for textbook explanations because a T-account is a logical format.

T-accounts have a left (debit) side and a right (credit) side. An example T-account follows:

Cash	
Debit	Credit

A double-entry system has been devised to handle the recording of transactions. In a double-entry system, each transaction is recorded with the total dollar amount of the debits equal to the total dollar amount of the credits. The scheme of the double-entry system revolves around the **accounting equation**:

Assets = Liabilities + Stockholders' Equity

With the double-entry system, *debit* merely means the left side of an account, while *credit* means the right side. Each transaction recorded must have an equal number of dollars on the left side as it does on the right side. Several accounts could be involved in a single transaction, but the debits and credits must still be equal.

The debit and credit approach is a technique that has gained acceptance over a long period of time. This book will not make you competent in the use of the double-entry (debit and credit) technique. This book will enhance your understanding of the end result of the accounting process and enable you to use the financial accounting information in a meaningful way.

Asset, liability, and stockholders' equity accounts are referred to as **permanent accounts** because the balances in these accounts carry forward to the next accounting period. Balances in revenue, expense, gain, loss, and dividend accounts, described as **temporary accounts**, are closed to retained earnings and not carried into the next period.

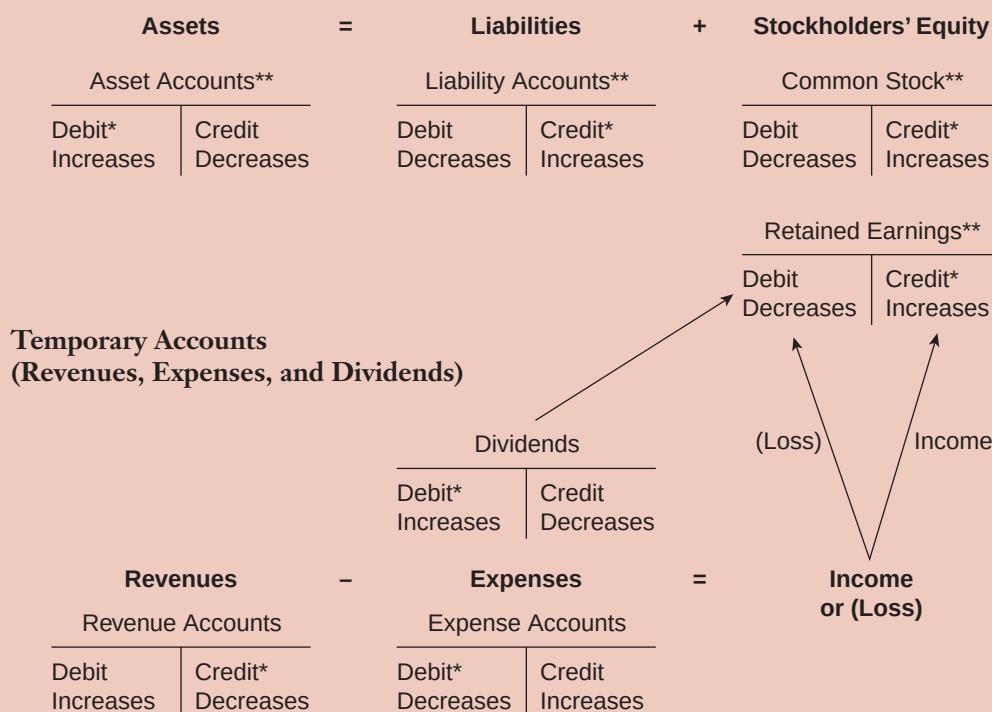
Exhibit 2-4 illustrates the double-entry system. Notice that the permanent accounts are represented by the accounting equation: assets = liabilities + stockholders' equity. The

EXHIBIT 2-4

DOUBLE-ENTRY SYSTEM

(Illustrating Relationship Between Permanent and Temporary Accounts)

Permanent Accounts (Assets, Liabilities, and Stockholders' Equity)



** Permanent accounts

* Normal balance

temporary accounts are represented by revenue, expense, and dividends. (Gains and losses would be treated like revenue and expense, respectively.) The balance sheet will not balance until the temporary accounts are closed to retained earnings.

Recording Adjusting Entries

Earlier a distinction was made between the accrual basis of accounting and the cash basis. It was indicated that the accrual basis requires that revenue be recognized when realized (realization concept) and expenses recognized when incurred (matching concept). The point of cash receipt for revenue and cash disbursement for expenses is not important under the accrual basis when determining income. Usually a company must use the accrual basis to achieve a reasonable result for the balance sheet and the income statement.

The accrual basis needs numerous adjustments to account balances at the end of the accounting period. For example, \$1,000 paid for insurance on October 1 for a one-year period (October 1–September 30) could have been recorded as a debit to Insurance Expense (\$1,000) and a credit to Cash (\$1,000). If this company prepares financial statements on December 31, it would be necessary to adjust Insurance Expense because not all of the insurance expense should be recognized in the three-month period October 1–December 31. The adjustment would debit Prepaid Insurance, an asset account, for \$750 and credit Insurance Expense for \$750. Thus, insurance expense would be presented on the income statement for this period as \$250, and an asset, prepaid insurance, would be presented on the balance sheet at \$750.

Adjusting entries are recorded in the general journal and then posted to the general ledger. Once the accounts are adjusted to the accrual basis, the financial statements can be prepared.

Preparing the Financial Statements

The accountant uses the accounts after the adjustments have been made to prepare the financial statements. These statements represent the output of the accounting system. Two of the principal financial statements, the income statement and the balance sheet, can be prepared directly from the adjusted accounts. Preparation of the statement of cash flows requires further analysis of the accounts.

AUDITOR'S REPORT

An auditor (certified public accountant) conducts an independent examination of the accounting information presented by the business and issues a report thereon. An **auditor's report** is the formal statement of the auditor's opinion of the financial statements after conducting an audit. Audit opinions are classified as follows:

1. **Unqualified opinion.** This opinion states that the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity, in conformity with generally accepted accounting principles.
2. **Qualified opinion.** A qualified opinion states that, except for the effects of the matter(s) to which the qualification relates, the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity, in conformity with generally accepted accounting principles.
3. **Adverse opinion.** This opinion states that the financial statements do *not* present fairly the financial position, results of operations, and cash flows of the entity, in conformity with generally accepted accounting principles.

4. **Disclaimer of opinion.** A disclaimer of opinion states that the auditor does not express an opinion on the financial statements. A disclaimer of opinion is rendered when the auditor has not performed an audit sufficient in scope to form an opinion.

The typical unqualified (or clean) opinion has three paragraphs. The first paragraph indicates *the financial statements that have been audited* and states that these *statements are the responsibility of the company's management*. This paragraph indicates that the auditors have the responsibility to express an opinion on these statements based on the audit or to disclaim an opinion.

The second paragraph indicates that the audit has been conducted *in accordance with generally accepted auditing standards*. Auditing standards define the required level of audit quality. These standards are classified as to “general standards,” “fieldwork standards,” and “reporting standards.” The paragraph goes on to state that these standards require the auditor to plan and perform the audit to obtain reasonable assurance that the financial statements are free of material misstatement. The second paragraph also includes a brief description of what is included in an audit.

The third paragraph gives an opinion on the statements—that they are in conformity with GAAP. In certain circumstances, an unqualified opinion on the financial statements may require that the auditor add an explanatory paragraph after the opinion paragraph. In this paragraph, the auditor may express agreement with a departure from a designated principle, describe a material uncertainty, describe a change in accounting principle, or express doubt as to the ability of the entity to continue as a going concern. An explanatory paragraph may also be added to emphasize a matter. Exhibit 2-5 illustrates a typical unqualified report.

EXHIBIT 2-5**TOYS “R” US Report—Unqualified Opinion****REPORT OF INDEPENDENT AUDITORS**

The Board of Directors and Stockholders
Toys “R” Us, Inc.

We have audited the accompanying consolidated balance sheets of Toys “R” Us, Inc. and subsidiaries as of January 30, 1999 and January 31, 1998, and the related consolidated statements of earnings, stockholders’ equity and cash flows for each of the three years in the period ended January 30, 1999. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Toys “R” Us, Inc. and subsidiaries at January 30, 1999 and January 31, 1998, and the consolidated results of their operations and their cash flows for each of the three years in the period ended January 30, 1999, in conformity with generally accepted accounting principles.

Ernst & Young LLP

Ernst & Young LLP
New York, New York
March 10, 1999

When examining financial statements, review the independent auditor's report. It can be important to your analysis. From the point of view of analysis, financial statements accompanied by an unqualified opinion without an explanatory paragraph or explanatory language carry the highest degree of reliability. This type of report indicates that the financial statements do not contain a material departure from GAAP and that the audit was not limited as to scope.

When an unqualified opinion contains an explanatory paragraph or explanatory language, try to decide how seriously to regard the departure from a straight unqualified opinion. For example, an explanatory paragraph because of a change in accounting principle would not usually be regarded as serious, although it would be important to your analysis. An explanatory paragraph because of a material uncertainty would often be regarded as a serious matter.

You are likely to regard a qualified opinion or an adverse opinion as casting serious doubts on the reliability of the financial statements. In each case, you must read the auditor's report carefully to form your opinion.

A disclaimer of opinion indicates that you should not look to the auditor's report as an indication of the reliability of the statements. When rendering this type of report, the auditor has not performed an audit sufficient in scope to form an opinion, or the auditor is not independent.

In some cases, outside accountants are associated with financial statements when they have performed less than an audit. The accountant's report then indicates that the financial statements have been reviewed or compiled.

A **review** consists principally of inquiries made to company personnel and analytical procedures applied to financial data. It has substantially less scope than an examination in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, the accountant does not express an opinion. The accountant's report will indicate that the accountants are not aware of any material modifications that should be made to the financial statements in order for them to be in conformity with GAAP; or the report will indicate departures from GAAP. A departure from GAAP may result from using one or more accounting principles without reasonable justification, the omission of necessary footnote disclosures, or the omission of the statement of cash flows.

In general, the reliance that can be placed on financial statements accompanied by an accountant's review report is substantially less than those accompanied by an audit report. Remember that the accountant's report does not express an opinion on reviewed financial statements.

When the outside accountant presents only financial information as provided by management, he or she is said to have **compiled** the financial statements. The compilation report states that the accountant has not audited or reviewed the financial statements. Therefore, the accountant does not express an opinion or any other form of assurance about them. If an accountant performs a compilation and becomes aware of deficiencies in the statements, then the accountant's report characterizes the deficiencies as follows:

- Omission of substantially all disclosures
- Omission of statement of cash flows
- Accounting principles not generally accepted

Sometimes financial statements are presented without an accompanying accountant's report. This means that the statements have not been audited, reviewed, or compiled. Such statements are solely the representation of management.

Management's Responsibility for Financial Statements

The responsibility for the preparation and for the integrity of financial statements rests with management. The auditor is responsible for conducting an independent examination of the statements and expressing an opinion on the financial statements based on the audit. To make financial statement users aware of management's responsibility, companies have presented management statements to shareholders as part of the annual report. Exhibit 2-6 shows an example.

The SEC's Integrated Disclosure System

In general, in the United States, the SEC has the authority to prescribe external financial reporting requirements for companies with securities sold to the general public. Under this jurisdiction, the SEC requires that certain financial statement information be included in the annual report to shareholders. This annual report, along with certain supplementary information, must then be included, or incorporated by reference, in the annual filing to the SEC, known as the **10-K report** or **Form 10-K**. The Form 10-K is due three months following the end of the company's fiscal year. The annual report and the Form 10-K include audited financial statements.

EXHIBIT 2-6

TOYS "R" US Management's Responsibility for Financial Reporting

REPORT OF MANAGEMENT

Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with the management of Toys "R" Us. The accompanying financial statements have been prepared from accounting records which management believes fairly and accurately reflect the operations and financial position of the Company. Management has established a system of internal controls to provide reasonable assurance that assets are maintained and accounted for in accordance with its policies and that transactions are recorded accurately on the Company's books and records.

The Company's comprehensive internal audit program provides for constant evaluation of the adequacy of the adherence to management's established policies and procedures. The Company has distributed to key employees its policies for conducting business affairs in a lawful and ethical manner.

The Audit Committee of the Board of Directors, which is comprised solely of outside directors, provides oversight to the financial reporting process through periodic meetings with our independent auditors, internal auditors and management.

The financial statements of the Company have been audited by Ernst & Young LLP, independent auditors, in accordance with generally accepted auditing standards, including a review of financial reporting matters and internal controls to the extent necessary to express an opinion on the consolidated financial statements.



Robert C. Nakasone
Chief Executive Officer



Louis Lipschitz
Executive Vice President
and Chief Financial Officer

The SEC promotes an integrated disclosure system between the annual report and the Form 10-K. The goals are to improve the quality of disclosure, lighten the disclosure load, standardize information requirements, and achieve uniformity of annual reports and Form 10-K filings.

In addition to the company's primary financial statements, the Form 10-K must include the following:

1. Information on the market for holders of common stock and related securities, including high and low sales price, frequency and amount of dividends, and number of shares.
2. Five-year summary of selected financial data, including net sales or operating revenues, income from continuing operations, total assets, long-term obligations, redeemable preferred stock, and cash dividends per share. (Some companies elect to present data for more than five years and/or expand the disclosure.) Trend analysis is emphasized.
3. Management's discussion and analysis (MDA) of financial condition and results of operations. Specifically required is discussion of liquidity, capital resources, and results of operations.
4. Two years of audited balance sheets and three years of audited income statements and statements of cash flow.
5. Disclosure of the domestic and foreign components of pretax income, unless foreign components are considered to be immaterial.

SEC requirements force management to focus on the financial statements as a whole, rather than on just the income statement and operations. Where trend information is relevant, discussion should center on the five-year summary. Emphasis should be on favorable or unfavorable trends and on identification of significant events or uncertainties. This discussion should provide the analyst with a reasonable summary of the position of the firm.

Exhibit 2-7 presents a summary of the major parts of the Form 10-K. In practice, much of the required information in the Form 10-K is incorporated by reference. Incorporated by

EXHIBIT 2-7

GENERAL SUMMARY OF FORM 10-K

PART I

- Item 1. Business.
- Item 2. Properties.
- Item 3. Legal Proceedings.
- Item 4. Submission of Matters to a Vote of Security Holders.

PART II

- Item 5. Market for Registrant's Common Equity and Related Stockholder Matters.
- Item 6. Selected Financial Data.
- Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.
- Item 8. Financial Statements and Supplementary Data.
- Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

PART III

- Item 10. Directors and Executive Officers of Registrant.
- Item 11. Executive Compensation.
- Item 12. Security Ownership of Certain Beneficial Owners and Management.
- Item 13. Certain Relationships and Related Transactions.
- Item 14. Exhibits, Financial Statement Schedules, and Reports on Form 8-K.

reference means that the information is presented outside the Form 10-K, and a reference in the Form 10-K indicates where the information can be found. Usually the financial statements are incorporated into the Form 10-K by referencing the annual report.

A review of a company's Form 10-K can reveal information that is not available in the annual report. For example, Item 2 of the Form 10-K reveals a detailed listing of properties and indicates if the property is leased or owned.

The SEC requires that a quarterly report (Form 10-Q), containing financial statements and a management discussion and analysis, be submitted within 45 days following the end of the quarter. (The Form 10-Q is not required for the fourth quarter of the fiscal year.) Most companies also issue a quarterly report to stockholders. The Form 10-Q and quarterly reports are unaudited.

In addition to the Form 10-K and Form 10-Q, a Form 8-K must be submitted to the SEC to report special events. Special events required to be reported are changes in principal stockholders, changes in auditors, acquisitions and divestitures, bankruptcy, and resignation of directors. The Form 8-K is due 15 days following the event.

The Forms 10-K, 10-Q, and 8-K filings are available to the public. Typically a company provides these reports to stockholders upon request only.

Proxy

The **proxy**, the solicitation sent to stockholders for the election of directors and for the approval of other corporation actions, represents the shareholder authorization regarding the casting of that shareholder's vote. The proxy contains notice of the annual meeting, beneficial ownership (name, address, and share ownership data of shareholders holding more than 5% of outstanding shares), board of directors, standing committees, compensation of directors, compensation of executive officers, employee benefit plans, certain transactions with officers and directors, relationship with independent accountants, and other business.

The proxy rules provided under the 1934 Securities Exchange Act are applicable to all securities registered under Section 12 of the Act. The SEC gains its influence over the annual report through provisions of the Act that cover proxy statements.

The SEC's proxy rules of particular interest to investors involve executive compensation disclosure, performance graph, and retirement plans for executive officers. These rules are designed to improve shareholders' understanding of the compensation paid to senior executives and directors, the criteria used in reaching compensation decisions, and the relationship between compensation and corporate performance.

Among other matters, the executive compensation rules call for four highly formatted disclosure tables and the disclosure of the compensation committee's basis for compensation decisions.

The four tables disclosing executive compensation are:

- A summary executive compensation table covering compensation for the company's chief executive officer and its four other most highly compensated executives for the last three years.
- Two tables detailing options and stock appreciation rights.
- A long-term incentive plan award table.

The performance graph is a line graph comparing the cumulative total shareholder return with performance indicators of the overall stock market and either the published industry index or the registrant-determined peer comparison. This performance graph must be presented for a five-year period.

The pension plan table for executive officers discloses the estimated annual benefits payable upon retirement for any defined benefit or actuarial plan under which benefits are determined primarily by final compensation (or average final compensation) and years of service. Immediately following the table, additional disclosure is required. This disclosure includes items such as the relationship of the covered compensation to the compensation reported in the summary compensation table and the estimated credited years of service for each of the named executive officers.

SUMMARY ANNUAL REPORT

A reporting option available to public companies is to issue a **summary annual report**. A summary annual report, a condensed report, omits much of the financial information typically included in an annual report. A typical full annual report has more financial pages than nonfinancial pages. A summary annual report generally has more nonfinancial pages.¹ When a company issues a summary annual report, the proxy materials it sends to shareholders must include a set of fully audited statements and other required financial disclosures.

A summary annual report is *not* adequate for reasonable analysis. For companies that issue a summary annual report, request a copy of their proxy and the Form 10-K. Even for companies that issue a full annual report, it is also good to obtain a copy of the proxy materials and the Form 10-K. Some companies issue a joint annual report and Form 10-K, while other companies issue a joint annual report and proxy.

THE EFFICIENT MARKET HYPOTHESIS

The **efficient market hypothesis (EMH)** relates to the ability of capital markets to generate prices for securities that reflect worth. The EMH implies that publicly available information is fully reflected in share prices. The market will not be efficient if the market does not have access to relevant information or if fraudulent information is provided.

There seems to be little doubt that the FASB and the SEC assess the impact of their actions on security prices. The SEC has been particularly sensitive to insider trading because abnormal returns could be achieved by the use of insider information.

If the market is efficient, investors may be harmed when firms do not follow a full disclosure policy. In an efficient market, the method of disclosure is not as important as whether or not the item is disclosed. It should not matter whether an item is disclosed in the body of the financial statements or in the footnotes. It is the disclosure rather than how to disclose that is the substantive issue.

Usually there is a cost to disclose. An attempt should be made to determine the value of additional disclosure in relation to the additional cost. Disclosure should be made when the perceived benefits exceed the additional cost to provide the disclosure.

It is generally recognized that the market is more efficient when dealing with large firms trading on large organized stock markets than it is for small firms that are not trading on large organized stock markets.

Although the research evidence regarding the EMH is conflicting, this hypothesis has taken on an important role in financial reporting in the United States.

ETHICS

“Ethics and morals are synonymous. While *ethics* is derived from Greek, *morals* is derived from Latin. They are interchangeable terms referring to ideals of character and

conduct. These ideals, in the form of codes of conduct, furnish criteria for distinguishing between right and wrong.”² Ethics has been a subject of investigation for hundreds of years. Individuals in financial positions must be able to recognize ethical issues and resolve them in an appropriate manner.

Ethics affect all individuals—from the financial clerk to the high-level financial executive. Individuals make daily decisions based on their individual values. Some companies and professional organizations have formulated a code of ethics as a statement of aspirations and a standard of integrity beyond that required by law (which can be viewed as the minimum standard of ethics).

Ten essential values can be considered central to relations between people.³

1. Caring
2. Honesty
3. Accountability
4. Promise keeping
5. Pursuit of excellence
6. Loyalty
7. Fairness
8. Integrity
9. Respect for others
10. Responsible citizenship

Ethics can be a particular problem with financial reports. Accepted accounting principles leave ample room for arriving at different results in the short run. Highly subjective estimates can substantially influence earnings. What provision should be made for warranty costs? What should be the loan loss reserve? What should be the allowance for doubtful accounts?

The American Accounting Association initiated a project in 1988 on professionalism and ethics. One of the goals of this project was to provide students with a framework for evaluating their courses of action when encountering ethical dilemmas. The American Accounting Association developed a decision model for focusing on ethical issues.⁴

1. Determine the facts—what, who, where, when, how.
2. Define the ethical issues (includes identifying the identifiable parties affected by the decision made or action taken).
3. Identify major principles, rules, and values.
4. Specify the alternatives.
5. Compare norms, principles, and values with alternatives to see if a clear decision can be reached.
6. Assess the consequences.
7. Make your decision.

Example 1: Questionable Ethics in Savings and Loans In connection with the savings and loan (S & L) scandal, it was revealed that several auditors of thrift institutions borrowed substantial amounts from the S & L that their firm was auditing. It was charged that some of the loans involved special consideration.⁵ In one case, dozens of partners of a major accounting firm borrowed money for commercial real estate loans, and some of the partners defaulted on their loans when the real estate market collapsed.⁶ It was not clear whether these particular loans violated professional ethics standards. The AICPA subsequently changed its ethics standards to ban all such loans.

In another case, an accounting firm paid \$1.5 million to settle charges by the California State Board of Accountancy that the accounting firm was grossly negligent in its 1987 audit of Lincoln Savings & Loan. The accounting board charged that the firm had agreed to the improper recognition of approximately \$62 million in profits.⁷

Example 2: Questionable Ethics in the Motion Picture Industry Hollywood's accounting practices have often been labeled "mysterious."⁸ A case in point is Art Buchwald's lawsuit against Paramount Pictures for breach of contract regarding the film *Coming to America*. Paramount took an option on Buchwald's story "King for a Day" in 1983 and promised Buchwald 1.5% of the net profits of the film. Buchwald's attorney, Pierce O'Donnell, accused Paramount Studios of "fatal subtraction" in determining the amount of profit. Although the film grossed \$350 million worldwide, Paramount claimed an \$18 million net loss. As a result of the studio's accounting practices, Buchwald was to get 1.5% of nothing.⁹ Buchwald was eventually awarded \$150,000 in a 1992 court decision.¹⁰

Many Hollywood celebrities, in addition to Art Buchwald, have sued over Hollywood-style accounting. These include Winston Groom over the movie rights to *Forrest Gump*, Jane Fonda over a larger share of profits relating to *On Golden Pond*, and James Garner over his share of profits from *The Rockford Files* (a television program). Some of the best creative work in Hollywood is in accounting.

HARMONIZATION OF INTERNATIONAL ACCOUNTING STANDARDS

The impetus for changes in accounting practice has come from the needs of the business community and governments. With the expansion of international business and global capital markets, the business community and governments have shown an increased interest in the harmonization of international accounting standards.

Suggested problems caused by lack of harmonization of international accounting standards include:

1. A need for employment of key personnel in multinational companies to bridge the "gap" in accounting requirements between countries.
2. Difficulties in reconciling local standards for access to other capital markets.
3. Difficulties in accessing capital markets for companies from less developed countries.¹¹
4. Negative effect on the international trade of accounting practice and services.¹²

International interest in harmonization of international accounting standards has been especially strong since the early 1970s. In 1973, nine countries, including the United States, formed the International Accounting Standards Committee (IASC). IASC includes approximately 100 member nations and well over 100 professional accounting bodies. The IASC is the only private sector body involved in setting international accounting standards.

The IASC's objectives include:

1. Developing international accounting standards and disclosure to meet the needs of international capital markets and the international business community.
2. Developing accounting standards to meet the needs of developing and newly industrialized countries.
3. Working toward increased comparability between national and international accounting standards.¹³

The IASC does not have authority to enforce its standards, but these standards have been adopted in whole or in part by many countries. Some see the lack of enforcement

authority as a positive factor because it enables the passing of standards that would not have had the necessary votes if they could be enforced. This allows standards to be more ideal than they would otherwise be if they were enforceable.

IASC follows a due-process procedure similar to that of the FASB. This includes exposure drafts and a comment period. All proposed standards and guidelines are exposed for comment for about six months.¹⁴

The United Nations (UN) has shown a substantial interest in harmonization of international accounting standards. The UN appointed a group to study harmonization of international accounting standards in 1973. This has evolved into an ad hoc working group. Members of the working group represent governments and not the private sector. The working group does not issue standards but rather facilitates their development. The UN's concern is with how multinational corporations affect the developing countries.¹⁵

Many other organizations, in addition to the IASC and the UN, have played a role in the harmonization of international accounting standards. Some of these organizations include the Financial Accounting Standards Board (FASB), the European Economic Community (EEC), the Organization for Economic Cooperation and Development (OECD), and the International Federation of Accountants (IFAC).

Domestic accounting standards have developed to meet the needs of domestic environments. A few of the factors that influence accounting standards locally are:

1. A litigious environment in the United States that has led to a demand for more detailed standards in many cases.
2. High rates of inflation in some countries that have resulted in periodic revaluation of fixed assets and other price-level adjustments or disclosures.
3. More emphasis on financial reporting/income tax conformity in certain countries (for example, Japan and Germany) that no doubt greatly influences domestic financial reporting.
4. Reliance on open markets as the principal means of intermediating capital flows that has increased the demand for information to be included in financial reports in the United States and some other developed countries.¹⁶

The following have been observed to have an impact on a country's financial accounting operation:

1. Who the investors and creditors—the information users—are (individuals, banks, the government).
2. How many investors and creditors there are.
3. How close the relationship is between businesses and the investor/creditor group.
4. How developed the stock exchanges and bond markets are.
5. The extent of use of international financial markets.¹⁷

With this backdrop of fragmentation, it will be difficult in the short run, if not impossible, to bring national standards into agreement with a meaningful body of international standards. But many see benefits to harmonization of international accounting standards and feel that accounting must move in that direction. In the short run, ways exist to cope with incomparable standards. One possible interim solution involves dual standards. International companies would prepare two sets of financial statements. One would be prepared under domestic GAAP, while the other would be prepared under international GAAP. This would likely put pressure on domestic GAAP to move towards international GAAP.

In the United States, a conflict exists between the SEC and the securities exchanges, such as the New York Stock Exchange (NYSE). In general, the SEC requires foreign registrants to conform to U.S. GAAP, either directly or by reconciliation. This approach achieves a degree of comparability in the U.S. capital market, but it does not achieve comparability for investors who want to invest in several national capital markets. This approach poses a problem for U.S. securities exchanges, because the U.S. standards are perceived to be the most stringent. This puts exchanges such as the NYSE at a competitive disadvantage with foreign exchanges that have lower standards. The development of international standards would alleviate this problem.

In the United States, the FASB did not show a critical interest in harmonization of international accounting standards until the early 1990s. The FASB now actively participates in the harmonization of international accounting standards. This includes cooperating with the IASC and the UN.

CONSOLIDATED STATEMENTS

Financial statements of legally separate entities may be issued to show financial position, income, and cash flow as they would appear if the companies were a single entity (consolidated). Such statements reflect an economic, rather than a legal, concept of the entity. For consolidated statements, all transactions between the entities being consolidated—intercompany transactions—must be eliminated.

One corporation can own stock in another corporation in an amount sufficient to hold substantial voting rights in that corporation. The corporation owning the stock is the *parent corporation*. The corporation whose stock is owned is the *subsidiary corporation*. The financial statements of the parent and the subsidiary are consolidated for all majority-owned subsidiaries unless control is temporary or does not rest with the majority owner. These are termed **consolidated financial statements**. An *unconsolidated* subsidiary is accounted for as an investment on the parent's balance sheet.

When a subsidiary is less than 100% owned and its statements are consolidated, minority shareholders must be recognized in the consolidated financial statements by showing the minority interest in net assets on the balance sheet and the minority share of earnings on the income statement. Minority-related accounts are discussed in detail in Chapter 3.

The consolidation of financial statements has been a practice in the United States for years; however, this has not been the case for many other nations. In some countries like Japan, parent-only financial statements are the norm. In other countries like Germany, consolidation only includes domestic subsidiaries.

The IASC passed a standard that requires that all controlled subsidiaries be consolidated. Although IASC standards cannot be enforced, this standard will likely increase the acceptance of consolidation.

ACCOUNTING FOR BUSINESS COMBINATIONS

The combination of business entities by merger or acquisition is very frequent. There are many possible reasons for this external business expansion, including achieving economies of scale and savings of time in entering a new market.

There are two methods of accounting for a business combination—the **pooling of interests** method and the **purchase** method. The accounting for a merger or acquisition is guided by 12 specific criteria to judge a combination. If the 12 criteria are met, then the acquisition must be accounted for as a pooling of interests. The criteria leave some room for judgment in determining if the pooling method should be used.

A pooling of interests involves an exchange of voting common stock. With the pooling method, the recorded assets and liabilities of the firms involved are carried forward to the combined entity at their previous recorded amounts. Income of the combined firm includes income of the constituents for the entire period. The prior years are restated to show the combined firms as merged (pooled).

Since the pooling method results in the acquired assets and liabilities being carried forward at the amount that they were previously recorded, this results in a net understatement of assets, liabilities, and equity in relation to the acquisition values. This will lead to a subsequent overstatement of income because of the reduced expenses subsequently recognized. With the pooling method, the resulting retained earnings in stockholders' equity represents the prior retained earnings of both companies.

The purchase method views the business combination as the acquisition of one entity by another. The firm doing the acquiring records the identifiable assets and liabilities at fair value at the date of acquisition. The difference between the fair value of the identifiable assets and liabilities and the amount paid is recorded as goodwill (an asset). Since goodwill must be amortized to expense, this can result in substantial subsequent expense.

With a purchase, the acquiring firm picks up the income of the acquired firm from the date of acquisition. Retained earnings of the acquired firm do not continue.

The Daimler-Benz/Chrysler Corp. merger depicts the advantage of pooling over the purchase method. Chrysler had a book value of approximately \$12 billion, while the transaction valued Chrysler at approximately \$39 billion. The purchase method would have resulted in approximately \$27 billion of goodwill. This would have been a subsequent \$27 billion drag on earnings.¹⁸

SUMMARY

This chapter includes an introduction to the basic financial statements. Later chapters will cover these statements in detail.

An understanding of the sequence of accounting procedures completed during each accounting period, called the accounting cycle, will help in understanding the end result—financial statements.

This chapter describes the forms of business entities, which are sole proprietorship, partnership, and corporation.

Management is responsible for financial statements. These statements are examined by auditors who express an opinion regarding the statements' conformity to GAAP in the auditor's report. The auditor's report often points out key factors that can affect financial statement analysis. The SEC has begun a program to integrate the Form 10-K requirements with those of the annual report.

A reporting option available to public companies, a summary annual report (a condensed annual report), omits much of the financial information included in a typical annual report.

The EMH relates to the ability of capital markets to generate prices for securities that reflect worth. The market will not be efficient if the market does not have access to relevant information or if fraudulent information is provided.

Individuals in financial positions must be able to recognize ethical issues and resolve them appropriately.

With the expansion of international business and global capital markets, the business community and governments have shown an increased interest in the harmonization of international accounting standards.

The combination of business entities by merger or acquisition is very frequent. An understanding of how a business combination can impact the basic statements is important to the analyst.

QUESTIONS

- Q 2-1.** Name the type of opinion indicated by each of the following situations:
- There is a material uncertainty.
 - There was a change in accounting principle.
 - There is no material scope limitation or material departure from GAAP.
 - The financial statements do not present fairly the financial position, results of operations, or cash flows of the entity in conformity with GAAP.
 - Except for the effects of the matter(s) to which the qualification relates, the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity, in conformity with GAAP.
- Q 2-2.** What are the roles of management and the auditor in the preparation and integrity of the financial statements?
- Q 2-3.** What is the purpose of the SEC's integrated disclosure system for financial reporting?
- Q 2-4.** Why do some unqualified opinions have explanatory paragraphs?
- Q 2-5.** Describe an auditor's review of financial statements.
- Q 2-6.** Will the accountant express an opinion on reviewed financial statements? Describe the accountant's report for reviewed financial statements.
- Q 2-7.** What type of opinion is expressed on a compilation?
- Q 2-8.** Are all financial statements presented with some kind of an accountant's report? Explain.
- Q 2-9.** What are the three principal financial statements of a corporation? Briefly describe the purpose of each statement.
- Q 2-10.** Why are footnotes to statements necessary?
- Q 2-11.** What are contingent liabilities? Are lawsuits against the firm contingent liabilities?
- Q 2-12.** Which of the following events, occurring subsequent to the balance sheet date, would require a footnote?
- | | |
|---|--|
| a. Major fire in one of the firm's plants | d. Introduction of new management techniques |
| b. Increase in competitor's advertising | e. Death of the corporate treasurer |
| c. Purchase of another company | |
- Q 2-13.** Describe a proxy statement.
- Q 2-14.** Briefly describe a summary annual report.
- Q 2-15.** If a company issues a summary annual report, where can the more extensive financial information be found?
- Q 2-16.** Comment on the typical number of financial pages in a summary annual report as compared to a full annual report.
- Q 2-17.** What are the major sections of a statement of cash flows?
- Q 2-18.** Which two principal financial statements explain the difference between two balance sheet dates? Describe how these financial statements explain the difference between two balance sheet dates.
- Q 2-19.** What are the three major categories on a balance sheet?

- ## To the Net



1. Go to the book's web site at accounting.swcollege.com and click on the link to DePaul University ethics web site. Click on Resources; then click on *Business Ethics*, Magazine Articles Online. Select one of the articles on an ethical issue. Summarize the information provided by the article.
2. Go to the FASB web site (www.fasb.org). Click on Financial Accounting Standards Board. Click on Site Map. Click on International and click on "A Vision for the Future—Report of the FASB." Read this article and be prepared to discuss.

PROBLEMS

P 2-1. The Mike Szabo Company engaged in the following transactions during the month of December:

December	2	Made credit sales of \$4,000 (accepted accounts receivable).
	6	Made cash sales of \$2,500.
	10	Paid office salaries of \$500.
	14	Sold land that originally cost \$2,200 for \$3,000 cash.
	17	Paid \$6,000 for equipment.
	21	Billed clients \$900 for services (accepted accounts receivable).
	24	Collected \$1,200 on an account receivable.
	28	Paid an account payable of \$700.

Required Record the transactions, using T-accounts.

P 2-2. The Darlene Cook Company engaged in the following transactions during the month of July:

July	1	Acquired land for \$10,000. The company paid cash.
	8	Billed customers for \$3,000. This represents an increase in revenue. The customer has been billed and will pay at a later date. An asset, accounts receivable, has been created.
	12	Incurred a repair expense for repairs of \$600. Darlene Cook Company agreed to pay in 60 days. This transaction involves an increase in accounts payable and repair expense.
	15	Received a check for \$500 from a customer who was previously billed. This is a reduction in accounts receivable.
	20	Paid \$300 for supplies. This was previously established as a liability, account payable.
	24	Paid wages in the amount of \$400. This was for work performed during July.

Required Record the transactions, using T-accounts.

P 2-3. The Gaffney Company had these adjusting entry situations at the end of December.

- On July 1, Gaffney Company paid \$1,200 for a one-year insurance policy. The policy was for the period July 1 through June 30. The transaction was recorded as prepaid insurance and a reduction in cash.
- On September 10, Gaffney Company purchased \$500 of supplies for cash. The purchase was recorded as supplies. On December 31, it was determined that various supplies had been consumed in operations and that supplies costing \$200 remained on hand.
- Gaffney Company received \$1,000 on December 1 for services to be performed in the following year. This was recorded on December 1 as an increase in cash and as revenue. As of December 31, this needs to be recognized as unearned revenue, a liability account.
- As of December 31, interest charges of \$200 have been incurred because of borrowed funds. Payment will not be made until February. A liability for the interest needs to be recognized as does the interest expense.
- As of December 31, a \$500 liability for salaries needs to be recognized.

6. As of December 31, Gaffney Company had provided services in the amount of \$400 for the Jones Company. An asset, account receivable, needs to be recognized along with the revenue.

Required Record the adjusting entries at December 31, using T-accounts.

P 2-4. The DeCort Company had these adjusting entry situations at the end of December:

1. On May 1, the DeCort Company paid \$960 for a two-year insurance policy. The policy was for the period May 1 through April 30 (2 years). This is the first year of the policy. The transaction was recorded as insurance expense.
2. On December 1, the DeCort Company purchased \$400 of supplies for cash. The purchase was recorded as an asset, supplies. On December 31, it was determined that various supplies had been consumed in operations and that supplies costing \$300 remained on hand.
3. DeCort Company holds a note receivable for \$4,000. This note is interest-bearing. The interest will be received when the note matures. The note is a one-year note receivable made on June 30, bearing 5% simple interest.
4. DeCort Company owes salaries in the amount of \$800 at the end of December.
5. As of December 31, DeCort Company had received \$600 for services to be performed. These services had not been performed as of December 31. A liability, unearned revenue needs to be recognized, and revenue needs to be reduced.
6. On December 20, DeCort Company received a \$400 bill for advertising in December. The liability account, accounts payable, needs to be recognized along with the related expense.

Required Record the adjusting entries at December 31, using T-accounts.

P 2-5.

Required Answer the following multiple-choice questions:

- a. The balance sheet equation can be defined as which of the following?
 1. Assets + Stockholders' Equity = Liabilities
 2. Assets + Liabilities = Stockholders' Equity
 3. Assets = Liabilities – Stockholders' Equity
 4. Assets – Liabilities = Stockholders' Equity
 5. None of the above
- b. If assets are \$40,000 and stockholders' equity is \$10,000, how much are liabilities?
 1. \$30,000
 2. \$50,000
 3. \$20,000
 4. \$60,000
 5. \$10,000
- c. If assets are \$100,000 and liabilities are \$40,000, how much is stockholders' equity?
 1. \$40,000
 2. \$50,000
 3. \$60,000
 4. \$30,000
 5. \$140,000
- d. Which is a permanent account?
 1. Revenue
 2. Advertising Expense
 3. Accounts Receivable
 4. Dividends
 5. Insurance Expense

- e. Which is a temporary account?
 - 1. Cash
 - 2. Accounts Receivable
 - 3. Insurance Expense
 - 4. Accounts Payable
 - 5. Notes Payable
- f. In terms of debits and credits, which accounts have the same normal balances?
 - 1. Dividends, retained earnings, liabilities
 - 2. Capital stock, liabilities, expenses
 - 3. Revenues, capital stock, expenses
 - 4. Expenses, assets, dividends
 - 5. Dividends, assets, liabilities

P 2-6.

Required Answer the following multiple-choice questions:

- a. Audit opinions cannot be classified as which of the following?
 - 1. All-purpose
 - 2. Disclaimer of opinion
 - 3. Adverse opinion
 - 4. Qualified opinion
 - 5. Unqualified opinion
- b. From the point of view of analysis, which classification of an audit opinion indicates that the financial statements carry the highest degree of reliability?
 - 1. Unqualified opinion
 - 2. All-purpose
 - 3. Disclaimer of opinion
 - 4. Qualified opinion
 - 5. Adverse opinion
- c. Which one of the following statements is false?
 - 1. The reliance that can be placed on financial statements that have been reviewed is substantially less than for those that have been audited.
 - 2. An accountant's report described as a compilation presents only financial information as provided by management.
 - 3. A disclaimer of opinion indicates that you should not look to the auditor's report as an indication of the reliability of the statements.
 - 4. A review has substantially less scope than an examination in accordance with generally accepted auditing standards.
 - 5. The typical unqualified opinion has one paragraph.
- d. If an accountant performs a compilation and becomes aware of deficiencies in the statements, the accountant's report characterizes the deficiencies by all but one of the following:
 - 1. Omission of substantially all disclosures
 - 2. Omission of statement of cash flows
 - 3. Accounting principles not generally accepted
 - 4. All of the above
 - 5. None of the above
- e. In addition to the company's principal financial statements, the Form 10-K and shareholder annual reports must include all but one of the following:
 - 1. Information on the market for holders of common stock and related securities, including high and low sales price, frequency and amount of dividends, and number of shares.
 - 2. Five-year summary of selected financial data.
 - 3. Management's discussion and analysis of financial condition and results of operations.
 - 4. Two years of audited balance sheets, three years of audited statements of income, and two years of statements of cash flows.
 - 5. Disclosure of the domestic and foreign components of pretax income.

- f. Which of these is not a suggested problem caused by lack of harmonization of international accounting standards?
 1. Positive effect on the international trade of accounting practice and services.
 2. A need for employment of key personnel in multinational companies to bridge the “gap” in accounting requirements between countries.
 3. Difficulties in reconciling local standards for access to other capital markets.
 4. Difficulties in accessing capital markets for companies from less developed countries.
 5. Negative effect on the international trade of accounting practice and services.
- g. Which of these organizations has not played a role in the harmonization of international accounting standards?
 1. United Nations (UN)
 2. Internal Revenue Service (IRS)
 3. International Accounting Standards Committee (IASC)
 4. Financial Accounting Standards Board (FASB)
 5. European Economic Community (EEC)
- h. The Form 10-K is submitted to the
 1. American Institute of Certified Public Accountants
 2. Securities and Exchange Commission
 3. Internal Revenue Service
 4. American Accounting Association
 5. Emerging Issues Task Force

P 2-7. The following are selected accounts of the Laura Gibson Company on December 31:

	Permanent (P) or Temporary (T)	Normal Balance (Dr.) or (Cr.)
Cash	_____	_____
Accounts Receivable	_____	_____
Equipment	_____	_____
Accounts Payable	_____	_____
Common Stock	_____	_____
Sales	_____	_____
Purchases	_____	_____
Rent Expense	_____	_____
Utility Expense	_____	_____
Selling Expense	_____	_____

Required In the space provided:

1. Indicate if the account is a permanent (P) or temporary (T) account.
2. Indicate the normal balance in terms of debit (Dr.) or credit (Cr.).

P 2-8. An auditor’s report is the formal presentation of all the effort that goes into an audit. Below is a list of the classifications of audit opinions that can be found in an auditor’s report as well as a list of phrases describing the opinions.

Classifications of Audit Opinions

- a. Unqualified opinion
- b. Qualified opinion
- c. Adverse opinion
- d. Disclaimer of opinion

Phrases

- ___ 1. This opinion states that the financial statements do not present fairly the financial position, results of operations, or cash flows of the entity, in conformity with generally accepted accounting principles.
- ___ 2. This type of report is rendered when the auditor has not performed an audit sufficient in scope to form an opinion.
- ___ 3. This opinion states that, except for the effects of the matters to which the qualification relates, the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity, in conformity with generally accepted accounting principles.
- ___ 4. This opinion states that the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity, in conformity with generally accepted accounting principles.

Required Place the appropriate letter identifying each type of opinion on the line in front of the statement or phrase describing the type of opinion.

P 2-9. A company prepares financial statements in order to summarize financial information. Below is a list of financial statements and a list of descriptions.

Financial Statements

- a. Balance sheet
- b. Income statement
- c. Statement of cash flows
- d. Statement of stockholders' equity

Descriptions

- ___ 1. Details the sources and uses of cash during a specified period of time.
- ___ 2. Summary of revenues and expenses and gains and losses for a specific period of time.
- ___ 3. Shows the financial condition of an accounting entity as of a specific date.
- ___ 4. Presents reconciliation of the beginning and ending balances of the stockholders' equity accounts.

Required Match each financial statement with its description.

Case 2-1

The CEO Retires*

Dan Murphy awoke at 5:45 a.m., just like he did every workday morning. No matter that he went to sleep only four hours ago. The Orange Bowl game had gone late into the evening, and the New Year's Day party was so good, no one wanted to leave. At least Dan could awake easily this morning. Some of his guests had lost a little control celebrating the first day of the new year, and Dan was not a person who ever lost control.

The drive to the office was easier than most days. Perhaps there were a great many parties last night. All the better as it gave Dan time to think. The dawn of a new year; his last year. Dan would turn 65 next December, and the company had a mandatory retirement policy. A good idea he thought; to get new blood in the organization. At least that's what he thought on the climb up. From just another college graduate within the corporate staff, all the way to the Chief Executive Officer's suite. It certainly is a magnificent view from the top.

To be CEO of his own company. Well not really, as it was the stockholders' company, but he had been CEO for the past eight years. Now he too must turn the reins over. "Must," now that's the operative word. He knew it was the best thing for the company. Turnover kept middle management aggressive, but he also knew that he wouldn't leave if he had a choice. So Dan resolved to make his last year the company's best year ever.

It was that thought which kept his attention, yet the focus of consideration and related motivations supporting such a strategy changed as he continued to strategize. At first, Dan thought that it would be a fine way to give something back to a company that had given him so much. His 43 years with the company had given him challenges which filled his life with meaning and satisfaction, provided him with a good living, and made him a man respected and listened to in the business community. But the thought that the company was also forcing him to give all that up made his thoughts turn more inward.

Of course, the company had done many things for him, but what of all the sacrifices he had made? His whole heart and soul were tied to the company. In fact, one could hardly think of Dan Murphy without thinking of the company, in much the same way as prominent corporate leaders and their firms are intrinsically linked. But the company would still be here this time next year, and what of him? Yes, he would leave the company strong, because by leaving it strong, it would strengthen his reputation as a great leader. His legacy would carry and sustain him over the years. But would it? One must also live in a manner consistent with such esteem.

Being the CEO of a major company also has its creature comforts. Dan was accustomed to a certain style of living. How much will that suffer after the salary, bonuses, and stock options are no more?

Arriving at the office by 7:30 a.m., he left a note for his secretary that he was not to be disturbed until 9 a.m. He pulled out the compensation file and examined the incentive clauses in his own contract. The contract was created by the compensation committee of the Board of Directors. All of the committee members were outsiders; that is, not a part of the company's management. This lends the appearance of independence, but most were CEOs of their own companies, and Dan knew that, by and large, CEOs take care of their own. His suspicions were confirmed. If the company's financial results were the best ever this year, then so too would be his own personal compensation.

Yet what if there were uncontrollable problems? The general economy appeared fairly stable. However, another oil shock, some more bank failures, or a list of other disas-

ters could turn things into a downward spiral quickly. Economies are easily influenced and consumer and corporate psychology can play a large part in determining outcomes. But even in apparently uncontrollable circumstances, Dan knew he could protect himself and the financial fortunes of his company during the short-term, which after all, was the only thing that mattered.

Upon further review of his compensation contract, Dan saw that a large portion of his bonus and stock options was a function of operating income levels, earnings per share, and return on assets. So the trick was to maximize those items. If he did, the company would appear vibrant and posed for future growth at the time of his forced retirement, he reminded himself. Furthermore, his total compensation in the last year of his employment would reach record proportions. Additionally, since his pension is based on the average of his last three years' compensation, Dan will continue to reap the benefits of this year's results for hopefully a long time to come. And who says CEOs don't think long-term?

Two remaining issues needed to be addressed. Those were (1) how to ensure a record-breaking year and (2) how to overcome any objections raised in attaining those results? Actually, the former was a relatively simple goal to achieve. Since accounting allows so many alternatives in the way financial events are measured, Dan could just select a package of alternatives which would maximize the company's earnings and return on assets. Some alternatives may result in changing an accounting method, but since the new auditing standards were issued, his company could still receive an unqualified opinion from his auditors, with only a passing reference to any accounting changes in the auditor's opinion and its effects disclosed in the footnotes. As long as the alternative was allowed by generally accepted accounting principles, and the justification for the change was reasonable, the auditors should not object. If there were objections, Dan could always threaten to change auditors. But still the best avenue to pursue would be a change in accounting estimates, since those changes did not even need to be explicitly disclosed.

So Dan began to mull over what changes in estimates or methods he could employ in order to maximize his firm's financial appearance. In the area of accounting estimates, Dan could lower the rate of estimated default on his accounts receivable, thus lowering bad debt expense. The estimated useful lives of his plant and equipment could be extended, thus lowering depreciation expense. In arguing that quality improvements have been implemented in the manufacturing process, the warranty expense on the products sold could also be lowered. In examining pension expense, he noted that the assumed rate of return on pension assets was at a modest 6.5%, so if that rate could be increased, the corresponding pension expense could be reduced.

Other possibilities occurred to Murphy. Perhaps items normally expensed, such as repairs, could be capitalized. Those repairs that could not be capitalized could simply be deferred. The company could also defer short-term expenses for the training of staff. Since research and development costs must now be fully expensed as incurred, a reduction in those expenditures would increase net income. Return on assets would be increased by not acquiring any new fixed assets. Production levels for inventory could be increased, thus spreading fixed costs over a greater number of units and reducing the total average cost per unit. Therefore, gross profit per unit will increase. Inventory levels would be a little bloated, but that should be easily handled by Dan's successor.

The prior examples are subtle changes that could be made. As a last resort, a change in accounting methods could be employed. This would require explicit footnote disclosure and a comment in the auditor's report, but if it came to that, it would still be tolerable. Examples of such changes would be to switch from accelerated to straight-line depreciation or to change from LIFO to FIFO.

How to make changes to the financial results of the company appeared easier than he first thought. Now back to the other potential problem of "getting away with it." At first thought, Dan considered the degree of resistance by the other members of top manage-

ment. Mike Harrington, Dan's chief financial officer, would have to review any accounting changes that he suggested. Since Dan had brought Mike up the organization with him, Dan didn't foresee any strong resistance from Mike. As for the others, Dan believed he had two things going for him. One was their ambition. Dan knew that they all coveted his job, and a clear successor to Dan had yet to be chosen. Dan would only make a recommendation to the promotion committee of the Board of Directors, but everyone knew his recommendation carried a great deal of weight. Therefore, resistance to any accounting changes by any individual would surely end his or her hope to succeed him as CEO. Secondly, although not as lucrative as Dan's, their bonus package is tied to the exact same accounting numbers. So any actions taken by Dan to increase his compensation will also increase theirs.

Dan was actually beginning to enjoy this situation, even considering it one of his final challenges. Dan realized that any changes he implemented would have the tendency to reverse themselves over time. That would undoubtedly hurt the company's performance down the road, but all of his potential successors were in their mid-to-late 50s, so there would be plenty of time for them to turn things around in the years ahead. Besides, any near-term reversals would merely enhance his reputation as an excellent corporate leader, as problems would arise after his departure.

At that moment, his secretary called to inform him that Mike Harrington wanted to see him. Mike was just the man Dan wanted to see.

What are the ethical issues?

What should Mike do?

- Required**
- Determine the facts—what, who, where, when, how.
 - Define the ethical issues.
 - Identify major principles, rules, and values.
 - Specify the alternatives.
 - Compare norms, principles, and values with alternatives to see if a clear decision can be reached.
 - Assess the consequences.
 - Make your decision.

Case 2-2

The Dangerous Morality of Managing Earnings*

The Majority of Managers Surveyed Say It's Not Wrong to Manage Earnings

Occasionally, the morals and ethics executives use to manage their businesses are examined and discussed. Unfortunately, the morals that guide the timing of nonoperating events and choices of accounting policies largely have been ignored.

The ethical framework used by managers in reporting short-term earnings probably has received less attention than its operating counterpart because accountants prepare financial disclosures consistent with laws and generally accepted accounting principles (GAAP). Those disclosures are reviewed by objective auditors.

Managers determine the short-term reported earnings of their companies by:

*Note: Prepared by William J. Bruns, Jr., Professor of Business Administration, Harvard University Graduate School of Business Administration, and Kenneth A. Merchant, Professor of Accounting, University of Southern California. Reprinted from *Management Accounting*, August 1990. Copyright by National Association of Accountants, Montvale, NJ.

- Managing, providing leadership, and directing the use of resources in operations.
- Selecting the timing of some nonoperating events, such as the sale of excess assets or the placement of gains or losses into a particular reporting period.
- Choosing the accounting methods that are used to measure short-term earnings.

Casual observers of the financial reporting process may assume that time, laws, regulation, and professional standards have restricted accounting practices to those which are moral, ethical, fair, and precise. But most managers and their accountants know otherwise—that managing short-term earnings can be part of a manager’s job.

To understand the morals of short-term earnings management, we surveyed general managers and finance, control, and audit managers. The results are frightening.

We found striking disagreements among managers in all groups. Furthermore, the liberal definitions revealed in many responses of what is moral or ethical should raise profound questions about the quality of financial information that is used for decision-making purposes by parties both inside and outside a company. It seems many managers are convinced that if a practice is not explicitly prohibited or is only a slight deviation from rules, it is an ethical practice regardless of who might be affected either by the practice or the information that flows from it. This means that anyone who uses information on short-term earnings is vulnerable to misinterpretation, manipulation, or deliberate deception.

The Morals of Managing Earnings

To find a “revealed” consensus concerning the morality of engaging in earnings-management activities, we prepared a questionnaire describing 13 earnings-management situations we had observed either directly or indirectly. The actions described in the incidents were all legal (although some were in violation of GAAP), but each could be construed as involving short-term earnings management.

A total of 649 managers completed our questionnaire. Table 2-1 classifies respondents by job function. Table 2-2 summarizes the views on the acceptability of various earnings-management practices.

TABLE 2-1

SURVEY RESPONDENTS

Total Sample	
General Managers	119
Finance, Control, & Audit Managers	262
Others or Position Not Known	<u>268</u>
	649

A major finding of the survey was a striking lack of agreement. None of the respondent groups viewed any of the 13 practices unanimously as an ethical or unethical practice. The dispersion of judgments about many of the incidents was great. For example, here is one hypothetical earnings-management practice described in the questionnaire:

In September, a general manager realized that his division would need a strong performance in the last quarter of the year in order to reach its budget targets. He decided to implement a sales program offering liberal payment terms to pull some sales that would normally occur next year into the current year. Customers accepting delivery in the fourth quarter would not have to pay the invoice for 120 days.

The survey respondents' judgments of the acceptability of this practice were distributed as follows:

Ethical	279
Questionable	288
Unethical	82
Total	649

Perhaps you are not surprised by these data. The ethical basis of an early shipment/liberal payment program may not be something you have considered, but, with the prevalence of such diverse views, how can any user of a short-term earnings report know the quality of the information?

Although the judgments about all earnings-management practices varied considerably, there are some other generalizations that can be made from the findings summarized in Table 2-2.

- On average, the respondents viewed management of short-term earnings by *accounting* methods as significantly less acceptable than accomplishing the same ends by changing or manipulating *operating decisions or procedures*.
- The direction of the effect on earnings matters. *Increasing* earnings is judged less acceptable than *reducing* earnings.
- Materiality matters. Short-term earnings management is judged less acceptable if the earnings effect is *large* rather than *small*.
- The time period of the effect may affect ethical judgments. Managing short-term earnings at the end of an interim *quarterly* reporting period is viewed as somewhat

TABLE 2-2

MANAGING SHORT-TERM EARNINGS

	Proportion of Managers Who Judge the Practice		
	Ethical	Questionable, or a Minor Infraction	Unethical, or a Serious Infraction
1. Managing short-term earnings by changing or manipulating operating decisions or procedures:			
When the result is to reduce earnings	79%	19%	2%
When the result is to increase earnings	57%	31%	12%
2. Managing short-term earnings by changing or manipulating accounting methods:			
When the change to earnings is small	5%	45%	50%
When the change to earnings is large	3%	21%	76%
3. Managing short-term earnings by deferring discretionary expenditures into the next accounting period:			
To meet an interim quarterly budget target	47%	41%	12%
To meet an annual budget target	41%	35%	24%
4. Increasing short-term earnings to meet a budget target:			
By selling excess assets and realizing a profit	80%	16%	4%
By ordering overtime work at year-end to ship as much as possible	74%	21%	5%
By offering customers special credit terms to accept delivery without obligation to pay until the following year	43%	44%	15%

Percentages are calculated from *Harvard Business Review* readers' sample.

more acceptable than engaging in the same activity at the end of an *annual* reporting period.

- The method of managing earnings has an effect. Increasing profits by offering *extended credit terms* is seen as less acceptable than accomplishing the same end by *selling excess assets or using overtime* to increase shipments.

Managers Interviewed

Were the survey results simply hypothetical, or did managers recognize they can manage earnings and choose to do so? To find the answers, we talked to a large number of the respondents. What they told us was rarely reassuring.

On accounting manipulations, a profit center controller reported:

“Accounting is grey. Very little is absolute . . . You can save your company by doing things with sales and expenses, and, if it’s legal, then you are justified in doing it.”

A divisional general manager spoke to us about squeezing reserves to generate additional reported profit:

“If we get a call asking for additional profit, and that’s not inconceivable, I would look at our reserves. Our reserves tend to be realistic, but we may have a product claim that could range from \$50,000 to \$500,000. Who knows what the right amount for something like that is? We would review our reserves, and if we felt some were on the high side, we would not be uncomfortable reducing them.”

We also heard about operating manipulations. One corporate group controller noted:

“[To boost sales] we have paid overtime and shipped on Saturday, the last day of the fiscal quarter. If we totally left responsibility for the shipping function to the divisions, it could even slip over to 12:30 a.m. Sunday. There are people who would do that and not know it’s wrong.”

Managers often recognize that such actions “move” earnings from one period to another. For example, a division controller told us:

“Last year we called our customers and asked if they would take early delivery. We generated an extra \$300,000 in sales at the last minute. We were scratching for everything. We made our plans, but we cleaned out our backlog and started in the hole this year. We missed our first quarter sales plan. We will catch up by the end of the second quarter.”

And a group vice president said:

“I recently was involved in a situation where the manager wanted to delay the production costs for the advertising that would appear in the fall [so that he could meet his quarterly budget].”

Thus, in practice, it appears that a large majority of managers use at least some methods to manage short-term earnings. Although legal, these methods do not seem to be consistent with a strict ethical framework. While the managers’ actions have the desired effect on reported earnings, the managers know there are no real positive economic benefits, and the actions might actually be quite costly in the long run. These actions are at best questionable because they involve deceptions that are not disclosed. Most managers who manage earnings, however, do not believe they are doing anything wrong.

We see two major problems. The most important is the generally high tolerance for operating manipulations. The other is the dispersion in managers’ views about which practices are moral and ethical.

The Dangerous Allure

The essence of a moral or ethical approach to management is achieving a balance between individual interests and obligations to those who have a stake in what happens in the corporation (or what happens to a division or group within the corporation). These stakeholders include not only people who work in the firm, but customers, suppliers, creditors, shareholders, and investors as well.

Managers who take unproductive actions to boost short-term earnings may be acting totally within the laws and rules. Also they may be acting in the best interest of the corporation. But, if they fail to consider the adverse effects of their actions on other stakeholders, we may conclude that they are acting unethically.

The managers we interviewed explained that they rated accounting manipulations harshly because in such cases the “truth” has somehow been denied or misstated. The recipients of the earnings reports do not know what earnings would have been if no manipulation had taken place. Even if the accounting methods used are consistent with GAAP, they reason, the actions are not ethical because the interests of major stakeholder groups—including the recipients of the earnings reports—have been ignored.

The managers judge the operating manipulations more favorably because the earnings numbers are indicative of what actually took place. The operating manipulations have changed reality, and “truth” is fairly reported.

We see flaws in that reasoning. One is that the truth has not necessarily been disclosed completely. When sales and profits are borrowed from the future, for example, it is a rare company that discloses the borrowed nature of some of the profits reported.

A second flaw in the reasoning about the acceptability of operating manipulations is that it ignores a few or all of the effects of some types of operating manipulations on the full range of stakeholders. Many managers consider operating manipulations as a kind of “victimless crime.”

But victims do exist. Consider, for example, the relatively common operating manipulation of early shipments. As one manager told us:

“Would I ship extra product if I was faced with a sales shortfall? You have to be careful there; you’re playing with fire. I would let whatever happened fall to the bottom line. I’ve been in companies that did whatever they could to make the sales number, such as shipping lower quality product. That’s way too short-term. You have to draw the line there. You must maintain the level of quality and customer service. You’ll end up paying for bad shipments eventually. You’ll have returns, repairs, adjustments, ill will that will cause you to lose the account . . . [In addition] it’s tough to go to your employees one day and say ship everything you can and then turn around the next day and say that the quality standards must be maintained.”

Another reported:

“We’ve had to go to [one of our biggest customers] and say we need an order. That kills us in the negotiations. Our last sale was at a price just over our cost of materials.”

These comments point out that customers—and sometimes even the corporation—may be victims.

Without a full analysis of the costs of operating manipulations, the dangers of such manipulations to the corporation are easily underestimated. Mistakes will be made because the quality of information is misjudged. The short term will be emphasized at the expense of the long term. If managers consistently manage short-term earnings, the messages sent to other employees create a corporate culture that lacks mutual trust, integrity, and loyalty.

A Lack of Moral Agreement

We also are troubled by the managers' inability to agree on the types of earnings-management activities that are acceptable. This lack of agreement exists even within corporations.

What this suggests is that many managers are doing their analyses in different ways. The danger is obfuscation of the reality behind the financial reports. Because managers are using different standards, individuals who try to use the information reported may be unable to assess accurately the quality of that information.

If differences in opinions exist, it is likely that financial reporting practices will sink to their lowest and most manipulative level. As a result, managers with strict definitions of what is moral and ethical will find it difficult to compete with managers who are not playing by the same rules. Ethical managers either will loosen their moral standards or fail to be promoted into positions of greater power.

Actions for Concerned Managers

We believe most corporations would benefit if they established clearer accounting and operating standards for all employees to follow. The standard-setting process should involve managers in discussions of the practices related to short-term earnings measurements.

Until these standards are in place, different managers will use widely varying criteria in assessing the acceptability of various earnings-management practices. These variations will have an adverse effect on the quality of the firm's financial information. Companies can use a questionnaire similar to the one in our study to encourage discussion and to communicate corporate standards and the reason for them.

Standards also enable internal and external auditors and management to judge whether or not the desired quality of earnings is being maintained. In most companies, auditors can depend on good standards to identify and judge the acceptability of the operating manipulations.

Ultimately, the line management chain-of-command, not auditors or financial staff, bears the primary responsibility for controlling operating manipulations. Often managers must rely on their prior experience and good judgment to distinguish between a decision that will have positive long-term benefits and one that has a positive short-term effect but a deleterious long-term effect.

Finally, it is important to manage the corporate culture. A culture that promotes openness and cooperative problem-solving among managers is likely to result in less short-term earnings management than one that is more competitive and where annual, and even quarterly, performance shortfalls are punished. A corporate culture that is more concerned with managing for excellence rather than for reporting short-term profits will be less likely to support the widespread use of immoral earnings-management practices.

- Required**
- Time, laws, regulation, and professional standards have restricted accounting practices to those that are moral, ethical, fair, and precise. Comment.
 - Most managers surveyed had a conservative, strict interpretation of what is moral or ethical in financial reporting. Comment.
 - The managers surveyed exhibited a surprising agreement as to what constitutes an ethical or unethical practice. Comment.
 - List the five generalizations from the findings in this study relating to managing earnings.
 - Comment on management's ability to manage earnings in the long run by influencing financial accounting.

Case 2-3

Frequent-Flier Awards—Tick-Tick, Tick-Tick, Tick-Tick

In the early 1980s, airlines introduced frequent-flier awards to develop passenger loyalty to a single airline. Free tickets and possibly other awards were made available to passengers when they accumulated a certain number of miles or flights on a particular air carrier. These programs were potentially good for the passenger and the airline as long as the awards were not too generous and the airlines could minimize revenue displacement from a paying passenger.

These programs were introduced by American Airlines in 1981. Originally there were no restrictions. Anyone with the necessary miles could take any flight that had an available seat. In the late 1980s, most airlines changed their no-restriction programs to programs with restrictions and blackout days. Airlines typically compensated passengers for these changes by cutting mileage requirements. The airlines also added partners in frequent-flier programs, such as car rental companies and hotels. These partners handed out frequent-flier miles compensating the airlines in some manner for the miles distributed. Airlines also added triple-mileage deals.

A consequence of these expanding frequent-flier programs was a surge in the number of passengers flying free and a surge in unused miles. To get a handle on the cost and the unused miles, airlines increased the frequent-flier miles needed for a flight and placed time limits on the award miles. Thus —tick-tick, tick-tick, tick-tick.

The increased frequent-flier miles needed for a flight and the time limits prompted lawsuits. Many of these lawsuits were filed in state courts. One of the suits filed in the District Court in Chicago in 1989 made its way to the United States Supreme Court. In 1995 the Supreme Court ruled that federal airline deregulation law would not bar the breach-of-contract claim in the state court. In June of 1995 a District Court in Dallas ruled in favor of the airline in a case involving an increase in miles needed to earn a trip. Airlines interpret this decision as upholding their right to make changes to their frequent-flier programs.

- Required**
- a. In your opinion, are the outstanding (unused) miles a liability to the airline? (Substantiate your answer.)
 - b. Comment on the potential problems involved in estimating the dollar amount of any potential liability.
 - c.
 1. What is a contingent liability?
 2. In your opinion, are unused miles a contingent liability to the air carrier?
 3. Recommend the recognition (if any) for unused miles.

Case 2-4

International Accounting—Harmonization in Practice

Dennis R. Beresford, Chairman, Financial Accounting Standards Board, included these comments in the June, 1995 Financial Accounting Series of the Financial Accounting Foundation. This case represents a quote from page 2, Notes from the Chairman. (Permission to reprint obtained from the Financial Accounting Standards Board.)

Notes from the Chairman (in Part)

Last month Jim Leisenring and I attended what is now becoming more or less an annual meeting of accounting standards setters from more than a dozen countries. The first of those meetings, initiated by the FASB, was held in 1991 in Brussels, and similar get-togethers have followed in our offices, London, and now Amsterdam. This year's meeting was held in conjunction with a regular meeting of the International Accounting Standards Committee and the centenary celebrations of NIVRA, the professional accounting body in the Netherlands.

Earlier, this group had devoted its attention mainly to conceptual issues and general communications about what the various countries were working on at the time. For example, the first gathering concentrated on the objectives of external financial reporting and whether individual countries had explicit or implicit conceptual frameworks. In London, most of the time was spent on how future events are considered in accounting recognition and measurement decisions. That discussion was facilitated by a paper prepared by the FASB and our counterparts from Australia, Canada, the United Kingdom, and the IASC. The paper later was jointly published as the Special Report, "Future Events—A Conceptual Study of Their Significance for Recognition and Measurement."

In Amsterdam, we spent most of the time on two specific technical issues that are hot topics here as well as in the rest of the world: accounting for environmental liabilities and derivative financial instruments. Papers were presented by Canada, Denmark, England, and the European Commission, which covered the current state-of-the-art regarding disclosure of and accounting for environmental costs. As in the U.S., the key issues are deciding when an obligation has been incurred, under what circumstances can any resulting debit be considered an asset (e.g., costs incurred to "improve" a productive facility), and when an amount is measurable with sufficient reliability.

- Required**
- Comment on the trend in harmonization of international accounting as represented by the comments included in this case.
 - Can we expect harmonization of international accounting to be accomplished in the foreseeable future? Comment.

Case 2-5

Materiality: In Practice

Professional standards require auditors to make a preliminary judgment about materiality levels during the planning of an audit. Statement of Auditing Standards (SAS) No. 47 states that "the auditor plans the audit to obtain reasonable assurance of detecting misstatements that he/she believes could be large enough, individually or in the aggregate, to be quantitatively material to the financial statements."*

SAS No. 47 indicates that materiality judgments involve both quantitative and qualitative considerations. This statement recognizes that it ordinarily is not practical to design procedures to detect misstatements that could be qualitatively material.

Note: This case is based on SAS No. 47 as updated and presented in AV312 of the *Codification of Statements on Auditing Standards* (American Institute of Certified Public Accountants), January, 1989

A number of rule-of-thumb materiality calculations have emerged, such as percentages of income, total assets, revenues, and equity. These rule-of-thumb calculations result in differing amounts for audit planning purposes. In fact, sizeable differences can result, depending on the rule of thumb and the industry.

- Required**
- It would seem prudent for auditors to give careful consideration to planning materiality decisions. Comment.
 - It is difficult to design procedures to detect misstatements that could be qualitatively material. Comment.
 - It is difficult to design procedures to detect misstatements that could be quantitatively material. Comment.
 - In your opinion, would the application of materiality be a frequent issue in court cases involving financial statements? Comment.

Case 2-6

Who is Responsible?

REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareowners and Board of Directors
The Kroger Co.

In our opinion, the accompanying consolidated balance sheet of The Kroger Co. and the related consolidated statements of operations and accumulated deficit, and cash flows present fairly, in all material respects, the financial position of the Kroger Co. as of January 2, 1999 and December 27, 1997, and the consolidated results of its operations and its cash flows for the years ended January 2, 1999, December 27, 1997, and December 28, 1996, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

As discussed in the notes to the consolidated financial statements, the Company changed its application of the LIFO method of accounting for store inventories as of December 28, 1997.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Cincinnati, Ohio
January 28, 1999

- Required**
- Who has the responsibility for the financial statements?
 - What is the role of the accountant (auditor) as to the financial statements?

- c. Accountants (auditors) are often included as defendants in lawsuits that relate to the financial statements. Speculate as to why this is the case.
- d. What type of auditor's opinion is represented in this case?
- e. Would we expect these audited financial statements to be free of misstatement? Comment.

Case 2-7

Safe Harbor

In 1995, Congress passed the Private Securities Litigation Reform Act (the Act). The principal provisions of the Act are intended to curb abusive litigation, and improve the quality of information available to investors through the creation of a safe harbor for forward-looking statements.

Forward-looking statements were defined to include statements relating to projections of revenues and other financial items, plans and objectives, future economic performance, assumptions, reports issued by outside reviewers, or other projections or estimates specified by rule of the SEC. The safe harbor applies to both oral and written statements.

Management frequently uses signals as “we estimate,” “we project,” and the like, where forward-looking statements are not otherwise identified as such. The forward-looking statements must be accompanied by meaningful cautionary statements. The cautionary statement may be contained in a separate risk section elsewhere in the disclosure document.

Osmonics included statements that would likely be construed as forward-looking in their 1998 second quarter report to shareholders. This included a statement by D. Dean Spatz, Chairman & Chief Executive Officer.

“I am gratified to see our employees enthusiastically embrace the Company's restructuring and re-engineering. Their dedication and ideas will have even greater impact on our business as we implement streamlined systems and new management practices. We believe our revitalized organization, integrated products, and rationalized manufacturing operations will enable Osmonics to be a dominant supplier of high technology water purification and filtration products and cost-effective components in the years ahead.”

The Osmonics report included this cautionary statement:

“The Private Securities Litigation Reform Act of 1995 provides a ‘safe harbor’ for forward-looking statements. Certain information included in this document and other materials filed or to be filed with the Securities and Exchange Commission (as well as information included in oral or other written statements made or to be made by the Company) contains statements that are forward-looking. Such statements may relate to plans for future expansion, business development activities capital spending, financing, the effects of regulation and competition, or anticipated sales or earnings results. Such information involves risks and uncertainties that could significantly affect results in the future and, accordingly, such results may differ from those expressed in any forward-looking statements made by or on behalf of the Company. These risks and uncertainties include, but are not limited to, those relating to product development activities, computer systems implementation, dependence on existing management, global economic and market conditions, and changes to federal or state laws.”

- Required**
- a. Demand for financial reports exists because users believe that the reports help them in decision making. In your opinion, will forward-looking statements as provided by the Private Securities Litigation Reform Act aid users of financial reports in decision making?
 - b. To some extent, investors rights are limited by the curb of abusive litigation. In your opinion, is there a net benefit to investors from a safe harbor for forward-looking statements?

Endnotes

- 1 Charles H. Gibson and Nicholas Schroeder, "How 21 Companies Handled Their Summary Annual Reports," *Financial Executive* (November/December 1989), pp. 45–46.
- 2 Mary E. Guy, *Ethical Decision Making in Everyday Work Situations* (New York, NY: Quarum Books, 1990), p. 5.
- 3 Guy, p. 14.
- 4 William W. May, ed., *Ethics in the Accounting Curriculum: Cases & Readings* (Sarasota, FL: American Accounting Association, 1990), pp. 1–2.
- 5 "Regulators Investigate Peat on Its Auditing of S & L," *The New York Times* (May 23, 1991), p. D-1.
- 6 "S.E.C. Inquiry Is Reported on Loans to Accountants," *The New York Times* (February 7, 1991), p. D-1.
- 7 "Ernst & Young Settles Negligence Charge," *Business Insurance* (May 6, 1991), p. 2.
- 8 Ronald Grover, "Curtains for Tinseltown Accounting?" *Business Week* (January 14, 1991), p. 35.
- 9 Shahram Victory, "Pierce O'Donnell Pans 'Fatal Subtraction,'" *American Lawyer* (March 1991), p. 43.
- 10 "Buchwald Wins Just \$150,000 in Film Lawsuit," *The Wall Street Journal* (March 17, 1992), p. B-1.
- 11 Dennis E. Peavey and Stuart K. Webster, "Is GAAP the Gap to International Markets?" *Management Accounting* (August 1990), pp. 31–32.
- 12 John Hagarty, "Why We Can't Let GATT Die," *Journal of Accountancy* (April 1991), p. 74.
- 13 Peavey and Webster, p. 34.
- 14 Anthony B. Creamer, "Auditing Beyond U.S. Shores: What the U.S. CPA Should Know," *Journal of Accountancy* (November 1987), p. 92.
- 15 Gerhard G. Mueller, Helen Gernan, and Gary Meek, *Accounting: An International Perspective*, 2d ed. (Homewood, IL: Richard D. Irwin, Inc., 1991), pp. 45–46.
- 16 Dennis Beresford, "Internationalization of Accounting Standards," *Accounting Horizons* (March 1990), p. 10.
- 17 Mueller, Gernan, and Meek, pp. 11–12.
- 18 The FASB is considering a proposal that would require that the purchase method be the only method used to account for business combinations.

CHAPTER

3

BALANCE SHEET

THE PRINCIPAL FINANCIAL STATEMENTS ARE the balance sheet, income statement, and statement of cash flows. This chapter will review the balance sheet in detail. Another statement,

called the statement of stockholders' equity, reconciles the changes in stockholders' equity, a section of the balance sheet. This statement will also be reviewed in this chapter.

BASIC ELEMENTS OF THE BALANCE SHEET

A **balance sheet** shows the financial condition of an accounting entity as of a particular date. The balance sheet consists of assets, the resources of the firm; liabilities, the debts of the firm; and stockholders' equity, the owners' interest in the firm.

The assets are derived from two sources, creditors and owners. At any point in time, the assets must equal the contribution of the creditors and owners. The accounting equation expresses this relationship:

$$\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$$

On the balance sheet, the assets equal the liabilities plus the stockholders' equity. This may be presented side by side (account form) or with the assets at the top and the liabilities and stockholders' equity at the bottom (report form). Exhibit 3-1 presents a typical report form format, and Exhibit 3-2 presents a typical account form format.

Balance sheet formats differ across nations. For example, nations influenced by British financial reporting report the least liquid assets first and cash last. Nations influenced by the United States report a balance sheet emphasizing liquidity, as illustrated in this chapter.

Assets

Assets are probable future economic benefits obtained or controlled by an entity as a result of past transactions or events.¹ Assets may be *physical*, such as land, buildings, inventory of supplies, material, or finished products. Assets may also be *intangible*, such as patents and trademarks.

Assets are normally divided into two major categories: current and noncurrent (long-term). **Current assets** are assets (1) in the form of cash, (2) that will normally be realized in cash, or (3) that conserve the use of cash during the operating cycle of a firm or for one year, whichever is longer. The *operating cycle* covers the time between the acquisition of inventory and the realization of cash from selling the inventory. Noncurrent or **long-term** assets take longer than a year or an operating cycle to be converted to cash or to conserve cash. Some industries, such as banking (financial institutions), insurance, and real estate, do not divide assets (or liabilities) into current and noncurrent. Chapter 12 reviews specialized industries.

When a significant subsidiary is consolidated from an industry that does not use the concept of current and noncurrent, then the consolidated statements will not use the concept of current and noncurrent. These companies often present supplementary statements, handling the subsidiary as an investment (nonconsolidated).

For example, the Dana Corporation is primarily in the business of manufacturing and marketing vehicular and industrial components. Dana has a significant financial subsidiary, Dana Credit Corporation (DCC). Dana consolidates this subsidiary and presents the balance sheet without the concept of current and noncurrent. Dana presents the balance sheet and income statement of DCC in a footnote, Significant Subsidiary.

Current Assets

Current assets are listed on the balance sheet in order of **liquidity** (the ability to be converted to cash). Current assets typically include cash, marketable securities, short-term receivables, inventories, and prepaids. In some cases, assets other than these may be classified as current. If so, management is indicating that it expects the asset to be converted into cash during the operating cycle or within a year, whichever is longer. An example is land held for immediate disposal. Exhibit 3-3 includes the items that the 1998 edition of *Accounting Trends & Techniques* reported as being disclosed as other current assets. The definition of current assets excludes restricted cash, investments for purposes of control, long-term receivables, the cash surrender value of life insurance, land and other natural resources, depreciable assets, and long-term prepayments.

EXHIBIT 3-1**PEPSICO, INC. AND SUBSIDIARIES****Consolidated Balance Sheets (Statement of Financial Position)
Report Form**

<i>(In millions)</i>	December 26, 1998	December 27, 1997
ASSETS		
Current assets		
Cash and cash equivalents	\$ 311	\$ 1,928
Short-term investments, at cost	83	955
	394	2,883
Accounts and notes receivable, less allowance: \$127 in 1998 and \$125 in 1997	2,453	2,150
Inventories	1,016	732
Prepaid expenses, deferred income taxes and other current assets	499	486
Total Current Assets	4,362	6,251
Property, Plant and Equipment, net	7,318	6,261
Intangible Assets, net	8,996	5,855
Investments in Unconsolidated Affiliates	1,396	1,201
Other Assets	588	533
Total Assets	\$22,660	\$ 20,101
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Short-term borrowings	\$ 3,921	\$ —
Accounts payable and other current liabilities	3,870	3,617
Income taxes payable	123	640
Total Current Liabilities	7,914	4,257
Long-Term Debt	4,028	4,946
Other Liabilities	2,314	2,265
Deferred Income Taxes	2,003	1,697
Shareholders' Equity		
Capital stock, par value 1 2/3¢ per share: authorized 3,600 shares, issued 1,726 shares	29	29
Capital in excess of par value	1,166	1,314
Retained earnings	12,800	11,567
Accumulated other comprehensive loss	(1,059)	(988)
	12,936	11,922
Less: Treasury stock, at cost: 255 shares and 224 shares in 1998 and 1997, respectively	(6,535)	(4,986)
Total Shareholders' Equity	6,401	6,936
Total Liabilities and Shareholders' Equity	\$22,660	\$ 20,101

Cash Cash, the most liquid asset, includes negotiable checks and unrestricted balances in checking accounts, as well as cash on hand. Savings accounts are classified as cash even though the bank may not release the money for a specific period of time. Exhibit 3-4 illustrates the presentation of cash.

Marketable Securities Marketable securities (also labeled short-term investments) are characterized by their marketability at a readily determinable market price. A firm holds marketable securities to earn a return on near-cash resources. Management must intend

EXHIBIT 3-2

ADOLPH COORS COMPANY AND SUBSIDIARIES
Consolidated Balance Sheets (Statement of Financial Position)
Account Form

<i>(In thousands)</i>	December 27, 1998	December 28, 1997
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 160,038	\$ 168,875
Short-term investments	96,190	42,163
Accounts and notes receivable:		
Trade, less allowance for doubtful accounts of \$299 in 1998 and \$557 in 1997	106,962	89,731
Affiliates	11,896	19,677
Other, less allowance for certain claims of \$584 in 1998 and \$1,500 in 1997	7,751	15,077
Inventories:		
Finished	38,520	44,729
In process	24,526	20,119
Raw materials	34,016	35,654
Packaging materials, less allowance for obsolete inventories of \$1,018 in 1998 and \$1,049 in 1997	5,598	5,977
Total inventories	102,660	106,479
Other supplies, less allowance for obsolete supplies of \$3,968 in 1998 and \$4,165 in 1997	27,729	32,362
Prepaid expenses and other assets	12,848	18,224
Deferred tax asset (Note 5)	22,917	24,606
Total current assets	548,991	517,194
Properties, at cost and net (Note 2)	714,441	733,117
Excess of cost over net assets of business acquired, less accumulated amortization of \$6,727 in 1998 and \$5,726 in 1997	23,114	22,880
Long-term investments	31,444	47,100
Other assets (Note 10)	142,608	91,792
Total assets	<u>\$1,460,598</u>	<u>\$1,412,083</u>

to convert these assets to cash during the current period for them to be classified as marketable securities.

The carrying basis of debt and equity marketable securities is fair value. Refer to Exhibit 3-4 for a presentation of marketable securities.

Accounts Receivable **Accounts receivable** are monies due on accounts that arise from sales or services rendered to customers. Accounts receivable are shown net of allowances to reflect their realizable value. This amount is expected to be collected. The most typical allowances are for bad debts (uncollectible accounts). Other allowances may account for expected sales discounts, which are given for prompt payment or for sales returns. These types of allowances recognize expenses in the period of sale, at which time the allowance is

EXHIBIT 3-2

continued

<i>(In thousands)</i>	December 27, 1998	December 28, 1997
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt (Note 4)	\$ 40,000	\$ 27,500
Accounts payable:		
Trade	132,193	113,864
Affiliates	11,706	18,072
Accrued salaries and vacations	54,584	58,257
Taxes, other than income taxes	48,332	52,805
Federal and state income taxes (Note 5)	10,130	13,660
Accrued expenses and other liabilities	86,967	74,988
Total current liabilities	<u>383,912</u>	<u>359,146</u>
Long-term debt (Note 4)	105,000	145,000
Deferred tax liability (Note 5)	65,779	76,219
Postretirement benefits (Note 8)	74,469	71,908
Other long-term liabilities	56,640	23,242
Total liabilities	<u>685,800</u>	<u>675,515</u>
Commitments and contingencies (Notes 3, 4, 5, 6, 7, 8, 10 and 13)		
Shareholders' equity (Notes 6 and 11):		
Capital stock:		
Preferred stock, non-voting, \$1 par value (authorized: 25,000,000 shares; issued and outstanding: none)	—	—
Class A common stock, voting, \$1 par value (authorized, issued and outstanding: 1,260,000 shares)	1,260	1,260
Class B common stock, non-voting, no par value, \$0.24 stated value (authorized: 100,000,000 shares; issued and outstanding: 35,395,306 in 1998 and 35,599,356 in 1997)	8,428	8,476
Total capital stock	<u>9,688</u>	<u>9,736</u>
Paid-in capital	10,505	—
Retained earnings	756,531	730,628
Accumulated other comprehensive income	(1,926)	(3,796)
Total shareholders' equity	<u>774,798</u>	<u>736,568</u>
Total liabilities and shareholders' equity	<u>\$1,460,598</u>	<u>\$1,412,083</u>

established. In future periods, when the losses occur, they are charged to the allowance. Exhibit 3-4 presents the accounts receivable of Sun Microsystems (less allowances). At year-end 1998, the firm expects to realize \$1,845,765,000. The gross receivables can be reconciled as follows:

Receivables, net	\$1,845,765,000
Plus: Allowances	235,563,000
Receivables, gross	<u>\$2,081,328,000</u>

EXHIBIT 3-3**OTHER CURRENT ASSET ITEMS**

Nature of Asset	Number of Companies			
	1997	1996	1995	1994
Deferred income taxes	375	378	365	363
Property held for sale	33	37	32	36
Unbilled costs	14	16	19	28
Advances or deposits	4	6	7	9
Other — identified	29	30	33	29

Source: *Accounting Trends & Techniques*, copyright© 1998 by American Institute of Certified Public Accountants, Inc., p. 186. Reprinted with permission.

Other receivables may also be included in current assets. These receivables may result from contracts, tax refund claims, sales of assets, retained interest in sold receivables, employees, and installment notes or accounts.²

Inventories **Inventories** are the balance of goods on hand. In a manufacturing firm, they include raw materials, work in process, and finished goods. Inventories will be carried at cost, expressed in terms of lower-of-cost-or-market. (Cost methods and lower-of-cost-market are covered in Chapter 7.) Refer to Exhibit 3-5 for a presentation of inventory.

Raw Materials These are goods purchased for direct use in manufacturing a product, and they become part of the product. For example, in the manufacture of shirts, the fabric and buttons would be raw materials.

Work in Process Work in process represents goods started but not ready for sale. Work in process includes the cost of materials, labor costs for workers directly involved in the manufacture, and factory overhead. Factory overhead includes such cost items as rent, indirect wages, and maintenance.

EXHIBIT 3-4**SUN MICROSYSTEMS, INC.****Illustration of Cash, Marketable Securities, and Accounts Receivable**

(In thousands)	At June 30,	
	1998	1997
ASSETS (In Part)		
Current assets:		
Cash and cash equivalents	\$ 822,267	\$ 660,170
Short-term investments	476,185	452,590
Accounts receivable, net of allowance of \$235,563 in 1998 and \$196,091 in 1997	1,845,765	1,666,523
Inventories	346,446	437,978
Deferred tax assets	371,841	286,720
Other current assets	285,021	224,469
Total current assets	<u>\$4,147,525</u>	<u>\$3,728,450</u>

EXHIBIT 3-5**PFIZER INC. AND SUBSIDIARY COMPANIES**
Inventory

Consolidated Balance Sheet (In Part) (millions)	December 31		
	1998	1997	1996
Assets (In Part)			
Current Assets			
Cash and cash equivalents	\$1,552	\$ 877	\$ 1,150
Short-term investments	2,377	712	486
Accounts receivable, less allowance for doubtful accounts: 1998 – \$67; 1997 – \$35; 1996 – \$41	2,914	2,220	1,914
Short-term loans	150	115	355
Inventories			
Finished goods	697	442	371
Work in process	890	808	636
Raw materials and supplies	241	211	224
Total inventories	<u>1,828</u>	<u>1,461</u>	<u>1,231</u>
Prepaid expenses, taxes and other assets	1,110	637	608
Net assets of discontinued operations	–	1,420	1,432
Total current assets	<u>9,931</u>	<u>7,442</u>	<u>7,176</u>
Significant Accounting Policies (In Part)			
C – Inventories			
We value inventories at cost or fair value, if lower. Cost is determined as follows:			
• finished goods and work-in-process at average actual cost • raw materials and supplies at average or latest actual cost			
“Last-in, first-out” (LIFO) usage applies to U.S.-sourced pharmaceuticals and part of animal health inventories (approximately 8% of total inventories) and “first-in, first-out” usage applies to the rest. The replacement cost of LIFO inventories is not materially different from the LIFO value reported.			

Finished Goods Finished goods are inventory ready for sale. These inventory costs also include the cost of materials, labor costs for workers directly involved in the manufacture, and a portion of factory overhead.

Since retailing and wholesaling firms do not engage in the manufacture of a product but only in the sale, their only inventory item is merchandise. These firms do not have raw materials, work in process inventory, or finished goods.

Supplies In addition to goods on hand, the firm may have supplies. Supplies could include register tapes, pencils, or sewing machine needles for the shirt factory. Details relating to inventory are usually disclosed in a footnote.

Prepays A **prepaid** is an expenditure made in advance of the use of the service or goods. It represents future benefits that have resulted from past transactions. For example, if insurance is paid in advance for three years, at the end of the first year, two years' worth of the outlay will be prepaid. The entity retains the right to be covered by insurance for two more years.

Typical prepaids include advertising, taxes, insurance, promotion costs, and early payments on long-term contracts. Prepaids are often not disclosed separately. In Exhibit 3-2, the prepaid account is disclosed separately as part of prepaid expenses and other assets. In Exhibit 3-1, prepaids are part of prepaid expenses, deferred income taxes, and other current assets.

Long-Term Assets

Long-term assets are usually divided into four categories: tangible assets, investments, intangible assets, and other.

Tangible Assets These are the physical facilities used in the operations of the business. The tangible assets of land, buildings, machinery, and construction in progress will now be reviewed. Accumulated depreciation related to buildings and machinery will also be reviewed.

Land Land is shown at acquisition cost and is not depreciated because land does not get used up. Land containing resources that will be used up, however, such as mineral deposits and timberlands, is subject to depletion. Depletion expense attempts to measure the wearing away of these resources. It is similar to depreciation except that depreciation deals with a tangible fixed asset and depletion deals with a natural resource.

Buildings Structures are presented at cost plus the cost of permanent improvements. Buildings are depreciated (expensed) over their estimated useful life.

Machinery Machinery is listed at historical cost, including delivery and installation, plus any material improvements that extend its life or increase the quantity or quality of service. Machinery is depreciated over its estimated useful life.

Construction in Progress Construction in progress represents cost incurred for projects under construction. These costs will be transferred to the proper tangible asset account upon completion of construction. The firm cannot use these assets while they are under construction. Some analysis is directed at how efficiently the company is using operating assets. This analysis can be distorted by construction in progress, since construction in progress is classified as part of tangible assets. To avoid this distortion, classify construction in progress under long-term assets, other.

Accumulated Depreciation Depreciation is the process of allocating the cost of buildings and machinery over the periods benefited. The depreciation expense taken each period is accumulated in a separate account (Accumulated Depreciation). Accumulated depreciation is subtracted from the cost of plant and equipment. The net amount is the **book value** of the asset. It does not represent the current market value of the asset.

There are a number of depreciation methods that a firm can use. Often a firm depreciates an asset under one method for financial statements and another for income tax returns. A firm often wants to depreciate slowly for the financial statements because this results in the highest immediate income and highest asset balance. The same firm would want to depreciate faster for income tax returns because this results in the lowest immediate income and thus lower income taxes. Over the life of an asset, the total depreciation will be the same regardless of the depreciation method selected.

Three factors are usually considered when computing depreciation: (1) the asset cost, (2) length of the life of the asset, and (3) its salvage value when retired from service. The length of the asset's life and the salvage value must be estimated at the time that the asset is placed in service. These estimates may be later changed if warranted.

Exhibit 3-6 indicates the depreciation methods used for financial reporting purposes by the firms surveyed for the 1998 edition of *Accounting Trends & Techniques*. The most popular methods were straight-line, accelerated methods, and units-of-production. Many firms use more than one depreciation method.

EXHIBIT 3-6

DEPRECIATION METHODS

	Number of Companies			
	1997	1996	1995	1994
Straight-line	578	575	572	573
Declining balance	26	28	27	27
Sum-of-the-years'-digits	10	12	12	9
Accelerated method - not specified	50	48	49	49
Units-of-production	39	42	38	49
Other	10	12	11	11

Source: *Accounting Trends & Techniques*, copyright © 1998 by American Institute of Certified Public Accountants, Inc., p. 363. Reprinted with permission.

The following assumptions will be made to illustrate depreciation methods:

1. Cost of asset—\$10,000
2. Estimated life of asset—5 years
3. Estimated salvage (or residual) value—\$2,000
4. Estimated total hours of use—16,000

Straight-Line Method The **straight-line method** recognizes depreciation in equal amounts over the estimated life of the asset. Compute depreciation using the straight-line method as follows:

$$\frac{\text{Cost} - \text{Salvage Value}}{\text{Estimated Life}} = \text{Annual Depreciation}$$

For the asset used for illustration, the annual depreciation would be computed as follows:

$$\frac{\$10,000 - \$2,000}{5 \text{ years}} = \$1,600$$

The \$1,600 depreciation amount would be recognized each year of the five-year life of the asset. Do not depreciate the salvage value.

Declining-Balance Method The **declining-balance method**, an accelerated method, applies a multiple times the straight-line rate to the declining book value (cost minus accumulated depreciation) to achieve a declining depreciation charge over the estimated life of the asset. This book will use double the straight-line rate, which is the maximum rate that can be used. Compute depreciation using the declining balance method as follows:

$$\frac{1}{\text{Estimated life of asset}} \times 2 \times \text{Book amount at beginning of the year} = \text{Annual depreciation}$$

For the asset used for illustration, the first year's depreciation would be computed as follows:

$$\frac{1}{5} \times 2 \times (\$10,000 - 0) = \$4,000$$

The declining-balance method results in the following depreciation amounts for each of the five years of the asset's life:

Year	Cost	Accumulated Depreciation at Beginning of Year	Book Amount at Beginning of Year	Depreciation for Year	Book Amount at End of Year
1	\$10,000	—	\$10,000	\$4,000	\$6,000
2	10,000	\$4,000	6,000	2,400	3,600
3	10,000	6,400	3,600	1,440	2,160
4	10,000	7,840	2,160	160	2,000
5	10,000	8,000	2,000	—	2,000

Estimated salvage value is not considered in the formula, but the asset should not be depreciated below the estimated salvage value. For the sample asset, the formula produced a depreciation amount of \$864 in the fourth year. Only \$160 depreciation can be used in the fourth year because the \$160 amount brings the book amount of the asset down to the salvage value. Once the book amount is equal to the salvage value, no additional depreciation may be taken.

Sum-of-the-Years'-Digits Method The **sum-of-the-years'-digits** method is an accelerated depreciation method. Thus, the depreciation expense declines steadily over the estimated life of the asset. This method takes a fraction each year times the cost less salvage value. The numerator of the fraction changes each year. It is the remaining number of years of the asset's life. The denominator of the fraction remains constant; it is the sum of the digits representing the years of the asset's life. Compute depreciation using the sum-of-the-years'-digits method as follows:

$$\frac{\text{Remaining Number of Years of Life}}{\text{Sum of the Digits Representing the Years of Life}} \times (\text{Cost} - \text{Salvage}) = \text{Annual Depreciation}$$

For the asset used for illustration, the first year's depreciation would be computed as follows:

$$\frac{5}{(5 + 4 + 3 + 2 + 1) \text{ or } 15} \times (\$10,000 - \$2,000) = \$2,666.67$$

The sum-of-the-years'-digits method results in the following depreciation amounts for each year of the five years of the asset's life:

Year	Cost Less Salvage Value	Fraction	Depreciation for Year	Accumulated Depreciation at End of Year	Book Amount at End of Year
1	\$8,000	5/15	\$2,666.67	\$2,666.67	\$7,333.33
2	8,000	4/15	2,133.33	4,800.00	5,200.00
3	8,000	3/15	1,600.00	6,400.00	3,600.00
4	8,000	2/15	1,066.67	7,466.67	2,533.33
5	8,000	1/15	533.33	8,000.00	2,000.00

Unit-of-Production Method The **unit-of-production** method relates depreciation to the output capacity of the asset, estimated for the life of the asset. The capacity is stated in terms most appropriate for the asset, such as units of production, hours of use, or miles. Hours of use will be used for the asset in our example. For the life of the asset, it is estimated

that there will be 16,000 hours of use. The estimated output capacity is divided into the cost of the asset less the salvage value to determine the depreciation per unit of output. For the example asset, the depreciation per hour of use would be \$.50 [(cost of asset, \$10,000 – salvage, \$2,000) divided by 16,000 hours].

The depreciation for each year is then determined by multiplying the depreciation per unit of output by the output for that year. Assuming that the output was 2,000 hours during the first year, the depreciation for that year would be \$1,000 (\$.50 × 2,000). Further depreciation cannot be taken when the accumulated depreciation equals the cost of the asset less the salvage value. For the example asset, this will be when accumulated depreciation equals \$8,000.

In Exhibit 3-7, Converse Inc. presents these assets as net property, plant, and equipment. This is a typical presentation—not disclosing the detail contents on the face of the balance sheet. Detail information is often disclosed in the notes. Converse discloses that the straight-line method of computing depreciation and amortization is used for financial reporting. Accelerated methods are used for tax purposes.

Leases Leases are classified as *operating* leases or *capital* leases. If the lease is in substance an ownership arrangement, it is a capital lease; otherwise, the lease is an operating lease. Assets leased under a capital lease are classified as long-term assets. They are shown net of amortization (depreciation) and listed with plant, property, and equipment. (The discounted value of the obligation, a liability, will be part current and part long term.) Chapter 7 covers the topic of leases in more length.

Investments

Long-term investments, usually stocks and bonds of other companies, are often held to maintain a business relationship or to exercise control. Long-term investments are different from marketable securities, where the intent is to hold for short-term profits and to achieve liquidity. (Financial reports often refer to marketable securities as investments.)

Debt securities under investments are to be classified as held-to-maturity securities or available-for-sale securities. *Held-to-maturity securities* are securities that the firm has the intent and ability to hold to maturity. Debt securities classified as held-to-maturity securities are carried at amortized cost. Debt securities classified as available-for-sale securities are carried at fair value.

Equity securities under investments are to be carried at fair value. An exception for fair value is used for common stock where there is significant influence. For these common stock investments, the investment is carried under the equity method. Under the equity method, the cost is adjusted for the proportionate share of the rise (fall) in retained profits of the subsidiary (investee). For example, a parent company owns 40% of a subsidiary company, purchased at a cost of \$400,000. When the subsidiary company earns \$100,000, the parent company increases the investment account by 40% of \$100,000, or \$40,000. When the subsidiary company declares dividends of \$20,000, the parent company decreases the investment account by 40% of \$20,000, or \$8,000. This decrease occurs because the investment account changes in direct proportion to the retained earnings of the subsidiary.

Investments can also include tangible assets not currently used in operations, such as an idle plant, as well as monies set aside in special funds, such as pensions. The investments of Microsoft are illustrated in Exhibit 3-8.

Intangibles

Intangibles are nonphysical assets, such as patents and copyrights. Intangibles are recorded at historical cost and amortized over their useful lives or their legal lives, whichever is shorter. Current GAAP requires amortization for intangibles over a period of

EXHIBIT 3-7**CONVERSE INC. AND SUBSIDIARIES**
Properties and Depreciation**CONSOLIDATED BALANCE SHEET (IN PART)***(Dollars in thousands)***ASSETS****Current assets:**

	<u>January 3, 1998</u>	<u>January 2, 1999</u>
Cash and cash equivalents	\$ 5,738	\$ 3,274
Receivables, less allowances of \$2,066 and \$2,086, respectively	72,083	57,826
Inventories (Note 5)	94,681	71,292
Prepaid expenses and other current assets (Note 10)	9,713	8,962
Total current assets	182,215	141,354
Net property, plant and equipment (Note 6)	20,086	20,838
Other assets (Note 10)	32,393	32,814
	<u>\$234,694</u>	<u>\$195,006</u>

Notes to Consolidated Financial Statements (In Part)**2. Significant Accounting Policies (In Part)***Property, plant and equipment*

Property, plant and equipment are recorded at cost when acquired. Expenditures for improvements are capitalized while normal repairs and maintenance are expensed as incurred. When properties are disposed of, the related cost and accumulated depreciation or amortization are removed from the accounts, and gains or losses on the dispositions are reflected in results of operations. For financial reporting purposes, Converse utilizes the straight-line method of computing depreciation and amortization while accelerated methods are used for tax purposes. Such expense is computed based on the estimated useful lives of the respective assets.

6. Property, Plant and Equipment

Property, plant and equipment consisted of the following:

	Estimated Useful Life (Years)	January 3, 1998	January 2, 1999
Building and leasehold improvements	5 - 10	\$ 7,832	\$ 8,129
Machinery and equipment	3 - 11	12,012	14,139
Furniture and fixtures	5 - 8	2,944	3,049
Office and computer equipment	7	8,381	10,171
		31,169	35,488
Less accumulated depreciation		11,083	14,650
		<u>\$20,086</u>	<u>\$20,838</u>

time that cannot exceed 40 years. Intangibles purchased prior to 1970 (the passage of APB Opinion No. 17) do not have to be amortized. Also, research and development costs must be expensed as incurred. Thus, research and development costs in the United States represent an immediate expense, not an intangible. This requirement is not common in many other countries. The following are examples of intangibles that are recorded in the United States:

Goodwill Goodwill arises from the acquisition of a business for a sum greater than the physical asset value, usually because the business has unusual earning power. It may result from good customer relations, a well-respected owner, and so on.

Goodwill can be a substantial asset. Therefore, the amortization period selected can have a material influence on earnings. In the United States, the maximum amortization

EXHIBIT 3-8**MICROSOFT
Investments****BALANCE SHEETS (IN PART)**

June 30 (In millions)	1997	1998
Assets		
Current assets:		
Cash and short-term investments	\$ 8,966	\$13,927
Accounts receivable	980	1,460
Other	427	502
Total current assets	10,373	15,889
Property and equipment	1,465	1,505
Equity investments	2,346	4,703
Other assets	203	260
Total assets	\$14,387	\$22,357

period is 40 years, although the FASB has issued an Exposure Draft that would reduce the maximum amortization period to 20 years.

The global treatment of goodwill varies significantly. In some countries, goodwill is not recorded because it is charged to stockholders' equity. In this case, there is no influence to reported income. In some countries, goodwill is expensed in the year acquired. In many countries that record goodwill, the maximum amortization period is much less than it is in the United States.

Patents **Patents**, exclusive legal rights granted to an inventor for a period of 20 years, are valued at their acquisition cost. The cost of a patent should be amortized over its legal life or its useful life, whichever is shorter.

Trademarks **Trademarks** are distinctive names or symbols. Rights are granted to the holder for 10 years and may be renewed every 10 years thereafter. The cost must be amortized over the periods benefited, not to exceed 40 years.

Organizational Costs **Organizational costs** are legal costs incurred when a business is organized. These costs are carried as an asset and are usually written off over a period of five years or longer. The amortization period cannot exceed 40 years.

Franchises **Franchises** are the legal right to operate under a particular corporate name, providing trade-name products or services. The cost of a franchise with a limited life should be amortized over the life of the franchise, not to exceed 40 years.

Copyrights **Copyrights** are rights that authors, painters, musicians, sculptors, and other artists have in their creations and expressions. A copyright is granted for the life of the creator, plus 70 years. The costs of the copyright should be amortized over the period of expected benefit, not to exceed 40 years.

Exhibit 3-9 displays the Johnson and Johnson presentation of intangibles. It consists primarily of goodwill, less accumulated amortization.

EXHIBIT 3-9**JOHNSON & JOHNSON AND SUBSIDIARIES**
Intangibles**CONSOLIDATED BALANCE SHEETS (IN PART)***(At January 3, 1999 and December 28, 1997) (Dollars in Millions) (Note 1)*

	1998	1997
Assets		
Current assets		
Cash and cash equivalents (Notes 1 and 16)	\$ 1,927	2,753
Marketable securities at cost (Note 16)	651	146
Accounts receivable trade, less allowances \$385 (1997, \$358)	3,661	3,329
Inventories (Notes 1 and 2)	2,853	2,516
Deferred taxes on income (Note 6)	1,180	831
Prepaid expenses and other receivables	860	988
Total current assets	<u>\$11,132</u>	<u>10,563</u>
Marketable securities, non-current (Note 16)	416	385
Property, plant and equipment, net (Notes 1, 3 and 15)	6,240	5,810
Intangible assets, net (Notes 1 and 5)	7,209	3,261
Deferred taxes on income (Note 6)	102	332
Other assets	1,112	1,102
Total assets	<u>\$26,211</u>	<u>21,453</u>

Note to Consolidated Financial Statements (In Part)

Note 1. Summary of Significant Accounting Policies (In Part)

Intangible Assets

The excess of the cost over the fair value of net assets of purchased businesses is recorded as goodwill and is amortized on a straight-line basis over periods of 40 years or less. The cost of other acquired intangibles is amortized on a straight-line basis over their estimated useful lives. The Company continually evaluates the carrying value of goodwill and other intangible assets. Any impairments would be recognized when the expected future operating cash flows derived from such intangible assets is less than their carrying value.

Note 5 Intangible Assets

At the end of 1998 and 1997, the gross and net amounts of intangible assets were:

<i>(Dollars in Millions)</i>	1998	1997
Goodwill – gross	\$4,112	2,198
Less accumulated amortization	<u>329</u>	<u>241</u>
Goodwill – net	<u>\$3,783</u>	<u>1,957</u>
Patents & trademarks – gross	\$1,634	1,074
Less accumulated amortization	<u>343</u>	<u>262</u>
Patents and trademarks – net	<u>\$1,291</u>	<u>812</u>
Other intangibles – gross	\$2,296	613
Less accumulated amortization	<u>161</u>	<u>121</u>
Other intangibles – net	<u>\$2,135</u>	<u>492</u>
Total intangible assets – gross	\$8,042	3,885
Less accumulated amortization	<u>833</u>	<u>624</u>
Total intangible assets – net	<u>\$7,209</u>	<u>3,261</u>

The weighted average amortization periods for goodwill, patents and trademarks and other intangibles are 32 years, 21 years and 18 years, respectively.

Other Assets

Firms will occasionally have assets that do not fit into one of the previously discussed classifications. These assets, termed “other,” might include noncurrent receivables and noncurrent prepaids. Exhibit 3-10 summarizes types of other assets from a financial statement compilation in *Accounting Trends & Techniques*.

Liabilities

Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.³ Liabilities are usually classified as either current or long-term liabilities.

Current Liabilities

Current liabilities are obligations whose liquidation is reasonably expected to require the use of existing current assets or the creation of other current liabilities within a year or an operating cycle, whichever is longer. They include the following items. Exhibit 3-11 shows the current liabilities of Wendy's International.

Payables These include short-term obligations created by the acquisition of goods and services, such as accounts payable (for materials or goods bought for use or resale), wages payable, and taxes payable. Payables may also be in the form of a written promissory note, notes payable.

Unearned Income Payments collected in advance of the performance of service are termed unearned. They include rent income and subscription income. Rather than cash, a future service or good is due the customer.

EXHIBIT 3-10

OTHER NONCURRENT ASSETS

	Number of Companies			
	1997	1996	1995	1994
Deferred income taxes	177	172	185	167
Prepaid pension costs	101	101	97	95
Software	53	47	35	41
Debt issue costs	48	48	48	47
Property held for sale	43	36	63	55
Segregated cash or securities	34	33	35	38
Cash surrender value of life insurance	29	25	22	24
Assets leased to others	20	14	16	23
Estimated insurance recoveries	13	—	—	—
Start-up costs	12	12	13	20
Assets of nonhomogeneous operations	9	15	16	25
Other identified noncurrent assets	40	45	50	50

Source: *Accounting Trends & Techniques*, copyright© 1998 by American Institute of Certified Public Accountants, Inc., p. 217. Reprinted with permission.

EXHIBIT 3-11**WENDY'S INTERNATIONAL, INC. AND SUBSIDIARIES**
Current Liabilities

CONSOLIDATED BALANCE SHEETS (IN PART)		
(Dollars in thousands)	January 3, 1999	December 28, 1997
Current Liabilities		
Accounts payable	\$101,100	\$100,966
Accrued expenses		
Salaries and wages	30,432	31,377
Taxes	31,105	15,830
Insurance	34,944	30,899
Other	46,432	26,391
Current portion of long-term obligations	5,399	7,151
	<u>249,412</u>	<u>212,614</u>

Other Current Liabilities There are many other current obligations requiring payment during the year. Exhibit 3-12 displays other current liabilities reported by *Accounting Trends & Techniques* in 1998.

Long-Term Liabilities

Long-term liabilities are those due in a period exceeding one year or one operating cycle, whichever is longer. Long-term liabilities are generally of two types: financing arrangements of assets and operational obligations.

Liabilities Relating to Financing Agreements The long-term liabilities that are financing arrangements of assets usually require systematic payment of principal and interest. They include notes payable, bonds payable, and credit agreements.

Notes Payable Promissory notes due in periods greater than one year or one operating cycle, whichever is longer, are classified as long term. If secured by a claim against real property, they are called mortgage notes.

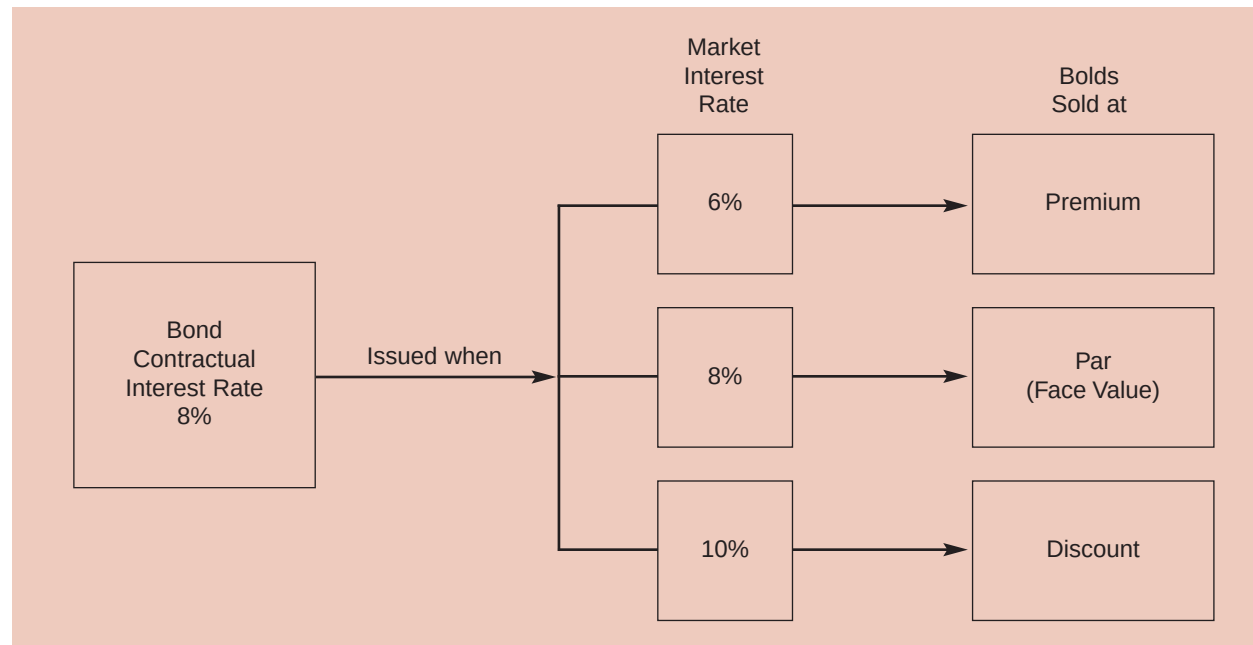
Bonds Payable A **bond** is a debt security normally issued with \$1,000 par per bond and requiring semiannual interest payments based on the coupon rate. Bonds payable is similar to notes payable. Bonds payable are usually for a longer duration than notes payable.

Bonds are not necessarily sold at par. They are sold at a premium if the stated rate of interest exceeds the market rate and at a discount if the stated rate of interest is less than the market rate. If sold for more than par, a premium on bonds payable arises and increases bonds payable to obtain the current carrying value. Similarly, if sold at less than par, a discount on bonds payable arises and decreases bonds payable on the balance sheet. Each of these accounts, discount or premium, will be gradually written off (amortized) to interest expense over the life of the bond. At the maturity date, the carrying value of bonds payable will be equal to the par value. Amortization of bond discount increases interest expense; amortization of bond premium reduces it. Exhibit 3-13 illustrates bonds sold at par, premium, or discount.

EXHIBIT 3-12**OTHER CURRENT LIABILITIES**

	Number of Companies			
	1997	1996	1995	1994
Taxes other than federal income taxes	116	123	122	139
Interest	110	119	124	124
Estimated costs related to discontinued operations	87	92	108	130
Dividends payable	69	71	75	78
Deferred revenue	69	67	58	54
Warranties	66	67	54	54
Insurance	63	71	78	78
Advertising	56	51	45	39
Customer advances, deposits	50	56	54	55
Environmental costs	49	49	51	53
Deferred taxes	39	47	46	53
Due to affiliated companies	21	15	24	22
Billings on uncompleted contracts	16	23	28	31
Litigation	16	14	20	N/C
Royalties	15	15	11	N/C
Other—described	91	85	118	115
N/C - Not Compiled				

Source: *Accounting Trends & Techniques*, copyright© 1998 by American Institute of Certified Public Accountants, Inc., p. 233. Reprinted with permission.

EXHIBIT 3-13**BONDS AT PAR, PREMIUM, OR DISCOUNT**

Note: The market interest rate becomes the effective rate of interest.

Bonds that are convertible into common stock at the option of the bondholder (creditor) are exchanged for a specified number of common shares, and the bondholder becomes a common stockholder. Often, convertible bonds are issued when the common stock price is low, in management's opinion, and the firm eventually wants to increase its common equity. By issuing a convertible bond, the firm may get more for the specified number of common shares than could be obtained by issuing the common shares. The conversion feature allows the firm to issue the bond at a more favorable interest rate than would be the case with a bond lacking the conversion feature. Also, the tax deductible interest paid on the convertible bond reduces the firm's cost for these funds. If common stock had been issued, the dividend on the common stock would not be tax deductible. Thus, a firm may find that issuing a convertible bond can be an attractive means of raising common equity funds in the long run. However, if the firm's stock price stays depressed after issuing a convertible bond, then the firm will have the convertible bond liability until the bond comes due. Convertible bonds (Notes) of The Home Depot are displayed in Exhibit 3-14.

Credit Agreements Many firms arrange loan commitments from banks or insurance companies for future loans. Often, the firm does not intend to obtain these loans but has arranged the credit agreement just in case a need exists for additional funds. Such credit agreements do not represent a liability unless the firm actually requests the funds. From the point of view of analysis, the existence of a substantial credit agreement is a positive condition in that it could relieve pressure on the firm if there is a problem in meeting existing liabilities.

In return for giving a credit agreement, the bank or insurance company obtains a fee. This commitment fee is usually a percentage of the unused portion of the commitment. Also, banks often require the firm to keep a specified sum in its bank account, referred to as a compensating balance. Exhibit 3-15 shows credit agreements.

Liabilities Relating to Operational Obligations Long-term liabilities relating to operational obligations include obligations arising from the operation of a business, mostly of a service nature, such as pension obligations, postretirement benefit obligations other than pension plans, deferred taxes, and service warranties. Chapter 7 covers at length pensions and postretirement benefit obligations other than pension plans.

Deferred Taxes Deferred taxes are caused by using different accounting methods for tax and reporting purposes. For example, a firm may use accelerated depreciation for tax purposes and straight-line depreciation for reporting purposes. This causes tax expense for reporting purposes to be higher than taxes payable according to the tax return. The difference is deferred tax. Any situation where revenue or expense is recognized in the financial statements in a different time period than for the tax return will create a deferred tax situation (asset or liability). For example, in the later years of the life of a fixed asset, straight-line depreciation will give higher depreciation and, therefore, lower net income than an accelerated method. Then tax expense for reporting purposes will be lower than taxes payable, and the deferred tax will be reduced (paid). Since firms often buy more and higher-priced assets, however, the increase in deferred taxes may exceed the decrease. In this case, a partial or a total reversal will not occur. The taxes may be deferred for a very long time, perhaps permanently. Chapter 7 covers deferred taxes in more detail.

Warranty Obligations Warranty obligations are estimated obligations arising out of product warranties. Product warranties require the seller to correct any deficiencies in quantity, quality, or performance of the product or service for a specific period of time after the sale. Warranty obligations are estimated in order to recognize the obligation at the balance sheet

EXHIBIT 3-14**THE HOME DEPOT, INC. AND SUBSIDIARIES**
Convertible Bonds**BALANCE SHEETS (IN PART)**

(Amounts in millions)	January 31, 1999	February 1, 1998
Current Liabilities:		
Accounts Payable	\$1,586	\$1,358
Accrued Salaries and Related Expenses	395	312
Sales Taxes Payable	176	143
Other Accrued Expenses	586	530
Income Taxes Payable	100	105
Current Installments of Long-Term Debt (notes 2 and 5)	14	8
Total Current Liabilities	<u>2,857</u>	<u>2,456</u>
Long-Term Debt, excluding current installments (notes 2 and 5)	1,566	1,303
Other Long-Term Liabilities	208	178
Deferred Income Taxes (note 3)	85	78
Minority Interest (note 10)	9	116

Note 2 Long-Term Debt (In Part)

The Company's long-term debt at the end of fiscal 1998 and 1997 consisted of the following (amounts in millions):

	January 31, 1999	February 1, 1998
3 1/4% Convertible Subordinates Notes, due October 1, 2001: convertible into shares of common stock of the Company at a conversion price of \$23.0417 per share; redeemable by the Company at a premium, plus accrued interest, beginning October 2, 1999.	\$1,103	\$1,104
Commercial Paper; weighted average interest rate of 4.8% at January 31, 1999.	246	—
Capital Lease Obligations; payable in varying installments through January 31, 2019 (see note 5).	180	151
Installment Notes Payable; interest imputed at rates between 6.1% and 10.5%; payable in varying installments through 2018.	27	32
Unsecured Bank Loan; floating interest rate averaging 5.9% in fiscal 1998 and 6.05% in fiscal 1997; payable in August 2002.	15	15
Variable Rate Industrial Revenue Bonds; secured by letters of credit or land; interest rates averaging 3.8% during fiscal 1998 and 4.2% during fiscal 1997; payable in varying installments through 2010.	9	9
Total long-term debt	<u>1,580</u>	<u>1,311</u>
Less current installments	<u>14</u>	<u>8</u>
Long-term debt, excluding current installments	<u>\$1,566</u>	<u>\$1,303</u>

In October 1996, the Company issued, through a public offering, \$1.1 billion of 3 1/4% Convertible Subordinated Notes ("3 1/4% Notes") due October 1, 2001. The 3 1/4% Notes were issued at par and are convertible into shares of common stock at any time prior to maturity, unless previously redeemed by the Company, at a conversion price of \$23.0417 per share, subject to adjustment under certain conditions. The 3 1/4% Notes may be redeemed by the Company at any time on or after October 2, 1999, in whole or in part, at a redemption price of 100.813% of the principal amount and after October 1, 2000, at 100% of the principal amount. The 3 1/4% Notes are not subject to sinking fund provisions.

EXHIBIT 3-15**COOPER TIRE & RUBBER COMPANY**
Credit Agreements

1998 Annual Report

Note**Debt (In part) (Dollar amounts in thousands)**

At December 31, 1998 and 1997, short-term debt consisted of bank line borrowings primarily in European currencies at weighted average interest rates of 4.4 and 5.6 percent, respectively.

The Company's long-term debt at December 31 consisted of the following:

	1998	1997
7 5/8% notes due 2027	\$200,000	\$200,000
Capitalized leases and other	5,285	5,978
	<u>205,285</u>	<u>205,978</u>
Less current maturities	249	453
	<u>\$205,036</u>	<u>\$205,525</u>

The Company has an agreement with four banks authorizing borrowings up to \$150,000 on a long-term basis through October 31, 2002 and \$100,000 on a short-term basis, with interest at varying rates. The credit facility provides for borrowings in foreign currencies and supports issuance of commercial paper. The proceeds may be used for general corporate purposes. A commitment fee is payable quarterly and is based on the daily unused portion of the amount authorized. The agreement requires the maintenance of certain debt and fixed charge coverage ratios. The Company has other informal lines of credit available to meet domestic borrowing needs.

date and to charge the expense to the period of the sale. Exhibit 3-16 shows warranty obligations of General Motors.

Minority Interest Minority interest reflects the ownership of minority shareholders in the equity of consolidated subsidiaries less than wholly owned. Minority interest does not represent a liability or stockholders' equity in the firm being analyzed. Consider the following simple example. Parent P owns 90% of the common stock of Subsidiary S.

	Parent P Balance Sheet December 31, 2000	Subsidiary S Balance Sheet December 31, 2000
	(In millions)	
Current assets	\$100	\$10
Investment in Subsidiary S	18	—
Other long-term assets	382	40
	<u>\$500</u>	<u>\$50</u>
Current liabilities	\$100	\$10
Long-term liabilities	200	20
Stockholders' equity	200	20
	<u>\$500</u>	<u>\$50</u>

In consolidation, the assets and liabilities of the subsidiary are added to those of the parent, with the elimination of the investment in Subsidiary S. Parent P owns 90% of the subsidiary's net assets of \$20 (\$50 – \$30), and the minority shareholders own 10%.

EXHIBIT 3-16**GENERAL MOTORS CORPORATION AND SUBSIDIARIES**
Warranty Obligations**Note 14. Accrued Expenses, Other Liabilities and Deferred Income Taxes (In Part)****Automotive, Electronics and Other Operations**

Accrued expenses, other liabilities and deferred income taxes included the following (in millions):

December 31,	1998	1997
Warranties, dealer and customer allowances, claims, and discounts	\$14,603	\$13,992
Deferred revenue	8,548	7,799
Payrolls and employee benefits (excludes postemployment)	6,884	7,794
Unpaid losses under self-insurance programs	1,774	1,631
Taxes, other than income taxes	1,067	981
Interest	1,545	1,235
Income taxes	449	1,023
Deferred income taxes	2,973	2,923
Postemployment benefits	3,820	4,038
Other	10,589	11,132
Total accrued expenses, other liabilities and deferred income taxes	<u>\$52,252</u>	<u>\$52,548</u>

This will be shown on the consolidated balance sheet:

PARENT P AND SUBSIDIARY
Consolidated Balance Sheet
December 31, 2000

	(In millions)
Current assets	\$110
Long-term assets	<u>422</u>
	<u>\$532</u>
Current liabilities	\$110
Long-term liabilities	220
Minority interest	2
Stockholders' equity	<u>200</u>
	<u>\$532</u>

Because of the nature of minority interest, it is usually presented after liabilities and before stockholders' equity. Some firms include minority interest in liabilities; others present it in stockholders' equity. Since minority interest is seldom material, consider it a liability to simplify the analysis. In a firm where the minority interest is material, the analysis can be performed twice—once with minority interest as a liability and then as a stockholders' equity item.

Including minority interest as a long-term liability is also conservative when analyzing a firm. The primary analysis should be conservative. Refer to Exhibit 3-17 for an illustration of minority interest.

Other Noncurrent Liabilities Many other noncurrent liabilities may be disclosed. It would not be practical to discuss all of the possibilities. An example would be deferred profit on sales.

EXHIBIT 3-17**COMPAQ COMPUTER CORPORATION**
Minority Interest**CONSOLIDATED BALANCE SHEET (IN PART)**

December 31 (In Millions)	1998	1997
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$4,237	\$2,837
Income taxes payable	282	195
Accrued restructuring costs	1,110	—
Other current liabilities	5,104	2,170
Total current liabilities	10,733	5,202
Postretirement and other postemployment benefits	545	—
Commitments and contingencies (Note 13)	—	—
Minority interest	422	—
Stockholders' equity: (Detail Omitted)	11,351	9,429

Redeemable Preferred Stock Redeemable preferred stock is subject to mandatory redemption requirements or has a redemption feature outside the control of the issuer. If this feature is coupled with such characteristics as no vote or fixed return, often preferred stock and bond characteristics, then this type of preferred stock is more like debt than equity. For this reason, the SEC directs that the three categories of stock—redeemable preferred stock, non-redeemable preferred stock, and common stock—not be totaled in the balance sheet. Further, the stockholders' equity section should not include redeemable preferred stock. Redeemable preferred stock is illustrated in Exhibit 3-18. Because redeemable preferred stock is more like debt than equity, consider it as part of total liabilities for purposes of financial statement analysis.

Stockholders' Equity

Stockholders' equity is the residual ownership interest in the assets of an entity that remains after deducting its liabilities.⁴ Usually divided into two basic categories, paid-in capital and retained earnings, other accounts may appear in stockholders' equity that are usually presented separately from paid-in capital and retained earnings. Other accounts include accumulated other comprehensive income, equity-oriented deferred compensation, and employee stock ownership plans (ESOPs).

Corporations do not use a standard title for owners' equity. Exhibit 3-19 shows the titles for owners' equity used by the companies surveyed by *Accounting Trends & Techniques*.

Paid-in Capital

The first type of paid-in capital account is capital stock. Two basic types of capital stock are preferred and common.

Both preferred stock and common stock may be issued as par-value stock. (Some states call this *stated value stock*.) The articles of incorporation establish the par value, a designated dollar amount per share. Many states stipulate that the par value of issued stock times the number of shares outstanding constitutes the **legal capital**. Many states also designate that, if original-issue stock is sold below par value, the buyer is contingently liable for the difference between the par value and the lower amount paid. This does not usually pose a problem because the par value has no direct relationship to market value, the selling price

EXHIBIT 3-18**WENDY'S INTERNATIONAL, INC. AND SUBSIDIARIES**
Redeemable Preferred Stock**CONSOLIDATED BALANCE SHEETS (IN PART)**

<i>(Dollars in thousands)</i>	January 3, 1999	December 28, 1997
Liabilities and Shareholders' Equity		
Current liabilities (detail omitted)	\$ 249,412	\$ 212,614
Long-term obligations		
Term debt	205,371	205,872
Capital leases	40,676	43,891
	<u>246,047</u>	<u>249,763</u>
Deferred income taxes	60,707	81,017
Other long-term liabilities	13,714	14,052
Commitments and contingencies		
Company-obligated mandatorily redeemable preferred securities of subsidiary Wendy's Financing I, holding solely Wendy's Convertible Debentures	200,000	200,000
Shareholders' equity		
Preferred stock, authorized: 250,000 shares		
Common stock, \$.10 stated value per share, authorized: 200,000,000 shares Issued and Exchangeable: 133,415,000 and 132,396,000 shares, respectively	11,796	11,595
Capital in excess of stated value	370,288	353,327
Retained earnings	931,603	839,215
Accumulated other comprehensive expense	(33,355)	(18,191)
	<u>1,280,332</u>	<u>1,185,946</u>
Treasury stock, at cost: 9,410,000 and 129,000 shares, respectively	(212,265)	(1,712)
	<u>1,068,067</u>	<u>1,184,234</u>
	<u><u>\$1,837,947</u></u>	<u><u>\$1,941,680</u></u>

of the stock. To avoid selling a stock below par, the par value is usually set very low in relation to the intended selling price. For example, the intended selling price may be \$25.00, and the par value may be \$1.00.

Some states allow the issuance of no-par stock (either common or preferred). Some of these states require that the entire proceeds received from the sale of the no-par stock be designated as legal capital.

Additional paid-in capital arises from the excess of amounts paid for stock over the par or stated value of the common and preferred stock. Also included here are amounts over cost from the sale of treasury stock (discussed later in this chapter), capital arising from the donation of assets to the firm, and transfer from retained earnings through stock dividends when the market price of the stock exceeds par.

Common stock

Common stock shares in all the stockholders' rights and represents ownership that has voting and liquidation rights. Common stockholders elect the board of directors and vote on major corporate decisions. In the event of liquidation, the liquidation rights of common

EXHIBIT 3-19**TITLE OF OWNERS' EQUITY**

	1997	1996	1995	1994
Stockholders' Equity	271	263	256	249
Shareholders' Equity	246	250	248	255
Shareowners' Equity	25	20	23	24
Common Stockholders' Equity	11	12	16	13
Shareholders' Investment	12	15	14	9
Common Shareholders' Equity	10	8	10	8
Other or no title	25	32	33	41
Total Companies	<u>600</u>	<u>600</u>	<u>600</u>	<u>600</u>

Source: *Accounting Trends & Techniques*, copyright© 1998 by American Institute of Certified Public Accountants, Inc., p. 278. Reprinted with permission.

stockholders give them claims to company assets after all creditors' and preferred stockholders' rights have been fulfilled.

Preferred stock

Preferred stock seldom has voting rights. When preferred stock has voting rights, it is usually because of missed dividends. For example, the preferred stockholders may possibly receive voting rights if their dividends have been missed two consecutive times. Some other preferred stock characteristics include the following:

- Preference as to dividends
- Accumulation of dividends
- Participation in excess of stated dividend rate
- Convertibility into common stock
- Callability by the corporation
- Redemption at future maturity date (see the previous discussion of redeemable preferred stock)
- Preference in liquidation

Preference as to Dividends When preferred stock has a preference as to dividends, the current year's preferred dividend must be paid before a dividend can be paid to common stockholders. For par-value (or stated value) stock, the dividend rate is usually stated as a percentage of par. For example, if the dividend rate were 6% and the par were \$100 per share, then the dividend per share would be \$6. For no-par stock, if the dividend rate is stated as \$5, then each share should receive \$5 if a dividend is paid. A preference as to dividends does not guarantee that a preferred dividend will be paid in a given year. The Board of Directors must declare a dividend before a dividend is paid. The lack of a fixed commitment to pay dividends and the lack of a due date on the principal are the primary reasons that many firms elect to issue preferred stock instead of bonds. Preferred stock usually represents an expensive source of funds, compared to bonds. The preferred stock dividends are not tax deductible, while interest on bonds is deductible.

Accumulation of Dividends If the Board of Directors does not declare dividends in a particular year, a holder of noncumulative preferred stock will never be paid that dividend. To make the preferred stock more attractive to investors, a corporation typically issues

cumulative preferred stock. If a corporation fails to declare the usual dividend on the cumulative preferred stock, the amount of passed dividends becomes **dividends in arrears**. Common stockholders cannot be paid any dividends until the preferred dividends in arrears and the current preferred dividends are paid.

To illustrate dividends in arrears, assume a corporation has outstanding 10,000 shares of 8%, \$100 par cumulative preferred stock. If dividends are not declared in 1998 and 1999, but are declared in 2000, the preferred stockholders would be entitled to dividends in arrears of \$160,000 and current dividends in 2000 of \$80,000 before any dividends could be paid to common stockholders.

Participation in Excess of Stated Dividend Rate When preferred stock is participating, preferred stockholders may receive an extra dividend beyond the stated dividend rate. The terms of the participation depend on the terms included with the stock certificate. For example, the terms may state that any dividend to common stockholders over \$10 per share will also be given to preferred stockholders.

To illustrate participating preferred stock, assume that a corporation has 8%, \$100 par preferred stock. The terms of the participation are that any dividend paid on common shares over \$10 per share will also be paid to preferred stockholders. For the current year, a dividend of \$12 per share is declared on the common stock. Therefore, a dividend of \$10 must be paid per share of preferred stock for the current year: $(8\% \times \$100) + \$2.00 = \$10.00$.

Convertibility into Common Stock Convertible preferred stock contains a provision that allows the preferred stockholders, at their option, to convert the share of preferred stock at a specific exchange ratio into another security of the corporation. The other security is almost always common stock. The conversion feature is very attractive to investors. For example, the terms may be that each share of preferred stock can be converted to four shares of common stock.

Convertible preferred stock is similar to a convertible bond, except that there are no fixed payout commitments with the convertible preferred stock. The preferred dividend need not be declared, and the preferred stock does not have a due date. The major reason for issuing convertible preferred stock is similar to that for issuing convertible bonds: If the current common stock price is low, in the opinion of management, and the firm eventually wants to increase its common equity, then the firm can raise more money for a given number of common shares by first issuing convertible preferred stock.

A firm usually prefers to issue convertible bonds rather than convertible preferred stock if its capital structure can carry more debt without taking on too much risk. The interest on the convertible bond is tax deductible while the dividend on the preferred stock is not.

Callability by the Corporation Callable preferred stock may be retired (recalled) by the corporation at its option. The call price is part of the original stock contract. When the preferred stock is also cumulative, the call terms normally require payment of dividends in arrears before the call is executed.

The call provision favors the company because the company decides when to call. Investors do not like call provisions. Therefore, to make a security that has a call provision marketable, the call provision can normally not be exercised for a given number of years. For example, callable preferred stock issued in 1998 may have a provision that the call option cannot be exercised prior to 2008.

Preference in Liquidation Should the corporation liquidate, the preferred stockholders normally have priority over common stockholders for settlement of claims. However, the claims of preferred stockholders are secondary to the claims of creditors, including bondholders.

Preference in liquidation for preferred stock over common stock is not usually considered to be an important provision. This is because often, in liquidation, funds are not sufficient to pay claims of preferred stock. Even creditors may receive only a few cents on the dollar in satisfaction of their claims.

Disclosures Preferred stock may carry various combinations of provisions. The provisions of each preferred stock issue should be disclosed either parenthetically in the stockholders' equity section of the balance sheet or in a footnote. A company may have various preferred stock issues, each with different provisions. Preferred stock is illustrated in Exhibit 3-20.

Donated Capital

Donated capital may be included in the paid-in capital. Capital is donated to the company by stockholders, creditors, or other parties (such as a city). For example, a city may offer land to a company as an inducement to locate a factory there to increase the level of employment. The firm records the donated land at the appraised amount and records an equal amount as donated capital in stockholders' equity.

EXHIBIT 3-20

CHIQUITA BRANDS INTERNATIONAL, INC. Preferred Stock

CONSOLIDATED BALANCE SHEET (IN PART)

	December 31,	
	1998	1997
(In thousands, except share amounts)		
Shareholders' equity		
Preferred and preference stock	\$253,475	\$253,239
Common stock—65,447,875 shares, \$.01 par value in 1998; 61,167,900 shares, \$.33 par value in 1997	654	20,389
Capital surplus	755,660	676,352
Accumulated deficit	(214,967)	(166,486)
Accumulated other comprehensive loss	(842)	(3,408)
Total shareholders' equity	<u>793,980</u>	<u>780,086</u>

Notes to Consolidated Financial Statements (In Part)

Note 11 - Shareholders' Equity (In Part)

At December 31, 1998, three series of preferred and preference stock are outstanding, each share of which has a liquidation preference of \$50.00, and has an annual dividend rate and is convertible at the holder's option into a number of shares of Chiquita common stock as follows:

	Shares outstanding	Annual dividend rate	Holders' conversion rate
\$2.875 Non-Voting Cumulative Preferred Stock, Series A	2,875,000	\$2.875	2.6316
\$3.75 Convertible Preferred Stock, Series B	2,300,000	3.750	3.3333
\$2.50 Convertible Preference Stock, Series C	84,371	2.500	2.9220

Another example would be a company that needs to increase its available cash. A plan is devised, calling for existing common stockholders to donate a percentage of their stock to the company. When the stock is sold, the proceeds are added to the cash account, and the donated capital in stockholders' equity is increased. Exhibit 3-21 illustrates the presentation of donated capital by Lands' End.

Retained Earnings

Retained earnings are the undistributed earnings of the corporation—that is, the net income for all past periods minus the dividends (both cash and stock) that have been declared. Retained earnings, cash dividends, and stock dividends are reviewed in more detail in Chapter 4. Exhibit 3-21 illustrates the presentation of retained earnings.

Quasi-Reorganization

A **quasi-reorganization** is an accounting procedure equivalent to an accounting fresh start. A company with a deficit balance in retained earnings “starts over” with a zero balance rather than a deficit. A quasi-reorganization involves the reclassification of a deficit in retained earnings. It removes the deficit and an equal amount from paid-in capital. A quasi-reorganization may also include a restatement of the carrying values of assets and liabilities to reflect current values.

When a quasi-reorganization is performed, the retained earnings should be dated as of the readjustment date and disclosed in the financial statements for a period of five to ten years. Exhibit 3-22 on the next page illustrates a quasi-reorganization of Exco Resources.

Accumulated Other Comprehensive Income

Conceptually, **accumulated other comprehensive income** represents retained earnings from other comprehensive income. In addition to the aggregate amount, companies are required to disclose the separate categories that make up accumulated other comprehensive income. The disclosure of the separate components can be made on the face of the balance

EXHIBIT 3-21

LANDS' END, INC. AND SUBSIDIARIES Donated Capital

CONSOLIDATED BALANCE SHEETS (IN PART)		
(In thousands)	January 29, 1999	January 30, 1998
Shareholders' investment		
Common stock, 40,221 shares issued	\$ 402	\$ 402
Donated capital	8,400	8,400
Additional paid-in capital	26,994	26,457
Deferred compensation	(394)	(1,047)
Accumulated other comprehensive income	2,003	875
Retained earnings	406,396	375,211
Treasury stock, 10,317 and 9,281 shares at cost, respectively	(201,298)	(167,586)
Total shareholders' investment	<u>\$242,503</u>	<u>\$242,712</u>

EXHIBIT 3-22**EXCO RESOURCES, INC.
Quasi-Reorganization****BALANCE SHEET (IN PART)***(In thousands)*

	December 31,	
	1997	1998
Stockholders' equity		
Preferred stock, \$.01 par value		
Authorized shares - 10,000,000		
Outstanding shares - none	—	—
Common stock, \$.02 par value		
Authorized shares - 25,000,000		
Issued and outstanding shares - 502,650 and 6,687,696 at December 31, 1997 and 1998, respectively	10	134
Additional paid-in capital	9,716	46,241
Notes receivable - officers		(825)
Deficit eliminated	(8,799)	(8,799)
Retained earnings (deficit), as adjusted for quasi-reorganization at December 31, 1997	—	(511)
Total stockholders' equity	<u>\$ 927</u>	<u>\$36,240</u>

Notes (In Part)**Quasi-Reorganization**

Effective December 31, 1997, we effected a quasi-reorganization by applying approximately \$8.8 million of our additional paid-in capital account to eliminate our accumulated deficit. Our board of directors decided to effect a quasi-reorganization given the change in management, the infusion of new equity capital and increase in activities. Our accumulated deficit was primarily related to past operations and properties that have been disposed of. We did not adjust the historical carrying values of our assets and liabilities in connection with the quasi-reorganization.

sheet, in the statement of stockholders' equity, or in the footnotes. Chapter 4 covers comprehensive income. Exhibit 3-21 illustrates the presentation of accumulated other comprehensive income.

Equity-Oriented Deferred Compensation

Equity-oriented deferred compensation arrangements encompass a wide variety of plans. The deferred compensation element of an equity-based deferred compensation arrangement is the amount of compensation cost deferred and amortized (expensed) to future periods as the services are provided.

If stock is issued in a plan before some or all of the services are performed, the unearned compensation should be shown as a reduction to stockholders' equity. This unearned compensation amount should be accounted for as an expense of future period(s) as services are performed. Thus, the unearned compensation amount is removed from stockholders' equity (amortized) and is recognized as an expense in future periods.

When a plan involves the potential issuance of only stock, then the unearned compensation is shown as a reduction in stockholders' equity, and the offsetting amount is also in the stockholders' equity section. If the plan involves cash or a subsequent election of either cash or stock, the unearned compensation appears as a reduction in stockholders' equity, and the offsetting amount appears as a liability.

Exhibit 3-23 illustrates an equity-oriented deferred compensation plan for AMP. It is apparently a stock-only plan. The deferred compensation will be amortized to expense over subsequent periods.

EXHIBIT 3-23**AMP
Equity-Oriented Deferred Compensation**

<i>(Dollars in thousands)</i>	December 31, 1998	December 31, 1997
Shareholders' Equity:		
Common stock, without par value - Authorized 700,000,000 shares, issued 232,496,129 shares	\$ 81,912	\$ 81,670
Other capital	91,872	91,575
Deferred compensation	(19,752)	(11,169)
Cumulative other comprehensive income	17,204	18,606
Retained earnings	2,706,614	2,940,488
Treasury stock, at cost	(213,512)	(177,735)
Total shareholders' equity	<u>\$2,664,338</u>	<u>\$2,943,435</u>

Employee Stock Ownership Plans (ESOPs)

An **ESOP** is a qualified stock-bonus, or combination stock-bonus and money-purchase pension plan, designed to invest primarily in the employer's securities. A qualified plan must satisfy certain requirements of the Internal Revenue Code. An ESOP must be a permanent trustee plan for the exclusive benefit of the employees.

The trust that is part of the plan is exempt from tax on its income, and the employer/sponsor gets a current deduction for contributions to the plan. The plan participants become eligible for favorable taxation of distributions from the plan.

An ESOP may borrow the funds necessary to purchase the employer stock. These funds may be borrowed from the company, its stockholders, or a third party such as a bank. The company can guarantee the loan to the ESOP. Financial leverage—the ability of the ESOP to borrow in order to buy employer securities—is an important aspect.

The Internal Revenue Code favors borrowing for an ESOP. Commercial lending institutions, insurance companies, and mutual funds are permitted an exclusion from income for 50% of the interest received on loans used to finance an ESOP's acquisition of company stock. Thus, these institutions are willing to charge a reduced rate of interest for the loan.

From a company's perspective, there are advantages and disadvantages to an ESOP. One advantage is that an ESOP serves as a source of funds for expansion at a reasonable rate. Other possible advantages follow:

1. A means to buy the stock from a major shareholder or possibly an unwanted shareholder.
2. Help financing a leveraged buyout.
3. Reduction of potential of an unfriendly takeover.
4. Help in creating a market for the company's stock.

Some firms do not find an ESOP attractive, because it can result in a significant amount of voting stock in the hands of their employees. Existing stockholders may not find an ESOP desirable because it will probably dilute their proportional ownership.

The employer contribution to an ESOP reduces cash, and an unearned compensation item decreases stockholders' equity. The unearned compensation is amortized on the income statement in subsequent periods. When an ESOP borrows funds and the firm (in either an informal or formal guarantee) commits to future contributions to the ESOP to

meet the debt-service requirements, then the firm records this commitment as a liability and as a deferred compensation deduction within stockholders' equity. As the debt is liquidated, the liability and deferred compensation are reduced.

Exhibit 3-24 shows the reporting of the ESOP of Hershey Foods.

Treasury Stock

A firm creates treasury stock when it repurchases its own stock and does not retire it. Since treasury stock lowers the stock outstanding, it is subtracted from stockholders' equity. Treasury stock is, in essence, a reduction in paid-in capital.

A firm may record treasury stock in two ways. One method records the treasury stock at par or stated value, referred to as the par value method of recording treasury stock. This method removes the paid-in capital in excess of par (or stated value) from the original issue. The treasury stock appears as a reduction of paid-in capital.

EXHIBIT 3-24

HERSHEY FOODS CORPORATION Employee Stock Ownership Plan (ESOP)

CONSOLIDATED BALANCE SHEETS (IN PART)

(In thousands of dollars)	December 31	
	1998	1997
Stockholders' Equity:		
Preferred Stock, shares issued: none in 1998 and 1997	\$ —	\$ —
Common Stock, shares issued: 149,502,964 in 1998 and 149,484,964 in 1997	149,503	149,485
Class B Common Stock, shares issued: 30,447,908 in 1998 and 30,465,908 in 1997	30,447	30,465
Additional paid-in capital	29,995	33,852
Unearned ESOP compensation	(25,548)	(28,741)
Retained earnings	2,189,693	1,977,849
Treasury—Common Stock shares, at cost: 36,804,157 in 1998 and 37,018,566 in 1997	(1,267,422)	(1,267,861)
Accumulated other comprehensive loss	(64,367)	(42,243)
Total stockholders' equity	<u>\$1,042,301</u>	<u>\$ 852,806</u>

Note 11. Employee Stock Ownership Trust

The Corporation's employee stock ownership trust (ESOP) serves as the primary vehicle for contributions to its existing ESSIOF for participating domestic salaried and hourly employees. The ESOP was funded by a 15-year 7.75% loan of \$47.9 million from the Corporation. During 1998 and 1997, the ESOP received a combination of dividends on unallocated shares and contributions from the Corporation equal to the amount required to meet its principal and interest payments under the loan. Simultaneously, the ESOP allocated to participants 159,176 shares of Common Stock each year. As of December 31, 1998, the ESOP held 927,863 allocated shares and 1,273,400 unallocated shares. All ESOP shares are considered outstanding for income per share computations.

The Corporation recognized net compensation expense equal to the shares allocated multiplied by the original cost of \$20 1/16 per share less dividends received by the ESOP on unallocated shares. Compensation expense related to the ESOP for 1998, 1997 and 1996 was \$1.0 million, \$1.4 million and \$1.8 million, respectively. Dividends paid on unallocated ESOP shares were \$1.2 million in 1998 and \$1.3 million in 1997 and 1996. The unearned ESOP compensation balance in stockholders' equity represented deferred compensation expense to be recognized by the Corporation in future years as additional shares are allocated to participants.

The other method, referred to as the *cost method*, records treasury stock at the cost of the stock (presented as a reduction of stockholders' equity). Most firms record treasury stock at cost.

Exhibit 3-25 illustrates the presentation of treasury stock for Coca-Cola Enterprises, Inc. Note that a firm cannot record gains or losses from dealing in its own stock. Any apparent gains or losses related to treasury stock must impact stockholders' equity, such as a reduction in retained earnings.

Stockholders' Equity in Unincorporated Firms

These firms do not have stockholders. Stockholders' equity in an unincorporated firm is termed capital. The amount invested by the owner plus the retained earnings may be shown as one sum. A sole proprietorship form of business has only one owner (one capital account). A partnership form of business has more than one owner (capital account for each owner). Chapter 2 reviewed these forms of business.

STATEMENT OF STOCKHOLDERS' EQUITY

Firms are required to present reconciliations of the beginning and ending balances of their stockholder accounts. This is accomplished by presenting a "statement of stockholders' equity."

This statement will include all of the stockholders' equity accounts. It is important when performing analysis to be aware of changes in these accounts. For example, common stock will indicate changes in common stock, retained earnings will indicate changes in retained earnings, and treasury stock will indicate changes in treasury stock. This statement is illustrated in Chapter 4.

For many firms, changes to the account accumulated other comprehensive income (loss) will be important to observe. This account is related to comprehensive income, which is covered in Chapter 4.

EXHIBIT 3-25

COCA-COLA ENTERPRISES INC. Treasury Stock

CONSOLIDATED BALANCE SHEETS (IN PART)

(In millions, except share data)	December 31	
	1998	1997
Share-Owners' Equity		
Preferred stock	\$ 49	\$ —
Common stock, \$1 par value - Authorized 1,000,000,000 shares; issued 446,319,946 and 442,971,597 shares, respectively	446	443
Additional paid-in capital	2,190	1,364
Reinvested earnings	458	374
Accumulated other comprehensive income (loss)	(2)	(16)
Common stock in treasury, at cost (44,865,214 and 56,418,084 shares, respectively)	(703)	(383)
Total Share-Owners' Equity	<u>\$2,438</u>	<u>\$1,782</u>

PROBLEMS IN BALANCE SHEET PRESENTATION

Numerous problems inherent in balance sheet presentation may cause difficulty in analysis. First, many assets are valued at cost, so one cannot determine the market value or replacement cost of many assets and should not assume that their balance sheet amount approximates current valuation.

Second, varying methods are used for asset valuation. For example, inventories may be valued differently from firm to firm and, within a firm, from product to product. Similar problems exist with long-term asset valuation and the related depreciation alternatives.

A different type of problem exists in that not all items of value to the firm are included as assets. For example, such characteristics as good employees, outstanding management, and a well-chosen location do not appear on the balance sheet. In the same vein, liabilities related to contingencies also may not appear on the balance sheet. Chapters 6 and 7 present many of the problems of the balance sheet.

These problems do not make statement analysis impossible. They merely require that qualitative judgment be applied to quantitative data in order to assess the impact of these problem areas.

SUMMARY

The balance sheet shows the financial condition of an accounting entity as of a particular date. It is the most basic financial statement, and it is read by various users as part of their decision-making process.

QUESTIONS

- Q 3-1.** Name and describe the three major categories of balance sheet accounts.
- Q 3-2.** Are the following balance sheet items (A) assets, (L) liabilities, or (E) stockholders' equity?
- | | |
|---------------------------|-------------------------|
| a. Cash dividends payable | k. Retained earnings |
| b. Mortgage notes payable | l. Donated capital |
| c. Investments in stock | m. Accounts receivable |
| d. Cash | n. Taxes payable |
| e. Land | o. Accounts payable |
| f. Inventory | p. Organizational costs |
| g. Unearned rent | q. Prepaid expenses |
| h. Marketable securities | r. Goodwill |
| i. Patents | s. Tools |
| j. Capital stock | t. Buildings |
- Q 3-3.** Classify the following as (CA) current asset, (IV) investments, (IA) intangible asset, or (TA) tangible asset:
- | | |
|--------------------------|----------------------------------|
| a. Land | g. Tools |
| b. Cash | h. Prepaids |
| c. Copyrights | i. Buildings |
| d. Marketable securities | j. Accounts receivable |
| e. Goodwill | k. Long-term investment in stock |
| f. Inventories | l. Machinery |
- Q 3-4.** Usually current assets are listed in specific order, starting with cash. What is the objective of this order of listing?
- Q 3-5.** Differentiate between marketable securities and long-term investments. What is the purpose of owning each?

- Q 3-6.** Differentiate between accounts receivable and accounts payable.
- Q 3-7.** What types of inventory will a retailing firm have? A manufacturing firm?
- Q 3-8.** What is depreciation? Which tangible assets are depreciated and which are not? Why?
- Q 3-9.** For reporting purposes, management prefers higher profits; for tax purposes, lower taxable income is desired. To meet these goals, firms often use different methods of depreciation for tax and reporting purposes. Which depreciation method is best for reporting and which for tax purposes? Why?
- Q 3-10.** A rental agency collects rent in advance. Why is the rent collected treated as a liability?
- Q 3-11.** A bond carries a stated rate of interest of 6% and par of \$1,000. It matures in 20 years. It is sold at 83 (83% of \$1,000, or \$830).
a. Under normal conditions, why would the bond sell at less than par?
b. How would the discount be disclosed on the statements?
- Q 3-12.** To be conservative, how should minority interest on the balance sheet be handled for primary analysis?
- Q 3-13.** Many assets are presented at historical cost. Why does this accounting principle cause difficulties in financial statement analysis?
- Q 3-14.** Explain how the issuance of a convertible bond can be a very attractive means of raising common equity funds.
- Q 3-15.** Classify each of the following as a (CA) current asset, (NA) noncurrent asset, (CL) current liability, (NL) noncurrent liability, or (E) equity account. Choose the best or most frequently used classification.
- | | |
|----------------------------------|--|
| a. Supplies | k. Wages payable |
| b. Notes receivable | l. Mortgage bonds payable |
| c. Unearned subscription revenue | m. Unearned interest |
| d. Accounts payable | n. Marketable securities |
| e. Retained earnings | o. Paid-in capital from sale of treasury stock |
| f. Accounts receivable | p. Land |
| g. Preferred stock | q. Inventories |
| h. Plant | r. Taxes accrued |
| i. Prepaid rent | s. Cash |
| j. Capital | |
- Q 3-16.** Explain these preferred stock characteristics:
a. Accumulation of dividends
b. Participation in excess of stated dividend rate
c. Convertibility into common stock
d. Callability by the corporation
e. Preference in liquidation
- Q 3-17.** Describe the account “unrealized exchange gains or losses.”
- Q 3-18.** What is treasury stock? Why is it deducted from stockholders’ equity?
- Q 3-19.** A firm, with no opening inventory, buys ten units at \$6 each during the period. In which accounts might the \$60 appear on the financial statements?
- Q 3-20.** How is an unconsolidated subsidiary presented on a balance sheet?
- Q 3-21.** When would minority interest be presented on a balance sheet?

- Q 3-22.** DeLand Company owns 100% of Little Florida, Inc. Will DeLand Company show a minority interest on its balance sheet? Would the answer change if it owned only 60%? Will there ever be a case in which the subsidiary, Little Florida, is not consolidated?
- Q 3-23.** Describe the item “unrealized decline in market value of noncurrent equity investments.”
- Q 3-24.** What is redeemable preferred stock? Why should it be included with debt for purposes of financial statement analysis?
- Q 3-25.** Describe donated capital.
- Q 3-26.** Assume that a city donated land to a company. What accounts would be affected by this donation, and what would be the value?
- Q 3-27.** Describe quasi-reorganization.
- Q 3-28.** Assume that an equity-oriented deferred compensation plan involves cash or a subsequent election of either cash or stock. Describe the presentation of this plan on the balance sheet.
- Q 3-29.** Describe employee stock ownership plans (ESOPs).
- Q 3-30.** Why are commercial lending institutions, insurance companies, and mutual funds willing to grant loans to an employee stock ownership plan at favorable rates?
- Q 3-31.** What are some possible disadvantages of an employee stock ownership plan?
- Q 3-32.** How does a company recognize, in an informal or formal way, that it has guaranteed commitments to future contributions to an ESOP to meet debt-service requirements?
- Q 3-33.** Describe depreciation, amortization, and depletion. How do they differ?
- Q 3-34.** What are the three factors usually considered when computing depreciation?
- Q 3-35.** An accelerated system of depreciation is often used for income tax purposes but not for financial reporting. Why?
- Q 3-36.** Which depreciation method will result in the most depreciation over the life of an asset?

To the Net



1. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Toys “R” Us. Select the 10-K405 filed on April 28, 1999.
 - a. What is the total stockholders’ equity at January 30, 1999?
 - b. What is the cost of treasury shares at January 30, 1999?
 - c. Why is treasury stock subtracted from stockholders’ equity?
2. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Illinois Power. Select the 10-K filed on March 29, 1999.
 - a. Read Note 1—Summary of Significant Accounting Policies. From this note, describe a quasi-reorganization.
 - b. Read Note 2—Clinton Impairment and Quasi-Reorganization. Describe why Illinois Power elected a quasi-reorganization.

- Q 3-37.** Should depreciation be recognized on a building in a year in which the cost of replacing the building rises? Explain.
- Q 3-38.** Describe the account “accumulated other comprehensive income.”

PROBLEMS

- P 3-1.** The following information was obtained from the accounts of Airlines International dated December 31, 2000. It is presented in alphabetical order.

Accounts payable	\$ 77,916
Accounts receivable	67,551
Accrued expenses	23,952
Accumulated depreciation	220,541
Allowance for doubtful accounts	248
Capital in excess of par	72,913
Cash	28,837
Common stock (par \$.50, authorized 20,000 shares, issued 14,304 shares)	7,152
Current installments of long-term debt	36,875
Deferred income tax liability (long term)	42,070
Inventory	16,643
Investments and special funds	11,901
Long-term debt, less current portion	393,808
Marketable securities	10,042
Other assets	727
Prepaid expenses	3,963
Property, plant, and equipment at cost	809,980
Retained earnings	67,361
Unearned transportation revenue (airline tickets expiring within one year)	6,808

Required Prepare a classified balance sheet in report form.

- P 3-2.** The following information was obtained from the accounts of Lukes, Inc. as of December 31, 2000. It is presented in scrambled order.

Common stock, no par value, 10,000 shares authorized, 5,724 shares issued	\$ 3,180
Retained earnings	129,950
Deferred income tax liability (long term)	24,000
Long-term debt	99,870
Accounts payable	35,000
Buildings	75,000
Machinery and equipment	300,000
Land	11,000
Accumulated depreciation	200,000
Cash	3,000
Receivables, less allowance of \$3,000	58,000
Accrued income taxes	3,000
Inventory	54,000
Other accrued expenses	8,000
Current portion of long-term debt	7,000
Prepaid expenses	2,000
Other assets (long term)	7,000

Required Prepare a classified balance sheet in report form. For assets, use the classifications of current assets, plant and equipment, and other assets. For liabilities, use the classifications of current liabilities and long-term liabilities.

P 3-3. The following information was obtained from the accounts of Alleg, Inc. as of December 31, 2000. It is presented in scrambled order.

Common stock, authorized 21,000 shares at \$1 par value, issued 10,000 shares	\$ 10,000
Additional paid-in capital	38,000
Cash	13,000
Marketable securities	17,000
Accounts receivable	26,000
Accounts payable	15,000
Current maturities of long-term debt	11,000
Mortgages payable	80,000
Bonds payable	70,000
Inventory	30,000
Land and buildings	57,000
Machinery and equipment	125,000
Goodwill	8,000
Patents	10,000
Other assets	50,000
Deferred income taxes (long-term liability)	18,000
Retained earnings	33,000
Accumulated depreciation	61,000

Required Prepare a classified balance sheet in report form. For assets, use the classifications of current assets, plant and equipment, intangibles, and other assets. For liabilities, use the classifications of current liabilities and long-term liabilities.

P 3-4. Presented below is the balance sheet of Ingram Industries.

INGRAM INDUSTRIES
Balance Sheet
June 30, 2000

Assets

Current assets:

Cash (including \$13,000 in sinking fund for bonds payable)	\$ 70,000	
Marketable securities	23,400	
Investment in subsidiary company	23,000	
Accounts receivable	21,000	
Inventories (lower-of-cost-or-market)	<u>117,000</u>	\$254,400

Plant assets:

Land and buildings	\$160,000	
Less: Accumulated depreciation	<u>100,000</u>	60,000

Investments:

Treasury stock		4,000

Deferred charges:

Discount on bonds payable	\$ 6,000	
Prepaid expenses	<u>2,000</u>	8,000
		<u>\$326,400</u>

Liabilities and Stockholders' Equity

Liabilities:			
Notes payable to bank		\$60,000	
Accounts payable		18,000	
Bonds payable		<u>61,000</u>	
Total liabilities			\$139,000
Stockholders' equity:			
Preferred and common (each \$10 par, 5,000 shares preferred and 6,000 shares common)		\$110,000	
Capital in excess of par		61,000	
Retained earnings, beginning of year	\$ 11,400		
Net income	15,000		
Less: Dividends	<u>10,000</u>	<u>16,400</u>	<u>187,400</u>
Total liabilities and stockholders' equity			<u><u>\$326,400</u></u>

Required Indicate your criticisms of the balance sheet and briefly explain the proper treatment of any item criticized.

P 3-5. Presented below is the balance sheet of Rubber Industries.

RUBBER INDUSTRIES

Balance Sheet

For the Year Ended December 31, 2000

Assets

Current assets:	
Cash	\$50,000
Marketable equity securities	19,000
Accounts receivable, net	60,000
Inventory	30,000
Treasury stock	<u>20,000</u>
Total current assets	179,000
Plant assets:	
Land and buildings, net	160,000
Investments:	
Short-term U.S. notes	20,000
Other assets:	
Supplies	<u>4,000</u>
Total assets	<u><u>\$363,000</u></u>

Liabilities and Stockholders' Equity

Liabilities:	
Bonds payable	\$120,000
Accounts payable	40,000
Wages payable	10,000
Premium on bonds payable	<u>3,000</u>
Total liabilities	173,000
Stockholders' equity:	
Common stock (\$20 par, 20,000 shares authorized, 6,000 shares outstanding)	120,000
Retained earnings	30,000
Minority interest	20,000
Redeemable preferred stock	<u>20,000</u>
Total liabilities and stockholders' equity	<u><u>\$363,000</u></u>

Required Indicate your criticisms of the balance sheet and briefly explain the proper treatment of any item criticized.

P 3-6. Presented below is the balance sheet of McDonald Company.

McDONALD COMPANY

December 31, 2000

Assets

Current assets:

Cash (including \$10,000 restricted for payment of note)	\$40,000	
Marketable equity securities	20,000	
Accounts receivable, less allowance for doubtful accounts of \$12,000	70,000	
Inventory	60,000	
Total current assets		\$190,000

Plant assets:

Land	40,000	
Buildings, net	100,000	
Equipment	\$80,000	
Less: Accumulated depreciation	<u>20,000</u>	60,000
Patent		20,000
Organizational costs	<u>15,000</u>	
		235,000

Other assets:

Prepaid insurance		<u>5,000</u>

Total assets		<u><u>\$430,000</u></u>

Liabilities and Stockholders' Equity

Current liabilities:

Accounts payable	\$60,000	
Wages payable	10,000	
Notes payable, due July 1, 2003	20,000	
Bonds payable, due December 2010	<u>100,000</u>	
Total current liabilities		\$190,000

Dividends payable		4,000

Deferred tax liability, long term		30,000

Stockholders' equity:

Common stock (\$10 par, 10,000 shares authorized, 5,000 shares outstanding)	50,000	
Retained earnings	<u>156,000</u>	
Total stockholders' equity		<u>206,000</u>

Total liabilities and stockholders' equity		<u><u>\$430,000</u></u>

Required Indicate your criticisms of the balance sheet and briefly explain the proper treatment of any item criticized.

- P 3-7.** You have just started as a staff auditor for a small CPA firm. During the course of the audit, you discover the following items related to a single client firm:
- During the year, the firm declared and paid \$10,000 in dividends.
 - Your client has been named defendant in a legal suit involving a material amount. You have received from the client's counsel a statement indicating little likelihood of loss.
 - Because of cost control actions and general employee dissatisfaction, it is likely that the client will suffer a costly strike in the near future.
 - Twenty days after closing, the client suffered a major fire in one of its plants.
 - The cash account includes a substantial amount set aside for payment of pension obligations.
 - Marketable securities include a large quantity of shares of stock purchased for control purposes.
 - Land is listed on the balance sheet at its market value of \$1,000,000. It cost \$670,000 to purchase 12 years ago.
 - During the year, the government of Uganda expropriated a plant located in that country. There was substantial loss.

Required How would each of these items be reflected in the year-end balance sheet, including footnotes?

- P 3-8.** Corvallis Corporation owns 80% of the stock of Little Harrisburg, Inc. At December 31, 2000, Little Harrisburg had the following summarized balance sheet:

LITTLE HARRISBURG, INC.

Balance Sheet

December 31, 2000

Current assets	\$100,000	Current liabilities	\$ 50,000
Property, plant, and equipment (net)	<u>400,000</u>	Long-term debt	150,000
		Capital stock	50,000
		Retained earnings	<u>250,000</u>
	<u>\$500,000</u>		<u>\$500,000</u>

The earnings of Little Harrisburg, Inc. for 2000 were \$50,000 after tax.

- Required**
- What would be the amount of minority interest on the balance sheet of Corvallis Corporation? How should minority interest be classified for financial statement analysis purposes?
 - What would be the minority share of earnings on the income statement of Corvallis Corporation?

- P 3-9.** The Aggarwal Company has had 10,000 shares of 10%, \$100 par-value preferred stock and 80,000 shares of \$5 stated-value common stock outstanding for the last three years. During that period, dividends paid totaled \$0, \$200,000, and \$220,000 for each year, respectively.

Required Compute the amount of dividends that must have been paid to preferred stockholders and common stockholders in each of the three years, given the following four independent assumptions:

- Preferred stock is nonparticipating and cumulative.
- Preferred stock participates up to 12% of its par value and is cumulative.
- Preferred stock is fully participating and cumulative.
- Preferred stock is nonparticipating and noncumulative.

- P 3-10.** The Rosewell Company has had 5,000 shares of 9%, \$100 par-value preferred stock and 10,000 shares of \$10 par-value common stock outstanding for the last two years. During the most recent year, dividends paid totaled \$65,000; in the prior year, dividends paid totaled \$40,000.

Required Compute the amount of dividends that must have been paid to preferred stockholders and common stockholders in each year, given the following independent assumptions:

- Preferred stock is fully participating and cumulative.
- Preferred stock is nonparticipating and noncumulative.
- Preferred stock participates up to 10% of its par value and is cumulative.
- Preferred stock is nonparticipating and cumulative.

- P 3-11.** An item of equipment acquired on January 1 at a cost of \$100,000 has an estimated life of ten years.

Required Assuming that the equipment will have a salvage value of \$10,000, determine the depreciation for each of the first three years by the:

- Straight-line method
- Declining-balance method
- Sum-of-the-years'-digits method

- P 3-12.** An item of equipment acquired on January 1 at a cost of \$60,000 has an estimated use of 25,000 hours. During the first three years, the equipment was used 5,000 hours, 6,000 hours, and 4,000 hours, respectively. The estimated salvage value of the equipment is \$10,000.

Required Determine the depreciation for each of the three years, using the unit-of-production method.

- P 3-13.** An item of equipment acquired on January 1 at a cost of \$50,000 has an estimated life of five years and an estimated salvage of \$10,000.

Required

- From a management perspective, from among the straight-line method, declining-balance method, and the sum-of-the-years'-digits method of depreciation, which method should be chosen for the financial statements if income is to be at a maximum the first year? Which method should be chosen for the income tax returns, assuming that the tax rate stays the same each year? Explain and show computations.
- Is it permissible to use different depreciation methods in financial statements than those used in tax returns?

Case 3-1

Balance Sheet Review

The December 31, 1998 and 1997 consolidated balance sheets of Merck & Co., Inc. follow.

CONSOLIDATED BALANCE SHEET

Merck & Co., Inc. and Subsidiaries

December 31 (\$ in millions)	1998	1997
Assets		
Current Assets		
Cash and cash equivalents	\$ 2,606.2	\$ 1,125.1
Short-term investments	749.5	1,184.2
Accounts receivable	3,374.1	2,876.7
Inventories	2,623.9	2,145.1
Prepaid expenses and taxes	874.8	881.9
Total current assets	<u>10,228.5</u>	<u>8,213.0</u>
Investments	<u>3,607.7</u>	<u>2,533.4</u>
Property, Plant and Equipment (at cost)		
Land	228.8	216.4
Buildings	3,664.0	3,257.8
Machinery, equipment and office furnishings	6,211.7	5,388.6
Construction in progress	1,782.1	1,169.8
	11,886.6	10,032.6
Less allowance for depreciation	<u>4,042.8</u>	<u>3,423.2</u>
	<u>7,843.8</u>	<u>6,609.4</u>
Goodwill and Other Intangibles (net of accumulated amortization of \$1,123.9 million in 1998 and \$815.8 million in 1997)	<u>8,287.2</u>	<u>6,780.5</u>
Other Assets	<u>1,886.2</u>	<u>1,599.6</u>
	<u><u>\$31,853.4</u></u>	<u><u>\$25,735.9</u></u>

Liabilities and Stockholders' Equity	1998	1997
Current Liabilities		
Accounts payable and accrued liabilities	\$ 3,682.1	\$ 3,268.9
Loans payable and current portion of long-term debt	624.2	902.5
Income taxes payable	1,125.1	859.6
Dividends payable	637.4	537.6
Total current liabilities	<u>6,068.8</u>	<u>5,568.6</u>
Long-Term Debt	<u>3,220.8</u>	<u>1,346.5</u>
Deferred Income Taxes and Noncurrent Liabilities	<u>6,057.0</u>	<u>5,060.1</u>
Minority Interests	<u>3,705.0</u>	<u>1,166.1</u>
Stockholders' Equity		
Common stock, one cent par value		
Authorized—5,400,000,000 shares		
Issued— 2,967,851,980 shares	29.7	29.7
Other paid-in capital	5,614.5	5,224.3
Retained earnings	20,186.7	17,291.5
Accumulated other comprehensive (loss) income	(21.3)	9.0
	<u>25,809.6</u>	<u>22,554.5</u>
Less treasury stock, at cost		
607,399,428 shares—1998		
580,555,052 shares—1997	13,007.8	9,959.9
Total stockholders' equity	<u>12,801.8</u>	<u>12,594.6</u>
	<u>\$31,853.4</u>	<u>\$25,735.9</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (In Part)

Merck & Co., Inc. and Subsidiaries

(\$ in millions except per share amounts)

1. Nature of Operations

Merck is a global research-driven pharmaceutical company that discovers, develops, manufactures and markets a broad range of human and animal health products, directly and through its joint ventures, and provides pharmaceutical benefit services through Merck-Medco Managed Care (Merck-Medco). Human health products include therapeutic and preventive agents, generally sold by prescription, for the treatment of human disorders. Pharmaceutical benefit services primarily include managed prescription drug programs and programs to manage health and drug utilization.

Merck sells its human health products and provides pharmaceutical benefit services to drug wholesalers and retailers, hospitals, clinics, government agencies, corporations, labor unions, retirement systems, insurance carriers, managed health care providers such as health maintenance organizations and other institutions.

2. Summary of Accounting Policies (In Part)

Principles of Consolidation - The consolidated financial statements include the accounts of the Company and all of its subsidiaries in which a controlling interest is maintained. For those consolidated subsidiaries where Company ownership is less than 100%, the outside stockholders' interests are shown as Minority interests. Investments in affiliates over which the Company has significant influence but not a controlling interest are carried on the equity basis.

Inventories - The majority of domestic inventories are valued at the lower of last-in, first-out (LIFO) cost or market. Remaining inventories are valued at the lower of first-in, first-out (FIFO) cost or market.

Depreciation - Depreciation is provided over the estimated useful lives of the assets, principally using the straight-line method. For tax purposes, accelerated methods are used.

Goodwill and Other Intangibles - Goodwill of \$4.3 billion in 1998 and \$3.6 billion in 1997 (net of accumulated amortization) represents the excess of acquisition costs over the fair value of net assets of businesses purchased and is amortized on a straight-line basis over periods up to 40 years. Other acquired intangibles principally include customer relationships of \$2.7 billion in 1998 and \$2.8 billion in 1997 (net of accumulated amortization) that arose in connection with the acquisition of Medco Containment Services, Inc. (renamed Merck-Medco Managed Care) and patent rights approximating \$9 billion in 1998 (net of accumulated amortization) acquired as part of the restructuring of Astra Merck Inc. (AMI). (See Note 4.) These acquired intangibles are recorded at cost and are amortized on a straight-line basis over their estimated useful lives of up to 40 years. The Company reviews goodwill and other intangibles to assess recoverability from future operations using undiscounted cash flows. Impairments are recognized in operating results to the extent that carrying value exceeds fair value.

5. Affiliates Accounted for Using the Equity Method

Investments in affiliates accounted for using the equity method are included in Other assets and were \$1.1 billion at December 31, 1998 and \$693.7 million at December 31, 1997. This increase primarily reflects the restructuring of the Company's investment in AMI into APLP, partially offset by the sale of the Company's one-half interest in DMPC. (See Notes 3 and 4.) Dividends and distributions received from these affiliates were \$919.3 million in 1998, \$791.0 million in 1997 and \$476.2 million in 1996. Summarized information for these affiliates is as follows:

<i>Years Ended December 31</i>	1998	1997	1996
Sales	\$7,095.6	\$5,655.8	\$4,441.4
Materials and production costs	2,191.1	1,349.3	959.4
Other expense, net	2,757.8	1,852.9	1,725.2
Income before taxes	<u>2,146.7</u>	<u>2,453.6</u>	<u>1,756.8</u>
<i>December 31</i>	1998	1997	
Current assets	\$2,693.0	\$2,475.9	
Noncurrent assets	2,036.6	2,824.0	
Current liabilities	2,280.2	1,920.1	
Noncurrent liabilities	<u>281.4</u>	<u>699.8</u>	

7. Inventories

Inventories at December 31 consisted of:

	1998	1997
Finished goods	\$1,701.2	\$1,230.6
Raw materials and work in process	851.6	849.7
Supplies	<u>71.1</u>	<u>64.8</u>
Total (approximates current cost)	2,623.9	2,145.1
Reduction to LIFO cost	<u>—</u>	<u>—</u>
	<u>\$2,623.9</u>	<u>\$2,145.1</u>

Inventories valued under the LIFO method comprised approximately 37% and 42% of inventories at December 31, 1998 and 1997, respectively.

Required

- a.
 1. The statement is entitled “Consolidated Balance Sheet.” What does it mean to have a consolidated balance sheet?
 2. For subsidiaries (affiliates) where control is present, does Merck have 100% ownership? Explain.
 3. For subsidiaries (affiliates) where control is not present, have these investments been consolidated? Explain.
 4. For subsidiaries (affiliates) where control is not present, have assets of these affiliates been included on Merck’s consolidated balance sheet? Explain.
- b.
 1. What are the gross receivables at December 31, 1998?
 2. What is the estimated amount that will be collected on receivables outstanding at December 31, 1998?
- c.
 1. What is the total amount of inventory at December 31, 1998?
 2. How much of the inventory was costed at LIFO at December 31, 1998?
 3. What proportion of the inventory was in finished goods at December 31, 1997 and 1998 respectively. Give your opinion as to this trend.
- d.
 1. What is the net property, plant, and equipment at December 31, 1998?
 2. What is the gross property, plant, and equipment at December 31, 1998?
 3. What depreciation method is used for financial reporting purposes?
 4. What depreciation method is used for tax purposes?
 5. Does it appear that property, plant, and equipment is relatively old? Explain.
- e. What is the total amount of current assets at December 31, 1998?
- f.
 1. What is the gross amount for goodwill and other intangibles at December 31, 1998?
 2. What is the net amount for goodwill and other intangibles at December 31 1998?
- g.
 1. Describe treasury stock.
 2. How many shares of treasury stock are held at December 31, 1998?
- h.
 1. How many common stock shares have been issued at December 31, 1998?
 2. How many common stock shares are outstanding at December 31, 1998?
- i.
 1. What is the total amount of assets at December 31, 1998?
 2. What is the total amount of liabilities at December 31, 1998?
 3. What is the amount of stockholders’ equity at December 31, 1998?
 4. Demonstrate that the balance sheet balances at December 31, 1998.

Case 3-2

Insight on Liabilities and Shareholders' Equity

The December 31, 1998 and 1997 liabilities and stockholders' equity of Motorola follow:

CONSOLIDATED BALANCE SHEETS (In Part)

(In millions, except per share amounts)

December 31	Motorola, Inc. and Subsidiaries	
	1998	1997
Liabilities and Stockholders' Equity		
<i>Current liabilities</i>		
Notes payable and current portion of long-term debt	\$ 2,909	\$ 1,282
Accounts payable	2,305	2,297
Accrued liabilities	6,226	5,476
Total current liabilities	<u>11,440</u>	<u>9,055</u>
Long-term debt	2,633	2,144
Deferred income taxes	1,188	1,522
Other liabilities	<u>1,245</u>	<u>1,285</u>
<i>Stockholders' equity</i>		
Preferred stock, \$100 par value issuable in series		
Authorized shares: 0.5 (none issued)	—	—
Common stock, \$3 par value		
Authorized shares: 1998 and 1997, 1,400		
Issued and outstanding: 1998, 601.1; 1997, 597.4	1,804	1,793
Additional paid-in capital	1,894	1,720
Retained earnings	8,254	9,504
Non-owner changes to equity	<u>270</u>	<u>255</u>
Total stockholders' equity	<u>12,222</u>	<u>13,272</u>
Total liabilities and stockholders' equity	<u>\$28,728</u>	<u>\$27,278</u>

- Required**
1. The statement is entitled "Consolidated Balance Sheets." What does it mean to have a consolidated balance sheet?
 2. Does it appear that the subsidiaries are wholly owned? Explain.
 - Describe deferred income taxes.
 1. Describe long-term debt.
 2. Why is the current part of long-term debt disclosed under current liabilities?
 - Describe retained earnings.
 1. How many shares of common stock have been issued at December 31, 1998?
 2. How many shares of common stock have been authorized at December 31, 1998?
 1. What are the total liabilities at December 31, 1998?
 2. What is the total stockholders' equity at December 31, 1998?
 3. What is the total asset amount at December 31, 1998?

Case 3-3**Insight on Shareholders' Investment**

The 1999 annual report of Lands' End, Inc. included the shareholders' investment as follows:

CONSOLIDATED BALANCE SHEETS (In Part)

(In thousands)	January 29, 1999	January 30, 1998
Shareholders' investment:		
Common stock, 40,221 shares issued	402	402
Donated capital	8,400	8,400
Additional paid-in capital	26,994	26,457
Deferred compensation	(394)	(1,047)
Accumulated other comprehensive income	2,003	875
Retained earnings	406,396	375,211
Treasury stock, 10,317 and 9,281 shares at cost, respectively	(201,298)	(167,586)
Total shareholders' investment	<u>242,503</u>	<u>242,712</u>
Total liabilities and shareholders' investment	<u>\$455,919</u>	<u>\$433,472</u>

Required

- a. Describe the following accounts:
 1. shareholders' investment
 2. deferred compensation
 3. donated capital
 4. accumulated other comprehensive income
 5. retained earnings
 6. treasury stock
- b. Determine the number of shares:
 1. common stock issued at January 29, 1999
 2. common stock outstanding at January 29, 1999
- c.
 1. What is the dollar amount of shareholders' investment at January 29, 1999?
 2. Would the dollar amount of shareholders' investment at January 29, 1999, equal the market value of the common stock at January 29, 1999? Explain.

Case 3-4

Insight on Assets

The January 3, 1998 and January 2, 1999 consolidated balance sheets of Converse Inc. included the following assets:

CONVERSE INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEET (Assets only) (Dollars in thousands)		
	January 3, 1998	January 2, 1999
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 5,738	\$ 3,274
Receivables, less allowances of \$2,066 and \$2,086, respectively	72,083	57,826
Inventories (Note 5)	94,681	71,292
Prepaid expenses and other current assets (Note 10)	9,713	8,962
Total current assets	182,215	141,354
Net property, plant and equipment (Note 6)	20,086	20,838
Other assets (Note 10)	32,393	32,814
	<u>\$ 234,694</u>	<u>\$ 195,006</u>

1. Summary of Business Operations (In Part)

Converse Inc. ("Converse" or the "Company") is a leading global designer, manufacturer and marketer of high quality athletic footwear for men, women and children. The Company is also a global licensor of sports apparel, accessories and selected footwear. Converse's principal markets are the United States, Europe and the Pacific Rim.

2. Significant Accounting Policies (In Part)

The major accounting policies of Converse are set forth below. (in Part)

Fiscal year

Converse's fiscal year end is the Saturday closest to December 31 in each year. For 1998 Converse's fiscal year ended on January 2, 1999 ("Fiscal 1998"), for 1997, Converse's fiscal year ended on January 3, 1998 ("Fiscal 1997") and for 1996, Converse's fiscal year ended on December 28, 1996 ("Fiscal 1996"). Fiscal Years 1998 and 1996 include 52 weeks whereas Fiscal Year 1997 includes 53 weeks.

Basis of consolidation

The consolidated financial statements include the accounts of Converse and its subsidiaries. All material intercompany transactions are eliminated in consolidation.

Management estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and cash equivalents

Converse considers all short-term investments with an original maturity of three months or less to be cash equivalents.

Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market.

Property, plant and equipment

Property, plant and equipment are recorded at cost when acquired. Expenditures for improvements are capitalized while normal repairs and maintenance are expensed as incurred. When properties are disposed of, the related cost and accumulated depreciation or amortization are removed from the accounts, and gains or losses on the dispositions are reflected in results of operations. For financial reporting purposes, Converse utilizes the straight-line method of computing depreciation and amortization while accelerated methods are used for tax purposes. Such expense is computed based on the estimated useful lives of the respective assets.

5. Inventories

Inventories are summarized as follows:

	<u>January 3, 1998</u>	<u>January 2, 1999</u>
Retail merchandise	\$ 5,245	\$ 4,535
Finished products	81,311	57,365
Work-in-process	4,560	5,009
Raw materials	3,565	4,383
	<u>\$ 94,681</u>	<u>\$ 71,292</u>

6. Property, Plant and Equipment

Property, plant and equipment consisted of the following:

	<u>Estimated Useful Life (Years)</u>	<u>January 3, 1998</u>	<u>January 2, 1999</u>
Building and leasehold improvements	5-10	\$ 7,832	\$ 8,129
Machinery and equipment	3-11	12,012	14,139
Furniture and fixtures	5-8	2,944	3,049
Office and computer equipment	7	8,381	10,171
		<u>31,169</u>	<u>35,488</u>
Less accumulated depreciation		<u>11,083</u>	<u>14,650</u>
		<u>\$20,086</u>	<u>\$20,838</u>

Required

- The statement is entitled "Consolidated Balance Sheet." What does it mean to have a consolidated balance sheet?
- What is the estimated amount that will be collected from receivables at January 2, 1999?
- What is the gross amount of property, plant, and equipment at January 2, 1999?
 - What is the net amount of property, plant, and equipment at January 2, 1999?

3. Describe the account accumulated depreciation.
4. What would be the accumulated depreciation related to land at January 2, 1999?
5. Does it appear that property, plant and equipment is relatively old at January 2, 1999? Explain.
6. Converse uses straight-line depreciation and amortization for financial reporting. Converse uses accelerated methods for tax purposes. Speculate on why the different approach for financial reporting than for tax purposes.
- d. 1. What is the amount of total assets at January 2, 1999?
2. What is the amount of current assets at January 2, 1999?
- e. Why did fiscal year 1997 include 53 weeks?
- f. Assets are stated at their exact amounts as of January 2, 1999. Comment.

Case 3-5

Our Principal Asset Is Our People

Foote, Cone & Belding Communications, Inc. included the following in its 1992 financial report:

BUSINESS PROFILE

FCB is a global marketing communications company that provides advertising, direct marketing, sales promotion, and other specialized services to clients worldwide. The Company's activities are conducted through an organization of 180 offices in 46 countries on six continents, including the combined Publicis-FCB group in Europe.

In 1992, the Company ranked as one of the largest marketing communications companies in the world. On a combined basis, FCB and Publicis had revenues of \$884 million and billings of more than \$6.1 billion.

PERSONNEL

Our principal asset is our people. Our success depends in large part on our ability to attract and retain personnel who are competent in the various aspects of our business. As of December 31, 1992, FCB employed 3,631 persons in its majority-owned offices: 2,411 were employed in the domestic offices and 1,220 were employed in the international offices. Of the 3,631 total employees, 1,100 were engaged in the creation and production of advertising, 1,176 in account management, 505 in media and research activities, and 850 in administrative and clerical functions.

We believe that it is important for the success of FCB that our people own a significant portion of FCB's outstanding Common Stock. Our employees owned approximately 20% of the outstanding Common Stock of the Company at December 31, 1992, either directly or through various employee benefit plans.

- Required**
- a. Foote, Cone & Belding states that "Our principal asset is our people." Currently, generally accepted principles do not recognize people as an asset. Speculate on why people are not considered to be an asset.
 - b. Speculate on what concept of an asset Foote, Cone & Belding is considering when they state "Our principal asset is our people."

Case 3-6**Brands Are Dead?**

The September 1, 1993 issue of *Financial World* estimated that the brand value of Intel was \$178 billion. *Financial World* arrived at this estimate using a valuation method developed by London-based Interbrand Group.

- Required**
- Define an asset.
 - In your opinion, do brands represent a valuable asset? Comment.
 - Under generally accepted accounting principles, should an internally generated brand value be recognized as an asset? Comment.
 - If the brand was purchased, should it be recognized as an asset? Comment.

Case 3-7**Advertising—Asset?**

The Big Car Company did substantial advertising in late December. The company's year-end date was December 31. The president of the firm was concerned that this advertising campaign would reduce profits.

- Required**
- Define an asset.
 - Would the advertising represent an asset? Comment.

Endnotes

- 1 *Statement of Financial Accounting Concepts No. 6*, "Elements of Financial Statements" (Stamford, CT: Financial Accounting Standards Board, 1985), paragraph 25.
- 2 *Accounting Trends and Techniques* (Jersey City, N J: American Institute of Certified Public Accountants, 1998), p. 167.
- 3 *Statement of Financial Accounting Concepts No. 6*, paragraph 35.
- 4 *Statement of Financial Accounting Concepts No. 6*, paragraph 212.

CHAPTER

4

INCOME STATEMENT

THE INCOME STATEMENT IS OFTEN CONSIDERED to be the most important financial statement. Frequently used titles for this statement include

Statement of Income, Statement of Earnings, and Statement of Operations. This chapter covers the income statement in detail.

BASIC ELEMENTS OF THE INCOME STATEMENT

An income statement summarizes revenues and expenses and gains and losses, and ends with the net income for a specific period. A multiple-step income statement usually presents separately the gross profit, operating income, income before income taxes, and net income.

A simplified multiple-step income statement might look as follows:

	Net Sales (Revenues)	\$XXX
–	<i>Cost of Goods Sold (cost of sales)</i>	<u>XXX</u>
	Gross Profit	XXX
–	<i>Operating Expenses (selling and administrative)</i>	<u>XXX</u>
	Operating Income	XXX
+(–)	<i>Other Income or Expense</i>	<u>XXX</u>
	Income Before Income Taxes	XXX
–	<i>Income Taxes</i>	<u>XXX</u>
	Net Income	<u><u>\$XXX</u></u>
	Earnings per Share	<u><u>\$XXX</u></u>

Many firms use a single-step income statement, which totals revenues and gains (sales, other income, etc.) and then deducts total expenses and losses (cost of goods sold, operating expenses, other expenses, etc.). A simplified single-step income statement might look as follows:

Revenue:	
Net Sales	\$XXX
Other Income	<u>XXX</u>
Total Revenue	<u>XXX</u>
Expenses:	
Cost of Goods Sold (cost of sales)	XXX
Operating Expenses (selling and administrative)	XXX
Other Expense	XXX
Income Tax Expense	<u>XXX</u>
Total Expenses	<u>XXX</u>
Net Income	<u><u>\$XXX</u></u>
Earnings per Share	<u><u>\$XXX</u></u>

A single-step income statement lists all revenues and gains (usually in order of amount), then lists all expenses and losses (usually in order of amount). Total expense and loss items deducted from total revenue and gain items determine the net income. Most firms that present a single-step income statement modify it in some way, such as presenting federal income tax expense as a separate item.

Exhibits 4-1 and 4-2 illustrate the different types of income statements. In Exhibit 4-1, Wendy's uses a single-step income statement, while in Exhibit 4-2, Ben and Jerry's uses a multiple-step format.

For firms that have cost of goods sold, cost of goods manufactured, or cost of services, a multiple-step income statement should be used for analysis. The multiple-step provides intermediate profit figures useful in analysis. You may need to construct the multiple-step format from the single-step.

Exhibit 4-3 contains a comprehensive multiple-step income statement illustration. This illustration resembles the vast majority of income statements as presented in the United States.

EXHIBIT 4-1

WENDY'S INTERNATIONAL, INC. AND SUBSIDIARIES
Consolidated Statements of Income
Single-Step Income Statement

Fifty-three weeks ended January 3, 1999 and fifty-two weeks ended December 28, 1997 and December 29, 1996

(In thousands, except per share data)

	1998	1997	1996
Revenues			
Retail sales	\$1,586,145	\$1,651,689	\$1,566,888
Franchise revenues	362,094	385,641	330,256
	<u>1,948,239</u>	<u>2,037,330</u>	<u>1,897,144</u>
Costs and expenses			
Cost of sales	995,966	1,026,026	976,666
Company restaurant operating costs	359,815	389,534	379,404
Operating costs	67,318	63,175	54,710
General and administrative expenses (Note 3)	183,486	232,983	136,461
Depreciation and amortization of property and equipment	95,396	95,638	88,957
Write-down of certain international assets and related charges (Note 2)	33,893		
Other expense (income)	2,665	6,899	(683)
Interest, net	2,039	3,604	6,812
	<u>1,740,578</u>	<u>1,817,859</u>	<u>1,642,327</u>
Income before income taxes	207,661	219,471	254,817
Income taxes	84,303	88,972	98,869
Net income	<u>\$ 123,358</u>	<u>\$ 130,499</u>	<u>\$ 155,948</u>
Basic earnings per common share	<u>\$.96</u>	<u>\$.99</u>	<u>\$ 1.23</u>
Diluted earnings per common share	<u>\$.95</u>	<u>\$.97</u>	<u>\$ 1.19</u>
Dividends per common share	<u>\$.24</u>	<u>\$.24</u>	<u>\$.24</u>
Basic shares	<u>128,353</u>	<u>131,595</u>	<u>126,461</u>
Diluted shares	<u>137,089</u>	<u>140,738</u>	<u>133,684</u>

Net Sales (Revenues)

Sales (revenues) represent revenue from goods or services sold to customers. The firm earns revenue from the sale of its principal products. Sales are usually shown net of any discounts, returns, and allowances.

Cost of Goods Sold (Cost of Sales)

This category shows the cost of goods sold to produce revenue. For a retailing firm, the cost of goods sold equals beginning inventory plus purchases minus ending inventory. In a manufacturing firm, the cost of goods manufactured replaces purchases since the goods are produced rather than purchased. A service firm will not have cost of goods sold or cost of sales, but it will often have cost of services.

EXHIBIT 4-2

BEN AND JERRY'S
Consolidated Statements of Operations
Multi-Step Income Statement

Consolidated Statements of Operations			
	Fiscal Year Ended		
	December 26, 1998	December 27, 1997	December 28, 1996
<i>(In thousands except share amounts)</i>			
Net sales	\$209,203	\$174,206	\$167,155
Cost of sales	136,225	114,284	115,212
Gross profit	72,978	59,922	51,943
Selling general and administrative expenses	63,895	53,520	45,531
Other income (expense):			
Interest income	2,248	1,938	1,676
Interest expense	(1,888)	(1,992)	(1,996)
Other income (expense), net	333	(64)	243
	693	(118)	(77)
Income before income taxes	9,776	6,284	6,335
Income taxes	3,534	2,388	2,409
Net income	\$ 6,242	\$ 3,896	\$ 3,926
Shares used to compute net income per common share			
Basic	7,197	7,247	7,189
Diluted	7,463	7,334	7,230
Net income per common share			
Basic	\$ 0.87	\$ 0.54	\$ 0.55
Diluted	\$ 0.84	\$ 0.53	\$ 0.54

Other Operating Revenue

Depending on the operations of the business, there may be other operating revenue, such as lease revenue and royalties.

Operating Expenses

Operating expenses consist of two types: selling and administrative. **Selling expenses**, resulting from the company's effort to create sales, include advertising, sales commissions, sales supplies used, and so on. **Administrative expenses** relate to the general administration of the company's operation. They include office salaries, insurance, telephone, bad debt expense, and other costs difficult to allocate.

Other Income or Expense

In this category are secondary activities of the firm, not directly related to the operations. For example, if a manufacturing firm has a warehouse rented, this lease income would be other income. Dividend and interest income and gains and losses from the sale of assets are also included here. Interest expense is categorized as other expense.

EXHIBIT 4-3**ILLUSTRATION OF SPECIAL ITEMS**

G AND F COMPANY			
Income Statement (Multiple-Step Format)			
For the Year Ended December 31, 2000			
Net sales			\$XXX
Cost of products sold			XXX
Gross profit			XXX
Other operating revenue			XXX
Operating expenses:			
Selling expenses	\$XXX		
General expenses	XXX	(XXX)	
Operating income			XXX
Other income (includes interest income)			XXX
Other expenses (includes interest expense)			(XXX)
[A] Unusual or infrequent item disclosed separately [loss]			(XXX)
[B] Equity in earnings of nonconsolidated subsidiaries [loss]			XXX
Income before taxes			XXX
Income taxes related to operations			XXX
Net income from operations			XXX
[C] Discontinued operations:			
Income [loss] from operations of discontinued segment			
(less applicable income taxes of \$XXX)			
Income [loss] on disposal of division X (less applicable			
income taxes of \$XXX)			
[D] Extraordinary gain [loss] (less applicable income taxes of			
\$XXX)			(XXX)
[E] Cumulative effect of change in accounting principle [loss]			
(less applicable income taxes of \$XXX)			XXX
Net income before minority interest			XXX
[F] Minority share of earnings (income) loss			(XXX)
Net income			XXX
Earnings per share			\$X.XX

**SPECIAL
INCOME
STATEMENT
ITEMS**

To comprehend and analyze profits, you need to understand income statement items that require special disclosure. Exhibit 4-3 contains items that require special disclosure. These items are lettered to identify them for discussion. Note that some of these items are presented before tax and some are presented net of tax.

(A) Unusual or Infrequent Item Disclosed Separately

Certain income statement items are either unusual or occur infrequently. They might include such items as a gain on sale of securities, write-downs of receivables, or write-downs of inventory. These items are shown with normal, recurring revenues and expenses, and gains and losses. If material, they will be disclosed separately, before tax. Unusual or infrequent items are typically left in primary analysis because they relate to operations.

In supplementary analysis, unusual or infrequent items should be removed net after tax. Usually an estimate of the tax effect will be necessary. A reasonable estimate of the tax effect

can be made by using the effective income tax rate, usually disclosed in a footnote, or by dividing income taxes by income before taxes.

Refer to Exhibit 4-4, which illustrates unusual or infrequent item disclosed separately for the Gillette Company. These items are reorganization and realignment expenses (1998), and the merger-related costs (1996). The income tax footnote discloses the effective tax rates to be 35.3% (1998) and 37.8% (1996).

The unusual or infrequent items in 1998 would be removed as follows:

Reorganization and realignment expenses	\$535,000,000
Less estimated tax effect (35.3% x \$535,000,000)	<u>188,855,000</u>
Reorganization and realignment expenses, net of tax	<u>\$347,145,000</u>

Net income would be increased by \$347,145,000, resulting in an adjusted net earnings of \$1,428,145,000 (\$347,145,000 + \$1,081,000,000).

EXHIBIT 4-4

THE GILLETTE COMPANY AND SUBSIDIARY COMPANIES
Consolidated Statements of Income
Unusual or Infrequent Item

<i>(Millions of dollars, except per share amounts)</i>			
<i>Years Ended December 31, 1998, 1997, and 1996</i>			
	1998	1997	1996
Net Sales	\$ 10,056	\$10,062	\$9,698
Cost of Sales	<u>3,853</u>	<u>3,831</u>	<u>3,682</u>
Gross Profit	6,203	6,231	6,016
Selling, General and Administrative Expenses	3,879	3,907	3,967
Reorganization and Realignment Expenses	535	—	—
Merger-Related Costs	<u>—</u>	<u>—</u>	<u>413</u>
Profit from Operations	1,789	2,324	1,636
Nonoperating Charges (Income)			
Interest income	(8)	(9)	(10)
Interest expense	94	78	77
Other charges-net	<u>34</u>	<u>34</u>	<u>44</u>
	<u>120</u>	<u>103</u>	<u>111</u>
Income before Income Taxes	1,669	2,221	1,525
Income Taxes	<u>588</u>	<u>794</u>	<u>576</u>
Net Income	\$ 1,081	\$ 1,427	\$ 949
Net Income per Common Share, basic	\$.96	\$ 1.27	\$.85
Net Income per Common Share, assuming full dilution	\$.95	\$ 1.24	\$.83
Weighted average number of common shares outstanding (millions)			
Basic	1,117	1,118	1,107
Assuming full dilution	1,144	1,148	1,140

(B) Equity in Earnings of Nonconsolidated Subsidiaries

When a firm accounts for its investments in stocks using the equity method (the investment is not consolidated), the investor reports equity earnings (losses). **Equity earnings** (losses) are the investor's proportionate share of the investee's earnings (losses). If the investor owns 20% of the stock of the investee, for example, and the investee reports income of \$100,000, then the investor reports \$20,000 on its income statement. In this book, the term *equity earnings* will be used unless equity losses are specifically intended.

To the extent that equity earnings are not accompanied by cash dividends, the investor reports earnings greater than the cash flow from the investment. If an investor company reports material equity earnings, its net income could be much greater than its ability to pay dividends or cover maturing liabilities.

For purposes of analysis, the equity in the net income of nonconsolidated subsidiaries raises practical problems. For example, the equity earnings represent earnings of other companies, not earnings from the operations of the business. Thus, equity earnings can distort the reported results of a business' operations. For each ratio influenced by equity earnings, this book suggests a recommended approach described when the ratio is introduced.

Refer to Exhibit 4-5, which illustrates equity in earnings of nonconsolidated subsidiaries for Honeywell. Leaving these accounts in the statements presents a problem for profitability analysis because most of the profitability measures relate income figures to

EXHIBIT 4-5

HONEYWELL INC. AND SUBSIDIARIES

Income Statement

Equity Income

(Dollars and Shares in Millions Except Per Share Amounts)	Year Ended December 31		
	1998	1997	1996
Sales	\$8,426.7	\$8,027.5	\$7,311.6
Costs and Expenses			
Cost of sales	5,677.0	5,425.1	4,975.4
Research and development	481.9	446.6	353.3
Selling, general and administrative	1,317.9	1,359.4	1,313.1
Gain on sale of businesses		(77.1)	
Litigation settlements	(23.6)		
Special charges	53.7	90.7	
Total Costs and Expenses	7,506.9	7,244.7	6,641.8
Interest			
Interest expense	113.0	101.9	81.4
Interest income	10.8	9.4	8.5
Net Interest	102.2	92.5	72.9
Equity Income	11.7	12.9	13.3
Income before Income Taxes	829.3	703.2	610.2
Provision for Income Taxes	257.3	232.2	207.5
Net Income	\$572.0	\$471.0	\$402.7
Basic Earnings Per Common Share	\$ 4.54	\$ 3.71	\$ 3.18
Average Number of Basic Common Shares Outstanding	126.1	127.1	126.6
Diluted Earnings Per Common share	\$ 4.48	\$ 3.65	\$ 3.11
Average Number of Diluted Common Shares Outstanding	127.8	129.2	129.5

other figures (usually balance sheet figures). Because these earnings are from nonconsolidated subsidiaries, an inconsistency can result between the numerator and the denominator when computing a ratio.

Some ratios are distorted more than others by equity earnings. (Chapter 5 presents a detailed discussion of ratios.) For example, the ratio that relates income to sales can be distorted because of equity earnings. The numerator of the ratio includes the earnings of the operating company and the equity earnings of nonconsolidated subsidiaries. The denominator (sales) includes only the sales of the operating company. The sales of the unconsolidated subsidiaries will not appear on the investor's income statement because the subsidiary was not consolidated. This causes the ratio to be distorted.

Equity in earnings of nonconsolidated subsidiaries (equity earnings) will be presented before tax. Any tax will be related to the dividend received, and it will typically be immaterial. When removing equity earnings for analysis, do not attempt a tax computation.

Income Taxes Related to Operations

Federal, state, and local income taxes, based on reported accounting profit, are shown here. Income tax expense includes taxes paid and taxes deferred. Income taxes reported here will not include taxes on items presented net of tax.

(C) Discontinued Operations

A common type of unusual item is the disposal of a business or product line. If the disposal meets the criteria of a discontinued operation, then a separate income statement category for the gain or loss from disposal of a segment of the business must be provided. In addition, the results of operations of the segment that has been or will be disposed of are reported in conjunction with the gain or loss on disposal. These effects appear as a separate category after continuing operations.

Discontinued operations pose a problem for profitability analysis. Ideally, income from continuing operations would be the better figure to use to project future income. Several practical problems associated with the removal of a gain or loss from the discontinued operations occur in the primary profitability analysis. These problems revolve around two points: (1) an inadequate disclosure of data related to the discontinued operations, in order to remove the balance sheet amounts associated with the discontinued operations; and (2) the lack of past profit and loss data associated with the discontinued operations.

Exhibit 4-6 illustrates the presentation of discontinued operations in net income. The best analysis would remove the income statement items that relate to the discontinued operations.

The income statement items that relate to a discontinued operation are always presented net of applicable income taxes. Therefore, the items as presented on the income statement can be removed for primary analysis without further adjustment for income taxes. Supplementary analysis considers discontinued operations in order to avoid disregarding these items.

Ideally, the balance sheet accounts that relate to the discontinued operations should be removed for primary analysis. Consider these items on a supplemental basis because they will not contribute to future operating revenue. However, inadequate disclosure often makes it impossible to remove these items from your analysis.

The balance sheet items related to discontinued operations are frequently disposed of when the business or product line has been disposed of prior to the year-end balance sheet

EXHIBIT 4-6

DuPONT
Consolidated Income Statements
Discontinued Operations

<i>(Dollars in millions, except per share)</i>	1998	1997	1996
Sales	\$ 24,767	\$ 24,089	\$ 23,644
Other Income (Note 3)	<u>981</u>	<u>1,005</u>	<u>1,101</u>
Total	<u>25,748</u>	<u>25,094</u>	<u>24,745</u>
Cost of Goods Sold and Other Operating Charges	<u>15,664</u>	<u>15,564</u>	<u>15,314</u>
Selling, General and Administrative expenses	<u>2,115</u>	<u>2,061</u>	<u>2,119</u>
Depreciation and Amortization	<u>1,452</u>	<u>1,361</u>	<u>1,526</u>
Research and Development Expense	<u>1,308</u>	<u>1,072</u>	<u>990</u>
Interest Expense (Note 4)	<u>520</u>	<u>389</u>	<u>409</u>
Purchased In-Process Research and Development (Note 5)	<u>1,443</u>	<u>1,478</u>	<u>—</u>
Employee Separation Costs and Write-down of Assets (Note 6)	<u>633</u>	<u>340</u>	<u>—</u>
Total	<u>23,135</u>	<u>22,265</u>	<u>20,358</u>
Income from Continuing Operations Before Income Taxes and Minority Interests	2,613	2,829	4,387
Provision for Income Taxes (Note 7)	<u>941</u>	<u>1,354</u>	<u>1,416</u>
Minority Interests in Earnings of Consolidated Subsidiaries	<u>24</u>	<u>43</u>	<u>40</u>
Income from Continuing Operations	1,648	1,432	2,931
Discontinued Operations (Note 2)			
Income from Operations of Discontinued Business, Net of Income Taxes	<u>594</u>	<u>973</u>	<u>705</u>
Gain on Disposal of Discontinued Business, Net of Income Taxes	<u>2,439</u>	<u>—</u>	<u>—</u>
Income Before Extraordinary Item	4,681	2,405	3,636
Extraordinary Charge From Early Extinguishment of Debt, Net of Income Taxes (Note 8)	<u>(201)</u>	<u>—</u>	<u>—</u>
Net Income	\$ 4,480	\$ 2,405	\$ 3,636
Basic Earnings (Loss) Per Share of Common Stock (Note 9)			
Continuing Operations Before Extraordinary Item	<u>\$ 1.45</u>	<u>\$ 1.26</u>	<u>\$ 2.60</u>
Discontinued Operations	<u>2.69</u>	<u>.86</u>	<u>.63</u>
Before Extraordinary Item	<u>4.14</u>	<u>2.12</u>	<u>3.23</u>
Extraordinary Charge	<u>(.18)</u>	<u>—</u>	<u>—</u>
Net Income	<u>\$ 3.96</u>	<u>\$ 2.12</u>	<u>\$ 3.23</u>
Diluted Earnings (Loss) Per Share of Common Stock (Note 9)			
Continuing Operations before Extraordinary Item	<u>\$ 1.43</u>	<u>\$ 1.24</u>	<u>\$ 2.56</u>
Discontinued Operations	<u>2.65</u>	<u>.84</u>	<u>.62</u>
Before Extraordinary Item	<u>4.08</u>	<u>2.08</u>	<u>3.18</u>
Extraordinary Charge	<u>(.18)</u>	<u>—</u>	<u>—</u>
Net Income	<u>\$ 3.90</u>	<u>\$ 2.08</u>	<u>\$ 3.18</u>

date. In this case, the balance sheet accounts related to discontinued operations do not present a problem for the current year.

(D) Extraordinary Items

Extraordinary items are material events and transactions distinguished by their unusual nature and by the infrequency of their occurrence. Examples include a major casualty (such as a fire), prohibition under a newly enacted law, or an expropriation. These items, net of their

tax effects, must be shown separately. Some pronouncements have specified items that must be considered extraordinary, including material tax loss carryovers and gains and losses from extinguishment of debt. The effect of an extraordinary item on earnings per share must also be shown separately. Exhibit 4-7 presents an extraordinary gain on sale of lease assets.

In analysis of income for purposes of determining a trend, extraordinary items should be eliminated since the extraordinary item is not expected to recur. In supplementary analysis, these extraordinary items should be considered, as this approach avoids disregarding these items.

Extraordinary items are always presented net of applicable income taxes. Therefore, the items as presented on the income statement are removed without further adjustment for income taxes.

(E) Cumulative Effect of Change in Accounting Principle

Some changes in accounting principles do not require retroactive adjustments to reflect the adoption of a new accounting principle. The new principle is used for the current year, while the prior years continue to be presented based on the prior accounting principle. This makes comparability a problem. The comparability problem is compounded by the additional reporting guideline that directs that the income effect of the change on prior years be reported net of tax as a cumulative effect of a change in accounting principle on the income

EXHIBIT 4-7

STORAGETEK™ Condensed Consolidated Statements of Operations Extraordinary Gain (Loss)

<i>(In thousands, except per share amounts)</i>	Year Ended		
	Dec. 25, 1998	Dec. 26, 1997	Dec. 27, 1996
Revenue	\$2,258,222	\$2,144,656	\$2,039,550
Cost of revenue	1,217,812	1,171,530	1,192,777
Gross profit	1,040,410	973,126	846,773
Research and product development costs	234,677	209,526	176,422
Selling, general, administrative and other, net	492,928	472,839	444,870
Operating profit	312,805	290,761	225,481
Interest income, net	6,943	25,356	1,211
Income before income taxes and extraordinary item	319,748	316,117	226,692
Provision for income taxes	(121,500)	(84,300)	(55,900)
Income before extraordinary item	198,248	231,817	170,792
Extraordinary gain on sale of lease assets, net			9,535
Net income	\$ 198,248	\$ 231,817	\$ 180,327
EARNINGS PER COMMON SHARE (1)			
Basic:			
Income before extraordinary item	\$ 1.91	\$ 1.93	\$ 1.52
Net income	\$ 1.91	\$ 1.93	\$ 1.61
Diluted:			
Income before extraordinary item	\$ 1.86	\$ 1.89	\$ 1.43
Net income	\$ 1.86	\$ 1.89	\$ 1.50

(1) Earnings per share has been restated to reflect the effect of the 2-for-1 stock split in the form of a stock dividend on June 26, 1998.

statement in the year of change. The cumulative effect is shown separately on the income statement in the year of change. It is usually shown just above net income.

When there is a cumulative effect of a change in accounting principle, the reporting standards require that income before extraordinary items and net income, computed on a pro forma basis (as if the new principle had been in effect), should be shown on the face of the income statements for all periods as if the newly adopted accounting principle had been applied during all periods affected. The pro forma presentation is an additional presentation at the bottom of the income statement. In practice, this pro forma material is often not presented or only partially presented.

The accounting standard of not changing the statements retroactively is the general case when an accounting principle changes. APB Opinion No. 20, the basis of this reporting standard, provides for only a few exceptions. For most exceptions, the prior statements are retroactively changed using the new accounting principle. In the case when the cumulative effect cannot be determined, the firm should include a footnote explaining the change in accounting principle and the fact that the cumulative effect is not determinable.

The accounting standard of not changing the statements retroactively when there has been a change in accounting principle is not always followed in practice. APB opinions subsequent to No. 20 and later SFASs frequently directed that the new principles included in the respective pronouncement be handled retroactively by changing prior years' statements.

The accounting standard of not changing the statements retroactively when there has been a change in accounting principle presents major problems for analysis. It is not good theory because it places on the income statement, in the year of change, a potentially material income or loss amount that has nothing to do with operations of that year. Comparability with prior years (consistency) is also a problem.

Statement of Financial Accounting Concepts No. 5 (December 1985) recommends that the cumulative effects of changes in accounting principles not be included in earnings in the year of change in principle. To date, this recommendation has not been the subject of a FASB statement.

No ideal way exists to handle the analysis problem when a change in accounting principle is not handled retroactively. The cumulative effect of a change in accounting principle should be removed from the income statement for primary analysis. This still leaves the comparability problem that the income in the year of change, and subsequent years, is based on the new principle; while the years prior to the change are based on the prior principle. If, in your opinion, the income effect is so extreme that comparability is materially distorted, then do not use years prior to the change in comparability analysis. Also note the pro forma presentation, if provided, at the bottom of the income statement. The pro forma numbers will be comparable, but limited. Exhibit 4-8 illustrates a cumulative effect of a change in accounting principle. Exhibit 4-8 does not include a pro forma presentation.

(F) Minority Share of Earnings

If a firm consolidates subsidiaries not wholly owned, the total revenues and expenses of the subsidiaries are included with those of the parent. However, to determine the income that would accrue to the parent, it is necessary to deduct the portion of income that would belong to the minority owners. This is labeled "minority share of earnings" or "minority interest." Note that this item sometimes appears before and sometimes after the tax provision on the income statement. When presented before the tax provision, it is usually presented gross of tax. When presented after the tax provision, it is presented net of tax. In this book, assume net-of-tax treatment. Exhibit 4-9 illustrates minority share of earnings.

EXHIBIT 4-8

KELLOGG COMPANY AND SUBSIDIARIES
Consolidated Statement of Earnings
Cumulative Effect of Change in Accounting Principle

<i>Year Ended December 31</i> <i>(millions, except per share data)</i>	1998	1997	1996
Net sales	\$6,762.1	\$6,830.1	\$6,676.6
Cost of goods sold	3,282.6	3,270.1	3,122.9
Selling and administrative expense	2,513.9	2,366.8	2,458.7
Non-recurring charges	70.5	184.1	136.1
Operating profit	895.1	1,009.1	958.9
Interest expense	119.5	108.3	65.6
Other income (expense), net	6.9	3.7	(33.4)
Earnings before income taxes and cumulative effect of accounting change	782.5	904.5	859.9
Income taxes	279.9	340.5	328.9
Earnings before cumulative effect of accounting change	502.6	564.0	531.0
Cumulative effect of accounting change (net of tax)	—	(18.0)	—
Net earnings	\$ 502.6	\$ 546.0	\$ 531.0
Per share amounts (basic and diluted):			
Earnings before cumulative effect of accounting change	\$ 1.23	\$ 1.36	\$ 1.25
Cumulative effect of accounting change	—	(.04)	—
Net earnings per share	\$ 1.23	\$ 1.32	\$ 1.25

Some ratios can be materially distorted because of a minority share of earnings. For each ratio influenced by a minority share of earnings, this book suggests a recommended approach.

EARNINGS
PER SHARE

In general, **earnings per share** is earnings divided by the number of shares of outstanding common stock. Chapter 9 presents earnings per share in detail, and explains its computation. Meanwhile, use the formula of net income divided by outstanding shares of common stock.

RETAINED
EARNINGS

Retained earnings, an account on the balance sheet, represents the undistributed earnings of the corporation. A reconciliation of retained earnings summarizes the changes in retained earnings. It shows the retained earnings at the beginning of the year, the net income for the year as an addition, the dividends as a subtraction, and concludes with end-of-year retained earnings. It also includes, if appropriate, prior period adjustments (net of tax) and some adjustments for changes in accounting principles (net of tax). These restate beginning retained earnings. Other possible changes to retained earnings are beyond the scope of this book.

Sometimes a portion of retained earnings may be unavailable for dividends because it has been appropriated (restricted). Appropriated retained earnings remain part of retained earnings. The appropriation of retained earnings may or may not have significance.

EXHIBIT 4-9

PFIZER INC. AND SUBSIDIARY COMPANIES
Consolidated Statement of Income
Minority Share of Earnings

<i>(millions, except per share data)</i>	Year Ended December 31		
	1998	1997	1996
Net sales	\$12,677	\$10,739	\$9,864
Alliance revenue	867	316	–
Total revenues	13,544	11,055	9,864
Costs and expenses:			
Cost of sales	2,094	1,776	1,695
Selling, informational and administrative expenses	5,568	4,401	3,859
Research and development expenses	2,279	1,805	1,567
Other deductions – net	1,009	206	215
Income from continuing operations before provision for taxes on income and minority interests	2,594	2,867	2,528
Provision for taxes on income	642	775	758
Minority interests	2	10	6
Income from continuing operations	1,950	2,082	1,764
Discontinued operations – net of tax	1,401	131	165
Net income	\$ 3,351	\$ 2,213	\$1,929
Earnings per common share – basic			
Income from continuing operations	\$ 1.54	\$ 1.66	\$ 1.41
Discontinued operations – net of tax	1.11	.10	.14
Net income	\$ 2.65	\$ 1.76	\$ 1.55
Earnings per common share – diluted			
Income from continuing operations	\$ 1.48	\$ 1.60	\$ 1.37
Discontinued operations – net of tax	1.07	.10	.13
Net income	\$ 2.55	\$ 1.70	\$ 1.50
Weighted average shares – basic	1,263	1,257	1,248
Weighted average shares – diluted	1,315	1,303	1,288

Appropriations that result from legal requirements (usually state law) and appropriations that result from contractual agreements are potentially significant. They may leave unappropriated retained earnings inadequate to pay dividends. (Note: A corporation will not be able to pay a cash dividend even with an adequate unrestricted balance in retained earnings unless it has adequate cash or ability to raise cash and has complied with the state law where it is incorporated.)

Most appropriations result from management decisions. These are usually not significant because management can choose to remove the appropriation.

Caution should be exercised not to confuse retained earnings or appropriated retained earnings with cash or any other asset. There is no cash or any other asset in retained earnings. The reason for an appropriation will be disclosed either in the reconciliation of retained earnings or in a footnote. From this disclosure, try to arrive at an opinion as to the significance, if any. For example, Cooper Tire & Rubber Company had retained earnings of \$672,373,000 at December 31, 1995. A footnote indicates restricted retained earnings because of loan agreements. The amount of retained earnings not restricted was \$540,703,000 at December 31, 1995. This is likely not significant because the dividends paid were only \$22,584,000 in 1995. Although Cooper appears to have adequate cash and adequate unrestricted retained earnings, it must also be in compliance with the applicable state law where it is incorporated in order to pay a dividend.

The reconciliation of retained earnings usually appears as part of a statement of stockholders' equity. Sometimes it is combined with the income statement. Exhibit 4-10 gives an example of a reconciliation of retained earnings being presented with a stockholders' equity statement.

EXHIBIT 4-10
INTEL CORPORATION
Consolidated Statement of Stockholders' Equity

Three years ended December 26, 1998 (in millions – except per share amounts)	Common stock and capital in excess of par value		Retained earnings	Accumulated other com- prehensive income	Total
	Number of shares	Amount			
Balance at December 30, 1995	3,286	\$2,583	\$ 9,505	\$ 52	\$12,140
Components of comprehensive income:					
Net income	—	—	5,157	—	5,157
Change in unrealized gain on available-for-sale investments	—	—	—	70	70
Total comprehensive income					5,227
Proceeds from sales of shares through employee stock plans, tax benefit of \$196 and other	65	457	—	—	457
Proceeds from sales of put warrants	—	56	—	—	56
Reclassification of put warrant obligation, net	—	70	272	—	342
Repurchase and retirement of Common Stock	(68)	(269)	(925)	—	(1,194)
Cash dividends declared (\$.048 per share)	—	—	(156)	—	(156)
Balance at December 28, 1996	3,283	2,897	13,853	122	16,872
Components of comprehensive income:					
Net income	—	—	6,945	—	6,945
Change in unrealized gain on available-for-sale investments	—	—	—	(64)	(64)
Total comprehensive income					6,881
Proceeds from sales of shares through employee stock plans, tax benefit of \$224 and other	61	581	(1)	—	580
Proceeds from sales of put warrants	—	288	—	—	288
Reclassification of put warrant obligation, net	—	(144)	(1,622)	—	(1,766)
Repurchase and retirement of Common Stock	(88)	(311)	(3,061)	—	(3,372)
Cash dividends declared (\$.058 per share)	—	—	(188)	—	(188)
Balance at December 27, 1997	3,256	3,311	15,926	58	19,295
Components of comprehensive income:					
Net income	—	—	6,068	—	6,068
Change in unrealized gain on available-for-sale investments	—	—	—	545	545
Total comprehensive income					6,613
Proceeds from sales of shares through employee stock plans, tax benefit of \$415 and other	66	922	—	—	922
Proceeds from exercise of 1998 Step-Up Warrants	155	1,620	—	—	1,620
Proceeds from sales of put warrants	—	40	—	—	40
Reclassification of put warrant obligation, net	—	53	588	—	641
Repurchase and retirement of Common Stock	(162)	(1,124)	(4,462)	—	(5,586)
Cash dividends declared (\$.050 per share)	—	—	(168)	—	(168)
Balance at December 26, 1998	3,315	\$4,822	\$17,952	\$603	\$ 23,377

DIVIDENDS AND STOCK SPLITS

Dividends return profits to the owners of a corporation. A cash dividend declared by the board of directors reduces retained earnings by the amount of the dividends declared and creates the current liability, dividends payable. The date of payment occurs after the date of declaration. The dividend payment eliminates the liability, dividends payable, and reduces cash. Note that the date of the declaration of dividends, not the date of the dividend payment, affects retained earnings and creates the liability.

The Board of Directors may elect to declare and issue another type of dividend, termed a *stock dividend*. The firm issues a percentage of outstanding stock as new shares to existing shareholders. If the Board declares a 10% stock dividend, for example, an owner holding 1,000 shares would receive an additional 100 shares of new stock. The accounting for a stock dividend, assuming a relatively small distribution (less than 25% of the existing stock), requires removing the fair market value of the stock at the date of declaration from retained earnings and transferring it to paid-in capital. With a material stock dividend, the amount removed from retained earnings and transferred to paid-in capital is determined by multiplying the par value of the stock by the number of additional shares. Note that the overall effect of a stock dividend leaves total stockholders' equity and each owner's share of stockholders' equity unchanged. However, the total number of outstanding shares increases.

A stock dividend should reduce the market value of individual shares by the percentage of the stock dividend. Total market value considering all outstanding shares should not change in theory. In practice, the market value change may not be the same percentage as the stock dividend.

A more drastic device to change the market value of individual shares is by declaring a stock split. A 2-for-1 split should reduce the market value per share to one half the amount prior to the split. The market value per share in practice may not change exactly in proportion to the split. The market value will result from the supply and demand for the stock.

Lowering the market value is sometimes desirable for stocks selling at high prices (as perceived by management). Stocks with high prices are less readily traded. A stock dividend or stock split can influence the demand for the stock.

A stock split merely increases the number of shares of stock. It does not usually change retained earnings or paid-in capital. For example, if a firm had 1,000 shares of common stock, a 2-for-1 stock split would result in 2,000 shares.

For a stock split, the par or stated value of the stock is changed in proportion to the stock split, and no change is made to retained earnings, additional paid-in capital, or capital stock. For example, a firm with \$10 par common stock that declares a 2-for-1 stock split would reduce the par value to \$5.

Since the number of shares changes under both a stock dividend and stock split, any ratio based on the number of shares must be restated for a meaningful comparison. For example, if a firm had earnings per share of \$4.00 in 1999, a 2-for-1 stock split in 2000 would require restatement of the earnings per share to \$2.00 in 1999 because of the increase in the shares. Restatement will be made for all prior financial statements presented with the current financial statements, including a five- or ten-year summary.

LEGALITY OF DISTRIBUTIONS TO STOCKHOLDERS

The legality of distributions to stockholders is governed by applicable state law. Currently, the 50 states may be classified into one of three groups for purposes of distributions to stockholders. These groups are the following:¹

1. Distributions to stockholders are acceptable as long as the firm has the ability to pay debts as they come due in the normal course of business.

2. Distributions to stockholders are acceptable as long as the firm is solvent and the distributions do not exceed the fair value of net assets.
3. Distributions consist of solvency and balance sheet tests of liquidity and risk.

Thus, the appropriateness of a distribution to stockholders is a legal interpretation. Accountants have not accepted the role of disclosing the firm's capacity to make distributions to stockholders. Accountants have accepted the role of disclosing appropriations (restrictions) of retained earnings. Appropriations can temporarily limit the firm's ability to make distributions. These appropriations are typically directed towards limiting or prohibiting the payment of cash dividends.

During the 1980s and 1990s, there were many distributions to stockholders that exceeded the net book value of the firm's assets. These were often accompanied by debt-financed restructurings. Often the result was a deficit balance in retained earnings and sometimes a deficit balance in total stockholders' equity.

During 1988, Holiday Corporation (owner of Holiday Inns of America) distributed a \$65 per share dividend to prevent a hostile takeover. The result was a substantial deficit to retained earnings and approximately a \$770 million deficit to total stockholders' equity.²

A similar situation took place at Owens Corning during the 1980s as it made a substantial distribution to stockholders by way of a debt-financed restructuring. Owens Corning also had substantial expenses related to asbestos-related illnesses. At the end of 1995, Owens Corning had a deficit in retained earnings of \$781,000,000, and a deficit in total stockholders' equity of \$212,000,000.

An Owens Corning news release of June 20, 1996, stated (in part):

"The Board of Directors has approved an annual dividend policy of 25 cents per share and declared a quarterly dividend of 6-1/4 cents per share payable on October 15, 1996 to shareholders of record as of September 30, 1996."

"In reference to the dividend," Hiner (chairman and chief executive officer) stated, "we were able to initiate this action because debt has been reduced to target levels and cash flow from operations will be in excess of internal funding requirements."

"We are delighted to be able to reward our shareholders with a dividend," said Hiner. "Reinstating the dividend has been a priority of mine since joining the company and I am pleased that we now are in a position to set the date."

COMPREHENSIVE INCOME

Chapter 1 described the Concept Statements that serve as the basis for evaluating existing standards of financial accounting and reports. Concept Statements Nos. 5 & 6 included the concept of comprehensive income. Comprehensive income was described in SFAC No. 6 as the change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources.

Subsequently, SFAS No. 130 was issued that required the reporting of comprehensive income, but using a narrower definition than in SFAC No. 6. Under SFAS No. 130, comprehensive income is net income plus the period's change in accumulated other comprehensive income. Accumulated other comprehensive income is a category within stockholders' equity, described in Chapter 3.

Categories within accumulated other comprehensive income are:

1. Foreign currency translation adjustments

The expansion of international business and extensive currency realignment have created special accounting problems. The biggest difficulty has been related to translating foreign financial statements into the financial statements of a U.S. enterprise.

U.S. financial reporting calls for postponing the recognition of unrealized exchange gains and losses until the foreign operation is substantially liquidated. This postponement is accomplished by creating a separate category within stockholders' equity to carry unrealized exchange gains and losses. This method eliminates the wide fluctuations in earnings from translation adjustments for most firms. For subsidiaries operating in highly inflationary economies, translation adjustments are charged to net earnings. Also, actual foreign currency exchange gains (losses) are included in net earnings.

2. Unrealized holding gains and losses on available-for-sale marketable securities.

Debt and equity securities classified as available-for-sale securities are carried at fair value. Unrealized holding gains and losses are included in a separate category within stockholders' equity until realized. Thus, the unrealized holding gains and losses are not included in net earnings. Note that this accounting only applies to securities available for sale. Trading securities are reported at their fair values on the balance sheet date, and unrealized holding gains and losses are included in income of the current period. Debt securities held to maturity are reported at their amortized cost on the balance sheet date.

3. Changes to stockholders' equity resulting from additional minimum pension liability adjustments.

Accounting standards require a reduction in stockholders' equity for a minimum pension liability under a defined benefit plan. Accounting for a defined benefit plan is reviewed in Chapter 7.

4. Unrealized gains and losses from derivative instruments.

Derivative instruments are financial instruments or other contracts where rights or obligations meet the definitions of assets or liabilities. The gain or loss for some derivative instruments are reported in current earnings. For other derivative instruments, the gain or loss is reported as a component of other comprehensive income. The gain or loss for these instruments is recognized in subsequent periods in income as the hedged forecasted transactions affect earnings.

The reporting of this component of accumulated other comprehensive income was effective for fiscal quarters of fiscal years beginning after June 15, 2000. For the other items, the effective date was for fiscal years beginning after December 15, 1997.

Required disclosures are the following:

1. Comprehensive income
2. Each category of other comprehensive income
3. Reclassification adjustments for categories of other comprehensive income
4. Tax effects for each category of other comprehensive income
5. Balances for each category of accumulated other comprehensive income

The accounting standard provides considerable flexibility in reporting comprehensive income. One format uses a single income statement to report net income and comprehensive income. The second format reports comprehensive income in a separate statement of financial activity. The third format reports comprehensive income within the statement of changes in stockholders' equity. Exhibit 4-11 illustrates the three format options provided for in the accounting standard.

The first two options are not popular because comprehensive income would be closely tied to the income statement. Comprehensive income will typically be more volatile than net income. This is because the items within accumulated other comprehensive income have the potential to be volatile. A good case could be made that comprehensive income is

EXHIBIT 4-11**REPORTING COMPREHENSIVE INCOME****Format A** Single Income Statement
to Report Net Income and Comprehensive Income**XYZ Corporation**Statement of Income and Comprehensive Income
For the Year Ended December 31, 2001

(Dollars in thousands, except per share)

Sales	\$ 230,000
Cost of goods sold	140,000
Gross profit	90,000
Operating expenses	40,000
Operating income	50,000
Other income	4,000
Income before income taxes	54,000
Income taxes	20,000
Net income	34,000
Other comprehensive income	
Available-for-sale securities adjustment, net of \$2,500 income tax	5,500
Minimum pension liability adjustment, net of \$1,000 income tax	3,500
Foreign currency translation adjustment, net of \$1,500 income tax benefit	(5,000)
Other comprehensive income	4,000
Comprehensive income	\$ 38,000
Earnings per share	
(Earnings per share continue to be calculated based on net income.)	\$ 2.80

Format B Separate Comprehensive
Income Statement**XYZ Corporation**Statement of Comprehensive Income
For the Year Ended December 31, 2001

(Dollars in thousands)

Net income	\$34,000
Other comprehensive income	
Available-for-sale securities adjustment, net of \$2,500 income tax	5,500
Minimum pension liability adjustment, net of \$1,000 income tax	3,500
Foreign currency translation adjustments, net of \$1,500 income tax benefit	(5,000)
Total Other comprehensive income	4,000
Comprehensive income	\$38,000

Format C Comprehensive Income Presented with Statement of Changes in Stockholders' Equity**XYZ Corporation**Statement of Stockholders' Equity For the Year Ended December 31, 2001
(Dollars in thousands)

	Total	Retained Earnings	Accumulated Other Comprehensive Income	Common Stock	
				Amount	Shares
Beginning balance	\$180,000	\$60,000	\$10,000	\$110,000	55,000
Net income	34,000	34,000			
Other comprehensive income:					
Available-for-sale securities adjustment, net of \$2,500 income tax	5,500		5,500		
Minimum pension liability adjustment, net of \$1,000 income tax	3,500		3,500		
Foreign currency translation adjustment, net of \$1,500 income tax benefit	(5,000)		(5,000)		
Comprehensive income	38,000				
Ending balance	\$218,000	\$94,000	\$14,000	\$110,000	55,000

a better indication of long-run profitability than is net income. Some firms have elected to disclose comprehensive income as a note to the financial statements. The coverage of comprehensive income in analysis is in Chapter 12.

SUMMARY

The income statement summarizes the profit for a specific period of time. To understand and analyze profitability, the reader must be familiar with the components of income, as well as income statement items that require special disclosure. This chapter presented special income statement items, such as unusual or infrequent items disclosed separately, equity in earnings of nonconsolidated subsidiaries, discontinued operations, extraordinary items, changes in accounting principle, and minority shares of earnings. This chapter also covered the reconciliation of retained earnings, dividends and stock splits, and comprehensive income.

QUESTIONS

- Q 4-1.** What are extraordinary items? How are they shown on the income statement? Why are they shown in that manner?
- Q 4-2.** Which of the following would be classified as extraordinary?
- | | |
|--|--|
| a. Selling expense | e. Income tax expense |
| b. Interest expense | f. Loss from prohibition of red dye |
| c. Gain on the sale of marketable securities | g. Loss from the write-down of inventory |
| d. Loss from flood | |
- Q 4-3.** Give three examples of unusual or infrequent items that are disclosed separately. Why are they shown separately? Are they presented before or after tax? Why or why not?
- Q 4-4.** Why is the equity in earnings of nonconsolidated subsidiaries sometimes a problem in profitability analysis? Discuss with respect to income versus cash flow.
- Q 4-5.** A health food distributor selling wholesale dairy products and vitamins decides to discontinue the division that sells vitamins. How should this discontinuance be classified on the income statement?
- Q 4-6.** Why are unusual or infrequent items disclosed before tax?
- Q 4-7.** In 2000, Jensen Company decided to change its depreciation method from units-of-production to straight-line. The cumulative effect of the change to the new method, prior to 2000, was to increase depreciation by \$30,000 before tax. How would the change be presented in the financial statements?
- Q 4-8.** How does the declaration of a cash dividend affect the financial statements? How does the payment of a cash dividend affect the financial statements?
- Q 4-9.** What is the difference in the impact on financial statements of a stock dividend versus a stock split?
- Q 4-10.** Why is minority share of earnings deducted before arriving at net income?
- Q 4-11.** Explain the relationship between the income statement and the reconciliation of retained earnings.
- Q 4-12.** List the three types of appropriated retained earnings accounts. Which of these types is most likely not a detriment to the payment of a dividend? Explain.

- Q 4-13.** A balance sheet represents a specific date, such as “December 31,” while an income statement covers a period of time, such as “For the Year Ended December 31, 2000.” Why does this difference exist?
- Q 4-14.** Describe the following items:
- Minority share of earnings
 - Equity in earnings of nonconsolidated subsidiaries
- Q 4-15.** An income statement is a summary of revenues and expenses and gains and losses, ending with net income for a specific period of time. Indicate the two traditional formats for presenting the income statement. Which of these formats is preferable for analysis? Why?
- Q 4-16.** Melcher Company reported earnings per share in 2000 and 1999 of \$2.00 and \$1.60, respectively. In 2001 there was a 2-for-1 stock split, and the earnings per share for 2001 were reported to be \$1.40. Give a three-year presentation of earnings per share (1999–2001).
- Q 4-17.** Comment on your ability to determine a firm’s capacity to make distributions to stockholders, using published financial statements.
- Q 4-18.** Management does not usually like to tie comprehensive income closely with the income statement. Comment.

To the Net



- Go to the book’s web site at accounting.swcollege.com and click on the link to the Coachmen Industries, Inc. web site. What is the Company mission?
 - Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Enter Coachmen Industries. Select the 10-K that was filed on March 26, 1999. Determine the income before cumulative effect of accounting change for 1998, 1997, and 1996. Determine the net income for 1998, 1997, and 1996. Which of these numbers is the better number for viewing a trend and consistency. Explain.
- Go to the book’s web site at accounting.swcollege.com and click on the link to the Dana Corporation site. Find the Dana style of management. What is the Dana style of management?
 - Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Enter Dana. Select the 10-K that was filed on February 24, 1999. Determine income before minority interest and equity in earnings of affiliates for 1998, 1997, and 1996. Determine the minority interest for 1998, 1997, and 1996. Determine the equity in earnings of affiliates for 1998, 1997, and 1996. Determine the net income for 1998, 1997, and 1996. Discuss a possible problem with equity earnings.

PROBLEMS

P 4-1. The following information for Decher Automotives covers the year ended 2000:

Administrative expense	\$ 62,000
Dividend income	10,000
Income taxes	100,000
Interest expense	20,000
Merchandise inventory, 1/1	650,000
Merchandise inventory, 12/31	440,000
Flood loss (net of tax)	30,000
Purchases	460,000
Sales	1,000,000
Selling expenses	43,000

- Required**
- Prepare a multiple-step income statement.
 - Assuming that 100,000 shares of common stock are outstanding, calculate the earnings per share before extraordinary items and the net earnings per share.
 - Prepare a single-step income statement.

P 4-2. The following information for Lesky Corporation covers the year ended December 31, 2000:

LESKY CORPORATION
Income Statement
For the Year Ended December 31, 2000

Revenue:		
Revenues from sales		\$362,000
Rental income		1,000
Interest		2,400
Total revenue		<u>365,400</u>
Expenses:		
Cost of products sold	\$242,000	
Selling expenses	47,000	
Administrative and general expenses	11,400	
Interest expense	2,200	
Federal and state income taxes	20,300	
Total expenses		<u>322,900</u>
Net income		<u>\$ 42,500</u>

- Required** Change this statement to a multiple-step format, as illustrated in this chapter.

P 4-3. The accounts of Consolidated Can contain the following amounts at December 31, 2000:

Cost of products sold	\$410,000
Dividends	3,000
Extraordinary gain (net of tax)	1,000
Income taxes	9,300
Interest expense	8,700
Other income	1,600
Retained earnings, 1/1	270,000
Sales	480,000
Selling and administrative expense	42,000

Required Prepare a multiple-step income statement combined with a reconciliation of retained earnings for the year ended December 31, 2000.

P 4-4. The following items are from Taperline Corporation on December 31, 2000. Assume a flat 40% corporate tax rate on all items, including the casualty loss.

Sales	\$670,000
Rental income	3,600
Gain on the sale of fixed assets	3,000
General and administrative expenses	110,000
Selling expenses	97,000
Interest expense	1,900
Depreciation for the period	10,000
Extraordinary item (casualty loss—pretax)	30,000
Cost of sales	300,000
Common stock (30,000 shares outstanding)	150,000

Required

- Prepare a single-step income statement for the year ended December 31, 2000. Include earnings per share for earnings before extraordinary items and net income.
- Prepare a multiple-step income statement. Include earnings per share for earnings before extraordinary items and net income.

P 4-5. The income statement of Rawl Company for the year ended December 31, 2000 shows:

Net sales	\$360,000
Cost of sales	190,000
Gross profit	170,000
Selling, general, and administrative expense	80,000
Income before unusual write-offs	90,000
Provision for unusual write-offs	50,000
Earnings from operations before income taxes	40,000
Income taxes	20,000
Net earnings from operations before extraordinary charge	20,000
Extraordinary charge, net of tax of \$10,000	(50,000)
Net earnings (loss)	<u><u>\$(30,000)</u></u>

Required Compute the net earnings remaining after removing unusual write-offs and the extraordinary charge. Remove these items net of tax. Estimate the tax rate for unusual write-offs based on the taxes on operating income.

P 4-6. At the end of 2000, vandals destroyed your financial records. Fortunately, the controller had kept certain statistical data related to the income statement, as follows:

- Cost of goods sold was \$2,000,000.
- Administrative expenses were 20% of the cost of sales but only 10% of sales.
- Selling expenses were 150% of administrative expenses.
- Bonds payable were \$1,000,000, with an average interest rate of 11%.
- The tax rate was 48%.
- 50,000 shares of common stock were outstanding for the entire year.

Required From the information given, reconstruct a multiple-step income statement for the year. Include earnings per share.

- P 4-7.** The following information applies to Bowling Green Metals Corporation for the year ended December 31, 2000.

Total revenues from regular operations	\$832,000
Total expenses from regular operations	776,000
Extraordinary gain, net of applicable income taxes	30,000
Dividends paid	20,000
Number of shares of common stock outstanding during the year	10,000

Required Compute earnings per share before extraordinary items and net earnings. Show how this might be presented in the financial statements.

- P 4-8.** You were recently hired as the assistant treasurer for Victor, Inc. Yesterday the treasurer was injured in a bicycle accident and is now hospitalized, unconscious. Your boss, Mr. Fernandes, just informed you that the financial statements are due today. Searching through the treasurer's desk, you find the following notes:

- Income from continuing operations, based on computations done so far, is \$400,000. No taxes are accounted for yet. The tax rate is 30%.
- Dividends declared and paid were \$20,000. During the year, 100,000 shares of stock were outstanding.
- The corporation experienced an uninsured \$20,000 pretax loss from a freak hail-storm. Such a storm is considered to be unusual and infrequent.
- The company decided to change its inventory pricing method from average cost to the FIFO method. The effect of this change is to increase prior years' income by \$30,000 pretax. The FIFO method has been used for 2000. (Hint: This adjustment should be placed just prior to net income.)
- In 2000, the company settled a lawsuit against it for \$10,000 pretax. The settlement was not previously accrued and is due for payment in February 2001.
- In 2000, the firm sold a portion of its long-term securities at a gain of \$30,000 pretax.
- The corporation disposed of its consumer products division in August 2000, at a loss of \$90,000 pretax. The loss from operations through August was \$60,000 pretax.

Required Prepare an income statement for 2000, in good form, starting with income from continuing operations. Compute earnings per share for income from continuing operations, discontinued operations, extraordinary loss, cumulative effect of a change in accounting principle, and net income.

- P 4-9.** List the statement on which each of the following items may appear. Choose from (A) income statement, (B) balance sheet, or (C) neither.

a. Net income	l. Interest payable
b. Cost of goods sold	m. Loss from flood
c. Gross profit	n. Land
d. Retained earnings	o. Taxes payable
e. Paid-in capital in excess of par	p. Interest income
f. Sales	q. Gain on sale of property
g. Supplies expense	r. Dividend income
h. Investment in G. Company	s. Depreciation expense
i. Dividends	t. Accounts receivable
j. Inventory	u. Accumulated depreciation
k. Common stock	v. Sales commissions

P 4-10. List where each of the following items may appear. Choose from (A) income statement, (B) balance sheet, or (C) reconciliation of retained earnings.

a. Dividends paid	k. Unrealized exchange gains and losses
b. Notes payable	l. Equity in net income of affiliates
c. Minority share of earnings	m. Goodwill
d. Accrued payrolls	n. Unrealized decline in market value of equity investment
e. Loss on disposal of equipment	o. Cumulative effect of change in accounting principle
f. Minority interest in consolidated subsidiary	p. Common stock
g. Adjustments of prior periods	q. Costs of good sold
h. Redeemable preferred stock	r. Supplies
i. Treasury stock	s. Land
j. Extraordinary loss	

P 4-11. The income statement of Tawls Company for the year ended December 31, 2000 shows:

Revenue from sales		\$980,000
Cost of products sold		<u>510,000</u>
Gross profit		470,000
Operating expenses:		
Selling expenses	\$110,000	
General expenses	<u>140,000</u>	<u>250,000</u>
Operating income		220,000
Equity on earnings of nonconsolidated subsidiary		<u>60,000</u>
Operating income before income taxes		280,000
Taxes related to operations		<u>100,000</u>
Net income from operations		180,000
Extraordinary loss from flood		
(less applicable taxes of \$50,000)		(120,000)
Minority share of earnings		<u>(40,000)</u>
Net income		<u><u>\$ 20,000</u></u>

- Required**
- Compute the net earnings remaining after removing nonrecurring items.
 - Determine the earnings from the nonconsolidated subsidiary.
 - For the subsidiary that was not consolidated, what amount of income would have been included if this subsidiary had been consolidated?
 - What earnings relate to minority shareholders of a subsidiary that was consolidated?
 - Determine the total tax amount.

P 4-12. The income statement of Jones Company for the year ended December 31, 2000 is shown at the top of the next page.

- Required**
- Compute the net earnings remaining after removing nonrecurring items.
 - Determine the earnings (loss) from the nonconsolidated subsidiary.
 - Determine the total tax amount.

Revenue from sales		\$790,000
Cost of products sold		<u>410,000</u>
Gross profit		380,000
Operating expenses:		
Selling expenses	\$ 40,000	
General expenses	<u>80,000</u>	<u>120,000</u>
Operating income		260,000
Equity in earnings of non-consolidated subsidiaries (loss)		<u>(20,000)</u>
Operating income before income taxes		240,000
Taxes related to operations		<u>(94,000)</u>
Net income from operations		146,000
Discontinued operations:		
Loss from operations of discontinued segment (less applicable income tax credit of \$30,000)	\$ (70,000)	
Loss on disposal of segment (less applicable income tax credit of \$50,000)	<u>(100,000)</u>	<u>(170,000)</u>
Income before cumulative effect of change in accounting principle		(24,000)
Cumulative effect of change in accounting principle (less applicable income taxes of \$25,000)		<u>50,000</u>
Net income		<u><u>\$ 26,000</u></u>

P 4-13. Uranium Mining Company, founded in 1970 to mine and market uranium, purchased a mine in 1971 for \$900 million. It estimated that the uranium had a market value of \$150 per ounce. By 2000, the market value had increased to \$300 per ounce. Records for 2000 indicate the following:

Production	200,000	ounces
Sales	230,000	ounces
Deliveries	190,000	ounces
Cash collection	210,000	ounces
Costs of production including depletion*	\$50,000,000	
Selling expense	\$2,000,000	
Administrative expenses	\$1,250,000	
Tax rate	50%	

*Production cost per ounce has remained constant over the last few years, and the company has maintained the same production level.

- Required**
- Compute the income for 2000, using each of the following bases:
 - Receipt of cash
 - Point of sale
 - End of production
 - Based on delivery
 - Comment on when each of the methods should be used. Which method should be used by Uranium Mining Company?

- P 4-14.** Each of the following statements represents a decision made by the accountant of Growth Industries:
- A tornado destroyed \$200,000 in uninsured inventory. This loss is included in the cost of goods sold.
 - Land was purchased ten years ago for \$50,000. The accountant adjusts the land account to \$100,000, which is the estimated current value.
 - The cost of machinery and equipment is charged to a fixed asset account. The machinery and equipment will be expensed over the period of use.
 - The value of equipment increased this year, so no depreciation of equipment was recorded this year.
 - During the year, inventory that cost \$5,000 was stolen by employees. This loss has been included in the cost of goods sold for the financial statements. The total amount of the cost of goods sold was \$1,000,000.
 - The president of the company, who owns the business, used company funds to buy a car for personal use. The car was recorded on the company's books.

Required State whether you agree or disagree with each decision.

- P 4-15.** The following information for Gaffney Corporation covers the year ended December 31, 2000:

GAFFNEY CORPORATION			
Income Statement			
For the Year Ended December 31, 2000			
Revenue:			
Revenues from sales			\$450,000
Other			<u>5,000</u>
Total revenue			455,000
Expenses:			
Cost of products sold	\$280,000		
Selling expenses	50,000		
Administrative and general expenses	20,000		
Federal and state income taxes	<u>30,000</u>		
Total expenses			<u>380,000</u>
Net income			75,000
Other comprehensive income			
Available-for-sale securities adjustment, net of \$5,000 income tax	\$ 7,000		
Foreign currency translation adjustment, net of \$3,000 income tax	<u>8,000</u>		
Other comprehensive income			<u>15,000</u>
Comprehensive income			<u>\$ 90,000</u>

- Required**
- Will net income or comprehensive income tend to be more volatile? Comment.
 - Which income figure will be used to compute earnings per share?
 - What is the total tax expense reported?
 - Will the items within other comprehensive income always net out as an addition to net income? Comment.

Case 4-1**Electronic Solutions**

Motorola presented these consolidated statements of operations for the years 1996, 1997, and 1998.

Consolidated Statements of Operations

(In millions, except per share amounts)

Motorola, Inc. and Subsidiaries

Years ended December 31	1998	1997	1996
Net sales	\$29,398	\$29,794	\$27,973
<i>Costs and expenses</i>			
Manufacturing and other costs of sales	20,886	20,003	18,990
Selling, general and administrative expenses	5,493	5,188	4,715
Restructuring and other charges	1,980	327	—
Depreciation expense	2,197	2,329	2,308
Interest expense, net	216	131	185
Total costs and expenses	30,772	27,978	26,198
Earnings (loss) before income taxes	(1,374)	1,816	1,775
Income tax provision (benefit)	(412)	636	621
Net earnings (loss)	\$ (962)	\$1,180	\$1,154

- Required**
- Does it appear that there is 100% ownership in all consolidated subsidiaries? Discuss.
 - If a subsidiary were not consolidated but rather accounted for using the equity method, would this change net income? Explain.
 - Present a multiple-step income statement.
 - Determine the net income for each year with the nonrecurring items excluded.

Case 4-2**Convenience**

Kellogg Company presented these consolidated statements of earnings shown on the following page for the years 1995, 1996, and 1997.

- Required**
- What does it mean that the statement is titled “Consolidated Statement of Earnings”?
 - Does it appear that Kellogg Company has consolidated subsidiaries in which it has less than 100% ownership? Explain.
 - Does it appear that Kellogg Company has investments in subsidiaries in which it does not have control? Explain.
 - Determine the net income for each year with the nonrecurring items excluded.
 - Determine the amount to remove for each year if the “nonrecurring charges” were removed.
 - The cumulative effect of accounting change (net of tax) in 1997 is \$18,000,000.
 - For the years 1997, 1996, and 1995, were the accounting principles used consistent? Explain.
 - Determine the net earnings for 1997, 1996, and 1995, using consistent accounting principles.
 - Does it appear that the change in accounting principle in 1997 was so material that earnings in 1997 should not be compared with prior years? Explain.

Kellogg Company and Subsidiaries Consolidated Statement of Earnings Year Ended December 31			
(millions, except per share data)	1997	1996	1995
NET SALES	<u>\$6,830.1</u>	<u>\$6,676.6</u>	<u>\$7,003.7</u>
Cost of goods sold	3,270.1	3,122.9	3,177.7
Selling and administrative expense	2,366.8	2,458.7	2,566.7
Nonrecurring charges	<u>184.1</u>	<u>136.1</u>	<u>421.8</u>
OPERATING PROFIT	<u>1,009.1</u>	<u>958.9</u>	<u>837.5</u>
Interest expense	108.3	65.6	62.6
Other income (expense), net	<u>3.7</u>	<u>(33.4)</u>	<u>21.1</u>
EARNINGS BEFORE INCOME TAXES AND CUMULATIVE EFFECT OF ACCOUNTING CHANGE	904.5	859.9	796.0
Income taxes	<u>340.5</u>	<u>328.9</u>	<u>305.7</u>
EARNINGS BEFORE CUMULATIVE EFFECT OF ACCOUNTING CHANGE	564.0	531.0	490.3
Cumulative effect of accounting change (net of tax)	<u>(18.0)</u>	<u>—</u>	<u>—</u>
NET EARNINGS	<u>\$ 546.0</u>	<u>\$ 531.0</u>	<u>\$ 490.3</u>
PER SHARE AMOUNTS (BASIC AND DILUTED):			
EARNINGS BEFORE CUMULATIVE EFFECT OF ACCOUNTING CHANGE	\$ 1.36	\$ 1.25	\$ 1.12
Cumulative effect of accounting change	<u>(.04)</u>	<u>—</u>	<u>—</u>
NET EARNINGS PER SHARE	<u>\$ 1.32</u>	<u>\$ 1.25</u>	<u>\$ 1.12</u>

Case 4-3**Run**

Reebok International LTD. presented these consolidated statements of income shown on the following page for the years 1996, 1997, and 1998.

Required

- What does it mean that the statements are “Consolidated Statements of Income”?
- Does it appear that Reebok has consolidated subsidiaries in which it has less than 100% ownership? Explain.
- Assume that special charges are nonrecurring. What would be the income before minority interest with the special charges removed?

Reebok International LTD

Amounts in thousands, except per share data

Years ended December 31	1998	1997	1996
Net sales	\$3,224,592	\$3,643,599	\$3,478,604
Other income (expense)	(19,167)	(6,158)	4,325
	<u>3,205,425</u>	<u>3,637,441</u>	<u>3,482,929</u>
Costs and Expenses:			
Cost of sales	2,037,465	2,294,049	2,144,422
Selling, general and administrative expenses	1,043,199	1,069,433	1,065,792
Special charges	35,000	58,161	
Amortization of intangibles	3,432	4,157	3,410
Interest expense	60,671	64,366	42,246
Interest income	(11,372)	(10,810)	(10,609)
	<u>3,168,395</u>	<u>3,479,356</u>	<u>3,245,261</u>
Income before income taxes and minority interest	37,030	158,085	237,668
Income taxes	<u>11,925</u>	<u>12,490</u>	<u>84,083</u>
Income before minority interest	25,105	145,595	153,585
Minority interest	<u>1,178</u>	<u>10,476</u>	<u>14,635</u>
Net income	<u>\$ 23,927</u>	<u>\$ 135,119</u>	<u>\$ 138,950</u>
Basic earnings per share	<u>\$.42</u>	<u>\$ 2.41</u>	<u>\$ 2.06</u>
Diluted earnings per share	<u>\$.42</u>	<u>\$ 2.32</u>	<u>\$ 2.03</u>
Dividends per common share	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 0.225</u>

Case 4-4

The Big Order

On October 15, 1990, United Airlines (UAL Corporation) placed the largest wide-body aircraft order in commercial aviation history—60 Boeing 747-400s and 68 Boeing 777s—with an estimated value of \$22 billion. With this order, United became the launch customer for the B777. This order was equally split between firm orders and options.

- Required**
- Comment on when United Airlines should record the purchase of these planes.
 - Comment on when Boeing should record the revenue from selling these planes.
 - Speculate on how firm the commitment was on the part of United Airlines to accept delivery of these planes.
 - Speculate on the disclosure for this order in the 1990 financial statements and footnotes of United Airlines.
 - Speculate on the disclosure for this order in the 1990 annual report of United Airlines. (Exclude the financial statements and footnotes.)
 - Speculate on the disclosure for this order in the 1990 financial statements and footnotes of Boeing.
 - Speculate on the disclosure for this order in the 1990 annual report of Boeing (exclude the financial statements and footnotes).

Case 4-5

Celtics

Boston Celtics Limited Partnership II and subsidiaries presented these consolidated statements of income for 1998, 1997, and 1996.

CONSOLIDATED STATEMENTS OF INCOME
BOSTON CELTICS LIMITED PARTNERSHIP II AND SUBSIDIARIES

	For The Year Ended		
	June 30, 1998	June 30, 1997	June 30, 1996
Revenues:			
Basketball regular season -	\$39,107,960	\$31,813,019	\$35,249,625
Ticket sales	28,002,469	23,269,159	22,071,992
Television and radio broadcast rights fees	8,569,485	7,915,626	7,458,651
Other, principally promotional advertising	75,679,914	62,997,804	64,780,268
Costs and expenses:			
Basketball regular season -			
Team	40,401,643	40,941,156	27,891,264
Game	2,820,107	2,386,042	2,606,218
General and administrative	13,464,566	13,913,893	15,053,333
Selling and promotional	4,819,478	4,680,168	2,973,488
Depreciation	208,162	189,324	140,894
Amortization of NBA franchise and other intangible assets	165,035	164,702	164,703
	<u>61,878,991</u>	<u>62,275,285</u>	<u>48,829,900</u>
	13,800,923	722,519	15,950,368
Interest expense	(6,017,737)	(5,872,805)	(6,387,598)
Interest income	6,402,366	6,609,541	8,175,184
Net realized gains (losses) on disposition of marketable securities and other short-term investments	(18,235)	361,051	(101,138)
Income from continuing operations before income taxes	14,167,317	1,820,306	17,636,816
Provision for income taxes	<u>1,900,000</u>	<u>1,400,000</u>	<u>1,850,000</u>
Income from continuing operations	12,267,317	420,306	15,786,816
Discontinued operations:			
Income from discontinued operations (less applicable income taxes of \$30,000)			82,806
Gain from disposal of discontinued operations (less applicable income taxes of \$17,770,000)			<u>38,330,907</u>
NET INCOME	12,267,317	420,306	54,200,529
Net income applicable to interests of General Partners	<u>306,216</u>	<u>62,246</u>	<u>1,291,014</u>
Net income applicable to interests of Limited Partners	<u>\$11,961,101</u>	<u>\$ 358,060</u>	<u>\$52,909,515</u>
Per unit:			
Income from continuing operations - basic	\$ 2.45	\$ 0.07	\$ 2.68
Income from continuing operations - diluted	\$ 2.17	\$ 0.06	\$ 2.59
Net income - basic	\$ 2.45	\$ 0.07	\$ 9.18
Net income - diluted	\$ 2.17	\$ 0.06	\$ 8.89
Distributions declared	\$ 2.00	\$ 1.00	\$ 1.50

- Required**
- Comment on the amortization of NBA franchise and other intangible assets.
 - Would the discontinued operations be included in projecting the future? Comment.
 - The costs and expenses include team costs and expenses. Speculate on the major reason for the increase in this expense between 1996 and 1997.
 - What were the major reasons for the increase in income from continuing operations between 1997 and 1998?
 - Speculate on why distributions declared were higher in 1998 than 1996. (Notice that net income was substantially higher in 1996.)

Case 4-6**Growth**

Wal-Mart presented these consolidated statements of income for 1998, 1997, and 1996.

Wal-Mart			
Consolidated Statements of Income			
(Amounts in millions except per share data)			
Fiscal years ended January 31	<u>1998</u>	<u>1997</u>	<u>1996</u>
Revenues:			
Net sales	\$117,958	\$ 104,859	\$ 93,627
Other income - net	<u>1,341</u>	<u>1,319</u>	<u>1,146</u>
	<u>119,299</u>	<u>106,178</u>	<u>94,773</u>
Costs and Expenses:			
Cost of sales	93,438	83,510	74,505
Operating, selling and general and administrative expenses	19,358	16,946	15,021
Interest Costs:			
Debt	555	629	692
Capital leases	<u>229</u>	<u>216</u>	<u>196</u>
	<u>113,580</u>	<u>101,301</u>	<u>90,414</u>
Income Before Income Taxes, Minority Interest and Equity in Unconsolidated Subsidiaries	5,719	4,877	4,359
Provision for Income Taxes			
Current	2,095	1,974	1,530
Deferred	<u>20</u>	<u>(180)</u>	<u>76</u>
	<u>2,115</u>	<u>1,794</u>	<u>1,606</u>
Income Before Minority Interest and Equity in Unconsolidated Subsidiaries	3,604	3,083	2,753
Minority Interest and Equity in Unconsolidated Subsidiaries	<u>(78)</u>	<u>(27)</u>	<u>(13)</u>
Net Income	<u>\$ 3,526</u>	<u>\$ 3,056</u>	<u>\$ 2,740</u>
Net Income Per Share - Basic and Dilutive	<u>\$ 1.56</u>	<u>\$ 1.33</u>	<u>\$ 1.19</u>

- Required**
- Describe minority interest.
 - Describe equity in unconsolidated subsidiaries.
 - In your opinion, is it good practice to combine minority interest and equity in unconsolidated subsidiaries? Comment.
 - Present a multiple-step statement of income for 1996, 1997, and 1998

Case 4-7

Preparing For the Future

Osmonics presented this information with their second quarter report 1998.

OSMONICS

Second Quarter Report 1998 (In Part)

Dear Shareholder,

Osmonics reported record quarterly sales in the second quarter, reflecting internal growth as well as sales from recent acquisitions. At the same time, we have taken significant special charges to reflect costs associated with these acquisitions and our re-engineering initiatives.

Sales of \$47.4 million for the second quarter ended June 30, 1998 were up 13.3% over sales of \$41.8 million for the second quarter of 1997. For the six months ended June 30, 1998, sales were \$89.5 million, an increase of 6.4% over sales of \$84.1 million for the first half of 1997. The second quarter sales increase was a result of core product sales growth of 6.3% and growth of 7.0% from the sales for the first full quarter of the Micron Separations (MSI) acquisition and two months of the Membrex business.

With the special charges of \$27.7 million, we are reporting a net loss of \$18.8 million or \$1.35 per diluted share, compared to a net profit for the second quarter last year of \$2.6 million or \$0.18 per diluted share. The special charges include a \$23.9 million charge to operating expense for purchased research and development related to the MSI and Membrex acquisitions, a \$2 million charge to cost of sales for slow-moving inventory, and a charge of \$1.8 million for restructuring and re-engineering also charged to operating expense. The Company's net income without special charges would have been \$2.4 million or \$0.17 per diluted share for the second quarter and \$0.32 per diluted share for the first six months.

The second quarter was reasonably strong in sales. However, gross margins were lower because of some large capital equipment sales, general pricing pressures in Asia and the United States, and lower utilization rates at several production facilities.

Comparing gross profit for the second quarter of 1998 before the special charge, we were up 3.5% over the gross profit for the same period in 1997. Excluding special charges, operating income for the second quarter 1998 was \$4,567,000, an increase of 17.7% over operating income of \$3,880,000 for the same period last year. This improvement in operating income was primarily due to control over expenses. Even though we added both MSI and Membrex, total operating expense was down slightly from the same period in 1997. SG&A only increased 1.5% year-to-year and research and development expense decreased 9.2% year-to-year, for total operating expense of \$12,878,000. Our expense control program has been successful, but we are committed to reduce expenses further to meet Corporate objectives.

SAP computer software implementation expenses amounted to about 1.5 cents per share for the quarter. The SAP software not only solves the year 2000 (Y2K) potential problem, but has helped to drive our process re-engineering program. There will still be costs associated with implementing SAP at our other operations. However, with the write-off of some previous implementation expenses as part of the special charges, and the savings we are now realizing in Minnetonka, SAP should have minimal impact on earnings going forward.

Our backlog of orders is even with last year's which would indicate flat internal growth for the third quarter. With the recent acquisitions our replaceable product sales have grown to 53% of overall sales and should add to third quarter revenue. Typically, replaceable products have little backlog because we ship from stock or on very short lead times.

Four of our five primary markets showed increased sales for the six months ended June 30, 1998 compared to the first six months of last year. Potable water treatment was the only market that did not increase, whereas food/beverage and industrial/power had strong growth. We

continue to be concerned about poor sales in Asia/Pacific but increased Euro/Africa sales have offset most of the reduced Asia sales. In the domestic market, results have been mixed and pricing is very competitive. The effect of the Asia problems on our U.S. customers who sell equipment to that market is difficult to assess. We continue to see strong interest in our products and systems: however, capital equipment customers tend to be deferring their order decisions.

"I am gratified to see our employees enthusiastically embrace the Company's restructuring and re-engineering. Their dedication and ideas will have even greater impact on our business as we implement streamlined systems and new management practices. We believe our revitalized organization, integrated products, and rationalized manufacturing operations will enable Osmonics to be a dominant supplier of high technology water purification and filtration products and cost-effective components in the years ahead."

D. Dean Spatz

D. Dean Spatz
Chairman & Chief Executive Officer
August 12, 1998

CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(In thousands except per share amounts)

	Second Quarter Ended June 30,		Six Months Ended June 30,	
	1998	1997	1998	1997
Sales	\$ 47,353	\$41,789	\$ 89,503	\$84,102
Cost of Sales	31,908	24,931	57,951	50,895
Gross Profit	15,445	16,858	31,552	33,207
SG&A	10,359	10,205	20,233	19,922
RD&E	2,519	2,773	4,847	5,559
Special Charge	25,706	—	25,706	—
Income (Loss) From Operations	(23,139)	3,880	(19,234)	7,726
Other Income/(Expense)	(981)	23	(1,557)	(78)
Income (Loss) Before Income Taxes	(24,120)	3,903	(20,791)	7,648
Income Tax Expense	(5,303)	1,310	(4,138)	2,621
Income (Loss) from Continuing Operations	(18,817)	2,593	(16,653)	5,027
Recovery on Discontinued Operations	—	—	—	325
Net Income (Loss)	<u>\$ (18,817)</u>	<u>\$ 2,593</u>	<u>\$ (16,653)</u>	<u>\$ 5,352</u>
Income (Loss) From Continuing Operations				
Basic	\$ (1.35)*	\$ 0.18	\$ (1.19)**	\$ 0.36
Fully Diluted	\$ (1.35)*	\$ 0.18	\$ (1.19)**	\$ 0.35
Rec. on Discontinued Operations				
Basic	\$ —	\$ —	\$ —	\$ 0.02
Fully Diluted	\$ —	\$ —	\$ —	\$ 0.02
Net Income (Loss)				
Basic	\$ (1.35)*	\$ 0.18	\$ (1.19)**	\$ 0.38
Fully Diluted	\$ (1.35)*	\$ 0.18	\$ (1.19)**	\$ 0.37
Average Common Equivalent Shares				
Shares Basic	13,962	14,071	13,956	14,137
Fully Diluted	13,962	14,362	13,956	14,450

* Earnings per share excluding special charge would have been \$0.17 Basic and Fully Diluted.

** Earnings per share excluding special charge would have been \$0.33 Basic and \$0.32 Fully Diluted.

Special Charges Disclosure:	
In-Process R&D	\$23,940
Corporate Restructuring	875
SAP/Re-engineering Cost	891
Slow Moving Inventory	2,000
Gross Special Charge	\$27,706
Less Slow Moving Inventory - in COS	(2,000)
Special Charge	<u>\$25,706</u>

Osmonics is a leading manufacturer and worldwide marketer of high technology water purification and fluid filtration, fluid separation, and fluid handling equipment, as well as the replaceable components used in purification, filtration, and separation equipment. These products are used by a broad range of industrial, commercial, and institutional customers. Osmonics is traded on the New York Stock Exchange under the symbol OSM.

- Required**
- a. During the second quarter, Osmonics acquired MSI and Membrex. In your opinion, were these acquisitions accounted for using the pooling of interests methods or the purchase method? Support your position.
 - b.
 1. What was the dollar amount for gross special charge for the second quarter ended June 30, 1998?
 2. For the gross special charge for the second quarter ended June 30, 1998, how much was charged to cost of sales?
 3. For the gross special charge for the second quarter ended June 30, 1998, how much was disclosed as a special charge on the consolidated statement of operations? Was this disclosure gross or net of tax?
 4. In your opinion, was the special charge material? (Support your answer.)
 - c.
 1. Apparently MSI and Membrex had had research and development expenditures for projects that were not complete prior to being acquired by Osmonics. How did MSI and Membrex account for these research and development expenditures?
 2. Apparently Osmonics was of the opinion that the in-process research and development was worth a substantial sum at the time of acquisition. Support this conclusion from the disclosure.
 3. Comment on when a benefit is expected from the expensed research and development. Does it appear that Osmonics expects the benefit from research and development to be substantial?
 - d.
 1. Why is the gross special charge presented as part of income (loss) from operations?
 2. Does this charge qualify for net of tax treatment?
 - e. In your opinion, what earnings (loss) number should be used for projecting future operations of Osmonics? Discuss.

Endnotes

- 1 Michael L. Roberts, William D. Samson, and Michael T. Dugan, "The Stockholders' Equity Section: *Form Without Substance*," Accounting Horizons, December 1990, pp. 35-46.
- 2 Roberts, Samson, and Dugan, p. 36.

CHAPTER

5

BASICS OF ANALYSIS

THE ANALYSIS OF FINANCIAL DATA EMPLOYS various techniques to emphasize the comparative and relative importance of the data presented and to evaluate the position of the firm. These techniques include ratio analysis, common-size analysis, study of differences in components of financial statements among industries, review of descriptive material, and comparisons of results with other types of data. The information derived from these types of analysis should be blended to determine the overall financial position. No one type of analysis supports overall findings or

serves all types of users. This chapter provides an introduction to different analyses and uses of financial information.

Financial statement analysis is a judgmental process. One of the primary objectives is identification of major changes (turning points) in trends, amounts, and relationships and investigation of the reasons underlying those changes. Often, a turning point may signal an early warning of a significant shift in the future success or failure of the business. The judgment process can be improved by experience and by the use of analytical tools.

**RATIO
ANALYSIS**

Financial ratios are usually expressed as a percent or as times per period. The ratios listed below will be discussed fully in future chapters.

1. Liquidity ratios measure a firm's ability to meet its current obligations. They may include ratios that measure the efficiency of the use of current assets and current liabilities (Chapter 6).
2. Borrowing capacity (leverage) ratios measure the degree of protection of suppliers of long-term funds (Chapter 7).
3. Profitability ratios measure the earning ability of a firm. Discussion will include measures of the use of assets in general (Chapter 8).
4. Investors are interested in a special group of ratios, in addition to liquidity, debt, and profitability ratios (Chapter 9).
5. Cash flow ratios can indicate liquidity, borrowing capacity, or profitability (Chapter 10).

A ratio can be computed from any pair of numbers. Given the large quantity of variables included in financial statements, a very long list of meaningful ratios can be derived. A standard list of ratios or standard computation of them does not exist. Each author and source on financial analysis uses a different list. This book presents frequently utilized and discussed ratios.

Ratios are interpretable in comparison with (1) prior ratios, (2) ratios of competitors, (3) industry ratios, and (4) predetermined standards. The trend of a ratio and the variability of a ratio are important considerations.

Comparison of income statement and balance sheet numbers, in the form of ratios, can create difficulties due to the timing of the financial statements. Specifically, the income statement covers the entire fiscal period; whereas, the balance sheet applies to a single point in time, the end of the period. Ideally, then, to compare an income statement figure such as sales to a balance sheet figure such as receivables, we need to know the average receivables for the year that the sales figure covers. However, these data are not available to the external analyst. In some cases, the analyst uses an average of the beginning and ending balance sheet figures. This approach smooths out changes from beginning to end, but it does not eliminate problems due to seasonal and cyclical changes. It also does not reflect changes that occur unevenly throughout the year.

Be aware that computing averages from two similar balance sheet dates can be misleading. It is possible that a representative average cannot be computed from externally published statements.

A ratio will usually represent a fairly accurate trend, even when the ratio is distorted. If the ratio is distorted, then it does not represent a good absolute number.

Applying the U.S. techniques of ratio analysis to statements prepared in other countries can be misleading. The ratio analysis must be understood in terms of the accounting principles used and the business practices and culture of the country.

**COMMON-SIZE
ANALYSIS
(VERTICAL AND
HORIZONTAL)**

Common-size analysis expresses comparisons in percentages. For example, if cash is \$40,000 and total assets is \$1,000,000, then cash represents 4% of total assets. The use of percentages is usually preferable to the use of absolute amounts. An illustration will make this clear. If Firm A earns \$10,000 and Firm B earns \$1,000, which is more profitable? Firm A is probably your response. However, the total owners' equity of A is \$1,000,000, and B's is \$10,000. The return on owners' equity is as follows:

	Firm A		Firm B
<u>Earnings</u>	<u>\$10,000</u>		<u>\$1,000</u>
<u>Owners' Equity</u>	<u>\$1,000,000</u>	$= 1\%$	<u>\$10,000</u>
			$= 10\%$

The use of common-size analysis makes comparisons of firms of different sizes much more meaningful. Care must be exercised in the use of common-size analysis with small absolute amounts because a small change in amount can result in a very substantial percentage change. For example, if profits last year amounted to \$100 and increased this year to \$500, this would be an increase of only \$400 in profits, but it would represent a substantial percentage increase.

Vertical analysis compares each amount with a base amount selected from the same year. For example, if advertising expenses were \$1,000 in 2000 and sales were \$100,000, the advertising would have been 1% of sales.

Horizontal analysis compares each amount with a base amount for a selected base year. For example, if sales were \$400,000 in 1999 and \$600,000 in 2000, then sales increased to 150% of the 1999 level in 2000, an increase of 50%.

Exhibit 5-1 illustrates common-size analysis (vertical and horizontal).

YEAR-TO-YEAR CHANGE ANALYSIS

Comparing financial statements over two time periods using absolute amounts and percentages can be meaningful. This approach aids in keeping absolute and percentage changes in perspective. For example, a substantial percentage change may not be relevant because of an immaterial absolute change. When performing year-to-year change analysis, follow these rules:

1. When an item has value in the base year and none in the next period, the decrease is 100%.
2. A meaningful percent change cannot be computed when one number is positive and the other number is negative.
3. No percent change is computable when there is no figure for the base year.

These rules are illustrated in Exhibit 5-2.

FINANCIAL STATEMENT VARIATIONS BY TYPE OF INDUSTRY

The components of financial statements, especially the balance sheet and the income statement, will vary by type of industry. Exhibits 5-3, 5-4, and 5-5 illustrate, respectively, a merchandising firm (Gap, Inc.), a service firm (The Interpublic Group of Companies), and a manufacturing firm (Intel Corporation).

Merchandising (retail-wholesale) firms sell products purchased from other firms. A principal asset is inventory, which consists of finished goods. For some merchandising firms, a large amount of sales may be for cash. In such cases, the receivables balance will be relatively low. Other merchandising firms have a large amount of sales charged but also accept credit cards such as VISA, so they also have a relatively low balance in receivables. Other firms extend credit and carry the accounts receivable and thus have a relatively large receivables balance. Because of the competitive nature of the industry, profit ratios on the income statement are often quite low, with the cost of sales and operating expenses constituting a large portion of expenses. Refer to Exhibit 5-3, Gap, Inc..

A service firm generates its revenue from the service provided. Because service cannot typically be stored, inventory is low or nonexistent. In people-intensive services, such as

EXHIBIT 5-1**MELCHER COMPANY****Income Statement****Illustration of Common Size Analysis (Vertical and Horizontal)**

(Absolute dollars)	For the Years Ended December 31		
	2001	2000	1999
Revenue from sales	\$100,000	\$95,000	\$ 91,000
Cost of products sold	<u>65,000</u>	<u>60,800</u>	<u>56,420</u>
Gross profit	<u>35,000</u>	<u>34,200</u>	<u>34,580</u>
Operating expenses			
Selling expenses	14,000	11,400	10,000
General expenses	<u>16,000</u>	<u>15,200</u>	<u>13,650</u>
Total operating expenses	<u>30,000</u>	<u>26,600</u>	<u>23,650</u>
Operating income before income taxes	5,000	7,600	10,930
Taxes related to operations	<u>1,500</u>	<u>2,280</u>	<u>3,279</u>
Net income	<u>\$ 3,500</u>	<u>\$ 5,320</u>	<u>\$ 7,651</u>
Vertical Common Size			
Revenue from sales	100.0%	100.0%	100.0%
Cost of goods sold	<u>65.0</u>	<u>64.0</u>	<u>62.0</u>
Gross profit	<u>35.0</u>	<u>36.0</u>	<u>38.0</u>
Operating expenses			
Selling expenses	14.0	12.0	11.0
General expenses	<u>16.0</u>	<u>16.0</u>	<u>15.0</u>
Total operating expenses	<u>30.0</u>	<u>28.0</u>	<u>26.0</u>
Operating income before income taxes	5.0	8.0	12.0
Taxes related to operations	<u>1.5</u>	<u>2.4</u>	<u>3.6</u>
Net income	<u>3.5%</u>	<u>5.6%</u>	<u>8.4%</u>
Horizontal Common Size			
Revenue from sales	109.9%	104.4%	100.0%
Cost of goods sold	115.2	107.8	100.0
Gross profit	101.2	98.9	100.0
Operating expenses			
Selling expenses	140.0	114.0	100.0
General expenses	117.2	111.4	100.0
Total operating expenses	126.8	112.5	100.0
Operating income before income taxes	45.7	69.5	100.0
Taxes related to operations	45.7	69.5	100.0
Net income	45.7	69.5	100.0

advertising, investment in property and equipment is also low compared with that of manufacturing firms. Refer to Exhibit 5-4, The Interpublic Group of Companies.

A manufacturing firm will usually have large inventories composed of raw materials, work in process, and finished goods, as well as a material investment in property, plant, and equipment. Notes and accounts receivable may also be material, depending on the terms of sale. The cost of sales often represents the major expense. Refer to Exhibit 5-5, Intel.

EXHIBIT 5-2**YEAR-TO-YEAR CHANGE ANALYSIS
(Illustrating Rules)**

Item	Year 1	Year 2	Change Analysis	
			Amount	Percent
Advertising expense	\$20,000	—	\$(20,000)	(100%)
Operating income	6,000	(3,000)	(9,000)	—
Net income	(7,000)	8,000	15,000	—
Other	—	4,000	4,000	—

**REVIEW OF
DESCRIPTIVE
INFORMATION**

The descriptive information found in an annual report, in trade periodicals, and in industry reviews helps us understand the financial position of a firm. Descriptive material might discuss the role of research and development in producing future sales, present data on capital expansion and the goals related thereto, discuss aspects of employee relations such as minority hiring or union negotiations, or help explain the dividend policy of the firm.

COMPARISONS

Absolute figures or ratios appear meaningless unless compared to other figures or ratios. If a person were asked if ten dollars is a lot of money, the frame of reference would determine the answer. To a small child, still in awe of a quarter, ten dollars is a lot. To a millionaire, a ten-dollar bill is nothing. Similarly, having 60% of total assets composed of buildings and equipment would be normal for some firms but disastrous for others. One must have a guide to determine the meaning of the ratios and other measures. Several types of comparisons offer insight.

Trend Analysis

Trend analysis studies the financial history of a firm for comparison. By looking at the trend of a particular ratio, one sees whether that ratio is falling, rising, or remaining relatively constant. This helps detect problems or observe good management.

Standard Industrial Classification (SIC) Manual

The Standard Industrial Classification, a statistical classification of business by industry, is used in compiling federal economic statistics. The National Technical Information Service publishes the classification manual. The manual is the responsibility of the Office of Management and Budget, which is under the executive office of the President.

Use of the SIC promotes comparability of various facets of the U.S. economy and defines industries in accordance with the composition and structure of the economy. An organization's SIC consists of a two-digit major group number, a three-digit industry group number, and a four-digit industry number. These numbers describe the business's identifiable level of industrial detail.

Determining a company's SIC is a good starting point in researching a company, an industry, or a product. Many library sources use the SIC number as a method of classification.

EXHIBIT 5-3

GAP INC.
Financial Statements - Merchandising Firm

CONSOLIDATED BALANCE SHEETS

(\$000 except par value)	January 30, 1999	January 31, 1998
ASSETS		
Current Assets		
Cash and equivalents	\$ 565,253	\$ 913,169
Merchandise inventory	1,056,444	733,174
Other current assets	250,127	184,604
Total current assets	<u>1,871,824</u>	<u>1,830,947</u>
Property and Equipment		
Leasehold improvements	1,040,959	846,791
Furniture and equipment	1,601,572	1,236,450
Land and buildings	160,776	154,136
Construction-in-progress	245,020	66,582
	<u>3,048,327</u>	<u>2,303,959</u>
Accumulated depreciation and amortization	<u>(1,171,957)</u>	<u>(938,713)</u>
Property and equipment, net	<u>1,876,370</u>	<u>1,365,246</u>
Lease rights and other assets	215,725	141,309
Total assets	<u>\$ 3,963,919</u>	<u>\$ 3,337,502</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Notes payable	\$ 90,690	\$ 84,794
Accounts payable	684,130	416,976
Accrued expenses and other current liabilities	655,770	406,181
Income taxes payable	122,513	83,597
Total current liabilities	<u>1,533,103</u>	<u>991,548</u>
Long-Term Liabilities		
Long-term debt	496,455	496,044
Deferred lease credits and other liabilities	340,682	265,924
Total long-term liabilities	<u>837,137</u>	<u>761,968</u>
Shareholders' Equity		
Common stock \$.05 par value		
Authorized 1,500,000,000 shares issued 664,997,475 and 659,884,262 shares; outstanding 571,973,354 and 589,699,542 shares	33,250	32,994
Additional paid-in capital	365,662	221,890
Retained earnings	3,121,360	2,392,750
Accumulated other comprehensive earnings	(12,518)	(15,230)
Deferred compensation	(31,675)	(38,167)
Treasury stock at cost	<u>(1,902,400)</u>	<u>(1,010,251)</u>
Total shareholders' equity	<u>1,573,679</u>	<u>1,583,986</u>
Total liabilities and shareholders' equity	<u>\$ 3,963,919</u>	<u>\$ 3,337,502</u>

Industry Averages and Comparison with Competitors

The analysis of an entity's financial statements is more meaningful if the results are compared with industry averages and with results of competitors. Several financial services provide composite data on various industries.

EXHIBIT 5-3

continued

Consolidated Statement of Earnings						
(\$000 except per share amounts)	Fifty-two	Percentage	Fifty-two	Percentage	Fifty-two	Percentage
	Weeks Ended January 30, 1999		Weeks Ended January 31, 1998		Weeks Ended February 1, 1997	
		to Sales		to Sales		to Sales
Net sales	\$9,054,462	100.0%	\$6,507,825	100.0%	\$5,284,381	100.0%
Costs and expenses						
Cost of goods sold and occupancy expenses	5,318,218	58.7	4,021,541	61.8	3,285,166	62.2
Operating expenses	2,403,365	26.5	1,635,017	25.1	1,270,138	24.0
Net interest expense (income)	13,617	0.2	(2,975)	0.0	(19,450)	(0.4)
Earnings before income taxes	1,319,262	14.6	854,242	13.1	748,527	14.2
Income taxes	494,723	5.5	320,341	4.9	295,668	5.6
Net earnings	<u>\$ 824,539</u>	<u>9.1%</u>	<u>\$ 533,901</u>	<u>8.2%</u>	<u>\$ 452,859</u>	<u>8.6%</u>
Weighted-average number of shares - basic		576,041,373		594,269,963		625,719,947
Weighted-average number of shares - diluted		602,916,255		615,301,137		640,900,830
Earnings per share - basic		\$1.43		\$.90		\$.72
Earnings per share - diluted		1.37		.87		.71

The analyst faces a problem when the industries reported do not clearly include the company being examined because the company is diversified into many industrial areas. Since many companies do not clearly fit into any one industry, it is often necessary to use an industry that best fits the firm. The financial services have a similar problem in selecting an industry in which to place a company. Thus, a financial service uses its best judgment as to which industry the firm best fits.

This section briefly describes some financial services. For a more extensive explanation, consult the service's literature. Each service explains how it computes its ratios and the data it provides.

The Department of Commerce Financial Report is a publication of the federal government for manufacturing, mining, and trade corporations. Published by the Economic Surveys Division of the Bureau of the Census, it includes income statement data and balance sheet data in total industry dollars. It also includes an industry-wide common-size vertical income statement (Income Statement in Ratio Format) and an industry-wide common-size vertical balance sheet (Selected Balance Sheet Ratios). This source also includes selected operating and balance sheet ratios.

This report, updated quarterly, probably offers the most current source. It typically becomes available within six or seven months after the end of the quarter. It is a unique source of industry data in total dollars and would enable a company to compare its dollars (such as sales) with the industry dollars (sales).

Robert Morris Associates Annual Statement Studies is published by Robert Morris Associates, the association of lending and credit risk professionals. Submitted by institutional members of Robert Morris Associates, the data cover several hundred different industries in manufacturing, wholesaling, retailing, service, agriculture, and construction.

EXHIBIT 5-4
THE INTERPUBLIC GROUP OF COMPANIES
Financial Statements - Service Firm
CONSOLIDATED BALANCE SHEET

(Dollars in Thousands Except Per Share Data)	December 31	
	1998	1997
ASSETS		
Current Assets:		
Cash and cash equivalents (includes certificates of deposit: 1998 - \$152,064; 1997 - \$256,934)	\$ 808,803	\$ 738,112
Marketable securities	31,733	31,944
Receivables (net of allowance for doubtful accounts: 1998 - \$53,093; 1997 - \$44,100)	3,522,616	3,104,606
Expenditures billable to clients	276,610	242,965
Prepaid expenses and other current assets	137,183	115,895
Total current assets	4,776,945	4,233,522
Other Assets:		
Investment in unconsolidated affiliates	47,561	46,665
Deferred taxes on income	97,350	75,661
Other investments and miscellaneous assets	299,967	223,832
Total other assets	444,878	346,158
Fixed Assets, at cost:		
Land and buildings	95,228	83,621
Furniture and equipment	650,037	554,608
	745,265	638,229
Less: accumulated depreciation	420,864	365,877
	324,401	272,352
Unamortized leasehold improvements	115,200	103,494
Total fixed assets	439,601	375,846
Intangible Assets (net of accumulated amortization: 1998 - \$504,787; 1997 - \$448,952)		
	1,281,399	1,027,917
Total Assets	\$6,942,823	\$5,983,443
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Payable to banks	\$ 214,464	\$ 187,820
Accounts payable	3,613,699	3,189,137
Accrued expenses	624,517	478,962
Accrued income taxes	205,672	161,236
Total current liabilities	4,658,352	4,017,155
Noncurrent Liabilities:		
Long-term debt	298,691	317,268
Convertible subordinated debentures and notes	207,927	201,768
Deferred compensation and reserve for termination allowances	319,526	273,408
Accrued postretirement benefits	48,616	47,404
Other noncurrent liabilities	88,691	72,986
Minority interests in consolidated subsidiaries	55,928	31,917
Total noncurrent liabilities	1,019,379	944,751

EXHIBIT 5-4**continued****Stockholders' Equity:**

Preferred Stock, no par value		
Shares authorized: 20,000,000 shares issued: None	—	—
Common stock, \$.10 par value		
Shares authorized: 225,000,000		
Shares issued: 1998 - 145,722,579; 1997 - 143,567,843	14,572	14,357
Additional paid-in capital	652,692	515,892
Retained earnings	1,116,365	886,201
Adjustment for minimum pension liability	(36,612)	(13,207)
Net unrealized gain on equity securities	9,889	12,405
Cumulative translation adjustment	(133,753)	(158,969)
	<u>1,623,153</u>	<u>1,256,679</u>
Less:		
Treasury stock at cost:		
1998 - 6,187,172 shares; 1997 - 5,271,046 shares	286,713	171,088
Unearned ESOP compensation	—	7,420
Unamortized expense of restricted stock grants	71,348	56,634
Total stockholders' equity	<u>1,265,092</u>	<u>1,021,537</u>
Commitments and contingencies (see Note 14)		
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$6,942,823</u>	<u>\$5,983,443</u>

Information for 1997 has been restated to reflect the aggregate effect of the acquisitions accounted for as pooling of interests.

CONSOLIDATED STATEMENT OF INCOME

Year Ended December 31	1998	1997	1996
(Dollars in thousands except per share data)			
Commissions and fees	\$3,844,340	\$3,352,776	\$2,874,417
Other income, net	124,388	129,608	109,482
Gross income	<u>3,968,728</u>	<u>3,482,384</u>	<u>2,983,899</u>
Salaries and related expenses	2,167,931	1,913,356	1,619,619
Office and general expenses	1,179,227	1,075,176	938,717
Interest expense	58,699	57,793	51,695
Special compensation charges	—	32,229	—
Total costs and expenses	<u>3,405,857</u>	<u>3,078,554</u>	<u>1,610,031</u>
Income before provision for income taxes	562,871	403,830	373,868
Provision for income taxes	232,005	186,246	156,783
Income of consolidated companies	330,866	217,584	217,085
Income applicable to minority interests	(28,125)	(23,754)	(14,914)
Equity in net income of unconsolidated affiliates	7,164	6,548	12,448
NET INCOME	<u>\$ 309,905</u>	<u>\$ 200,378</u>	<u>\$ 214,619</u>
PER SHARE DATA:			
Basic EPS	\$ 2.29	\$ 1.54	\$ 1.65
Diluted EPS	\$ 2.21	\$ 1.49	\$ 1.60

The accompanying notes are an integral part of these financial statements.

Information for 1996 and 1997 has been restated to reflect the aggregate effect of the acquisitions accounted for as poolings of interests.

EXHIBIT 5-5
INTEL CORPORATION
Financial Statements - Manufacturing Firm
CONSOLIDATED BALANCE SHEETS

December 26, 1998 and December 27, 1997

(In millions - except per share amounts)

	1998	1997
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,038	\$ 4,102
Short-term investments	5,272	5,630
Trading assets	316	195
Accounts receivable, net of allowance for doubtful accounts of \$62 (\$65 in 1997)	3,527	3,438
Inventories	1,582	1,697
Deferred tax assets	618	676
Other current assets	122	129
Total current assets	<u>13,475</u>	<u>15,867</u>
Property, plant and equipment:		
Land and buildings	6,297	5,113
Machinery and equipment	13,149	10,577
Construction in progress	1,622	2,437
	21,068	18,127
Less accumulated depreciation	9,459	7,461
Property, plant and equipment, net	<u>11,609</u>	<u>10,666</u>
Long-term investments	<u>5,365</u>	<u>1,839</u>
Other assets	<u>1,022</u>	<u>508</u>
Total assets	<u><u>\$31,471</u></u>	<u><u>\$28,880</u></u>
Liabilities and stockholders' equity		
Current liabilities:		
Short-term debt	\$ 159	\$ 212
Long-term debt redeemable within one year	—	110
Accounts payable	1,244	1,407
Accrued compensation and benefits	1,285	1,268
Deferred income on shipments to distributors	606	516
Accrued advertising	458	500
Other accrued liabilities	1,094	842
Income taxes payable	958	1,165
Total current liabilities	<u>5,804</u>	<u>6,020</u>
Long-term debt	<u>702</u>	<u>448</u>
Deferred tax liabilities	<u>1,387</u>	<u>1,076</u>
Put warrants	<u>201</u>	<u>2,041</u>
Commitments and contingencies		
Stockholders' equity:		
Preferred Stock, \$.001 par value, 50 shares authorized; none issued	—	—
Common Stock, \$.001 par value, 4,500 shares authorized; 3,315 issued and outstanding (3,256 in 1997) and capital in excess of par value	4,822	3,311
Retained earnings	17,952	15,926
Accumulated other comprehensive income	603	58
Total stockholders' equity	<u>23,377</u>	<u>19,295</u>
Total liabilities and stockholders' equity	<u><u>\$31,471</u></u>	<u><u>\$ 28,880</u></u>

EXHIBIT 5-5

continued

Consolidated Statements of Income
Three years ended December 26, 1998
(In millions - except per share amounts)

	1998	1997	1996
Net revenues	\$26,273	\$25,070	\$20,847
Cost of sales	12,144	9,945	9,164
Research and development	2,509	2,347	1,808
Marketing, general and administrative	3,076	2,891	2,322
Purchased in-process research and development	165	—	—
Operating costs and expenses	17,894	15,183	13,294
Operating income	8,379	9,887	7,553
Interest expense	(34)	(27)	(25)
Interest income and other, net	792	799	406
Income before taxes	9,137	10,659	7,934
Provision for taxes	3,069	3,714	2,777
Net income	\$ 6,068	\$ 6,945	\$ 5,157
Basic earnings per common share	\$ 1.82	\$ 2.12	\$ 1.57
Diluted earnings per common share	\$ 1.73	\$ 1.93	\$ 1.45
Weighted average common shares outstanding	3,336	3,271	3,290
Dilutive effect of:			
Employee stock options	159	204	187
1998 Step-Up Warrants	22	115	74
Weighted average common shares outstanding, assuming dilution	3,517	3,590	3,551

Selected Note

Inventories. Inventories are stated at the lower of cost or market. Cost is computed on a currently adjusted standard basis (which approximates actual cost on a current average or first-in, first-out basis). Inventories at fiscal year-ends were as follows:

(In millions)	1998	1997
Raw materials	\$ 206	\$ 255
Work in process	795	928
Finished goods	581	514
Total	\$1,582	\$1,697

Annual Statement Studies groups the data by industry, using the SIC number. It provides common-size balance sheets, income statements, and 16 selected ratios.

The data are sorted by assets and sales and are particularly useful because the financial position and operations of small firms are often quite different from those of larger firms. The Robert Morris presentation also includes a five-year comparison of historical data that presents all firms under a particular SIC code number.

In each category, the ratios are computed for the median and the upper and lower quartiles. For example:

Number of firms (9)

Ratio—Return on total assets

Results for the nine firms (in order, from highest to lowest):

12%, 11%, 10.5%, 10%, 9.8%, 9.7%, 9.6%, 7.0%, 6.5%

The middle result is the median: 9.8%

The result halfway between the top result and the median is the upper quartile: 10.5%

The result halfway between the bottom result and the median is the lower quartile: 9.6%

For ratios in which a low value is desirable, the results are presented from low values to high: For example, 2% (upper quartile), 5% (median), and 8% (lower quartile).

Because of the combination of common-size statements, selected ratios, and comparative historical data, *Robert Morris Associates Annual Statement Studies* is one of the most extensively used sources of industry data. Commercial loan officers in banks frequently use this source.

Notice the section called "Interpretation of Statement Studies Figures," Exhibit 5-6, which indicates that statement studies should be "regarded only as general guidelines and not as absolute industry norms." It then proceeds to list reasons why the data may not be fully representative of a given industry. This word of caution is useful in keeping the user from concluding that the data represent an absolute norm for a given industry.

EXHIBIT 5-6

ROBERT MORRIS ASSOCIATES ANNUAL STATEMENT STUDIES

INTERPRETATION OF STATEMENT STUDIES FIGURES

RMA recommends that *Statement Studies* data be regarded only as general guidelines and not as absolute industry norms. There are several reasons why the data may not be fully representative of a given industry.

- (1) The financial statements used in the *Statement Studies* are not selected by any random or statistically reliable method. RMA member banks voluntarily submit the raw data they have available each year with no limitation on company size.
- (2) Many companies have varied product lines; however, the *Statement Studies* categorize them by their primary product Standard Industrial Classification (SIC) number only.
- (3) Some of our industry samples are rather small in relation to the total number of firms in a given industry. A relatively small sample can increase the chances that some of our composites do not fully represent an industry.
- (4) There is the chance that an extreme statement can be present in a sample, causing a disproportionate influence on the industry composite. This is particularly true in a relatively small sample.
- (5) Companies within the same industry may differ in their method of operations which in turn can directly influence their financial statements. Since they are included in our sample, too, these statements can significantly affect our composite calculations.
- (6) Other considerations that can result in variations among different companies engaged in the same general line of business are different labor markets, geographical location, different account methods, quality of products handled, sources and methods of financing, and terms of sale.

For these reasons, RMA does not recommend the Statement Studies figures be considered as absolute norms for a given industry. Rather the figures should be used only as general guidelines and in addition to the other methods of financial analysis. RMA makes no claim as to the representativeness of the figures printed in this book.

**Robert Morris Associates
One Liberty Place
Philadelphia, PA 19103**

©1996 by Robert Morris Associates
Reprinted with permission, copyright Robert Morris Associates, 1996.

Standard & Poor's Industry Surveys contains a five-year summary on several firms within an industry group. Some of the data include:

1. Operating revenues	8. Debt as a percent of net working capital
2. Net income	9. Price-earnings ratio (high-low)
3. Return on revenues (%)	10. Dividend payout ratio (%)
4. Return on assets (%)	11. Yield (high %-low %)
5. Return on equity (%)	12. Earnings per share
6. Current ratio	13. Book value per share
7. Debt/capital ratio (%)	14. Share price (high-low)

Industry Surveys also includes composite industry data. Industry surveys are of particular interest to investors.

Almanac of Business and Industrial Financial Ratios, published by Prentice Hall, is a compilation of corporate tax return data. It includes a broad range of industries and presents 50 statistics for 11 size categories of firms. Some of the industries include manufacturing, construction, transportation, retail trade, banking, and wholesale trade. Each *Almanac* industry is cross-referenced to an SIC number.

Industry Norms and Key Business Ratios, desktop edition published by Dun & Bradstreet, includes over 800 different lines of business as defined by the SIC code numbers. It includes one-year data consisting of a condensed balance sheet and income statement in dollars and common size. It also includes working capital and ratios.

There are 14 ratios presented for the upper quartile, median, and lower quartile. The 14 ratios are:

Solvency

- Quick Ratio (Times)
- Current Ratio (Times)
- Current Liabilities to Net Worth (%)
- Current Liabilities to Inventory (%)
- Total Liabilities to Net Worth (%)
- Fixed Assets to Net Worth (%)

Efficiency

- Collection Period (days)
- Sales to Inventory (Times)
- Assets to Sales (%)
- Sales to Net Working Capital (Times)
- Accounts payable to sales (%)

Profitability

- Return on Sales (%)
- Return on Assets (%)
- Return on Net Working Capital (%)

Dun & Bradstreet advises that the industry norms and key business ratios are to be used as yardsticks and not as absolutes. *Industry Norms and Key Business Ratios* is also published in an expanded set in the following five segments:

1. Agriculture/Mining/Construction/Transportation/Communication/Utilities
2. Manufacturing
3. Wholesaling
4. Retailing
5. Finance/Real Estate/Services

All five segments are available in three different formats, for a total of 15 books. The three formats follow:

1. Industry Norms for last three years
2. Industry Norms one-year edition
3. Key Business Ratios one-year edition

Value Line Investment Service contains profitability and investment data for 1,700 individual firms and for industries in general. *Value Line* places companies in 1 of 96 industries. This service rates each stock's timeliness and safety. It is very popular with investors.

The data included in *Value Line* for a company are largely for a relatively long period of time (five to ten years). Some of the data provided for each company are as follows:

1. Revenues per share
2. Cash flow per share
3. Earnings per share
4. Dividends declared per share
5. Capital spending per share
6. Book value per share
7. Common shares outstanding
8. Average annual P/E ratio
9. Relative P/E ratio
10. Average annual dividend yield
11. Revenues
12. Net profit
13. Income tax rate
14. AFUDC % to net profit
15. Long-term debt ratio
16. Common equity ratio
17. Total capital
18. Net plant
19. Percent earned total capital
20. Percent earned net worth
21. Percent earned common equity
22. Percent retained to common equity
23. Percent all dividends to net profit

Tax Financial Statement Benchmarks, published by John Wiley & Sons, provides industry benchmarks from IRS tax return data representing approximately 4 million corporations in the United States. The data are aggregated into 235 industries and industry groups, identified by both SIC and IRS Principal Business Activity (PBA) codes. The corporations in each industry are categorized by asset size into 13 size-classes. Income statement, balance sheet, and operating data are presented in percentage form. There are also profitability, liquidity, leverage, and other financial ratios.

As indicated previously, comparison has become more difficult in recent years as more firms become conglomerates and diversify into many product lines. To counteract this problem, the SEC has implemented line-of-business reporting requirements for companies that must submit their reports to the SEC. These reports are made available to the public. SFAS No. 14 also addresses line-of-business reporting requirements. Such reporting requirements ease the analysis problem created by conglomerates but cannot eliminate it because the entity must decide how to allocate administrative and joint costs.

If industry figures are unavailable or if comparison with a competitor is desired, another firm's statements may be analyzed. Remember, however, that the other firm is not necessarily good or bad, nor does it represent a norm or standard for its industry.

Alternative accounting methods are acceptable in many situations. Since identical companies may use different valuation or expense methods, read statements and footnotes carefully to determine if the statements are reasonably comparable.

Ideally, the use of all types of comparison would be best. Using trend analysis, industry averages, and comparisons with a major competitor will give support to findings and will provide a concrete basis for analysis.

In analyzing ratios, the analyst will sometimes encounter negative profit figures. *Analysis of ratios that have negative numerators or denominators is meaningless, and the negative sign of the ratio should simply be noted.*

Caution in Using Industry Averages

Financial analysis requires judgment decisions on the part of the analyst. Users of financial statements must be careful not to place complete confidence in ratios or comparisons.

Remember that ratios are simply fractions with a numerator (top) and a denominator (bottom). There are as many for financial analysis as there are pairs of figures. There is no set group, nor is a particular ratio always computed using the same figures. Even the industry ratio formulas vary from source to source. Adequate detailed disclosure of how the industry ratios are computed is often lacking. Major problems can result from analyzing a firm according to the recommendations of a book and then making comparisons to industry ratios that may have been computed differently.

The use of different accounting methods causes a problem. Since identical firms may use different valuation or revenue recognition methods, read statements and footnotes carefully to determine the degree of comparability between statements. Trend analysis for each firm, however, will usually be meaningful. Industry averages group firms that use different accounting principles.

Different year-ends can also produce different results. Consider the difference in the inventory of two toy stores if one ends November 30 and the other ends December 31. The ratios of firms with differing year-ends are all grouped together in industry averages.

Firms with differing financial policies might be included in the same industry average. Possibly capital-intensive firms are grouped with labor-intensive companies. Firms with large amounts of debt may be included in the same average as firms that prefer to avoid the risk of debt.

Some industry averages come from small samples that may not be representative of the industry. An extreme statement, such as one containing a large loss, can also distort industry data.

Ratios may have alternative forms of computation. In comparing one year to the next, one firm to another, or a company to its industry, meaningful analysis requires that the ratios be computed using the same formula. For example, Robert Morris computes income ratios before tax; Dun & Bradstreet profit figures are after tax. The analyst should compute the enterprise ratios on the same basis as is used for industry comparisons, but this is often not possible.

Finally, ratios are not absolute norms. They are general guidelines to be combined with other methods in formulating an evaluation of the financial condition of a firm. Despite the problems with using ratios, they can be very informative if reasonably used.

**RELATIVE SIZE
OF FIRM**

Comparisons of firms of different sizes may be more difficult than comparison of firms of equal size. For example, larger firms often have access to wider and more sophisticated capital markets, can buy in large quantities, and service wider markets. Ratios and common-size analysis help to eliminate some of the problems related to the use of absolute numbers.

Be aware of the different sizes of firms under comparison. These differences can be seen by looking at relative sales, assets, or profit sizes. Investment services such as *Value Line* often make available another meaningful figure—percent of market.

**OTHER LIBRARY
SOURCES**

The typical business library has many sources of information relating to a particular company, industry, and product. Some of these sources are described here to aid you in your search for information about a company, its industry, and its products.

Standard & Poor's Reports

Standard & Poor's Reports covers companies on the New York Stock Exchange, American Stock Exchange, over-the-counter companies, and regional exchanges. Arranged alphabetically by stock exchange, they contain a brief narrative analysis of companies regularly traded and provide key financial data. Company information is updated four times per year on a rotating basis.

Standard & Poor's Register of Corporations, Directors, and Executives

This annual source is arranged in three volumes. Volume 1 contains an alphabetical list of approximately 55,000 corporations, including such data as ZIP codes, telephone numbers, and functions of officers, directors, and other principals.

Volume 2 contains an alphabetical list of individuals serving as officers, directors, trustees, partners, and so on. It provides such data as principal business affiliations, business address, and residence address.

Volume 3 contains seven sections:

- *Section 1*—Explains the construction and use of the SIC code numbers and lists these numbers by major groups and by alphabetical and numerical division of major groups.
- *Section 2*—Lists corporations under the four-digit standard industrial classification codes, which are arranged in numerical order.
- *Section 3*—Lists companies geographically by states and by major cities.
- *Section 4*—Lists and cross-references subsidiaries, divisions, and affiliates in alphabetical sequence and links them to their ultimate parent company listed in Volume 1.
- *Section 5*—Lists the deaths of which publishers have been notified in the past year.
- *Section 6*—Lists individuals whose names appear in the *Register* for the first time.
- *Section 7*—Lists the companies appearing in the *Register* for the first time.

Standard & Poor's Analyst's Handbook

This source contains selected income account and balance sheet items and related ratios as applied to the Standard & Poor's industry group stock price indexes. The progress of a

given company may possibly be compared with a composite of its industry groups. Brief monthly updates for selected industries supplement the annual editions of the handbook.

Standard & Poor's Corporation Records

This source provides background information and detailed financial statistics on U.S. corporations, with extensive coverage for some corporations. Historical information is arranged in a multivalue section separate from the "Daily News" section. The contents and the index are updated throughout the year.

America's Corporate Families:TM The Billion Dollar Directory®

The directory listings include 9,000 parent companies that have \$500,000 or more of net worth, at least one subsidiary, and at least two principal business locations. Corporate family listings are alphabetical, geographical, and by SIC classification. This annual directory provides a cross-reference index of divisions, subsidiaries, and ultimate parent companies, as well as such data as lines of business and telephone numbers of parent and subsidiary companies.

Million Dollar Directory®

This directory provides information on more than 160,000 U.S. companies with a net worth of over \$500,000. Company listings are shown alphabetically, geographically, and by SIC classification. Data include lines of business, accounting firm, legal counsel, stock ticker symbol, and names of officers.

Directory of Corporate Affiliations

This directory gives an in-depth view of companies and their divisions, subsidiaries, and affiliates. It contains an alphabetical index, geographical index, and SIC classifications. The parent company listing consists of address, telephone number, stock ticker symbol, stock exchange(s), approximate sales, number of employees, type of business, and top corporate officers.

Thomas Register of American Manufacturers

This is a comprehensive "yellow pages" of products and services, as follows:

- *Red section*—Products and services listed alphabetically.
- *Yellow section*—Company profiles with addresses, ZIP codes, telephone numbers, branch officials, asset ratings, and company officials.
- *Blue section*—Catalogs of companies; cross-referenced to the red volumes.

Moody's Investors' Services

Moody's Industrial Manual examines corporations with detailed summary coverage of the history, principal products and services, and detailed financial tables. They are color-coded and arranged in major industry/service groups: Bank and finance, Industrial, OTC industrial, OTC unlisted, International, Municipal government, Public utility, and Transportation.

Also available from Moody's are the following:

- *Moody's Bond Record*
- *Moody's Bond Survey*
- *Moody's Dividend Record*
- *Moody's Handbook of Common Stock*

Securities Owner's Stock Guide

This monthly guide, published by Standard & Poor's, covers over 5,300 common and preferred stocks. It contains trading activity, price range, dividends, and so on for companies traded on the New York Stock Exchange, American Stock Exchange, over the counter, and regional exchanges. The information is displayed with numerous abbreviations and footnotes, in order to fit concisely into one single line, for each publicly traded security.

Wall Street Transcript

The Wall Street Transcript newspaper provides access to corporate management presentations to financial analysts and brokerage house assessment reports of corporations and industries. Each issue contains a cumulative index for the current quarter. Each issue also has a reference to the cumulative index for a relatively long period of time, such as for the prior year.

The Wall Street Journal Index

This index provides abstracts and comprehensive indexing of all articles in the 3-Star Eastern Edition of *The Wall Street Journal*. Some of the items included are feature articles, editorials, news items, and earnings reports.

The Official Index to The Financial Times

This index is compiled from the final London editions of *The Financial Times* and *The Weekend Financial Times*. It can be used to locate reports and articles in these publications.

Predicasts F & S Index

This family of indexes, previously known as the Funk & Scott Index of Corporations and Industries, includes:

- *Predicasts F & S Index—United States*
- *Predicasts F & S Index—Europe*
- *Predicasts F & S Index—International*

This comprehensive family of indexes to articles on corporations and industries issued monthly covers 1965 to the present. Each listing includes business periodicals, newspapers, government documents, and investment services reports. The material is arranged by company and industry by SIC code number.

Reference Book of Corporate Managements

The four volumes contain profile information on over 200,000 principal corporate officers in over 12,000 companies. The information includes the year of birth, education,

military service, present business position, and previous positions. Names and titles of other officers, as well as names of directors who are not officers, are also provided.

Compact Disclosure

This database of textual and financial information on approximately 14,000 public companies can be accessed by a menu-driven screen. The information is taken from annual and periodic reports filed by each company with the Securities and Exchange Commission. A full printout for a company is approximately 14 pages. It includes the major financial statements (annual and quarterly), many financial ratios for the prior three years, institutional holdings, ownership by insiders, president's letter, and financial footnotes.

A company can be accessed by keying its name or ticker symbol. In addition, the system can be searched by type of business (SIC), by geographic area (state, city, ZIP code, or telephone area code), stock price financial ratios, and much more.

THE USERS OF FINANCIAL STATEMENTS

The financial statements are prepared for a group of diversified users. Users of financial data have their own objectives in analysis.

Management, an obvious user of financial data, must analyze the data from the viewpoints of both investors and creditors. Management must be concerned about the current position of the entity to meet its obligations, as well as the future earning prospects of the firm.

Management is interested in the financial structure of the entity in order to determine a proper mix of short-term debt, long-term debt, and equity from owners. Also of interest is the asset structure of the entity: the combination of cash, inventory, receivables, investments, and fixed assets.

Management must guide the entity toward sound short-term and long-term financial policies and also earn a profit. For example, liquidity and profitability are competitive since the most highly liquid assets (cash and marketable securities) are usually the least profitable. It does the entity little good to be guided toward a maximum profitability goal if resources are not available to meet current obligations. The entity would soon find itself in bankruptcy as creditors cut off lines of credit and demand payment. Similarly, management must utilize resources properly to obtain a reasonable return.

The investing public, another category of users, is interested in specific types of analysis. Investors are concerned with the financial position of the entity and its ability to earn future profits. The investor uses an analysis of past trends and the current position of the entity to project the future prospects of the entity.

Credit grantors are interested in the financial statements of the entity. Pure credit grantors obtain a limited return from extending credit: a fixed rate of interest (as in the case of banks) or the profit on the merchandise or services provided (as in the case of suppliers). Since these rewards are limited and the possibility exists that the principal will not be repaid, credit grantors tend to be conservative in extending credit.

The same principle applies to suppliers that extend credit. If merchandise with a 20% markup is sold on credit, it takes five successful sales of the same amount to make up for one sale not collected. In addition, the creditor considers the cost of the funds when extending credit. Extending credit really amounts to financing the entity.

A difference exists between the objectives of short-term grantors of credit and those of long-term grantors. The short-term creditor can look primarily to current resources that appear on the financial statements in order to determine if credit should be extended. Long-term creditors must usually look to the future prospects of earnings in order to be repaid.

For example, if bonds are issued that are to be repaid in 30 years, the current resources of the entity will not be an indication of its ability to meet this obligation. The repayment for this obligation will come from future earnings. Thus, the objectives of financial analysis by credit grantors will vary, based on such factors as the term of the credit and the purpose. Profitability of the entity may not be a major consideration, as long as the resources for repayment can be projected.

The financial structure of the entity is of interest to creditors because the amount of equity capital in relation to debt indicates the risk that the owners bear in relation to the creditors. The equity capital provides creditors with a cushion against loss. When this equity cushion is small, creditors are bearing the risk of the entity.

Many other parties are interested in analyzing financial statements. Unions that represent employees are interested in the ability of the entity to grant wage increases and fringe benefits, such as pension plans. The government also has an interest in analyzing financial statements for tax purposes and to ensure compliance with antitrust laws.

SUMMARY

Financial analysis consists of the quantitative and qualitative aspects of measuring the relative financial position among firms and among industries. Analysis can be done in different ways, depending on the type of firm or industry and the specific needs of the user. Financial statements will vary by size of firm and among industries.

QUESTIONS

- Q 5-1.** What is a ratio? How do ratios help to alleviate the problems of size differences among firms?
- Q 5-2.** What does each of the following categories of ratios attempt to measure? (a) liquidity; (b) long-term borrowing capacity; (c) profitability. Name a group of users who might be interested in each category.
- Q 5-3.** Brown Company earned 5.5% on sales in 2000. What further information would be needed to evaluate this result?
- Q 5-4.** Differentiate between absolute and percentage changes. Which is generally a better measure of change? Why?
- Q 5-5.** Differentiate between horizontal and vertical analysis. Using sales as a component for each type, give an example that explains the difference.
- Q 5-6.** What is trend analysis? Can it be used for ratios? For absolute figures?
- Q 5-7.** Suppose you are comparing two firms within an industry. One is large and the other is small. Will relative or absolute numbers be of more value in each case? What kinds of statistics can help evaluate relative size?
- Q 5-8.** Are managers the only users of financial reports? Discuss.
- Q 5-9.** Briefly describe how each of these groups might use financial reports: managers, investors, and creditors.
- Q 5-10.** Refer to Exhibits 5-3, 5-4, and 5-5 to answer the following questions:
a. For each of the firms illustrated, what is the single largest asset category? Does this seem typical of this type of firm?

- b. Which of the three firms has the largest amount in current assets in relation to the amount in current liabilities? Does this seem logical? Explain.
- Q 5-11.** Differentiate between the types of inventory typically held by a retailing firm and a manufacturing firm.
- Q 5-12.** Sometimes manufacturing firms have only raw materials and finished goods listed on their balance sheets. This is true of Avon Products, a manufacturer of cosmetics, and it might be true of food canners also. Explain the absence of work in process.
- Q 5-13.** Using these results for a given ratio, compute the median, upper quartile, and lower quartile. 14%, 13.5% 13%, 11.8%, 10.5% 9.5% 9.3% 9%, 7%.
- Q 5-14.** You want profile information on the president of a company. Which reference book should be consulted?
- Q 5-15.** Answer the following concerning the *Almanac of Business and Industrial Financial Ratios*:
- This service presents statistics for how many size categories of firms?
 - Indicate the industries covered by this service.
- Q 5-16.** Using the *Department of Commerce Quarterly Financial Report* discussion in the text, answer the following:
- Could we determine the percentage of total sales income after income taxes that a particular firm had in relation to the total industry sales? Explain.
 - Could we determine the percentage of total assets that a particular firm had in relation to the total industry? Explain.
- Q 5-17.** What is the SIC number? How can it aid in the search of a company, industry, or product?
- Q 5-18.** You want to know if there have been any reported deaths of officers of a company you are researching. What library source will aid you in your search?
- Q 5-19.** You want to compare the progress of a given company with a composite of that company's industry group for selected income statement and balance sheet items. Which library source will aid you?
- Q 5-20.** You are considering buying the stock of a large publicly traded company. You need an opinion of timeliness of the industry and the company. Which publication could you use?
- Q 5-21.** You want to know the trading activity (volume of its stock sold) for a company. Which service provides this information?
- Q 5-22.** You need to research articles on a company that you are analyzing. Which source will aid you?
- Q 5-23.** You read in your local newspaper that an executive of a company that you are interested in is giving a presentation to financial analysts in New York. How could you learn the content of the presentation without getting in touch with the company?
- Q 5-24.** You would like to determine the principal business affiliations of the president of a company you are analyzing. Which reference service may have this information?
- Q 5-25.** Indicate some sources that contain an appraisal of the outlook for particular industries.
- Q 5-26.** You want to determine if there is a fairly recent brokerage house assessment report on a company that you are analyzing. Which reference may aid you?

To the Net



- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Novell. Select the 10-K filed on January 29, 1999. For the following partial consolidated statements of operations, compute horizontal and vertical analysis. Use October 26, 1996, for the base in the horizontal analysis. Use net sales for the vertical analysis. Comment on the results.

	Fiscal Year Ended		
	October 31, 1998	October 31, 1997	October 26, 1996
Net sales			
Cost of sales			
Gross profit			
Operating expenses			
Sales and marketing			
Product development			
General and administrative			
Restructuring charges			
Total operating expenses			

- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Kmart. Select the 10-K filed on April 15, 1999.
 - What is the standard industrial classification for Kmart?
 - Notice that the year end is January 27, 1999. What type of year end does this represent?
 - On the consolidated statements of operations, what is the major expenditure? Do you consider this normal for this type of business?
 - On the consolidated balance sheets, what are the two largest assets? Do you consider this normal for this type of business?
 - On the consolidated balance sheets, what is the largest liability? Do you consider this normal for this type of business?

PROBLEMS

P 5-1. The Gap Inc. balance sheets from its 1998 annual report are presented in Exhibit 5-3.

- Required**
- Using the balance sheets, prepare a vertical common-size analysis for 1999 and 1998. Use total assets as a base.
 - Using the balance sheets, prepare a horizontal common-size analysis for 1999 and 1998. Use 1998 as the base.
 - Comment on significant trends that appear in (a) and (b).

P 5-2. The Gap Inc. statements of earnings from its 1998 annual report is presented in Exhibit 5-3.

- Required**
- Using the income statement, prepare a vertical common-size analysis for 1999, 1998, and 1997. Use net sales as a base.
 - Using the income statement, prepare a horizontal common-size analysis for 1999, 1998, and 1997. Use 1997 as the base.
 - Comment on significant trends that appear in (a) and (b).

P 5-3. The Interpublic Group of Companies balance sheet from its 1998 annual report is presented in Exhibit 5-4.

- Required**
- Using the balance sheet, prepare a vertical common-size analysis for 1998 and 1997. Use total assets as a base.
 - Using the balance sheet, prepare a horizontal common-size analysis for 1998 and 1997. Use 1997 as the base.
 - Comment on significant trends that appear in (a) and (b).

P 5-4. The Interpublic Group of Companies income statement from its 1998 annual report is presented in Exhibit 5-4.

- Required**
- Using the income statement, prepare a vertical common-size analysis for 1998, 1997, and 1996. Use gross income as the base.
 - Using the income statement, prepare a horizontal common-size analysis for 1998, 1997, and 1996. Use 1996 as the base.
 - Comment on significant trends that appear in (a) and (b).

P5-5.

Item	Year 1	Year 2	Change Analysis	
			Amount	Percent
1	—	3,000		
2	6,000	(4,000)		
3	(7,000)	4,000		
4	4,000	—		
5	8,000	10,000		

- Required** Determine the absolute change and the percentage for these items.

P5-6.

Item	Year 1	Year 2	Change Analysis	
			Amount	Percent
1	4,000	—		
2	5,000	(3,000)		
3	(9,000)	2,000		
4	7,000	—		
5	—	15,000		

- Required** Determine the absolute change and the percentage for these items.

CHAPTER

6

LIQUIDITY OF SHORT-TERM ASSETS; RELATED DEBT-PAYING ABILITY

AN ENTITY'S ABILITY TO MAINTAIN ITS SHORT-term debt-paying ability is important to all users of financial statements. If the entity cannot maintain a short-term debt-paying ability, it will not be able to maintain a long-term debt-paying ability, nor will it be able to satisfy its stockholders. Even a very profitable entity will find itself bankrupt if it fails to meet its obligations to short-term creditors. The ability to pay current obligations when due is also related to the cash-generating ability of the firm. This will be discussed in Chapter 10.

When analyzing the short-term debt-paying ability of the firm, we find a close relationship between the current assets and the current liabilities. Generally, the current liabilities will be paid with cash generated from the current assets. As previously indicated, the profitability of the firm does not determine the short-term debt-paying ability. In other words, using accrual accounting, the entity may report very high profits but may not have the ability to pay its current bills because it lacks available funds. If the entity

reports a loss, it may still be able to pay short-term obligations.

This chapter suggests procedures for analyzing short-term assets and the short-term debt-paying ability of an entity. The procedures require an understanding of current assets, current liabilities, and the notes to financial statements.

This chapter also includes a detailed discussion of four very important assets—cash, marketable securities, accounts receivable, and inventory. Accounts receivable and inventory, two critical assets, often substantially influence the liquidity and profitability of a firm.

Chapters 6 through 10 will extensively use the 1999 financial statements of Nike, Inc. (Nike) to illustrate the technique of financial analysis. This will aid readers in viewing financial analysis as a whole. The Nike, Inc. 1999 financial statements are presented following Chapter 10. With the Nike statements is an analysis that summarizes and expands on the Nike analysis in Chapters 6 through 10.

**CURRENT
ASSETS,
CURRENT
LIABILITIES,
AND THE
OPERATING
CYCLE**

Current assets (1) are in the form of cash, (2) will be realized in cash, or (3) conserve the use of cash *within the operating cycle of a business or one year, whichever is longer*.¹

The five categories of assets usually found in current assets, listed in their order of liquidity, include cash, marketable securities, receivables, inventories, and prepayments. Other assets may also be classified in current assets, such as assets held for sale. This chapter will examine in detail each type of current asset.

The **operating cycle** for a company is the time period between the acquisition of goods and the final cash realization resulting from sales and subsequent collections. For example, a food store purchases inventory and then sells the inventory for cash. The relatively short time that the inventory remains an asset of the food store represents a very short operating cycle. In another example, a car manufacturer purchases materials and then uses labor and overhead to convert these materials into a finished car. A dealer buys the car on credit and then pays the manufacturer. Compared to the food store, the car manufacturer has a much longer operating cycle, but it is still less than a year. Only a few businesses have an operating cycle longer than a year. For example, if a business is involved in selling resort property, the average time period that the property is held before sale, plus the average collection period, is typically longer than a year.

Cash

Cash is a medium of exchange that a bank will accept for deposit and a creditor will accept for payment. To be classified as a current asset, cash must be free from any restrictions that would prevent its deposit or use to pay creditors classified as current. If restricted for specific short-term creditors, many firms still classify this cash under current assets, but they disclose the restrictions. Cash restricted for short-term creditors should be eliminated along with the related amount of short-term debt when determining the short-term debt-paying ability. Cash should be available to pay general short-term creditors to be considered as part of the firm's short-term debt-paying ability.

It has become common for banks to require a portion of any loan to remain on deposit in the bank for the duration of the loan period. These deposits, termed **compensating balances**, reduce the amount of cash available to the borrower to meet obligations, and they increase the borrower's effective interest rate.

Compensating balances against short-term borrowings are separately stated in the current asset section or footnoted. Compensating balances for long-term borrowings are separately stated as noncurrent assets under either investments or other assets.

The cash account on the balance sheet is usually entitled *cash, cash and equivalents*, or *cash and certificates of deposit*. The cash classification typically includes currency and unrestricted funds on deposit with a bank.

There are two major problems encountered when analyzing a current asset: determining a fair valuation for the asset and determining the liquidity of the asset. These problems apply to the cash asset only when it has been restricted. Thus, it is usually a simple matter to decide on the amount of cash to use when determining the short-term debt-paying ability of an entity.

Marketable Securities

The business entity has varying cash needs throughout the year. Because an inferred cost arises from keeping money available, management does not want to keep all of the entity's cash needs in the form of cash throughout the year. The available alternative turns

some of the cash into productive use through short-term investments (marketable securities), which can be converted into cash as the need arises.

To qualify as a **marketable security**, the investment must be readily marketable, and it must be the intent of management to convert the investment to cash within the current operating cycle or one year, whichever is longer. The key element of this test is **managerial intent**.

It is to management's advantage to show investments under marketable securities, instead of long-term investments, because this classification improves the liquidity appearance of the firm. When the same securities are carried as marketable securities year after year, they are likely held for a business purpose. For example, the other company may be a major supplier or customer of the firm being analyzed. The firm would not want to sell these securities to pay short-term creditors. Therefore, to be conservative, it is better to reclassify them as investments for analysis purposes.

Investments classified as marketable securities should be temporary. Examples of marketable securities include treasury bills, short-term notes of corporations, government bonds, corporate bonds, preferred stock, and common stock. Investments in preferred stock and common stock are referred to as *marketable equity securities*.

Debt and equity securities are to be carried at fair value. An exception is that debt securities can be carried at amortized cost if classified as held-to-maturity securities, but these debt securities would be classified under investments (not classified under current assets).²

A security's liquidity must be determined in order for it to be classified as a marketable security. The analyst must assume that securities classified as marketable securities are readily marketable.

Exhibit 6-1 presents the marketable securities on the 1998 annual report of Coachmen Industries. It discloses the detail of the marketable securities account. Many companies do not disclose this detail.

Receivables

An entity usually has a number of claims to future inflows of cash. These claims are usually classified as **accounts receivable** and **notes receivable** on the financial statements. The primary claim that most entities have comes from the selling of merchandise or services on account to customers, referred to as *trade receivables*, with the customer promising to pay within a limited period of time, such as 30 days. Other claims may be from sources such as loans to employees or a federal tax refund.

Claims from customers, usually in the form of accounts receivable, neither bear interest nor involve claims against specific resources of the customer. In some cases, however, the customer signs a note instead of being granted the privilege of having an open account. Usually, the interest-bearing note will be for a longer period of time than an account receivable. In some cases, a customer who does not pay an account receivable when due signs a *note receivable* in place of the account receivable.

The common characteristic of receivables is that the company expects to receive cash some time in the future. This causes two valuation problems. First, a period of time must pass before the receivable can be collected, so the entity incurs costs for the use of these funds. Second, collection might not be made.

The valuation problem from waiting to collect is *ignored in the valuation of receivables and of notes classified as current assets* because of the short waiting period and the immaterial difference in value. The waiting period problem is not ignored if the receivable or note is long-term and classified as an investment. The stipulated rate of interest is presumed to be fair, except when:

EXHIBIT 6-1
COACHMEN INDUSTRIES, INC.
Marketable Securities (Short-Term Investments)

Consolidated Balance Sheets (In Part) Assets (In Part)	December 31,	
	1998	1997
CURRENT ASSETS		
Cash and temporary cash investments	\$23,009,502	\$71,427,918
Marketable securities	31,279,433	15,852,718
Trade receivables, less allowance for doubtful receivables 1998 - \$768,000 and 1997 - \$1,354,00	27,584,551	25,212,595
Other receivables	1,838,171	2,980,257
Refundable income taxes	3,741,000	1,761,000
Inventories	93,349,453	68,416,006
Prepaid expenses and other	1,341,175	1,247,973
Deferred income taxes	3,268,000	3,040,000
Total current assets	<u>185,411,285</u>	<u>189,938,467</u>

NOTE 1 (IN PART)

Marketable Securities – Marketable securities consist of public utility preferred stocks which pay quarterly cash dividends. The preferred stocks are part of a dividend capture program whereby preferred stocks are bought and held for the purpose of capturing the quarterly preferred dividend. The securities are then sold and the proceeds reinvested again in preferred stocks. The Company's dividend capture program is a tax planning strategy to maximize dividend income which is 70% excludable from taxable income under the Internal Revenue Code and related state tax provisions. As a result, a dividend capture program generally provides a higher after-tax return than other short-term investment alternatives. The Company accounts for its marketable securities under Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities," which requires certain securities to be categorized

as either trading, available-for-sale or held-to-maturity. The Company's marketable securities at December 31, 1998 and 1997 are classified as available-for-sale and, accordingly, are carried at fair value with net unrealized appreciation (depreciation) recorded as a separate component of shareholders' equity. At December 31, 1998 and 1997, the cost of marketable securities approximated their fair value and, accordingly, the Company recognized no unrealized appreciation (depreciation). The cost of securities sold is determined by the specific identification method.

The Company utilizes U.S. Treasury bond futures options as protection against the impact of increases in interest rates on the fair value of the Company's investments in marketable securities (fixed rate preferred stocks). The options are marked to market with market value changes recognized in the statements of income in the period of change.

Investment income consists of the following:

	1998	1997	1996
Interest income	\$3,184,394	\$4,602,030	\$1,615,442
Dividend income on preferred stocks	2,548,781	567,993	—
Net realized gains (losses) on sale of preferred stocks	(119,806)	206,569	—
Net realized losses on closed U.S. Treasury bond futures options	(596,691)	(401,232)	—
Unrealized losses on open U.S. Treasury bond futures options	(185,576)	—	—
Total	<u>\$4,831,102</u>	<u>\$4,975,360</u>	<u>\$1,615,442</u>

1. No interest is stated.
2. The stated rate of interest is clearly unreasonable.
3. The face value of the note is materially different from the cash sales price of the property, goods, or services, or the market value of the note at the date of the transaction.³

Under the condition that the face amount of the note does not represent the fair value of the consideration exchanged, *the note is recorded as a present value amount on the date of the original transaction*. The note is recorded at less than (or more than) the face amount, taking into consideration the time value of money. The difference between the recorded amount and the face amount is subsequently amortized as interest income (note receivable) or as interest expense (note payable).

The second problem in valuing receivables or notes is that collection may not be made. Usually, an allowance provides for estimated uncollectible accounts. Estimated losses must be accrued against income, and the impairment of the asset must be recognized (or liability recorded) under the following conditions:

1. Information available prior to the issuance of the financial statements indicates that it is probable that an asset has been impaired, or a liability has been incurred at the date of the financial statements.
2. The amount of the loss can be reasonably estimated.⁴

Both of these conditions are normally met with respect to the uncollectibility of receivables, and the amount subject to being uncollectible is usually material. Thus, in most cases, the company must estimate bad debt expense and indicate the impairment of the receivable. The expense is placed on the income statement, and the impairment of the receivable is disclosed by the use of an account, **allowance for doubtful accounts**, which is subtracted from the gross receivable account. Later, a specific customer's account, identified as being uncollectible, is charged against allowance for doubtful accounts and the gross receivable account on the balance sheet. (This does not mean that the firm will stop efforts to collect.)

It is difficult for the firm to estimate the collectibility of any individual receivable, but when it considers all of the receivables in setting up the allowance, the total estimate should be reasonably accurate. The problem of collection applies to each type of receivable, including notes. The company normally provides for only one allowance account as a matter of convenience, but it considers possible collection problems with all types of receivables and notes when determining the allowance account.

The impairment of receivables may come from causes other than uncollectibility, such as cash discounts allowed, sales returns, and allowances given. Usually, the company considers all of the causes that impair receivables in allowance for doubtful accounts, rather than setting up a separate allowance account for each cause.

Nike presented its receivable account for May 31, 1999, and 1998 as follows:

	1999	1998
Accounts receivable, less allowance of \$73,200,000 in 1999 and \$71,400,000 in 1998	\$1,540,100,000	\$1,674,400,000

This indicates that net receivables were \$1,540,100,000 at May 31, 1999, and \$1,674,400,000 at May 31, 1998, after subtracting allowances for doubtful accounts.

The use of the allowance for doubtful accounts approach results in the bad debt expense being charged to the period of sale, thus matching this expense with its related revenue. It also results in the recognition of the impairment of the asset. The later charge-off of a specified account receivable does not influence the income statement or net receivables on the balance sheet. The charge-off reduces accounts receivable and allowance for doubtful accounts.

When both conditions specified are not met, or the receivables are immaterial, the entity recognizes bad debt expense using the direct write-off method. With this method, bad debt expense is recognized when a specific customer's account is identified as being

uncollectible. At this time, the bad debt expense is recognized on the income statement, and gross accounts receivable is decreased on the balance sheet. This method recognizes the bad debt expense in the same period for both the income statement and the tax return.

The direct write-off method frequently results in the bad debt expense being recognized in the year subsequent to the sale, and thus does not result in a proper matching of expense with revenue. This method reports gross receivables, which does not recognize the impairment of the asset from uncollectibility.

When a company has receivables that are due beyond one year (or accounting cycle) from the balance sheet date, and when it is the industry practice to include these receivables in current assets, they are included in current assets even though they do not technically meet the guidelines to qualify as a current asset. The company should disclose the fact that these receivables do not meet the technical guidelines for current assets. Exhibit 6-2 indicates the disclosure made by Snap On, Inc. in its 1998 annual report.

When a company has receivables classified as current, but due later than one year from the balance sheet date, the analyst should make special note of this when making comparisons with competitors. If competitors do not have the same type of receivables, the receivables may not be comparable. For example, a retail company that has substantial installment receivables, with many of them over a year from their due date, is not comparable to a retail company that does not have installment receivables. Installment receivables are considered to be of lower quality than other receivables because of the length of time needed to collect the installment receivables. More importantly, the company with installment receivables should have high standards when granting credit and should closely monitor its receivables.

Customer concentration can be an important consideration in the quality of receivables. When a large portion of receivables is from a few customers, the firm can be highly dependent on those customers. This information is usually not available in the annual report but will be avail-

EXHIBIT 6-2**SNAP ON, INC.****Receivables Due Beyond One Year****CONSOLIDATED BALANCE SHEETS (IN PART)**

(Amounts in thousands except per share data) Asset (In Part)	January 2, 1999	January 3, 1998
Current assets		
Cash and cash equivalents	\$ 15,041	\$ 25,679
Accounts receivable, less allowance for doubtful accounts of \$29.2 million in 1998 and \$20.6 million in 1997	554,703	539,589
Inventories	375,436	373,155
Prepaid expenses and other assets	134,652	83,286
Total current assets	<u>\$1,079,832</u>	<u>\$1,021,709</u>

NOTE 4 RECEIVABLES (IN PART)

Accounts receivable include installment receivable amounts that are due beyond one year from balance sheet dates. These amounts were approximately \$16.5 million and \$15.6 million at the end of 1998 and 1997. Gross installment receivables amounted to \$176.9 million and \$174.0 million at the end of 1998 and 1997. Of these amounts, \$16.8 million and \$14.6 million represented unearned finance charges at the end of 1998 and 1997.

able in the Form 10-K. Nike's Form 10-K disclosed that "during 1999, 1998 and 1997 revenues derived from one customer represented 10%, 11% and 12% respectively of the company's consolidated revenues." Thus there is a moderate concentration of sales to one customer.

The liquidity of the trade receivables for a company can be examined by making *two computations*. The *first computation* determines the number of days' sales in receivables at the end of the accounting period, and the *second computation* determines the accounts receivable turnover. The turnover figure can be computed to show the number of times per year receivables turn over or to show how many days on the average it takes to collect the receivables.

Days' Sales in Receivables

The number of days' sales in receivables relates the amount of the accounts receivable to the average daily sales on account. For this computation, the accounts receivable amount should include trade notes receivable. Other receivables not related to sales on account should not be included in this computation. Compute the days' sales in receivables as follows:

$$\text{Days' Sales in Receivables} = \frac{\text{Gross Receivables}}{\text{Net Sales} / 365}$$

This formula divides the number of days in a year into net sales on account, and then divides the resulting figure into gross receivables. Exhibit 6-3 presents the computation for Nike at the end of 1999 and 1998. The increase in days' sales in receivables from 66.71 days at the end of 1998 to 67.08 days at the end of 1999 appears to indicate a slight deterioration in the control of receivables. It could also indicate an increase in sales on account late in 1999.

An internal analyst compares days' sales in receivables with the company's credit terms as an indication of how efficiently the company manages its receivables. For example, if the credit term is 30 days, days' sales in receivables should not be materially over 30 days. If days' sales in receivables are materially more than the credit terms, the company has a collection problem. An effort should be made to keep the days' sales in receivables close to the credit terms.

Consider the effect on the quality of receivables from a change in the *credit terms*. Shortening the credit terms indicates that there will be less risk in the collection of future receivables, and a lengthening of the credit terms indicates a greater risk. Credit term information is readily available for internal analysis and may be available in footnotes.

Right of return privileges can also be important to the quality of receivables. Liberal right of return privileges can be a negative factor in the quality of receivables and on sales that have already been recorded. Pay particular attention to any change in the right of return privileges. Right of return privileges can readily be determined for internal analysis, and this information should be available in a footnote if considered to be material.

EXHIBIT 6-3 NIKE, INC.

Days' Sales in Receivables Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Receivables, less allowance for doubtful accounts of \$73.2 in 1999 and \$71.4 in 1998	\$1,540.1	\$1,674.4
Gross receivables (net plus allowance) [A]	1,613.3	1,745.8
Net sales	8,776.9	9,553.1
Average daily sales on account (net sales on account divided by 365) [B]	24.05	26.17
Days' sales in receivable [A ÷ B]	67.08 days	66.71 days

The net sales figure includes collectible and uncollectible accounts. The uncollectible accounts *would not exist* if there were an accurate way, prior to sale, of determining which credit customers would not pay. Firms make an effort to determine credit standing when they approve a customer for credit, but this process does not eliminate uncollectible accounts. Since the net sales figure includes both collectible and uncollectible accounts (gross sales), the comparable receivables figure should include gross receivables, rather than the net receivables figure that remains after the allowance for doubtful accounts is deducted.

The days' sales in receivables gives an indication of the length of time that the receivables have been outstanding at the end of the year. *The indication can be misleading if sales are seasonal and/or the company uses a natural business year.* If the company uses a natural business year for its accounting period, the days' sales in receivables will tend to be understated because the actual sales per day at the end of the year will be low when compared to the average sales per day for the year. The understatement of days' sales in receivables can also be explained by the fact that gross receivables will tend to be below average at that time of year.

The following is an example of how days' sales in receivables will tend to be understated when a company uses a natural business year:

Average sales per day for the entire year	\$ 2,000
Sales per day at the end of the natural business year	1,000
Gross receivables at the end of the year	100,000
Days' sales in receivables based on the formula:	

$$\frac{\$100,000}{\$2,000} = 50 \text{ Days}$$

Days' sales in receivables based on sales per day at the end of the natural business year:

$$\frac{\$100,000}{\$1,000} = 100 \text{ Days}$$

The liquidity of a company that uses a natural business year tends to be overstated. However, the only positive way to know if a company uses a natural business year is through research. The information may not be readily available.

It is unlikely that a company that has a seasonal business will close the accounting year during peak activity. At the peak of the business cycle, company personnel are busy and receivables are likely to be at their highest levels. If a company closed during peak activity, the days' sales in receivables would tend to be overstated and the liquidity understated.

The length of time that the receivables have been outstanding gives an indication of their collectibility. The days' sales in receivables should be compared for several years. A comparison should also be made between the days' sales in receivables for a particular company and comparable figures for other firms in the industry and industry averages. This type of comparison can be made when doing either internal or external analysis.

Assuming that the days' sales in receivables computation is *not* distorted because of a seasonal business and/or the company's use of a natural business year, consider the following reasons to explain why the days' sales in receivables appears to be abnormally high:

1. Sales volume expands materially late in the year.
2. Receivables are uncollectible and should have been written off.
3. The company seasonally dates invoices. (An example would be a toy manufacturer that ships in August with the receivable due at the end of December.)
4. A large portion of receivables are on the installment basis.

Assuming that the distortion is *not* from a seasonal situation or the company's use of a natural business year, the following should be considered as possible reasons why the days' sales in receivables appears to be abnormally low:

1. Sales volume decreases materially late in the year.
2. A material amount of sales are on a cash basis.
3. The company has a factoring arrangement in which a material amount of the receivables is sold. (With a factoring arrangement, the receivables are sold to an outside party.)

When doing external analysis, many of the reasons why the days' sales in receivables is abnormally high or low cannot be determined without access to internal information.

Accounts Receivable Turnover

Another computation, accounts receivable turnover, indicates the liquidity of the receivables. Compute the accounts receivable turnover measured in times per year as follows:

$$\text{Accounts Receivable Turnover} = \frac{\text{Net Sales}}{\text{Average Gross Receivables}}$$

Exhibit 6-4 presents the computation for Nike at the end of 1999 and 1998. The turnover of receivables slightly decreased between 1998 and 1999 from 5.37 times per year to 5.23 times per year. For Nike, this would be a negative trend.

Computing the average gross receivables based on beginning-of-year and end-of-year receivables can be misleading if the business has seasonal fluctuations or if the company uses a natural business year. To avoid problems of seasonal fluctuations or of comparing a company that uses a natural business year with one that uses a calendar year, the monthly balances (or even weekly balances) of accounts receivable should be used in the computation. This is feasible when performing internal analysis, but not when performing external analysis. In the latter case, quarterly figures can be used to help eliminate these problems. If these problems cannot be eliminated, companies not on the same basis should not be compared. The company with the natural business year tends to overstate its accounts receivable turnover, thus overstating its liquidity.

EXHIBIT 6-4 NIKE, INC.

Accounts Receivable Turnover Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net sales [A]	\$8,776.9	\$9,553.1
End-of-year receivables, less allowance for doubtful accounts	1,540.1	1,674.4
Beginning-of-year receivables, less allowance for doubtful accounts	1,674.4	1,754.1
Allowance for doubtful accounts		
End of 1999 \$73.2		
End of 1998 \$71.4		
End of 1997 \$57.2		
Ending gross receivables (net plus allowance)	1,613.3	1,745.8
Beginning gross receivables (net plus allowance)	1,745.8	1,811.3
Average gross receivables [B]	1,679.6	1,778.6
Accounts receivable turnover [A ÷ B]	5.23 times	5.37 times

Accounts Receivable Turnover in Days

The accounts receivable turnover can be expressed in terms of days instead of times per year. Turnover in number of days also gives a comparison with the number of days' sales in the ending receivables. The accounts receivable turnover in days also results in an answer directly related to the firm's credit terms. Compute the accounts receivable turnover in days as follows:

$$\text{Accounts Receivable Turnover in Days} = \frac{\text{Average Gross Receivables}}{\text{Net Sales} / 365}$$

This formula is the same as that for determining number of days' sales in receivables, except that the accounts receivable turnover in days is computed using the average gross receivables. Exhibit 6-5 presents the computation for Nike at the end of 1999 and 1998. Accounts receivable turnover in days increased from 67.96 days in 1998 to 69.84 days in 1999. This would represent a modest negative trend.

The accounts receivable turnover in times per year and days can both be computed by alternative formulas, using Nike's 1999 figures, as follows:

1. Accounts Receivable Turnover in Times per Year

$$\frac{365}{\text{Accounts Receivable Turnover in Days}} = \frac{365}{69.84 \text{ Days}} = 5.23 \text{ Times per Year}$$

2. Accounts Receivable Turnover in Days

$$\frac{365}{\text{Accounts Receivable Turnover in Times Per Year}} = \frac{365}{5.23 \text{ Times per Year}} = 69.79 \text{ Days}$$

The answers obtained for both accounts receivable turnover in number of times per year and accounts receivable turnover in days, using the alternative formulas, may differ slightly from the answers obtained with the previous formulas. The difference is due to rounding.

Credit Sales Versus Cash Sales

A difficulty in computing receivables' liquidity is the problem of credit sales versus cash sales. Net sales includes both credit sales and cash sales. To have a realistic indication of the liquidity of receivables, only the credit sales should be included in the computations. If cash sales are included, the liquidity will be overstated.

The internal analyst determines the credit sales figure and eliminates the problem of

EXHIBIT 6-5 NIKE, INC.

Accounts Receivable Turnover in Days Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net sales	\$8,776.9	\$9,553.1
Average gross receivables [A]	1,679.6	1,778.6
Sales per day (net sales divided by 365) [B]	24.05	26.17
Accounts receivable turnover in days [A ÷ B]	69.84 days	67.96 days

credit sales versus cash sales. The external analyst should be aware of this problem, and not be misled by the liquidity figures. The distinction between cash sales and credit sales is not usually a major problem for the external analyst because certain types of businesses tend to sell only on cash terms, and others sell only on credit terms. For example, a manufacturer usually sells only on credit terms. Some businesses, such as a retail department store, have a mixture of credit sales and cash sales.

In cases of mixed sales, the proportion of credit and cash sales tends to stay rather constant. Therefore, the liquidity figures are comparable (but overstated), enabling the reader to compare figures from period to period as well as figures of similar companies.

Inventories

Inventory is often the most significant asset in determining the short-term debt-paying ability of an entity. Often the inventory account is more than half of the total current assets. Because of the significance of inventories, a special effort should be made to analyze properly this important area.

To be classified as **inventory**, the asset should be for sale in the ordinary course of business, or used or consumed in the production of goods. A trading concern purchases merchandise in a form to sell to customers. Inventories of a trading concern, whether wholesale or retail, usually appear in one inventory account (merchandise inventory). A manufacturing concern produces goods to be sold. Inventories of a manufacturing concern are normally classified in three distinct inventory accounts: inventory available to use in production (raw materials inventory), inventory in production (work in process inventory), and inventory completed (finished goods inventory).

Usually, the determination of the inventory figures is much more difficult in a manufacturing concern than in a trading concern. The manufacturing concern deals with materials, labor, and overhead when determining the inventory figures, while the trading concern only deals with purchased merchandise. The overhead portion of the work in process inventory and the finished goods inventory is often a problem when determining a manufacturer's inventory. The overhead consists of all the costs of the factory other than direct materials and direct labor. From an analysis viewpoint, however, many of the problems of determining the proper inventory value are solved before the entity publishes financial statements.

Inventory is particularly sensitive to changes in business activity, so management must keep inventory in balance with business activity. Failure to do so leads to excessive costs (such as storage cost), production disruptions, and employee layoffs. For example, it is difficult for automobile manufacturers to balance inventories with business activities. When sales decline rapidly, the industry has difficulty adjusting production and the resulting inventory to match the decline. Manufacturers have to use customer incentives, such as price rebates, to get the large inventory buildup back to a manageable level. When business activity increases, inventory shortages can lead to overtime costs. The increase in activity can also lead to cash shortages because of the length of time necessary to acquire inventory, sell the merchandise, and collect receivables.

Inventory quantities and costs may be accounted for using either the **perpetual** or **periodic** system. Using the perpetual system, the company maintains a continuous record of physical quantities in its inventory. When the perpetual system includes costs (versus quantities only), then the company updates its inventory and cost of goods sold continually as purchases and sales take place. (The inventory needs to be verified by a physical count at least once a year.)

Using the periodic system, physical counts are taken periodically, which should be at least once a year. The cost of the ending inventory is determined by attaching costs to the physical quantities on hand based on the cost flow assumption used. The cost of goods sold is calculated by subtracting the ending inventory from the cost of goods available for sale.

Inventory Cost

The most critical problem that most entities face is determining which cost to use, since the cost prices have usually varied over time. If it were practical to determine the specific cost of an item, this would be a good cost figure to use. It would also substantially reduce inventory valuation problems. In practice, because of the different types of inventory items and the constant flow of these items, it is not practical to determine the specific costs. Exceptions to this are large items and/or expensive items. For example, it would be practical to determine the specific cost of a new car in the dealer's showroom or the specific cost of an expensive diamond in a jewelry store. When specific costs are used, this is referred to as the **specific identification** method.

Because the cost of specific items is not usually practical to determine and because other things are considered (such as the income result), companies typically use a cost flow assumption. The most common cost flow assumptions are first-in, first-out (FIFO), last-in, first-out (LIFO), or some average computation. These assumptions can produce substantially different results because of changing prices.

The **FIFO method** assumes that the first inventory acquired is the first sold. This means that the cost of goods sold account consists of beginning inventory and the earliest items purchased. The latest items purchased remain in inventory. These latest costs are fairly representative of the current costs to replace the inventory. If the inventory flows slowly (low turnover), or if there has been substantial inflation, even FIFO may not produce an inventory figure for the balance sheet representative of the replacement cost. Part of the inventory cost of a manufacturing concern consists of overhead, some of which may represent costs from several years prior, such as depreciation on the plant and equipment. Often the costs transferred to cost of goods sold under FIFO are low in relation to current costs, so current costs are not matched against current revenue. During a time of inflation, the resulting profit is overstated. To the extent that inventory does not represent replacement cost, an understatement of the inventory cost occurs.

The **LIFO method** assumes that the costs of the latest items bought or produced are matched against current sales. This assumption usually materially improves the matching of current costs against current revenue, so the resulting profit figure is usually fairly realistic. The first items (and oldest costs) in inventory can materially distort the reported inventory figure in comparison with its replacement cost. A firm that has been on LIFO for many years may have some inventory costs that go back 20 years or more. Because of inflation, the resulting inventory figure will not reflect current replacement costs. LIFO accounting was started in the United States. It is now accepted in a few other countries.

Averaging methods lump the costs to determine a midpoint. An average cost computation for inventories results in an inventory amount and a cost of goods sold amount somewhere between FIFO and LIFO. During times of inflation, the resulting inventory is more than LIFO and less than FIFO. The resulting cost of goods sold is less than LIFO and more than FIFO.

Exhibit 6-6 summarizes the inventory methods used by the 600 companies surveyed for *Accounting Trends & Techniques*. The table covers the years 1997, 1996, 1995, and 1994. (Notice that the number of companies in the table does not add up to 600 because many companies use more than one method.) Exhibit 6-6 indicates that the most popular inventory methods are FIFO and LIFO. It is perceived that LIFO requires more cost to

EXHIBIT 6-6**INVENTORY COST DETERMINATION**

	Number of Companies			
	1997	1996	1995	1994
Methods:				
First-in, first-out (FIFO)	415	417	411	417
Last-in, first-out (LIFO)	326	332	347	351
Average cost	188	181	185	192
Other	32	37	40	42
Use of LIFO:				
All inventories	17	15	14	17
50% or more of inventories	170	178	191	186
Less than 50% of inventories	99	92	88	98
Not determinable	40	47	54	50
Companies using LIFO	326	332	347	351

Source: *Accounting Trends & Techniques*, copyright © 1998 by American Institute of Certified Public Accountants, Inc. p. 178. Reprinted with permission.

administer than FIFO. LIFO is not as popular during times of relatively low inflation. During times of relatively high inflation, LIFO becomes more popular because LIFO matches the latest costs against revenue. LIFO results in tax benefits because of the matching of recent higher costs against revenue.

Exhibit 6-6 includes a summary of companies that use LIFO for all inventories, 50% or more of inventories, less than 50% of inventories, and not determinable. This summary indicates that only a small percentage of companies that use LIFO use it for all of their inventories.

For the following illustration, the periodic system is used with the inventory count at the end of the year. The same answer would result for FIFO and specific identification under either the perpetual or periodic system. A different answer would result for LIFO or average cost, depending on whether a perpetual or periodic system is used.

To illustrate the major costing methods for determining which costs apply to the units remaining in inventory at the end of the year and which costs are allocated to cost of goods sold, consider the following:

Date	Description	Number of Units	Cost per Unit	Total Cost
January 1	Beginning inventory	200	\$ 6	\$ 1,200
March 1	Purchase	1,200	7	8,400
July 1	Purchase	300	9	2,700
October 1	Purchase	400	11	4,400
		<u>2,100</u>		<u>\$16,700</u>

A physical inventory count on December 31 indicates 800 units on hand. There were 2,100 units available during the year, and 800 remained at the end of the year; therefore, 1,300 units were sold.

Four cost assumptions will be used to illustrate the determination of the ending inventory costs and the related cost of goods sold: *first-in, first-out (FIFO)*, *last-in, first-out (LIFO)*, *average cost*, and *specific identification*.

First-In, First-Out Method (FIFO) The cost of ending inventory is found by attaching cost to the physical quantities on hand, based on the FIFO cost flow assumption. The costs of goods sold is calculated by subtracting the ending inventory cost from the cost of goods available for sale.

		<u>Number of Units</u>		<u>Cost Per Unit</u>	<u>Inventory Cost</u>	<u>Cost of Goods Sold</u>
October 1	Purchase	400	@	\$11	\$4,400	
July 1	Purchase	300	@	9	2,700	
March 1	Purchase	100	@	7	700	
	Ending inventory	<u>800</u>			<u>\$7,800</u>	
	Cost of goods sold (\$16,700 – \$7,800)					<u>\$8,900</u>

Last-In, First-Out Method (LIFO) The cost of the ending inventory is found by attaching costs to the physical quantities on hand, based on the LIFO cost flow assumption. The cost of goods sold is calculated by subtracting the ending inventory cost from the cost of goods available for sale.

		<u>Number of Units</u>		<u>Cost Per Unit</u>	<u>Inventory Cost</u>	<u>Cost of Goods Sold</u>
January 1	Beginning inventory	200	@	\$6	\$1,200	
March 1	Purchase	600	@	7	4,200	
	Ending inventory	<u>800</u>			<u>\$5,400</u>	
	Cost of goods sold (\$16,700 – \$5,400)					<u>\$11,300</u>

Average Cost There are several ways to compute the average cost. The weighted average divides the total cost by the total units to determine the average cost per unit. The average cost per unit is multiplied by the inventory quantity to determine inventory cost. The cost of goods sold is calculated by subtracting the ending inventory cost from the cost of goods available for sale.

	<u>Inventory Cost</u>	<u>Cost of Goods Sold</u>
Total cost $\frac{\$16,700}{2,100} = \$7.95$		
Ending inventory (800 × \$7.95)	<u>\$6,360</u>	
Cost of goods sold (\$16,700 – \$6,360)		<u>\$10,340</u>

Specific Identification With the specific identification method, the items in inventory are identified as coming from specific purchases. For this example, assume that the 800 items in inventory can be identified with the March 1 purchase. The cost of goods sold is calculated by subtracting the ending inventory cost from the cost of goods available for sale.

	<u>Inventory Cost</u>	<u>Cost of Goods Sold</u>
Ending inventory (800 × \$7.00)	\$5,600	
Cost of goods sold (\$16,700 – \$5,600)		\$11,100

The difference in results for inventory cost and cost of goods sold from using different inventory methods may be material or immaterial. The major impact on the results usually

comes from the rate of inflation. In general, the higher the inflation rate, the greater the differences between the inventory methods.

Because the inventory amounts can be substantially different under the various cost flow assumptions, the analyst should be cautious when comparing the liquidity of firms that have different inventory cost flow assumptions. Caution is particularly necessary when one of the firms is using the LIFO method because LIFO may prove meaningless with regard to the firm's short-term debt-paying ability. If two firms that have different cost flow assumptions need to be compared, this problem should be kept in mind to avoid being misled by the indicated short-term debt-paying ability.

Since the resulting inventory amount will not be equal to the cost of replacing the inventory, regardless of the cost method, another problem needs to be considered when determining the short-term debt-paying ability of the firm: the inventory must be sold for more than cost in order to realize a profit. To the extent that the inventory is sold for more than cost, the short-term debt-paying ability has been understated. However, the extent of the understatement is materially reduced by several factors. One, the firm will incur substantial selling and administrative costs in addition to the inventory cost, thereby reducing the understatement of liquidity to the resulting net profit. Two, the replacement cost of the inventory usually exceeds the reported inventory cost, even if FIFO is used. Therefore, more funds will be required to replace the inventory sold. This will reduce the future short-term debt-paying ability of the firm. Also, since accountants support the conservatism concept, they would rather have a slight understatement of the short-term debt-paying ability of the firm than an overstatement.

The impact on the entity of the different inventory methods must be understood. Since the extremes in inventory costing are LIFO and FIFO, these methods are summarized below. This summary assumes that the entity faces a period of inflation. The conclusions arrived at in this summary would be reversed if the entity faces a deflationary period.

1. LIFO generally results in a lower profit than does FIFO, as a result of a higher cost of goods sold. This difference can be substantial.
2. Generally, reported profit under LIFO is closer to reality than profit reported under FIFO because the cost of goods sold is closer to replacement cost under LIFO. This is the case under both inflationary and deflationary conditions.
3. FIFO reports a higher inventory ending balance (closer to replacement cost). However, this figure falls short of true replacement cost.
4. The cash flow under LIFO is greater than the cash flow under FIFO because of the difference in tax liability between the two methods, an important reason why a company selects LIFO.
5. Some companies use a periodic inventory system, which updates the inventory in the general ledger once a year. Purchases made late in the year become part of the cost of goods sold under LIFO. If prices have increased during the period, the cost of goods sold will increase and profits will decrease. It is important that accountants inform management that profits will be lower if substantial purchases of inventory are made near the end of the year, and a periodic inventory system is used.
6. A company using LIFO could face a severe tax problem and a severe cash problem if sales reduce or eliminate the amount of inventory normally carried. The reduction in inventory would result in older costs being matched against current sales. This distorts profits on the high side. Because of the high reported profit, income taxes would increase. When the firm needs to replenish the inventory, it has to use additional cash. These problems can be reduced by planning and close supervision of production and purchases. A method called dollar-value LIFO is now frequently used by companies

that use LIFO. The dollar-value LIFO method uses price indexes related to the inventory instead of units and unit costs. With dollar-value LIFO, inventory each period is determined for pools of inventory dollars. (See an intermediate accounting book for a detailed explanation of dollar-value LIFO.)

7. LIFO would probably not be used for inventory that has a high turnover rate because there would be an immaterial difference in the results between LIFO and FIFO.
8. LIFO results in a lower profit figure than does FIFO, the result of a higher cost of goods sold.

A firm using LIFO must disclose a LIFO reserve account, usually in a footnote to the financial statement. Usually, the amount disclosed must be added to inventory to approximate the inventory at FIFO. An inventory at FIFO is usually a reasonable approximation of the current replacement cost of the inventory.

Nike changed its LIFO inventory in the fourth quarter of fiscal 1999 to the FIFO method. This resulted in \$15.0 million being added to other income. To illustrate the LIFO reserve account, we will use Cooper Tire & Rubber (Cooper).

The Cooper note reads, "Under the LIFO method, inventories have been reduced by approximately \$47,897,000 and \$60,627,000 at December 31, 1998 and 1997, respectively, from current cost which would be reported under the first-in, first-out method." The approximate current costs of the Cooper inventory for December 31, 1998 and 1997 follow:

	1998	1997
Balance sheet inventories	\$186,386,000	\$191,684,000
Additional amount in footnote (LIFO reserve)	<u>47,897,000</u>	<u>60,627,000</u>
Approximate current costs	<u>\$234,283,000</u>	<u>\$252,311,000</u>

In Chapter 11, we will examine the possibility of using the adjusted inventory amount to improve the analysis of inventory and of the liquidity of the firm in general.

Lower-of-Cost-or-Market Rule We have reviewed the inventory cost-based measurements of FIFO, LIFO, average, and specific identification. These cost-based measurements are all considered to be historical cost approaches. The accounting profession decided that a "departure from the cost basis of inventory pricing is required when the utility of the goods is no longer as great as its cost." Utility of the goods has been measured through market values. When the market value of inventory falls below cost, it is necessary to write the inventory down to the lower market value. This is known as the **lower-of-cost-or-market (LCM) rule**. Market is defined in terms of current replacement cost, either by purchase or manufacture.

Following the LCM rule, inventories can be written down below cost but never up above cost. The LCM rule provides for the recognition of the loss in utility during the period in which the loss occurs. The LCM rule is consistent with both the matching and the conservatism assumptions.

The LCM rule is used by many countries other than the United States. As indicated, market is defined in the United States in terms of current replacement cost. Market in other countries may be defined differently, such as "net realizable value."

Liquidity of Inventory The analysis of the liquidity of the inventories can be approached in a manner similar to that taken to analyze the liquidity of accounts receivable. One computation determines the *number of days' sales in inventory* at the end of the accounting period,

another computation determines the *inventory turnover in times per year*, and a third determines the *inventory turnover in days*.

Days' Sales in Inventory The number of days' sales in inventory ratio relates the amount of the ending inventory to the average daily cost of goods sold. All of the inventory accounts should be included in the computation. The computation gives an indication of the length of time that it will take to use up the inventory through sales. This can be misleading if sales are seasonal or if the company uses a natural business year.

If the company uses a natural business year for its accounting period, the number of days' sales in inventory will tend to be understated because the average daily cost of goods sold will be at a low point at this time of year. If the days' sales in inventory is understated, the liquidity of the inventory is overstated. The same caution should be observed here as was suggested for determining the liquidity of receivables, when one company uses a natural business year and the other uses a calendar year.

If the company closes its year during peak activity, the number of days' sales in inventory would tend to be overstated and the liquidity would be understated. As indicated with receivables, no good business reason exists for closing the year when activities are at a peak, so this situation should rarely occur.

Compute the number of days' sales in inventory as follows:

$$\text{Days' Sales in Inventory} = \frac{\text{Ending Inventory}}{\text{Cost of Goods Sold} / 365}$$

The formula divides the number of days in a year into the cost of goods sold, and then divides the resulting figure into the ending inventory. Exhibit 6-7 presents the number of days' sales in inventory for Nike for May 31, 1999, and May 31, 1998. The number of days' sales in inventory has decreased from 84.03 days at the end of 1998 to 79.69 days at the end of 1999. This represents a positive trend.

If sales are approximately constant, then the lower the number of days' sales in inventory, the better the inventory control. An inventory buildup can be burdensome if business volume decreases. However, it can be good if business volume expands, since the increased inventory would be available for customers.

The days' sales in inventory estimates the number of days that it will take to sell the current inventory. For several reasons, this estimate may not be very accurate. The cost of goods sold figure is based on last year's sales, divided by the number of days in a year. Sales next year may not be at the same pace as last year. Also, the ending inventory figure may not be representative of the quantity of inventory actually on hand, especially if using LIFO.

EXHIBIT 6-7 NIKE, INC.

Days' Sales in Inventory Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Inventories, end of year [A]	\$1,199.3	\$1,396.6
Cost of goods sold	5,493.5	6,065.5
Average daily cost of goods sold (cost of goods sold divided by 365) [B]	15.05	16.62
Number of days' sales in inventory [A ÷ B]	79.69 days	84.03 days

A seasonal situation, with inventory unusually low or high at the end of the year, would also result in an unrealistic days' sales in inventory computation. Also, a natural business year with low inventory at the end of the year would result in an unrealistic days' sales in inventory. Therefore, the resulting answer should be taken as a rough estimate, but it helps when comparing periods or similar companies.

The number of days' sales in inventory could become too low, resulting in lost sales. A good knowledge of the industry and the company is required to determine if the number of days' sales in inventory is too low.

In some cases, not only will the cost of goods sold not be reported separately, but the figure reported will not be a close approximation of the cost of goods sold. This, of course, presents a problem for the external analyst. In such cases, use net sales in place of the cost of goods sold. The result will not be a realistic number of days' sales in inventory, but it can be useful in comparing periods within one firm and in comparing one firm with another. Using net sales produces a much lower number of days' sales in inventory, which materially overstates the liquidity of the ending inventory. Therefore, only the trend determined from comparing one period with another and one firm with other firms should be taken seriously (not actual absolute figures). When you suspect that the days' sales in inventory computation does not result in a reasonable answer, consider using this ratio only to indicate a trend.

If the dollar figures for inventory and/or the cost of goods sold are not reasonable, the ratios calculated with these figures may be distorted. These distortions can be eliminated to some extent by using quantities rather than dollars in the computation. The use of quantities in the computation may work very well for single products or groups of similar products. It does not work very well for a large diversified inventory because of possible changes in the mix of the inventory. Also, using quantities rather than dollars will not be feasible when using externally published statements.

An example of the use of quantities, instead of dollars, follows:

Ending inventory		50 units	
Cost of goods sold		500 units	
		<u>50</u>	
Day's sales in inventory	=	$500 / 365$	= 36.50 Days

Inventory Turnover Inventory turnover indicates the liquidity of the inventory. This computation is similar to the accounts receivable turnover computation.

The inventory turnover formula follows:

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

Exhibit 6-8 presents the inventory turnover using the 1999 and 1998 figures for Nike. For Nike, the inventory turnover was down in 1999. This represents a negative trend.

Computing the average inventory based on the beginning-of-year and end-of-year inventories can be misleading if the company has seasonal fluctuations or if the company uses a natural business year. The solution to the problem is similar to that used when computing the receivables turnover—that is, use the monthly (or even weekly) balances of inventory. Monthly estimates of inventory are available for internal analysis, but not for external analysis. Quarterly figures may be available for external analysis. If adequate information is not available, avoid comparing a company on a natural business year with a company on a calendar year. The company with the natural business year tends to overstate inventory turnover and therefore the liquidity of its inventory.

EXHIBIT 6-8 NIKE, INC.**Merchandise Inventory Turnover
Year Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Cost of goods sold [A]	\$5,493.5	\$6,065.5
Inventories:		
Beginning of year	1,396.6	1,338.6
End of year	1,199.3	1,396.6
Total	2,595.9	2,735.2
Average inventory [B]	1,297.95	1,367.60
Merchandise inventory turnover [A ÷ B]	4.23 times per year	4.44 times per year

Over time, the difference between the inventory turnover for a firm that uses LIFO and one that uses a method that results in a higher inventory figure can become very material. The LIFO firm will have a much lower inventory and therefore a much higher turnover. Also, it may not be reasonable to compare firms in different industries.

When you suspect that the inventory turnover computation does not result in a reasonable answer because of unrealistic inventory and/or cost of goods sold dollar figures, perform the computation using quantities rather than dollars. As with the days' sales in inventory, this alternative is feasible only when performing internal analysis. (It may not be feasible even for internal analysis because of product line changes.)

Inventory Turnover in Days The inventory turnover figure can be expressed in number of days instead of times per year. This is comparable to the computation that expressed accounts receivable turnover in days. Compute the inventory turnover in days as follows:

$$\text{Inventory Turnover in Days} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold} / 365}$$

This is the same formula for determining the days' sales in inventory, except that it uses the average inventory. Exhibit 6-9 uses the 1999 and 1998 Nike data to compute the inventory turnover in days. There was an increase in inventory turnover in days for Nike in 1999. This represents a positive trend.

EXHIBIT 6-9 NIKE, INC.**Inventory Turnover in Days
Year Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Cost of goods sold	\$5,493.5	\$6,065.5
Average inventory [A]	1,297.95	1,367.60
Sales of inventory per day (cost of goods sold divided by 365) [B]	15.05	16.62
Inventory turnover in days [A ÷ B]	86.24 days	82.29 days

The inventory turnover in days can be used to compute the inventory turnover per year, as follows:

$$\frac{365}{\text{Inventory Turnover in Days}} = \text{Inventory Turnover per Year}$$

Using the 1999 Nike data, the inventory turnover is as follows:

$$\frac{365}{\text{Inventory Turnover in Days}} = \frac{365}{86.24} = 4.23 \text{ Times per Year}$$

Operating Cycle The operating cycle represents the period of time elapsing between the acquisition of goods and the final cash realization resulting from sales and subsequent collections. An approximation of the operating cycle can be determined from the receivables liquidity figures and the inventory liquidity figures. Compute the operating cycle as follows:

$$\text{Operating Cycle} = \frac{\text{Accounts Receivable}}{\text{Turnover in Days}} + \frac{\text{Inventory Turnover}}{\text{in Days}}$$

Exhibit 6-10 uses the 1999 and 1998 Nike data to compute the operating cycle. For Nike, the operating cycle increased, which is a negative trend.

EXHIBIT 6-10 NIKE, INC.

Operating Cycle Year Ended May 31, 1999 and 1998

	1999	1998
Accounts receivable turnover in days [A]	69.84	67.96
Inventory turnover in days [B]	86.24	82.29
Operating cycle [A + B]	156.08	150.25

The estimate of the operating cycle is not realistic if the accounts receivable turnover in days and the inventory turnover in days are not realistic. Remember that the accounts receivable turnover in days and the inventory turnover in days are understated, and thus the liquidity overstated, if the company uses a natural business year and computed the averages based on beginning-of-year and end-of-year data. It should also be remembered that the inventory turnover in days is understated, and the liquidity of the inventory overstated, if the company uses LIFO inventory. Also note that accounts receivable turnover in days is understated, and liquidity of receivables overstated, if the sales figures used included cash and credit sales.

The operating cycle should be helpful when comparing a firm from period to period and when comparing a firm with similar companies. This would be the case, even if understated or overstated, as long as the figures in the computation are comparable.

Related to the operating cycle figure is a computation that indicates how long it will take to realize cash from the ending inventory. This computation consists of combining the number of days' sales in ending receivables and the number of days' sales in ending inventory. The 1999 Nike data produced a days' sales in ending receivables of 67.08 days and a days' sales in ending inventory of 79.69 days, for a total of 146.77 days. In this case, there is a decrease, considering the year-end numbers. Therefore, the receivables and inventory at the end of the year are lower than the receivables and inventory carried during the year. This indicates more liquidity at the end of the year than during the year.

Prepayments

Prepayments consist of unexpired costs for which payment has been made. These current assets are expected to be consumed within the operating cycle or one year, whichever is longer. Prepayments normally represent an immaterial portion of the current assets. Therefore, they have little influence on the short-term debt-paying ability of the firm.

Since prepayments have been paid for and will not generate cash in the future, they differ from other current assets. Prepayments relate to the short-term debt-paying ability of the entity because they conserve the use of cash.

Because of the nature of prepayments, the problems of valuation and liquidity are handled in a simple manner. Valuation is taken as the cost that has been paid. Since a prepayment is a current asset that has been paid for in a relatively short period before the balance sheet date, the cost paid fairly represents the cash used for the prepayment. Except in rare circumstances, a prepayment will not result in a receipt of cash; therefore, no liquidity computation is needed. An example of a circumstance where cash is received would be an insurance policy canceled early. No liquidity computation is possible, even in this case.

Other Current Assets

Current assets other than cash, marketable securities, receivables, inventories, and prepayments may be listed under current assets. These other current assets may be very material in any one year and, unless they are recurring, may distort the firm's liquidity.

These assets will, in management's opinion, be realized in cash or conserve the use of cash within the operating cycle of the business or one year, whichever is longer. Examples of other current assets include property held for sale and advances or deposits, often explained in a footnote.

Current Liabilities

Current liabilities are "obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities."⁵ Thus, the definition of current liabilities correlates with the definition of current assets.

Typical items found in current liabilities include accounts payable, notes payable, accrued wages, accrued taxes, collections received in advance, and current portions of long-term liabilities. The 1999 Nike annual report listed current liabilities as follows:

	(In millions)
Current liabilities:	
Current portion of long-term debt	\$ 1.0
Notes payable	419.1
Accounts payable	373.2
Accrued liabilities	653.6
Total current liabilities	<u>\$1,446.9</u>

For a current liability, liquidity is not a problem, and the valuation problem is immaterial and is disregarded. Theoretically, the valuation of a current liability should be the present value of the required future outlay of money. Since the difference between the present value and the amount that will be paid in the future is immaterial, the current liability is carried at its face value.

**CURRENT
ASSETS
COMPARED
WITH CURRENT
LIABILITIES**

A comparison of current assets with current liabilities gives an indication of the short-term debt-paying ability of the entity. Several comparisons can be made to determine this ability:

1. Working capital
2. Current ratio
3. Acid-test ratio
4. Cash ratio

Working Capital

The working capital of a business is an indication of the short-run solvency of the business. Compute working capital as follows:

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Exhibit 6-11, presents the working capital for Nike at the end of 1999 and 1998. Nike had \$1,818,000,000 in working capital in 1999 and \$1,828,800,000 in working capital in 1998. These figures tend to be understated because some of the current assets, such as inventory, may be understated, based on the book figures.

The inventory as reported may be much less than its replacement cost. The difference between the reported inventory amount and the replacement amount is normally material when the firm is using LIFO inventory. The difference may also be material when using one of the other cost methods.

EXHIBIT 6-11 NIKE, INC.

Working Capital May 31, 1999 and 1998

	1999	1998
	(In millions)	
Current assets [A]	\$3,264.9	\$3,532.6
Current liabilities [B]	1,446.9	1,703.8
Working capital [A – B]	<u>\$1,818.0</u>	<u>\$1,828.8</u>

The current working capital amount should be compared with past amounts to determine if working capital is reasonable. Because the relative size of a firm may be expanding or contracting, comparing working capital of one firm with that of another firm is usually meaningless because of their size differences. If the working capital appears to be out of line, find the reasons by analyzing the individual current asset and current liability accounts.

Current Ratio

Another indicator, the current ratio, determines short-term debt-paying ability and is computed as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Exhibit 6-12 presents the current ratio for Nike at the end of 1999 and 1998. For Nike, the current ratio was 2.26 at the end of 1999 and 2.07 at the end of 1998. This indicates a positive trend considering liquidity.

EXHIBIT 6-12 NIKE, INC.**Current Ratio****May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Current assets [A]	\$3,264.9	\$3,532.6
Current liabilities [B]	\$1,446.9	\$1,703.8
Current ratio [A ÷ B]	2.26	2.07

For many years, the guideline for the minimum current ratio has been 2.00. Until the mid-1960s, the typical firm successfully maintained a current ratio of 2.00 or better. Since that time, the current ratio of many firms has declined to a point below the 2.00 guideline. Currently, many firms are not successful in staying above a current ratio of 2.00. This indicates a decline in the liquidity of many firms. It also could indicate better control of receivables and/or inventory.

A comparison with industry averages should be made to determine the typical current ratio for similar firms. In some industries, a current ratio substantially below 2.00 is adequate, while other industries require a much larger ratio. In general, the shorter the operating cycle, the lower the current ratio. The longer the operating cycle, the higher the current ratio.

A comparison of the firm's current ratio with prior periods, and a comparison with industry averages, will help to determine if the ratio is high or low. These comparisons do not indicate why it is high or low. Possible reasons can be found from an analysis of the individual current asset and current liability accounts. Often, the major reasons for the current ratio being out of line will be found in a detailed analysis of accounts receivable and inventory.

The current ratio is considered to be more indicative of the short-term debt-paying ability than the working capital. Working capital only determines the absolute difference between the current assets and current liabilities. The current ratio shows the relationship between the size of the current assets and the size of the current liabilities, making it feasible to compare the current ratio, for example, between IBM and Intel. A comparison of the working capital of these two firms would be meaningless because IBM is a larger firm than Intel.

LIFO inventory can cause major problems with the current ratio because of the understatement of inventory. The result is an understated current ratio. Extreme caution should be exercised when comparing a firm that uses LIFO and a firm that uses some other costing method.

Before computing the current ratio, the analyst should compute the accounts receivable turnover and the merchandise inventory turnover. These computations enable the analyst to formulate an opinion as to whether liquidity problems exist with receivables and/or inventory. An opinion as to the quality of receivables and inventory should influence the analyst's opinion of the current ratio. If liquidity problems exist with receivables and/or inventory, the current ratio needs to be much higher.

Acid-Test Ratio (Quick Ratio)

The current ratio evaluates an enterprise's overall liquidity position, considering current assets and current liabilities. At times, it is desirable to access a more immediate position than that indicated by the current ratio. The acid-test (or quick) ratio relates the most liquid assets to current liabilities.

Inventory is removed from current assets when computing the acid-test ratio. Some of the reasons for removing inventory are that inventory may be slow-moving or possibly

obsolete, and parts of the inventory may have been pledged to specific creditors. For example, a winery's inventory requires considerable time for aging and, therefore, a considerable time before sale. To include the wine inventory in the acid-test computation would overstate the liquidity. A valuation problem with inventory also exists because it is stated at a cost figure that may be materially different from a fair current valuation.

Compute the acid-test ratio as follows:

$$\text{Acid-Test Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Exhibit 6-13 presents the acid-test ratio for Nike at the end of 1999 and 1998. For Nike, the acid-test ratio was 1.43 at the end of 1999 and 1.25 at the end of 1998. This represents a positive trend.

EXHIBIT 6-13 NIKE, INC.

Acid-Test Ratio May 31, 1999 and 1998

	1999	1998
	(In millions)	
Current assets	\$3,264.9	\$3,532.6
Less: ending inventory	1,199.3	1,396.6
Remaining current assets [A]	<u>\$2,065.6</u>	<u>\$2,136.0</u>
Current liabilities [B]	<u>\$1,446.9</u>	<u>\$1,703.8</u>
Acid-test Ratio [A ÷ B]	1.43	1.25

It may also be desirable to exclude some other items from current assets that may not represent current cash flow, such as prepaid and miscellaneous items. Compute the more conservative acid-test ratio as follows:

$$\text{Acid-Test Ratio} = \frac{\text{Cash Equivalents} + \text{Marketable Securities} + \text{Net Receivables}}{\text{Current Liabilities}}$$

Usually, a very immaterial difference occurs between the acid-test ratios computed under the first method and this second method. Frequently, the only difference is the inclusion of prepayments in the first computation.

Exhibit 6-14 presents the conservative acid-test ratio for Nike at the end of 1999 and 1998. This approach resulted in an acid-test ratio of 1.20 at the end of 1999 and 1.05 at the end of 1998.

EXHIBIT 6-14 NIKE, INC.

Acid-Test Ratio (Conservative Approach) May 31, 1999 and 1998

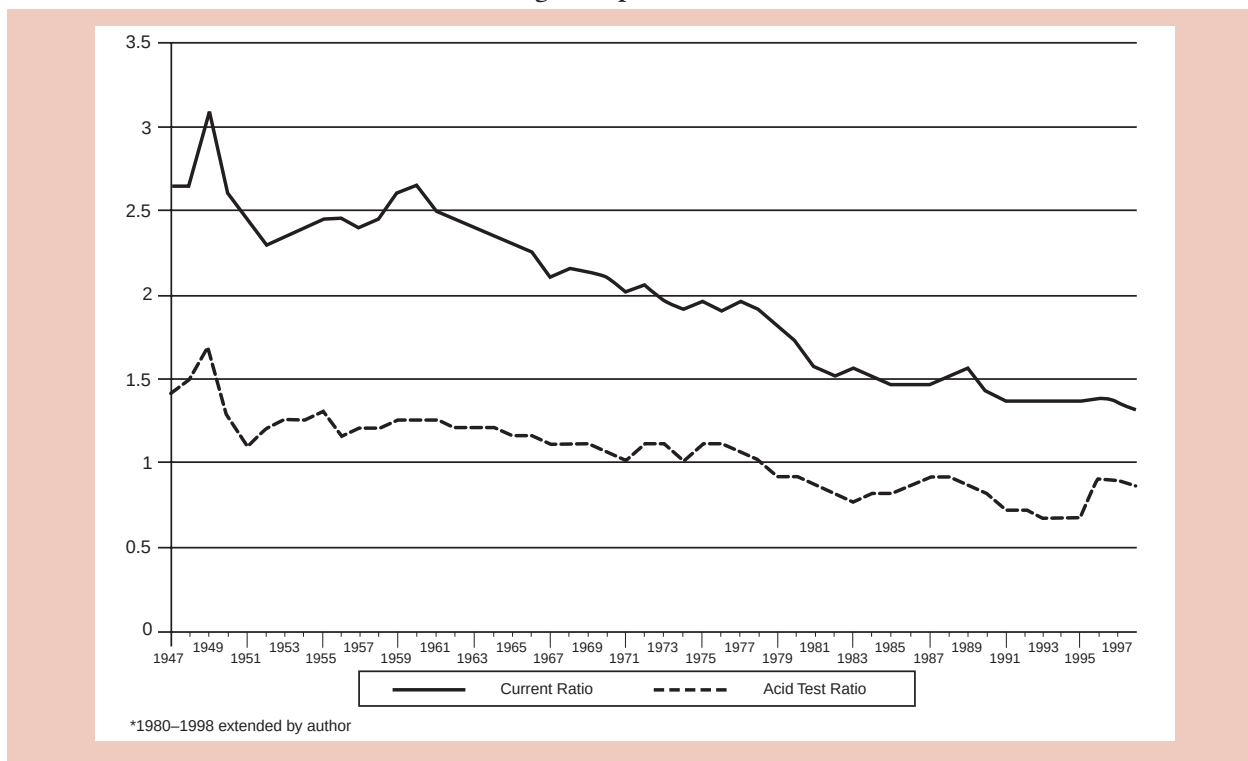
	1999	1998
	(In millions)	
Cash, including short-term investments	\$198.1	\$108.6
Net receivables	1,540.1	1,674.4
Total quick assets [A]	<u>\$1,738.2</u>	<u>\$1,783.0</u>
Current liabilities [B]	<u>\$1,446.9</u>	<u>\$1,703.8</u>
Acid-test Ratio [A ÷ B]	1.20	1.05

From this point on in this book, the more conservative computations will be used for the acid-test ratio. When a company needs to view liquidity with only inventory removed, the alternative computation should be used.

For many years, the guideline for the minimum acid-test ratio was 1.00. A comparison should be made with the firm's past acid-test ratios and with major competitors and the industry averages. Some industries find that a ratio less than 1.00 is adequate, while others need a ratio greater than 1.00. For example, a grocery store may sell only for cash and not have receivables. This type of business can have an acid-test ratio substantially below the 1.00 guideline and still have adequate liquidity.

Before computing the acid-test ratio, compute the accounts receivable turnover. An opinion as to the quality of receivables should help the analyst form an opinion of the acid-test ratio.

There has been a major decline in the liquidity of companies in the United States, as measured by the current ratio and the acid-test ratio. Exhibit 6-15 shows the dramatically reduced liquidity of U.S. companies. Reduced liquidity leads to more bankruptcies and greater risk for creditors and investors.

EXHIBIT 6-15
**TRENDS IN CURRENT RATIO AND ACID-TEST RATIO
All U.S. Manufacturing Companies, 1947–1998***


*1980–1998 extended by author.

Source: Financial Accounting Standards Board, "FASB Discussion Memorandum—Reporting Funds Flow, Liquidity, and Financial Flexibility," 1980, p. 7.

Cash Ratio

Sometimes an analyst needs to view the liquidity of a firm from an extremely conservative point of view. For example, the company may have pledged its receivables and its inventory, or the analyst suspects severe liquidity problems with inventory and receivables. The best indicator of the company's short-run liquidity may be the cash ratio. Compute the cash ratio as follows:

$$\text{Cash Ratio} = \frac{\text{Cash Equivalents} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

The analyst seldom gives the cash ratio much weight when evaluating the liquidity of a firm because it is not realistic to expect a firm to have enough cash equivalents and marketable securities to cover current liabilities. If the firm must depend on cash equivalents and marketable securities for its liquidity, its solvency may be impaired.

Analysts should consider the cash ratio of companies that have naturally slow-moving inventories and receivables and companies that are highly speculative. For example, a land development company in Florida may sell lots paid for over a number of years on the installment basis, or the success of a new company may be in doubt.

The cash ratio indicates the immediate liquidity of the firm. A high cash ratio indicates that the firm is not using its cash to its best advantage; cash should be put to work in the operations of the company. Detailed knowledge of the firm is required, however, before drawing a definite conclusion. Management may have plans for the cash, such as a building expansion program. A cash ratio that is too low could indicate an immediate problem with paying bills.

Exhibit 6-16 presents this ratio for Nike at the end of 1999 and 1998. For Nike, the cash ratio was .14 at the end of 1999 and .06 at the end of 1998. Nike's cash ratio increased materially at the end of 1999 in relation to the end of 1998.

EXHIBIT 6-16 NIKE, INC.

Cash Ratio May 31, 1999 and 1998

	1999	1998
	(In millions)	
Cash, including short-term investments [A]	\$ 198.1	\$ 108.6
Current liabilities [B]	\$1,446.9	\$1,703.8
Cash ratio [A ÷ B]	0.14	0.06

OTHER LIQUIDITY CONSIDERATIONS

Another ratio that may be useful to the analyst is the sales to working capital ratio. In addition, there may be liquidity considerations that are not on the face of the statements. This ratio and other liquidity considerations are discussed in this section.

Sales to Working Capital (Working Capital Turnover)

Relating sales to working capital gives an indication of the turnover in working capital per year. The analyst needs to compare this ratio with the past, with competitors, and with industry averages in order to form an opinion as to the adequacy of the working capital turnover. Like many ratios, no rules of thumb exist as to what it should be. Since this ratio

relates a balance sheet number (working capital) to an income statement number (sales), a problem exists if the balance sheet number is not representative of the year. To avoid this problem, use the average monthly working capital figure when available. Compute the working capital turnover as follows:

$$\text{Sales to Working Capital} = \frac{\text{Sales}}{\text{Average Working Capital}}$$

A low working capital turnover ratio tentatively indicates an unprofitable use of working capital. In other words, sales are not adequate in relation to the available working capital. A high ratio tentatively indicates that the firm is undercapitalized (overtrading). An undercapitalized firm is particularly susceptible to liquidity problems when a major adverse change in business conditions occurs.

Exhibit 6-17 presents this ratio for Nike at the end of 1999 and 1998. The sales to working capital ratio decreased slightly from 1998 to 1999. (Working capital in 1999 was higher in relation to sales than it was in 1998.) This tentatively indicates a slightly less profitable use of working capital in 1999 in relation to 1998.

EXHIBIT 6-17 NIKE, INC.

Sales to Working Capital Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net sales [A]	\$8,776.9	\$9,553.1
Working capital at beginning of year	1,828.8	1,964.0
Working capital at end of year	1,818.0	1,828.8
Average working capital [B]	1,823.4	1,896.4
Sales to working capital [A ÷ B]	4.81 times per year	5.04 times per year

Liquidity Considerations Not on the Face of the Statements

A firm may have a better liquidity position than indicated by the face of the financial statements. The following paragraphs present several examples:

1. Unused bank credit lines would be a positive addition to liquidity. They are frequently disclosed in footnotes. Cooper Tire & Rubber includes this statement in its debt footnote: "The Company has an agreement with four banks authorizing borrowings up to \$150,000 on long-term basis through October 31, 2002, and \$100,000 on a short-term basis with interest at varying rates. The credit facility provides for borrowings in foreign currencies and supports issuance of commercial paper. The proceeds may be used for general corporate purposes." (Dollar amounts in thousands)
2. A firm may have some long-term assets that could be converted to cash quickly. This would add to the firm's liquidity. Extreme caution is advised if there is any reliance on long-term assets for liquidity. For one thing, the long-term assets are usually needed in operations. Second, even excess long-term assets may not be easily converted into cash in a short period of time. An exception might be investments, depending on the nature of the investments.
3. A firm may be in a very good long-term debt position and therefore have the capability to issue debt or stock. Thus, the firm could relieve a severe liquidity problem in a reasonable amount of time.

A firm may not be in as good a position of liquidity as indicated by the ratios, as the following examples show:

1. A firm may have notes discounted on which the other party has full recourse against the firm. Discounted notes should be disclosed in a footnote. (A company that discounts a customer note receivable is in essence selling the note to the bank with recourse.)
2. A firm may have major contingent liabilities that have not been recorded, such as a disputed tax claim. Unrecorded contingencies that are material are disclosed in a footnote.
3. A firm may have guaranteed a bank note for another company. This would be disclosed in a footnote.

SUMMARY

The ratios related to the liquidity of short-term assets and the short-term debt-paying ability follow:

$$\text{Days' Sales in Receivables} = \frac{\text{Gross Receivables}}{\text{Net Sales} / 365}$$

$$\text{Accounts Receivable Turnover} = \frac{\text{Net Sales}}{\text{Average Gross Receivables}}$$

$$\text{Accounts Receivable Turnover in Days} = \frac{\text{Average Gross Receivables}}{\text{Net Sales} / 365}$$

$$\text{Days' Sales in Inventory} = \frac{\text{Ending Inventory}}{\text{Cost of Goods Sold} / 365}$$

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Inventory Turnover in Days} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold} / 365}$$

$$\text{Operating Cycle} = \frac{\text{Accounts Receivable}}{\text{Turnover in Days}} + \frac{\text{Inventory Turnover}}{\text{in Days}}$$

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Acid-Test Ratio} = \frac{\text{Cash Equivalents} + \text{Marketable Securities} + \text{Net Receivables}}{\text{Current Liabilities}}$$

$$\text{Cash Ratio} = \frac{\text{Cash Equivalents} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

$$\text{Sales to Working Capital} = \frac{\text{Sales}}{\text{Average Working Capital}}$$

QUESTIONS

- Q 6-1.** It is proposed at a stockholders' meeting that the firm slow its rate of payments on accounts payable in order to make more funds available for operations. It is contended that this procedure will enable the firm to expand inventory, which will in turn enable the firm to generate more sales. Comment on this proposal.
- Q 6-2.** Jones Wholesale Company has been one of the fastest growing wholesale firms in the United States for the last five years in terms of sales and profits. The firm has maintained a current ratio above the average for the wholesale industry. Mr. Jones has asked you to explain possible reasons why the firm is having difficulty meeting its payroll and its accounts payable. What would you tell Mr. Jones?
- Q 6-3.** What is the reason for separating current assets from the rest of the assets found on the balance sheet?
- Q 6-4.** Define the operating cycle.
- Q 6-5.** Define current assets.
- Q 6-6.** List the major categories of items usually found in current assets.
- Q 6-7.** Rachit Company has cash that has been frozen in a bank in Cuba. Should this cash be classified as a current asset? Discuss.
- Q 6-8.** A. B. Smith Company has guaranteed a \$1,000,000 bank note for Alender Company. How would this influence the liquidity ratios of A. B. Smith Company? How should this situation be considered?
- Q 6-9.** Arrow Company has invested funds in a supplier to help ensure a steady supply of needed materials. Would this investment be classified as a marketable security (current asset)?
- Q 6-10.** List the two computations that are used to determine the liquidity of receivables.
- Q 6-11.** List the two computations that are used to determine the liquidity of inventory.
- Q 6-12.** Would a company that uses a natural business year tend to overstate or understate the liquidity of its receivables? Explain.
- Q 6-13.** T. Melcher Company uses the calendar year. Sales are at a peak during the holiday season, and T. Melcher Company extends 30-day credit terms to customers. Comment on the expected liquidity of its receivables, based on the days' sales in receivables and the accounts receivable turnover.
- Q 6-14.** A company that uses a natural business year, or ends its year when business is at a peak, will tend to distort the liquidity of its receivables when end-of-year and beginning-of-year receivables are used in the computation. Explain how a company that uses a natural business year or ends its year when business is at a peak can eliminate the distortion in its liquidity computations.

- Q 6-15.** If a company has substantial cash sales and credit sales, is there any meaning to the receivable liquidity computations that are based on gross sales?
- Q 6-16.** Describe the difference in inventories between a firm that is a trading concern and a firm that is a manufacturing concern.
- Q 6-17.** During times of inflation, which of the inventory costing methods listed below would give the most realistic valuation of inventory? Which method would give the least realistic valuation of inventory? Explain.
a. LIFO b. Average c. FIFO
- Q 6-18.** The number of days' sales in inventory relates the amount of the ending inventory to the average daily cost of goods sold. Explain why this computation may be misleading under the following conditions:
a. The company uses a natural business year for its accounting period.
b. The company closes the year when activities are at a peak.
c. The company uses LIFO inventory, and inflation has been a problem for a number of years.
- Q 6-19.** The days' sales in inventory is an estimate of the number of days that it will take to sell the current inventory.
a. What is the ideal number of days' sales in inventory?
b. In general, does a company want many days' sales in inventory?
c. Can days' sales in inventory be too low?
- Q 6-20.** Some firms do not report the cost of goods sold separately on their income statements. In such a case, how should you proceed to compute days' sales in inventory? Will this procedure produce a realistic days' sales in inventory?
- Q 6-21.** One of the computations used to determine the liquidity of inventory determines the inventory turnover. In this computation, usually the average inventory is determined by using the beginning-of-the-year and the end-of-the-year inventory figures, but this computation can be misleading if the company has seasonal fluctuations or uses a natural business year. Suggest how to eliminate these distortions.
- Q 6-22.** Explain the influence of the use of LIFO inventory on the inventory turnover.
- Q 6-23.** Define working capital.
- Q 6-24.** Define current liabilities.
- Q 6-25.** Several comparisons can be made to determine the short-term debt-paying ability of an entity. Some of these are:
a. Working capital
b. Current ratio
c. Acid-test ratio
d. Cash ratio
1. Define each of these terms.
2. If the book figures are based on cost, will the results of the preceding computations tend to be understated or overstated? Explain.
3. What figures should be used in order to avoid the problem referred to in (2)?
- Q 6-26.** Discuss how to use working capital in analysis.
- Q 6-27.** Both current assets and current liabilities are used in the computation of working capital and the current ratio, yet the current ratio is considered to be more indicative of the short-term debt-paying ability. Explain.

- Q 6-28.** In determining the short-term liquidity of a firm, the current ratio is usually considered to be a better guide than the acid-test ratio, and the acid-test ratio is considered to be a better guide than the cash ratio. Discuss when the acid-test ratio would be preferred over the current ratio and when the cash ratio would be preferred over the acid-test ratio.
- Q 6-29.** Discuss some benefits that may accrue to a firm from reducing its operating cycle. Suggest some ways that may be used to reduce a company's operating cycle.
- Q 6-30.** Discuss why some firms have longer natural operating cycles than other firms.
- Q 6-31.** Would a firm with a relatively long operating cycle tend to charge a higher markup on its inventory cost than a firm with a short operating cycle? Discuss.
- Q 6-32.** Is the profitability of the entity considered to be of major importance in determining the short-term debt-paying ability? Discuss.
- Q 6-33.** Does the allowance method for bad debts or the direct write-off method result in the fairest presentation of receivables on the balance sheet and the fairest matching of expenses against revenue?
- Q 6-34.** When a firm faces an inflationary condition and the LIFO inventory method is based on a periodic basis, purchases late in the year can have a substantial influence on profits. Comment.
- Q 6-35.** Why could a current asset such as "net assets of business held for sale" distort a firm's liquidity, in terms of working capital or the current ratio?
- Q 6-36.** Before computing the current ratio, the accounts receivable turnover and the inventory turnover should be computed. Why?
- Q 6-37.** Before computing the acid-test ratio, compute the accounts receivable turnover. Comment.
- Q 6-38.** Which inventory costing method results in the highest balance sheet amount for inventory? (Assume inflationary conditions.)
- Q 6-39.** Indicate the single most important factor that motivates a company to select LIFO.
- Q 6-40.** A relatively low sales to working capital ratio is a tentative indication of an efficient use of working capital. Comment. A relatively high sales to working capital ratio is a tentative indication that the firm is undercapitalized. Comment.
- Q 6-41.** List three situations in which the liquidity position of the firm may be better than that indicated by the liquidity ratios.
- Q 6-42.** List three situations in which the liquidity position of the firm may not be as good as that indicated by the liquidity ratios.
- Q 6-43.** Indicate the objective of the sales to working capital ratio.
- Q 6-44.** Why does LIFO result in a very unrealistic ending inventory figure in a period of rising prices?
- Q 6-45.** The cost of inventory at the close of the calendar year of the first year of operation is \$40,000, using LIFO inventory, resulting in a profit before tax of \$100,000. If the FIFO inventory would have been \$50,000, what would the reported profit before tax have been? If the average cost method would have resulted in an inventory of \$45,000, what would the reported profit before tax have been? Should the inventory costing method be disclosed? Why?

To the Net



1. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K405). Enter Honeywell. Select the 10-K405 filed on March 11, 1999.
 - a. Determine the standard industrial classification.
 - b. What is the inventory amount at December 31, 1998?
 - c. Using Note 1, Accounting Policies, determine the accounting policies for inventory.
 - d. What cost method is used for inventory?
 - e. "Payments received from customers relating to the uncompleted portion of contracts are deducted from applicable inventories." Speculate on why this is the accepted accounting procedure.
2. Go to the book's Web site at accounting.swcollege.com and click on the links to the Kroger Co. site and the Cooper Tire & Rubber Company site. (Note: the SEC site (www.sec.gov) can also be used.) Determine the following:
 - a. What is the nature of the business of the Kroger Co.?
 - b. What is the nature of the business of Cooper Tire & Rubber Company?
 - c. Considering the nature of the business of these companies, speculate on which firm has the higher current ratio. Comment.

PROBLEMS

P 6-1. In this problem, compute the acid-test ratio as follows:

$$\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Required Determine the cost of sales of a firm with the financial data given below:

Current ratio	2.5
Quick ratio or acid-test	2.0
Current liabilities	\$400,000
Inventory turnover	3 times

P 6-2. The Hawk Company wants to determine the liquidity of its receivables. It has supplied you with the following data regarding selected accounts for December 31, 2000, and 1999:

	2000	1999
Net sales	\$1,180,178	\$2,200,000
Receivables, less allowance for losses and discounts		
Beginning of year (allowance for losses and discounts, 2000—\$12,300; 1999—\$7,180)	240,360	230,180
End of year (allowance for losses and discounts, 2000—\$11,180; 1999—\$12,300)	220,385	240,360

Required a. Compute the number of days' sales in receivables at December 31, 2000, and 1999.

- b. Compute the accounts receivable turnover for 2000 and 1999. (Use year-end gross receivables.)
- c. Comment on the liquidity of the Hawk Company receivables.

P 6-3. Mr. Williams, the owner of Williams Produce, wants to maintain control over accounts receivable. He understands that days' sales in receivables and accounts receivable turnover will give a good indication of how well receivables are being managed. Williams Produce does 60% of its business during June, July, and August. Mr. Williams provided the pertinent data:

	For Year Ended December 31, 2000	For Year Ended July 31, 2000
Net sales	\$800,000	\$790,000
Receivables, less allowance for doubtful accounts		
Beginning of period (allowance		
January 1, \$3,000; August 1, \$4,000)	50,000	89,000
End of period (allowance December 31,		
\$3,500; July 31, \$4,100)	55,400	90,150

- Required**
- a. Compute the days' sales in receivables for July 31, 2000, and December 31, 2000, based on the accompanying data.
 - b. Compute the accounts receivable turnover for the period ended July 31, 2000, and December 31, 2000. (Use year-end gross receivables.)
 - c. Comment on the results from (a) and (b).

P 6-4. The L. Solomon Company would like to compare its days' sales in receivables with that of a competitor, L. Konrath Company. Both companies have had similar sales results in the past, but the L. Konrath Company has had better profit results. The L. Solomon Company suspects that one reason for the better profit results is that the L. Konrath Company did a better job of managing receivables. The L. Solomon Company uses a calendar year that ends on December 31, while the L. Konrath Company uses a fiscal year that ends on July 31. Information related to sales and receivables of the two companies follows:

	For Year Ended December 31, 20XX
L. Solomon Company	
Net sales	\$1,800,000
Receivables, less allowance for doubtful accounts of \$8,000	110,000
	For Year Ended July 31, 20XX
L. Konrath Company	
Net sales	\$1,850,000
Receivables, less allowance for doubtful accounts of \$4,000	60,000

- Required**
- a. Compute the days' sales in receivables for both companies. (Use year-end gross receivables.)
 - b. Comment on the results.

P 6-5a. The P. Gibson Company has computed its accounts receivable turnover in days to be 36.

- Required** Compute the accounts receivable turnover per year.

P 6-5b. The P. Gibson Company has computed its accounts receivable turnover per year to be 12.

Required Compute the accounts receivable turnover in days.

P 6-5c. The P. Gibson Company has gross receivables at the end of the year of \$280,000 and net sales for the year of \$2,158,000.

Required Compute the days' sales in receivables at the end of the year.

P 6-5d. The P. Gibson Company has net sales of \$3,500,000 and average gross receivables of \$324,000.

Required Compute the accounts receivable turnover.

P 6-6. The J. Shaffer Company has an ending inventory of \$360,500 and a cost of goods sold for the year of \$2,100,000. It has used LIFO inventory for a number of years because of persistent inflation.

Required

- Compute the days' sales in inventory.
- Is the J. Shaffer Company days' sales in inventory as computed realistic in comparison with the actual days' sales in inventory?
- Would the days' sales in inventory computed for the J. Shaffer Company be a helpful guide?

P 6-7. The J. Szabo Company had an average inventory of \$280,000 and a cost of goods sold of \$1,250,000.

Required Compute the following:

- The inventory turnover in days
- The inventory turnover

P 6-8. The following inventory and sales data for this year for the G. Rabbit Company are:

	End of Year	Beginning of Year
Net sales	\$3,150,000	
Gross receivables	180,000	\$160,000
Inventory	480,000	390,000
Cost of goods sold	2,250,000	

Required Using the above data from the G. Rabbit Company, compute:

- The accounts receivable turnover in days
- The inventory turnover in days
- The operating cycle

P 6-9. The Anna Banana Company would like to estimate how long it will take to realize cash from its ending inventory. For this purpose, the following data are submitted:

Accounts receivable, less allowance for doubtful accounts of \$30,000	\$ 560,000
Ending inventory	680,000
Net sales	4,350,000
Cost of goods sold	3,600,000

Required Estimate how long it will take to realize cash from the ending inventory.

- P 6-10.** The Laura Badora Company has been using LIFO inventory. The Company is required to disclose the replacement cost of its inventory and the replacement cost of its cost of goods sold on its annual statements. Selected data for the year ended 2001 are as follows:

Ending accounts receivable, less allowance for doubtful accounts of \$25,000	\$ 480,000	
Ending inventory, LIFO (estimated replacement \$900,000)	570,000	
Net sales		3,650,000
Cost of goods sold (estimated replacement cost \$3,150,000)	2,850,000	

- Required**
- Compute the days' sales in receivables.
 - Compute the days' sales in inventory, using the cost figure.
 - Compute the days' sales in inventory, using the replacement cost for the inventory and the cost of goods sold.
 - Should replacement cost of inventory and cost of goods sold be used, when possible, when computing days' sales in inventory? Discuss.

- P 6-11.** A partial balance sheet and income statement for the King Corporation are shown below and on the next page.

KING CORPORATION
Partial Balance Sheet
December 31, 2001

Assets

Current assets:

Cash	\$ 33,493
Marketable securities	215,147
Trade receivables, less allowance of \$6,000	255,000
Inventories, LIFO	523,000
Prepaid expenses	26,180
Total current assets	<u>\$1,052,820</u>

Liabilities

Current liabilities:

Trade accounts payable	\$ 103,689
Notes payable (primarily to banks) and commercial paper	210,381
Accrued expenses and other liabilities	120,602
Income taxes payable	3,120
Current maturities of long-term debt	22,050
Total current liabilities	<u>\$ 459,842</u>

- Required**
- Compute the following:
- Working capital
 - Current ratio
 - Acid-test ratio
 - Cash ratio
 - Days' sales in receivables
 - Accounts receivable turnover in days
 - Days' sales in inventory
 - Inventory turnover in days
 - Operating cycle

KING CORPORATION
Partial Income Statement
For Year Ended December 31, 2001

Net sales	\$3,050,600
Miscellaneous income	45,060
	<u>\$3,095,660</u>
Costs and expenses:	
Cost of sales	2,185,100
Selling, general, and administrative expenses	350,265
Interest expense	45,600
Income taxes	300,000
	<u>2,880,965</u>
Net income	<u>\$ 214,695</u>

Note: The trade receivables at December 31, 2000, were \$280,000, net of an allowance of \$8,000, for a gross receivables figure of \$288,000. The inventory at December 31, 2000, was \$565,000.

P 6-12. Individual transactions often have a significant impact on ratios. This problem will consider the direction of such an impact.

	Total Current Assets	Total Current Liabilities	Net Working Capital	Current Ratio
a. Cash is acquired through issuance of additional common stock.	_____	_____	_____	_____
b. Merchandise is sold for cash. (Assume a profit.)	_____	_____	_____	_____
c. A fixed asset is sold for more than book value.	_____	_____	_____	_____
d. Payment is made to trade creditors for previous purchases.	_____	_____	_____	_____
e. A cash dividend is declared and paid.	_____	_____	_____	_____
f. A stock dividend is declared and paid.	_____	_____	_____	_____
g. Cash is obtained through long-term bank loans.	_____	_____	_____	_____
h. A profitable firm increases its fixed assets depreciation allowance account.	_____	_____	_____	_____
i. Current operating expenses are paid.	_____	_____	_____	_____
j. Ten-year notes are issued to pay off accounts payable.	_____	_____	_____	_____
k. Accounts receivable are collected.	_____	_____	_____	_____
l. Equipment is purchased with short-term notes.	_____	_____	_____	_____
m. Merchandise is purchased on credit.	_____	_____	_____	_____
n. The estimated taxes payable are increased.	_____	_____	_____	_____
o. Marketable securities are sold below cost.	_____	_____	_____	_____

Required Indicate the effects of the transactions listed above on each of the following: total current assets, total current liabilities, net working capital, and current ratio. Use + to indicate an increase, – to indicate a decrease, and 0 to indicate no effect. Assume an initial current ratio of more than 1 to 1.

- P 6-13.** Current assets and current liabilities for companies D and E are summarized as follows:

	<u>Company D</u>	<u>Company E</u>
Current assets	\$400,000	\$900,000
Current liabilities	200,000	700,000
Working capital	<u>\$200,000</u>	<u>\$200,000</u>

Required Evaluate the relative solvency of companies D and E.

- P 6-14.** Current assets and current liabilities for companies R and T are summarized below:

	<u>Company R</u>	<u>Company T</u>
Current assets	\$400,000	\$800,000
Current liabilities	200,000	400,000
Working capital	<u>\$200,000</u>	<u>\$400,000</u>

Required Evaluate the relative solvency of companies R and T.

- P 6-15.** The following financial data were taken from the annual financial statements of the Smith Corporation:

	<u>1999</u>	<u>2000</u>	<u>2001</u>
Current assets	\$ 450,000	\$ 400,000	\$ 500,000
Current liabilities	390,000	300,000	340,000
Sales	1,450,000	1,500,000	1,400,000
Cost of goods sold	1,180,000	1,020,000	1,120,000
Inventory	280,000	200,000	250,000
Accounts receivable	120,000	110,000	105,000

- Required**
- Based on these data, calculate the following for 2000 and 2001:
 - Working capital
 - Current ratio
 - Acid-test ratio
 - Accounts receivable turnover
 - Merchandise inventory turnover
 - Inventory turnover in days
 - Evaluate the results of your computations in regard to the short-term liquidity of the firm.

- P 6-16.** The Anne Elizabeth Corporation is engaged in the business of making toys. A high percentage of its products are sold to consumers during November and December. Therefore, retailers need to have the toys in stock prior to November. The corporation produces on a relatively stable basis during the year in order to retain its skilled employees and to minimize its investment in plant and equipment. The seasonal nature of its business requires a substantial capacity to store inventory.

The gross receivables balance at April 30, 2000, was \$75,000, and the inventory balance was \$350,000 on this date. Sales for the year ended April 30, 2001, totaled \$4,000,000, and the cost of goods sold totaled \$1,800,000.

The Anne Elizabeth Corporation uses a natural business year that ends on April 30. Inventory and accounts receivable data are given in the following table for the year ended April 30, 2001.

Month	Month-End Balance	
	Gross Receivables	Inventory
May, 2000	\$ 60,000	\$525,000
June, 2000	40,000	650,000
July, 2000	50,000	775,000
August, 2000	60,000	900,000
September, 2000	200,000	975,000
October, 2000	800,000	700,000
November, 2000	1,500,000	400,000
December, 2000	1,800,000	25,000
January, 2001	1,000,000	100,000
February, 2001	600,000	150,000
March, 2001	200,000	275,000
April, 2001	50,000	400,000

- Required**
- Using averages based on the year end figures, compute the following:
 - Accounts receivable turnover in days
 - Accounts receivable turnover per year
 - Inventory turnover in days
 - Inventory turnover per year
 - Using averages based on monthly figures, compute the following:
 - Accounts receivable turnover in days
 - Accounts receivable turnover per year
 - Inventory turnover in days
 - Inventory turnover per year
 - Comment on the difference between the ratios computed in (a) and (b).
 - Compute the days' sales in receivables.
 - Compute the days' sales in inventory.
 - How realistic are the days' sales in receivables and the days' sales in inventory that were computed in (d) and (e)?

P 6-17. The following data relate to inventory for the year ended December 31, 2000:

Date	Description	Number of Units	Cost Per Unit	Total Cost
January 1	Beginning inventory	400	\$5.00	\$ 2,000
March 1	Purchase	1,000	6.00	6,000
August 1	Purchase	200	7.00	1,400
November 1	Purchase	200	7.50	1,500
		<u>1,800</u>		<u>\$10,900</u>

A physical inventory on December 31, 2000, indicates that 400 units are on hand and that they came from the March 1 purchase.

- Required** Compute the cost of goods sold for the year ended December 31, 2000, and the ending inventory under the following cost assumptions:
- First-in, first-out (FIFO)
 - Last-in, first-out (LIFO)
 - Average cost (weighted average)
 - Specific identification

P 6-18. The following data relate to inventory for the year ended December 31, 2001. A physical inventory on December 31, 2001, indicates that 600 units are on hand and that they came from the July 1 purchase.

Date	Description	Number of Units	Cost Per Unit	Total Cost
January 1	Beginning inventory	1,000	\$4.00	\$ 4,000
February 20	Purchase	800	4.50	3,600
April 1	Purchase	900	4.75	4,275
July 1	Purchase	700	5.00	3,500
October 22	Purchase	500	4.90	2,450
December 10	Purchase	500	5.00	2,500
		<u>4,400</u>		<u>\$20,325</u>

Required Compute the cost of goods sold for the year ended December 31, 2001, and the ending inventory under the following cost assumptions:

- First-in, first-out (FIFO)
- Last-in, first-out (LIFO)
- Average cost (weighted average)
- Specific identification

P 6-19. The J.A. Appliance Company has supplied you with the following data regarding working capital and sales for the years 2001, 2000, and 1999.

	2001	2000	1999
Working capital	\$270,000	\$260,000	\$240,000
Sales	\$650,000	\$600,000	\$500,000
Industry average for the ratio sales to working capital	4.10 times	4.05 times	4.00 times

Required

- Compute the sales to working capital ratio for each year.
- Comment on the sales to working capital ratio for J.A. Appliance in relation to the industry average and what this may indicate.

P 6-20. The Depoole Company manufactures industrial products and employs a calendar year for financial reporting purposes. Items (a) through (e) present several of Depoole's transactions during 2001. The total of cash equivalents, marketable securities, and net receivables exceeded total current liabilities both before and after each transaction described. Depoole has positive profits in 2001 and a credit balance throughout 2001 in its retained earnings account.

Required Answer the following multiple-choice questions.

- Payment of a trade account payable of \$64,500 would:
 - Increase the current ratio, but the acid-test ratio would not be affected.
 - Increase the acid-test ratio, but the current ratio would not be affected.
 - Increase both the current and acid-test ratios.
 - Decrease both the current and acid-test ratios.
 - Have no effect on the current and acid-test ratios.
- The purchase of raw materials for \$85,000 on open account would:
 - Increase the current ratio.
 - Decrease the current ratio.
 - Increase net working capital.
 - Decrease net working capital.
 - Increase both the current ratio and net working capital.

- c. The collection of a current accounts receivable of \$29,000 would:
 1. Increase the current ratio.
 2. Decrease the current ratio.
 3. Increase the acid-test ratio.
 4. Decrease the acid-test ratio.
 5. Not affect the current or acid-test ratios.
- d. Obsolete inventory of \$125,000 was written off during 2001. This would:
 1. Decrease the acid-test ratio.
 2. Increase the acid-test ratio.
 3. Increase net working capital.
 4. Decrease the current ratio.
 5. Decrease both the current and acid-test ratios.
- e. The early liquidation of a long-term note with cash would:
 1. Affect the current ratio to a greater degree than the acid-test ratio.
 2. Affect the acid-test ratio to a greater degree than the current ratio.
 3. Affect the current and acid-test ratios to the same degree.
 4. Affect the current ratio, but not the acid-test ratio.
 5. Affect the acid-test ratio, but not the current ratio.

CMA Adapted

P 6-21. Information from the Greg Company's balance sheet follows:

Current assets:	
Cash	\$ 2,100,000
Marketable securities	7,200,000
Accounts receivable	50,500,000
Inventories	65,000,000
Prepaid expenses	1,000,000
Total current assets	<u>\$125,800,000</u>
Current liabilities:	
Notes payable	\$ 1,400,000
Accounts payable	18,000,000
Accrued expenses	11,000,000
Income taxes payable	600,000
Payments due within one year on long-term debt	<u>3,000,000</u>
Total current liabilities	<u>\$34,000,000</u>

Required Answer the following multiple-choice questions:

- a. What is the acid-test ratio for the Greg Company?
 1. 1.60
 2. 1.76
 3. 1.90
 4. 2.20
- b. What is the effect of the collection of accounts receivable on the current ratio and net working capital, respectively?

Current Ratio	Net Working Capital
1. No effect	No effect
2. Increase	Increase
3. Increase	No effect
4. No effect	Increase

P 6-22. The following data apply to items (a) and (b). Mr. Sparks, the owner of School Supplies, Inc., wants to maintain control over accounts receivable. He understands that accounts receivable turnover will give a good indication of how well receivables are being managed. School Supplies, Inc. does 70% of its business during June, July, and August. The terms of sale are 2/10, net/60.

Net sales for the year ended December 31, 2001, and receivables balances are given below.

Net sales	\$1,500,000
Receivables, less allowance for doubtful accounts of \$8,000 at January 1, 2001	72,000
Receivables, less allowance for doubtful accounts of \$10,000 at December 31, 2001	60,000

Required Answer the following multiple-choice questions:

- a. The average accounts receivable turnover calculated from the data above is:
 1. 20.0 times
 2. 25.0 times
 3. 22.7 times
 4. 18.75 times
 5. 20.8 times
- b. The average accounts receivable turnover computed for School Supplies, Inc., in item (a) above is:
 1. Representative for the entire year
 2. Overstated
 3. Understated

CMA Adapted

P 6-23. Items (a) through (d) are based on the following information:

SHARKEY CORPORATION
Selected Financial Data

	As of December 31	
	2001	2000
Cash	\$ 8,000	\$ 60,000
Marketable securities	32,000	8,000
Accounts receivable	40,000	110,000
Inventory	80,000	140,000
Net property, plant, and equipment	240,000	280,000
Accounts payable	60,000	100,000
Short-term notes payable	30,000	50,000
Cash sales	1,500,000	1,400,000
Credit sales	600,000	900,000
Cost of goods sold	1,260,000	1,403,000

Required Answer the following multiple-choice questions:

- a. Sharkey's acid test ratio as of December 31, 2001 is
 1. 0.63
 2. 0.70
 3. 0.89
 4. 0.99
- b. Sharkey's receivables turnover for 2001 is
 1. 8 times
 2. 6 times
 3. 12 times
 4. 14 times
- c. Sharkey's inventory turnover for 2001 is
 1. 11.45 times
 2. 10.50 times
 3. 9.85 times
 4. 8.45 times
- d. Sharkey's current ratio at December 31, 2001, is
 1. 1.40
 2. 2.60
 3. 1.90
 4. 1.78

- e. If current assets exceed current liabilities, payments to creditors made on the last day of the year will
- | | |
|---------------------------|-----------------------------|
| 1. Decrease current ratio | 3. Decrease working capital |
| 2. Increase current ratio | 4. Increase working capital |

P 6-24.

Required Answer the following multiple-choice questions:

- a. A company's current ratio is 2.2 to 1 and quick (acid-test) ratio is 1.0 to 1 at the beginning of the year. At the end of the year, the company has a current ratio of 2.5 to 1 and a quick ratio of .8 to 1. Which of the following could help explain the divergence in the ratios from the beginning to the end of the year?
1. An increase in inventory levels during the current year.
 2. An increase in credit sales in relationship to cash sales.
 3. An increase in the use of trade payables during the current year.
 4. An increase in the collection rate of accounts receivable.
 5. The sale of marketable securities at a price below cost.
- b. If, just prior to a period of rising prices, a company changed its inventory measurement method from FIFO to LIFO, the effect in the next period would be to
1. Increase both the current ratio and inventory turnover
 2. Decrease both the current ratio and inventory turnover
 3. Increase the current ratio and decrease inventory turnover
 4. Decrease the current ratio and increase inventory turnover
 5. Leave the current ratio and inventory turnover unchanged
- c. Selected year-end data for the Bayer Company are as follows:
- | | |
|---------------------|-----------|
| Current liabilities | \$600,000 |
| Acid-test ratio | 2.5 |
| Current ratio | 3.0 |
| Cost of sales | 500,000 |
- The Bayer Company's inventory turnover based on this year-end data is
1. 1.20
 2. 2.40
 3. 1.67
 4. Some amount other than those given above
 5. Not determinable from the data given
- d. If a firm has a high current ratio but a low acid-test ratio, one can conclude that
1. The firm has a large outstanding accounts receivable balance
 2. The firm has a large investment in inventory
 3. The firm has a large amount of current liabilities
 4. The cash ratio is extremely high
 5. The two ratios must be recalculated because both conditions cannot occur simultaneously
- e. Investment instruments used to invest temporarily idle cash balances should have which of the following characteristics?
1. High expected return, low marketability, and a short term to maturity
 2. High expected return, readily marketable, and no maturity date
 3. Low default risk, low marketability, and a short term to maturity
 4. Low default risk, readily marketable, and a long term to maturity
 5. Low default risk, readily marketable, and a short term to maturity

- f. The primary objective in the management of accounts receivable is
 1. To achieve a combination of sales volume, bad-debt experience, and receivables turnover that maximizes the profits of the corporation
 2. To realize no bad debts because of the opportunity cost involved
 3. To provide the treasurer of the corporation with sufficient cash to pay the company's bills on time
 4. To coordinate the activities of manufacturing, marketing, and financing so that the corporation can maximize its profits
 5. To allow the most liberal credit acceptance policy because increased sales mean increased profits
- g. A firm requires short-term funds to cover payroll expenses. These funds can come from
 1. Trade credit
 2. Collections of receivables
 3. Bank loans
 4. Delayed payments of accounts payable
 5. All of the above

CMA Adapted

- P 6-25.** Text-of-the-Quarter, Inc. (TQI) is a new retailer of accounting texts. Sales are made via contracts that provide for TQI to send the customer an accounting text each quarter for twelve quarters. The selling price of each text is \$15, with payment due within 30 days of delivery. Sales can be accurately estimated because of the contracts.

The number of contracts TQI sold in its first four quarters of existence, along with the number of texts purchased by TQI, were as follows:

Quarter	Contracts Sold	Text Purchased	Texts Remaining from Each Quarter's Purchase at End of First Year
First	10,000	50,000	0
Second	20,000	40,000	0
Third	30,000	50,000	10,000
Fourth	40,000	120,000	50,000

All deliveries start in the quarter of contract sale, and all deliveries are up-to-date. Texts were purchased from the publisher at an average cost of \$9 for the first quarter, \$10 for the second and third quarters, and \$11 for the fourth quarter. Selling and administrative costs for the year were \$270,000. TQI's tax rate is 40%.

- Required** Using generally accepted accounting principles for revenue and expense recognition and inventory accounting, prepare an income statement in such a way as to minimize the company's taxes.

CFA Adapted

- P 6-26.** Consecutive five-year balance sheets and income statements of the Anne Gibson Corporation are shown on the next page.

- Required**
- a. Using year-end balance sheet figures, compute the following for the maximum number of years, based on the available data:
 1. Days' sales in receivables
 2. Accounts receivable turnover
 3. Accounts receivable turnover in days
 4. Days' sales in inventory
 5. Inventory turnover
 6. Inventory turnover in days
 7. Operating cycle
 8. Working capital
 9. Current ratio
 10. Acid-test ratio
 11. Cash ratio
 12. Sales to working capital

Anne Gibson Corporation
Balance Sheet
December 31, 1998 through December 31, 2002

Dollars in thousands	2002	2001	2000	1999	1998
Assets:					
Current assets					
Cash	\$ 47,200	\$ 46,000	\$ 45,000	\$ 44,000	\$ 43,000
Marketable securities	2,000	2,500	3,000	3,000	3,000
Accounts receivable, less allowance of \$1,000, December 31, 2002; \$ 900, December 31, 2001; \$ 900, December 31, 2000; \$ 800, December 31, 1999; \$1,200, December 31, 1998	131,000	128,000	127,000	126,000	125,000
Inventories	122,000	124,000	126,000	127,000	125,000
Prepaid expenses	3,000	2,500	2,000	1,000	1,000
Total current assets	305,200	303,000	303,000	301,000	297,000
Property, plant and equipment, net	240,000	239,000	238,000	237,500	234,000
Other assets	10,000	8,000	7,000	6,500	7,000
Total assets	<u>\$555,200</u>	<u>\$550,000</u>	<u>\$548,000</u>	<u>\$545,000</u>	<u>\$538,000</u>
Liabilities and stockholders' equity:					
Current liabilities					
Accounts payable	\$ 72,000	\$ 73,000	\$ 75,000	\$ 76,000	\$ 78,500
Accrued compensation	26,000	25,000	25,500	26,000	26,000
Income taxes	11,500	12,000	13,000	12,500	11,000
Total current liabilities	109,500	110,000	113,500	114,500	115,500
Long-term debt	68,000	60,000	58,000	60,000	62,000
Deferred income taxes	25,000	24,000	23,000	22,000	21,000
Stockholders' equity	352,700	356,000	353,500	348,500	339,500
Total liabilities and stockholders' equity	<u>\$555,200</u>	<u>\$550,000</u>	<u>\$548,000</u>	<u>\$545,000</u>	<u>\$538,000</u>

Anne Gibson Corporation
Statement of Earnings
For Years Ended December 31, 1998–2002

In thousands, except per share	2002	2001	2000	1999	1998
Net sales	\$880,000	\$910,000	\$840,000	\$825,000	\$820,000
Cost of goods sold	740,000	760,000	704,000	695,000	692,000
Gross profit	140,000	150,000	136,000	130,000	128,000
Selling and administrative expense	53,000	52,000	50,000	49,800	49,000
Interest expense	6,700	5,900	5,800	5,900	6,000
Earnings from continuing operations before income taxes	80,300	92,100	80,200	74,300	73,000
Income taxes	26,000	27,500	28,000	23,000	22,500
Net earnings	<u>\$ 54,300</u>	<u>\$ 64,600</u>	<u>\$ 52,200</u>	<u>\$ 51,300</u>	<u>\$ 50,500</u>
Earnings per share	<u>\$1.40</u>	<u>\$1.65</u>	<u>\$1.38</u>	<u>\$1.36</u>	<u>\$1.33</u>

- b. Using average balance sheet figures, as suggested in the chapter, compute the following for the maximum number of years, based on the available data:
- | | |
|---|------------------------------|
| 1. Days' sales in receivables | 7. Operating cycle |
| 2. Accounts receivable turnover | 8. Working capital |
| 3. Accounts receivable turnover in days | 9. Current ratio |
| 4. Days' sales in inventory | 10. Acid-test ratio |
| 5. Inventory turnover | 11. Cash ratio |
| 6. Inventory turnover in days | 12. Sales to working capital |
- c. Comment on trends indicated in short-term liquidity.

Case 6-1**LIFO-FIFO**

The current assets and current liabilities section of the NACCO Industries balance sheet for 1998 and 1997, along with selected footnotes, is presented on this page and the following page.

	December 31	
	1998	1997
	(In millions)	
Assets		
Current assets:		
Cash and cash equivalents	\$34.7	\$24.1
Accounts receivable, net of allowance of \$15.6 and \$14.1	275.1	240.8
Inventories	356.2	302.9
Prepaid expenses and other	37.2	31.8
Total current assets	<u>\$703.2</u>	<u>\$599.6</u>
Liabilities		
Current liabilities:		
Accounts payable	\$252.9	\$244.7
Revolving credit agreements	31.2	23.5
Current maturities of long-term debt	28.4	18.9
Income taxes	10.9	12.8
Accrued payroll	44.7	36.4
Accrued warranty obligations	36.3	27.9
Other current liabilities	<u>144.2</u>	<u>142.3</u>
Total current liabilities	<u>\$548.6</u>	<u>\$506.5</u>

Note 2 Accounting Policies (In part)

Inventories: Inventories are stated at the lower of cost or market. Cost is determined under the last-in, first-out (LIFO) method for manufacturing inventories in the United States and for certain retail inventories. The first-in, first-out (FIFO) method is used with respect to all other inventory.

Note 6 Inventories

	December 31	
	1998	1997
	(In millions)	
Manufacturing inventories:		
Finished goods and service parts		
NMHG	\$125.3	\$86.9
Housewares	41.5	31.8
	<u>166.8</u>	<u>118.7</u>
Raw materials and work in process		
NMHG	136.6	135.6
Housewares	17.5	15.1
	<u>154.1</u>	<u>150.7</u>
Lifo reserve		
NMHG	(12.6)	(13.4)
Housewares	1.8	1.1
	<u>(10.8)</u>	<u>(12.3)</u>
Total manufacturing inventories	310.1	257.1
Coal - NA Coal	9.5	10.7
Mining supplies - NA Coal	19.4	19.2
Housewares	<u>17.2</u>	<u>15.9</u>
	<u>\$356.2</u>	<u>\$302.9</u>

The cost of manufacturing inventories has been determined by the LIFO method for 72% and 66% of such inventories at December 31, 1998, and 1997 respectively.

Required

- What is the working capital at the end of 1998?
- What is the balance in the LIFO reserve account at the end of 1998? Describe this account.
- If the LIFO reserve account was added to the inventory at LIFO, what would be the resulting inventory number at the end of 1998? Which inventory amount do you consider to be more realistic?
- Does the use of LIFO or FIFO produce higher, lower, or the same income during (1) price increases, (2) price decreases, and (3) constant prices? (Assume no decrease or increase in inventory quantity.)
- Does the use of LIFO or FIFO produce higher, lower, or the same amount of cash flow during (1) price increases, (2) price decreases, and (3) constant costs? Answer the question for both pretax cash flows and after-tax cash flows. (Assume no decrease or increase in inventory quantity.)
- Assume that the company purchased inventory on the last day of the year, beginning inventory equaled ending inventory, and inventory records for the item purchased were maintained periodically on the LIFO basis. Would that purchase be included on the income statement or the balance sheet at year-end?

Case 6-2**Rising Prices, a Time to Switch Off LIFO?**

The following information was taken directly from an annual report of a firm that wishes to remain anonymous. (The dates have been changed.)

Financial Summary*Effects of LIFO Accounting*

For a number of years, the corporation has used the last-in, first-out (LIFO) method of accounting for its steel inventories. In periods of extended inflation, coupled with uncertain supplies of raw materials from foreign sources, and rapid increases and fluctuations in prices of raw materials such as nickel and chrome nickel scrap, earnings can be affected unrealistically for any given year.

Because of these factors, the corporation will apply to the Internal Revenue Service for permission to discontinue using the LIFO method of accounting for valuing those inventories for which this method has been used. If such application is granted, the LIFO reserve at December 31, 1999, of \$12,300,000 would be eliminated, which would require a provision for income taxes of approximately \$6,150,000. The corporation will also seek permission to pay the increased taxes over a ten-year period. If the corporation had not used the LIFO method of accounting during 1998, net earnings for the year would have been increased by approximately \$1,500,000.

The 1999 annual report also disclosed the following:

	1999	1998
1. Sales and revenues	\$536,467,782	\$487,886,449
2. Earnings per common share	\$3.44	\$3.58

Required

- The corporation indicates that earnings can be affected unrealistically by rapid increases and fluctuations in prices when using LIFO. Comment.
- How much taxes will need to be paid on past earnings from the switch from LIFO? How will the switch from LIFO influence taxes in the future?
- How will a switch from LIFO affect 1999 profits?
- How will a switch from LIFO affect future profits?
- How will a switch from LIFO affect 1999 cash flow?
- How will a switch from LIFO affect future cash flow?
- Speculate on the real reason that the corporation wishes to switch from LIFO.

Case 6-3**Online**

The information on this page and the next is from the 1998 financial report of America Online, Inc. America Online, Inc. is the leader in the interactive medium.

America Online, Inc.
Consolidated Balance Sheets (In Part)

	June 30	
	1998	1997
	(Amounts in millions)	
Assets		
Current assets:		
Cash and cash equivalents	\$ 631	\$124
Trade accounts receivable, less allowance of \$19 million and \$6 million, respectively	104	65
Other receivables	92	26
Prepaid expenses and other current assets	103	108
Total current assets	930	323
Property and equipment at cost, net	363	233
Other assets (detail omitted)	921	277
	<u>\$2,214</u>	<u>\$833</u>

Note: Other assets includes goodwill and other intangible assets, net of \$381 (1998) and \$59 (1997).

	June 30	
	1998	1997
	(Amounts in millions)	
Liabilities and Stockholders' Equity		
Current liabilities:		
Trade accounts payable	\$ 87	\$ 68
Other accrued expenses and liabilities	443	299
Deferred revenue	242	166
Accrued personnel costs	46	20
Deferred network services credit	76	—
Total current liabilities	<u>894</u>	<u>553</u>
Long-term liabilities: (detail omitted)	722	140
Total liabilities	<u>1,616</u>	<u>693</u>
Stockholders' equity (detail omitted)	598	140
	<u>\$2,214</u>	<u>\$833</u>

America Online, Inc.
Consolidated Statements of Operations (In Part)

	Year ended June 30		
	1998	1997	1996
	(Amounts in millions except per share data)		
Revenues:			
Online service revenues	\$2,161	\$1,429	\$ 992
Advertising, commerce and other revenues	<u>439</u>	<u>256</u>	<u>102</u>
Total revenues	<u>2,600</u>	<u>1,685</u>	<u>1,094</u>
Costs and expenses:			
Cost of revenues	1,678	1,074	654
Other costs and expenses (detail omitted)	<u>844</u>	<u>1,116</u>	<u>375</u>
Total costs and expenses	<u>2,522</u>	<u>2,190</u>	<u>1,029</u>
Income (loss) from operations	78	(505)	65
Other income (expense), net	<u>14</u>	<u>6</u>	<u>(3)</u>
Income (loss) before provision for income taxes	92	(499)	62
Provision for income taxes	<u>—</u>	<u>—</u>	<u>(32)</u>
Net income (loss)	<u>\$ 92</u>	<u>(\$499)</u>	<u>\$ 30</u>
Earnings (loss) per share			
Earnings (loss) per share - diluted	\$0.35	\$(2.61)	\$0.14
Earnings (loss) per share - basic	\$0.44	\$(2.61)	\$0.18

- Required**
- a. Based on these data, calculate the following for 1998 and 1997:
 1. Days' sales in receivables (Use total revenues.)
 2. Accounts receivable turnover (Use gross receivables at year-end and total revenues.)
 3. Days' sales in inventory
 4. Inventory turnover
 5. Working capital
 6. Current ratio
 7. Acid-test ratio
 - b. Prepare a vertical common-size analysis for the balance sheets using 1998 and 1997. (Use total assets as the base.)
 - c. Comment on each ratio individually.
 - d. Comment on the vertical common-size analysis.
 - e. Comment on the apparent total liquidity.

Case 6-4**The Other Side of LIFO**

What happens when a company using LIFO sells a greater quantity of goods than it purchases? In the following article,* Allen I. Schiff, Ph.D., Associate Professor of Accounting at Fordham University, New York City, discusses the implications of this phenomenon, which is known as LIFO liquidation.

Discussion of the LIFO cost basis for inventory valuation usually focuses on the superiority of this method and its widespread adoption. The conventional rationale for LIFO is its consistency with the matching principle during a period of rising prices. Historically, the most significant adoption of LIFO by U.S. corporations occurred during the period from 1973 to 1974, which was characterized by rapidly rising prices and sharp increases in interest rates. However, the motivation for the widespread use of LIFO didn't derive from the desire to achieve better matching of cost and revenue but, rather, from the reduced reported income that led to tax savings and increased cash flow.

Recently, another facet of LIFO has appeared in the annual reports of some companies. Known as LIFO liquidation, this process occurs during a reporting period when a company sells (withdraws) goods in a greater quantity than the quantity purchased (entered). As a result, inventories are reduced to a point at which cost layers of prior years are related to current inflated sales prices.

Relatively little attention has been given to the implications of LIFO inventory liquidations. Accounting texts discuss LIFO liquidations in a superficial fashion—and for good reason, it wasn't a phenomenon frequently encountered in the past. Indeed, until recently the only significant attempted LIFO liquidation related to the steel industry during the Korean War period. During this period, the demand for steel was strong, prices were high, and a steelworker's strike contributed to decreasing inventory levels. Congress was petitioned to modify the tax result from a matching of "old" costs against their then-current high-selling prices. Congress refused and steel inventories weren't liquidated despite market demand.

The Incentives for LIFO Liquidation

The economic environment at this writing is quite different. Possible factors causing LIFO liquidations at present are:

- Decreased expected demand associated with a recessionary economy.
- High interest rates resulting in high inventory carrying costs. These high rates also present alternative economic opportunities for funds invested in inventories if there is a belief that the inflation rate will decrease in relation to interest rates.
- A sluggish economy that could lead management to minimize losses or improve reported profit.

To get a notion about the extent, if any, to which companies that recorded a LIFO liquidation increased net income, the financial reports of 17 LIFO companies for the years 1980 and 1981 were randomly selected. Nine of these companies reported an increase in pretax income (or a reduction of loss) of at least 10 percent for either 1980, 1981 or both as a direct result of LIFO liquidation. What these preliminary results suggest is that there are other aspects of LIFO which require more extensive study. The original justification for LIFO was its superiority in reflecting results consistent with the matching principle. The liquidation of LIFO layers in recent years has had the opposite effect, it mismatches current revenues and historical costs, which results in the inclusion of inventory holding gains in reported income.

Conclusion

Thus, we have come full circle. FIFO valuation methods, originally criticized for poor matching when compared to LIFO, may actually be superior in the sense that, compared to companies experiencing LIFO liquidations, FIFO companies match costs and revenues relatively

*Copyright © 1983 by the AICPA, Inc. Opinions expressed in the *Journal of Accountancy* are those of the editors and contributors. Publication in the *Journal of Accountancy* does not constitute endorsement by the AICPA or its committees.

well. Furthermore, it may be argued that the sole motivation attributed to companies for switching to LIFO—to improve cash flows—may need broadening. Since the timing of the decision to liquidate LIFO inventories is entirely up to management, it would appear that such liquidations may give rise to income smoothing; it must be stressed that the smoothing may enhance the image conveyed by financial statements, but it has a negative impact on cash flow to the extent that taxes are paid (or loss carryforwards reduced) on the incremental profit associated with the sale of the liquidated inventories.

More extensive research is, of course, needed to fully document the incidence of LIFO inventory liquidation during the last two years. Even my limited examination of reports suggests the need to emphasize the “other side of LIFO.”

- Required**
- Briefly describe why an inventory method that uses historical costs (such as LIFO) can distort profits.
 - Indicate probable reasons why the steel industry did not sell its available inventory during the steel strike.
 - For the firms that were using LIFO, explain the anticipated effect on the following variables because of reducing inventories during 1980 and 1981:
 - Profits
 - Taxes paid
 - Cash flow
 - In your opinion, what effect did the reduction in inventories during 1980 and 1981, for the LIFO firms, have on the quality of earnings?
 - Explain why many firms voluntarily reduced their inventories during 1980 and 1981.

Case 6-5

Network Supreme

The following information is from the 1998 financial statements of Novell. Novell is a large network software company.

Novell Consolidated Balance Sheet (In Part)

(Dollars in thousands)	October 31 1998	October 31 1997
Assets		
Current assets:		
Cash and short-term investments	\$1,007,167	\$1,033,473
Receivables, less allowances (\$47,921 – 1998, \$33,053 – 1997)	246,577	211,531
Inventories	3,562	10,656
Prepaid expenses	63,165	57,685
Deferred and refundable income taxes	95,343	134,210
Other current assets	19,886	22,827
Total current assets	1,435,700	1,470,382
Property, plant, and equipment, net	346,196	373,865
Long-term investments	114,815	19,107
Other assets	27,401	47,295
Total assets	<u>\$1,924,112</u>	<u>\$1,910,649</u>

Liabilities and shareholders' equity

Current liabilities		
Accounts payable	\$77,987	\$82,759
Accrued compensation	52,348	51,397
Accrued marketing liabilities	16,383	27,728
Other accrued liabilities	62,206	85,157
Income taxes payable	64,057	—
Deferred revenue	141,714	74,915
Total current liabilities	414,695	321,956
Minority interests	15,919	23,276
Shareholders' equity (detail omitted)	1,493,498	1,565,417
Total liabilities and shareholders' equity	<u>\$1,924,112</u>	<u>\$1,910,649</u>

Novell**Consolidated Statements of Operations (In Part)**

	Fiscal Year Ended		
	October 31, 1998	October 31, 1997	October 31, 1996
(Amounts in millions except per share data)			
Net sales	\$1,083,887	\$1,007,311	\$1,374,856
Cost of sales	238,649	277,446	306,761
Gross profit	845,238	729,865	1,068,095
Operating expenses (detail omitted)	746,792	929,869	959,151
Income (loss) from operations	98,446	(200,004)	108,944
Other income (expense)			
Investment income	44,727	61,315	58,195
Gain on sale of assets	—	—	19,815
Other, net	(1,539)	(11,881)	(6,966)
Other income, net	43,188	49,434	71,044
Income (loss) before taxes	141,634	(150,570)	179,988
Income tax expense (benefit)	39,658	(72,274)	53,997
Net income (loss)	<u>\$ 101,976</u>	<u>\$ (78,296)</u>	<u>\$ 125,991</u>
Weighted average shares outstanding			
Basic	350,525	348,149	355,478
Diluted	356,437	349,429	357,919
Net income (loss) per share			
Basic	\$.29	\$(.22)	\$.35
Diluted	\$.29	\$(.22)	\$.35

Note: Repurchases of common stock

1998	\$244,964,000
1997	—
1996	\$455,701,000
Decrease in inventories	
1998	\$7,094,000
1997	\$6,181,000
1996	\$6,188,000

Required

- a. Based on these data, calculate the following for 1998 and 1997:
1. Days' sales in receivables
 2. Accounts receivable turnover (gross receivables at year-end.)
 3. Days' sales in inventory
 4. Inventory turnover (Use inventory at year-end.)
 5. Working capital

6. Current ratio
7. Acid-test ratio
- b. Prepare a vertical common-size analysis for the balance sheets, using 1998 and 1997. (Use total assets as the base.)
- c. Comment on each ratio individually.
- d. Comment on the vertical common-size analysis.
- e. Comment on the apparent total liquidity.

Case 6-6**Booming Retail**

The Grand retail firm reported the following financial data for the past several years:

	Year				
	5	4	3	2	1
	(amounts in 000s)				
Sales	\$1,254,131	\$1,210,918	\$1,096,152	\$979,458	\$920,797
Net accounts receivable	419,731	368,267	312,776	72,450	230,427

The Grand retail firm had a decentralized credit operation allowing each store to administer its credit operation. Many stores provided installment plans allowing the customer up to 36 months to pay. Gross profits on installment sales were reflected in the financial statements in the period when the sales were made.

- Required**
- a. Using Year 1 as the base, prepare horizontal common-size analysis for sales and net accounts receivable.
 - b. Compute the accounts receivable turnover for Years 2-5. (Use net accounts receivable.)
 - c. Would financial control of accounts receivable be more important with installment sales than with sales on 30-day credit? Comment.
 - d. Comment on what is apparently happening at The Grand retail firm.

Endnotes

- 1 Accounting Research Bulletins No. 43, "Restatement and Revision of Accounting Research Bulletins," 1953, Chapter 3, Section A, paragraph 4.
- 2 Statement of Financial Accounting Standards No. 115, "Accounting for Certain Investments in Debt and Equity Securities" (Norwalk, CT: Financial Accounting Standards Board, 1993).
- 3 Opinions of the Accounting Principles Board No. 21, "Interest on Receivables and Payables" (New York: American Institute of Certified Public Accountants, 1971), paragraph 11.
- 4 Statement of Financial Accounting Standards No. 5, "Accounting for Contingencies" (Stamford, CT: Financial Accounting Standards Board, 1975), paragraph 8.
- 5 Committee on Accounting Procedure, American Institute of Certified Public Accountants, "Accounting Research and Terminology Bulletins" (New York: American Institute of Certified Public Accountants, 1961), p. 21.

CHAPTER

7

LONG-TERM DEBT-PAYING ABILITY

THIS CHAPTER COVERS TWO APPROACHES TO viewing a firm's long-term debt-paying ability. One approach views the firm's ability to carry the debt as indicated by the income statement, and the other considers the firm's ability to carry debt as indicated by the balance sheet.

In the long run, a relationship exists between the reported income resulting from the use of accrual accounting and the ability of the firm to meet its long-term obligations. Although the reported income does not agree with the cash available in the short run, the revenue and expense items eventually do result in cash movements. Because of the close relationship between the reported income and the ability of the firm to meet its long-run

obligations, the entity's profitability is an important factor when determining long-term debt-paying ability.

In addition to the profitability of the firm, the amount of debt in relation to the size of the firm should be analyzed. This analysis indicates the amount of funds provided by outsiders in relation to those provided by owners of the firm. If a high proportion of the resources has been provided by outsiders, the risks of the business have been substantially shifted to the outsiders. A large proportion of debt in the capital structure increases the risk of not meeting the principal or interest obligation because the company may not generate adequate funds to meet these obligations.

**INCOME
STATEMENT
CONSIDERATION
WHEN
DETERMINING
LONG-TERM
DEBT-PAYING
ABILITY**

The firm's ability to carry debt, as indicated by the income statement, can be viewed by considering the times interest earned and the fixed charge coverage. These ratios are now reviewed.

Times Interest Earned

The **times interest earned ratio** indicates a firm's long-term debt-paying ability from the income statement view. If the times interest earned is adequate, little danger exists that the firm will not be able to meet its interest obligation. If the firm has good coverage of the interest obligation, it should also be able to refinance the principal when it comes due. In effect, the funds will probably never be required to pay off the principal if the company has a good record of covering the interest expense. A relatively high, stable coverage of interest over the years indicates a good record. A low, fluctuating coverage from year to year indicates a poor record.

Companies that maintain a good record can finance a relatively high proportion of debt in relation to stockholders' equity and, at the same time, obtain funds at favorable rates. Utility companies have traditionally been examples of companies that have a high debt structure, in relation to stockholders' equity. They accomplished this because of their relatively high, stable coverage of interest over the years. This stability evolved in an industry with a regulated profit and a relatively stable demand. During the 1970s, 1980s, and 1990s, utilities experienced a severe strain on their profits, as rate increases did not keep pace with inflation. In addition, the demand was not as predictable as in prior years. The strain on profits and the uncertainty of demand influenced investors to demand higher interest rates from utilities than had been previously required in relation to other companies.

A company issues debt obligations to obtain funds at an interest rate less than the earnings from these funds. This is called **trading on the equity** or **leverage**. With a high interest rate, the added risk exists that the company will not be able to earn more on the funds than the interest cost on them.

Compute times interest earned as follows:

$$\text{Times Interest Earned} = \frac{\text{Recurring Earnings, Excluding Interest Expense, Tax Expense, Equity Earnings, and Minority Earnings}}{\text{Interest Expense, Including Capitalized Interest}}$$

The income statement contains several figures that might be used in this analysis. In general, the primary analysis of the firm's ability to carry the debt as indicated by the income statement should include only income expected to occur in subsequent periods. Thus, the following nonrecurring items should be excluded:

1. Discontinued operations
2. Extraordinary items
3. Cumulative effect of a change in accounting principle

In addition to these nonrecurring items, additional items that should be excluded for the times interest earned computation include:

1. **Interest expense.** This is added back to net income because the interest coverage would be understated by one if interest expense were deducted before computing times interest earned.

2. **Income tax expense.** Income taxes are computed after deducting interest expense, so they do not affect the safety of the interest payments.
3. **Equity earnings (losses) of nonconsolidated subsidiaries.** These are excluded because they are not available to cover interest payments, except to the extent that they are accompanied by cash dividends.
4. **Minority income (loss).** This adjustment at the bottom of the income statement should be excluded; use income before minority interest. Minority income (loss) results from consolidating a firm in which a company has control but less than 100% ownership. All of the interest expense of the firm consolidated is included in the consolidated income statement. Therefore, all of the income of the firm consolidated should be considered in the coverage.

Capitalization of interest results in interest being added to a fixed asset instead of expensed. The interest capitalized should be included with the total interest expense in the denominator of the times interest earned ratio because it is part of the interest payment. The capitalized interest must be added to the interest expense disclosed on the income statement or in footnotes.

An example of capitalized interest would be interest during the current year on a bond issued to build a factory. As long as the factory is under construction, this interest would be added to the asset account, construction in process, on the balance sheet. This interest does not appear on the income statement, but it is as much of a commitment as the interest expense deducted on the income statement.

When the factory is completed, the annual interest on the bond issued to build the factory will be expensed. When expensed, interest appears on the income statement.

Capitalized interest is usually disclosed in a footnote. Some firms describe the capitalized interest on the face of the income statement.

Exhibit 7-1 shows times interest earned for Nike for the years 1999 and 1998. Many would consider this ratio to be high. To evaluate the adequacy of coverage, the times interest earned ratio should be computed for a period of three to five years and compared to competitors and the industry average. Computing interest earned for three to five years provides insight on the stability of the interest coverage. Because the firm needs to cover interest in the bad years as well as the good years, the lowest times interest earned in the period is used as the primary indication of the interest coverage. A cyclical firm may have a very high times interest earned ratio in highly profitable years, but interest may not be covered in low profit years.

EXHIBIT 7-1**NIKE, INC.****Times Interest Earned****Year Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Income before income taxes	\$746.1	\$653.0
Plus: Interest expense	44.1	60.0
Earnings before interest and tax [A]	<u>\$790.2</u>	<u>\$713.0</u>
Interest expense	\$ 44.1	\$ 60.0
Capitalized interest	6.9	6.5
Total interest paid [B]	<u>\$ 51.0</u>	<u>\$ 66.5</u>
Times interest earned [A ÷ B]	15.49 times per year	10.72 times per year

Interest coverage on long-term debt is sometimes computed separately from the normal times interest earned. For this purpose only, use the interest on long-term debt, thus focusing on the long-term interest coverage. Since times interest earned indicates long-term debt-paying ability, this revised computation helps focus on the long-term position. For external analysis, it is usually not practical to compute times interest coverage on long-term debt because of the lack of data. However, this computation can be made for internal analysis.

In the long run, a firm must have the funds to meet all of its expenses. In the short run, a firm can often meet its interest obligations even when the times interest earned is less than 1.00. Some of the expenses, such as depreciation expense, amortization expense, and depletion expense, do not require funds in the short run. The airline industry has had several bad periods when the times interest earned was less than 1.00, but it was able to maintain the interest payments.

To get a better indication of a firm's ability to cover interest payments in the short run, the noncash expenses such as depreciation, depletion, and amortization can be added back to the numerator of the times interest earned ratio. The resulting ratio, which is less conservative, gives a type of cash basis times interest earned useful for evaluating the firm in the short run.

Exhibit 7-2 shows that Nike's short-run times interest earned ratio is substantially higher than its long-run ratio.

Fixed Charge Coverage

The **fixed charge coverage ratio**, an extension of the times interest earned ratio, also indicates a firm's long-term debt-paying ability from the income statement view. The fixed charge coverage ratio indicates a firm's ability to cover fixed charges. It is computed as follows:

$$\text{Fixed Charge Coverage} = \frac{\text{Recurring Earnings, Excluding Interest Expense, Tax Expense, Equity Earnings, and Minority Earnings} + \text{Interest Portion of Rentals}}{\text{Interest Expense, Including Capitalized Interest} + \text{Interest Portion of Rentals}}$$

A difference of opinion occurs in practice as to what should be included in the fixed charges. When assets are leased, the lessee classifies leases as either capital leases or operat-

EXHIBIT 7-2

NIKE, INC.

Times Interest Earned (Short-Run Perspective) For the Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Income before income taxes	\$ 746.1	\$653.0
Plus: Interest expense	44.1	60.0
Depreciation and amortization*	228.8	233.5
Earnings adjusted [A]	<u>\$1,019.0</u>	<u>\$946.5</u>
Interest expense	\$ 44.1	\$ 60.0
Capitalized interest	6.9	6.5
Total interest paid [B]	<u>\$ 51.0</u>	<u>\$ 66.5</u>
Times interest earned (short-run perspective [A ÷ B])	19.98 times per year	14.23 times per year
*In the financial report, amortization and other were combined. The total amount was used because there was no way to determine the amount for amortization and the amount for other.		

ing leases. The lessee treats a capital lease as an acquisition and includes the leased asset in fixed assets and the related obligation in liabilities. Part of the lease payment is considered to be interest expense. Therefore, the interest expense on the income statement includes interest related to capital leases.

A portion of operating lease payments is an item frequently included in addition to interest expense. Operating leases are not on the balance sheet, but they are reflected on the income statement in the rent expense. An operating lease for a relatively long term is a type of long-term financing, so part of the lease payment is really interest. When a portion of operating lease payments is included in fixed charges, it is an effort to recognize the true total interest that the firm pays.

SEC reporting may require a more conservative computation than the times interest earned ratio in order to determine the firm's long-term debt-paying ability. The SEC refers to its ratio as the **ratio of earnings to fixed charges**. The major difference between the times interest earned computation and the ratio of earnings to fixed charges is that the latter computation includes a portion of the operating leases.

Usually, one-third of the operating leases' rental charges is included in the fixed charges because this is an approximation of the proportion of lease payment that is interest. The SEC does not accept the one-third approximation automatically, but requires a more specific estimate of the interest portion based on the terms of the lease. Individuals interested in a company's ratio of earnings to fixed charges can find this ratio on the face of the income statement included with the SEC registration statement (Form S-7) when debt securities are registered.

The same adjusted earnings figure is used in the fixed charge coverage ratio as is used for the times interest earned ratio, except that the interest portion of operating leases (rentals) is added to the adjusted earnings for the fixed charge coverage ratio. The interest portion of operating leases is added to the adjusted earnings because it was previously deducted on the income statement as rental charges.

Nike's 1999 annual report disclosed "the Company leases space for its offices, warehouses and retail stores under leases expiring from one to eighteen years after May 31, 1999. Rent expense aggregated \$129.5 million, \$129.6 million and \$84.1 million for the years ended May 31, 1999, 1998 and 1997, respectively."

Exhibit 7-3 shows the fixed charge coverage for Nike for 1999 and 1998, with the interest portion of rentals considered. This figure, more conservative than the times interest earned, is still very good for Nike.

Among the other items sometimes considered as fixed charges are depreciation, depletion and amortization, debt principal payments, and pension payments. Substantial preferred dividends may also be included, or a separate ratio may be computed to consider preferred dividends. The more items considered as fixed charges, the more conservative the ratio. The trend is usually similar to that found for the times interest earned ratio.

**BALANCE SHEET
CONSIDERATION
WHEN
DETERMINING
LONG-TERM
DEBT-PAYING
ABILITY**

The firm's ability to carry debt, as indicated by the balance sheet, can be viewed by considering the debt ratio and the debt/equity ratio. These ratios are now reviewed.

Debt Ratio

The debt ratio indicates the firm's long-term debt-paying ability. It is computed as follows:

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

EXHIBIT 7-3
NIKE, INC.
Fixed Charge Coverage
Year Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Income before income taxes	\$746.1	\$653.0
Plus: Interest expense	44.1	60.0
Interest portion of rentals	43.2	43.2
Earnings adjusted [A]	<u>\$833.4</u>	<u>\$756.2</u>
Interest expense	\$ 44.1	\$ 60.0
Capitalized interest	6.9	6.5
Interest portion of rental	43.2	43.2
Adjusted interest [B]	<u>\$ 94.2</u>	<u>\$109.7</u>
Fixed charge coverage [A ÷ B]	8.85 times per year	6.89 times per year

Total liabilities includes short-term liabilities, reserves, deferred tax liabilities, minority shareholders' interests, redeemable preferred stock, and any other noncurrent liability. It does not include stockholders' equity.

The debt ratio indicates the percentage of assets financed by creditors, and it helps to determine how well creditors are protected in case of insolvency. If creditors are not well protected, the company is not in a position to issue additional long-term debt. From the perspective of long-term debt-paying ability, the lower this ratio, the better the company's position.

Exhibit 7-4 shows the debt ratio for Nike for May 31, 1999, and May 31, 1998. The exhibit indicates that substantially less than one-half of the Nike assets were financed by outsiders in both 1999 and 1998. This debt ratio is a conservative computation because all of the liabilities and near liabilities have been included. At the same time, the assets are understated because no adjustments have been made for assets that have a fair market value greater than book value.

The debt ratio should be compared with competitors and industry averages. Industries that have stable earnings can handle more debt than industries that have cyclical earnings.

EXHIBIT 7-4
NIKE, INC.
Debt Ratio
May 31, 1999 and 1998

	1999	1998
	(In millions)	
Total liabilities compiled:		
Current liabilities	\$1,446.9	\$1,703.8
Long-term debt	386.1	379.4
Deferred income taxes and other liabilities	79.8	52.3
Redeemable preferred stock	0.3	0.3
Total liabilities [A]	<u>\$1,913.1</u>	<u>\$2,135.8</u>
Total assets [B]	<u>\$5,274.7</u>	<u>\$5,397.4</u>
Debt ratio [A ÷ B]	36.46%	39.57%

This comparison can be misleading if one firm has substantial hidden assets that other firms do not (such as substantial land carried at historical cost).

In practice, substantial disagreement occurs on the details of the formula to compute the debt ratio. Some of the disagreement revolves around whether short-term liabilities should be included. Some firms exclude short-term liabilities because they are not long-term sources of funds and are, therefore, not a valid indication of the firm's long-term debt position. Other firms include short-term liabilities because these liabilities become part of the total source of outside funds in the long run. For example, individual accounts payable are relatively short term, but accounts payable in total becomes a rather permanent part of the entire sources of funds. This book takes a conservative position that includes the short-term liabilities in the debt ratio.

Another issue involves whether certain other items should be included in liabilities. Under current GAAP, some liabilities clearly represent a commitment to pay out funds in the future, whereas other items may never result in a future payment. Items that present particular problems as to a future payment of funds include reserves, deferred taxes, minority shareholders' interests, and redeemable preferred stock. Each of these items will be reviewed in the sections that follow.

Reserves

The reserve accounts classified under liabilities (some short-term and some long-term) result from an expense charge to the income statement and an equal increase in the reserve account on the balance sheet. These reserve accounts do not represent definite commitments to pay out funds in the future, but they are estimates of funds that will be paid out.

Reserve accounts are used infrequently in U.S. financial reporting. It is thought that they provide too much discretion in determining the amount of the reserve and the related impact on reported income. When the reserve account is increased, income is reduced. When the reserve account is decreased, an asset is decreased. Reserve accounts are popular in some other countries like Germany. This book takes a conservative position that includes the reserves in liabilities in the debt ratio.

An example of a reserve appeared in the 1998 United Technologies annual report. The disclosure reads in part:

The Corporation extends performance and operating cost guarantees, which are beyond its normal warranty and service policies, for extended periods on some of its products, particularly commercial aircraft engines. Liability under such guarantees is contingent upon future product performance and durability. The Corporation has accrued its estimated liabilities that may result under these guarantees.

Deferred Taxes (Interperiod Tax Allocation)

In the United States, a firm may recognize certain income and expense items in one period for the financial statements and in another period for the federal tax return. This can result in financial statement income in any one period that is substantially different from tax return income. For many other countries, this is not the case. For example, there are few timing differences in Germany, and there are no timing differences in Japan. For these countries, deferred taxes are not a substantial issue or are not an issue. In the United States, taxes payable based on the tax return can be substantially different from income tax expense based on financial statement income. Current GAAP directs that the tax expense for the financial statements be based on the tax-related items on the financial statements. Taxes payable are based on the actual current taxes payable, determined by the tax return. (The Internal Revenue Code specifies the procedures for determining taxable income.)

The tax expense for the financial statements often does not agree with the taxes payable. The difference between tax expense and taxes payable is recorded as deferred income taxes. The concept that results in deferred income taxes is called **interperiod tax allocation**.

As an illustration of deferred taxes, consider the following facts related to machinery purchased for \$100,000:

Three-year write-off for tax purposes:

1st year	\$ 25,000
2nd year	38,000
3rd year	37,000
	<u>\$100,000</u>

Five-year write-off for financial statements:

1st year	\$ 20,000
2nd year	20,000
3rd year	20,000
4th year	20,000
5th year	20,000
	<u>\$100,000</u>

For both tax and financial statement purposes, \$100,000 was written off for the equipment. The write-off on the tax return was three years, while the write-off on the financial statements was five years. The faster write-off on the tax return resulted in lower taxable income than the income reported on the income statement during the first three years. During the last two years, the income statement income was lower than the tax return income.

In addition to temporary differences, the tax liability can be influenced by an **operating loss carryback** and/or **operating loss carryforward**. The tax code allows a corporation reporting an operating loss for income tax purposes in the current year to carry this loss back and forward to offset reported taxable income. The company may first carry an operating loss back two years in sequential order, starting with the earliest of the two years. If the taxable income for the past two years is not enough to offset the operating loss, then the remaining loss is sequentially carried forward 20 years and offset against future taxable income.

A company can elect to forgo a carryback and, instead, only carry forward an operating loss. A company would not normally forgo a carryback because an operating loss carryback results in a definite and immediate income tax refund. A carryforward will reduce income taxes payable in future years to the extent of earned taxable income. A company could possibly benefit from forgoing a carryback if prospects in future years are good and an increase in the tax rate is anticipated.

Interperiod tax allocation should be used for all temporary differences. A temporary difference between the tax basis of an asset or liability and its reported amount in the financial statements will result in taxable or deductible amounts in future years when the reported amount of the asset or liability is recovered or settled, respectively.

A corporation reports deferred taxes in two classifications: a net current amount and a net noncurrent amount. The net current amount could result in a current asset or a current liability being reported. The net noncurrent amount could result in a noncurrent asset or a noncurrent liability being reported.

Classification as current or noncurrent is usually based on the classification of the asset or liability responsible for the temporary difference. For example, a deferred tax liability resulting from the excess of tax depreciation over financial reporting depreciation would be reported as a noncurrent liability. This is because the temporary difference is related to noncurrent assets (fixed assets).

When a deferred tax asset or liability is not related to an asset or liability, the deferred tax asset or liability is classified according to the expected reversal date of the temporary difference. For example, a deferred tax amount resulting from an operating loss carryforward would be classified based on the expected reversal date of the temporary difference.

There should be a valuation allowance against a deferred tax asset if sufficient uncertainty exists about a corporation's future taxable income. A valuation allowance reduces the deferred tax asset to its expected realizable amount. At the time that the valuation allowance is recognized, tax expense is increased.

A more likely than not criterion is used to measure uncertainty. If more likely than not a deferred asset will not be realized, a valuation allowance would be required.

Nike discloses deferred taxes in long-term assets and long-term liabilities. For many firms, the long-term liability, deferred taxes, has grown to a substantial amount, which often increases each year. This occurs because of the growth in the temporary differences that cause the timing difference. The Nike amount increased substantially in 1999 for the long-term liability. Much of this increase was related to depreciation.

Deferred taxes must be accounted for, using the liability method, which focuses on the balance sheet. Deferred taxes are recorded at amounts at which they will be settled when underlying temporary differences reverse. Deferred taxes are adjusted for tax rate changes. A change in tax rates can result in a material adjustment to the deferred account and can substantially influence income in the year of the tax rate change.

Some individuals disagree with the concept of deferred taxes (interperiod tax allocation). It is uncertain that the deferred tax will be paid. If it will be paid (received), it is uncertain when it will be paid (or received). The deferred tax accounts are, therefore, often referred to as **soft accounts**.

Because of the uncertainty over whether (and when) a deferred tax liability (asset) will be paid (received), some individuals elect to exclude deferred tax liabilities and assets when performing analysis. This is inconsistent with GAAP, which recognize deferred taxes.

Some revenue and expense items, referred to as **permanent differences**, never go on the tax return, but do go on the income statement. Examples would be premiums on life insurance and life insurance proceeds. Federal tax law does not allow these items to be included in expense and revenue, respectively. These items never influence either the tax expense or the tax liability, so they never influence the deferred tax accounts.

Minority Shareholders' Interest

The account, minority shareholders' interest, results when the firm has consolidated another company of which it owns less than 100%. The proportion of the consolidated company that is not owned appears on the balance sheet just above stockholders' equity.

Some firms exclude the minority shareholders' interest when computing debt ratios because this amount does not represent a commitment to pay funds to outsiders. Other firms include the minority shareholders' interest when computing debt ratios because these funds came from outsiders and are part of the total funds that the firm uses. This book takes the conservative position of including minority shareholders' interest in the primary computation of debt ratios. To review minority shareholders' interest, refer to the section of Chapter 3 on minority interest.

Redeemable Preferred Stock

Redeemable preferred stock is subject to mandatory redemption requirements or has a redemption feature outside the control of the issuer. Some redeemable preferred stock agreements require the firm to purchase certain amounts of the preferred stock on the open

market. The Securities and Exchange Commission dictates that redeemable preferred stock not be disclosed under stockholders' equity.

The nature of redeemable preferred stock leaves open to judgment how it should be handled when computing debt ratios. One view excludes it from debt and includes it in stockholders' equity, on the grounds that it does not represent a normal debt relationship. A conservative position includes it as debt when computing the debt ratios. This book uses the conservative approach and includes redeemable preferred stock in debt for the primary computation of debt ratios. For a more detailed review, refer to the section of Chapter 3 that describes redeemable preferred stock.

Debt/Equity Ratio

The **debt/equity ratio** is another computation that determines the entity's long-term debt-paying ability. This computation compares the total debt with the total shareholders' equity. The debt/equity ratio also helps determine how well creditors are protected in case of insolvency. From the perspective of long-term debt-paying ability, the lower this ratio is, the better the company's debt position.

In this book, the computation of the debt/equity ratio is conservative because all of the liabilities and near liabilities are included, and the stockholders' equity is understated to the extent that assets have a value greater than book value. This ratio should also be compared with industry averages and competitors. Compute the debt/equity ratio as follows:

$$\text{Debt /Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholders' Equity}}$$

Exhibit 7-5 shows the debt/equity ratio for Nike for May 31, 1999, and May 31, 1998. Using a conservative approach to computing debt/equity, Exhibit 7-5 indicates the debt/equity ratio was 57.37% at the end of 1999, down from 65.48% at the end of 1998.

The debt ratio and the debt/equity ratio have the same objectives. Therefore, these ratios are alternatives to each other if computed in the manner recommended here. Because some financial services may be reporting the debt ratio and others may be reporting the debt/equity ratio, the reader should be familiar with both.

As indicated previously, a problem exists with the lack of uniformity in the way some ratios are computed. This especially occurs with the debt ratio and the debt/equity ratio. When comparing the debt ratio and the debt/equity ratio with industry ratios, try to determine how the industry ratios were computed. A reasonable comparison may not be possible because the financial sources sometimes do not indicate what elements of debt the computations include.

EXHIBIT 7-5 NIKE, INC.
Debt/Equity Ratio
May 31, 1999 and 1998

	1999	1998
	(In millions)	
Total liabilities [Exhibit 7-4] [A]	\$1,913.1	\$2,135.8
Shareholders' equity [B]	\$3,334.6	\$3,261.6
Debt/equity ratio [A ÷ B]	57.37%	65.48%

Debt to Tangible Net Worth Ratio

The debt to tangible net worth ratio also determines the entity's long-term debt-paying ability. This ratio also indicates how well creditors are protected in case of the firm's insolvency. As with the debt ratio and the debt/equity ratio, from the perspective of long-term debt-paying ability, it is better to have a lower ratio.

The debt to tangible net worth ratio is a more conservative ratio than either the debt ratio or the debt/equity ratio. It eliminates intangible assets, such as goodwill, trademarks, patents, and copyrights, because they do not provide resources to pay creditors—a very conservative position. Compute the debt to tangible net worth ratio as follows:

$$\text{Debt to Tangible Net Worth Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholders' Equity} - \text{Intangible Assets}}$$

In this book, the computation of the debt to tangible net worth ratio is conservative. All of the liabilities and near liabilities are included, and the stockholders' equity is understated to the extent that assets have a value greater than book value.

Exhibit 7-6 shows the debt to tangible net worth ratios for Nike for May 31, 1999, and May 31, 1998. This is a conservative view of the debt-paying ability.

Other Long-Term Debt-Paying Ability Ratios

A number of additional ratios indicate perspective on the long-term debt-paying ability of a firm. This section describes some of these ratios.

The **current debt/net worth ratio** indicates a relationship between current liabilities and funds contributed by shareholders. The higher the proportion of funds provided by current liabilities, the greater the risk.

Another ratio, the **total capitalization ratio**, compares long-term debt to total capitalization. Total capitalization consists of long-term debt, preferred stock, and common stockholders' equity. The lower the ratio, the lower the risk.

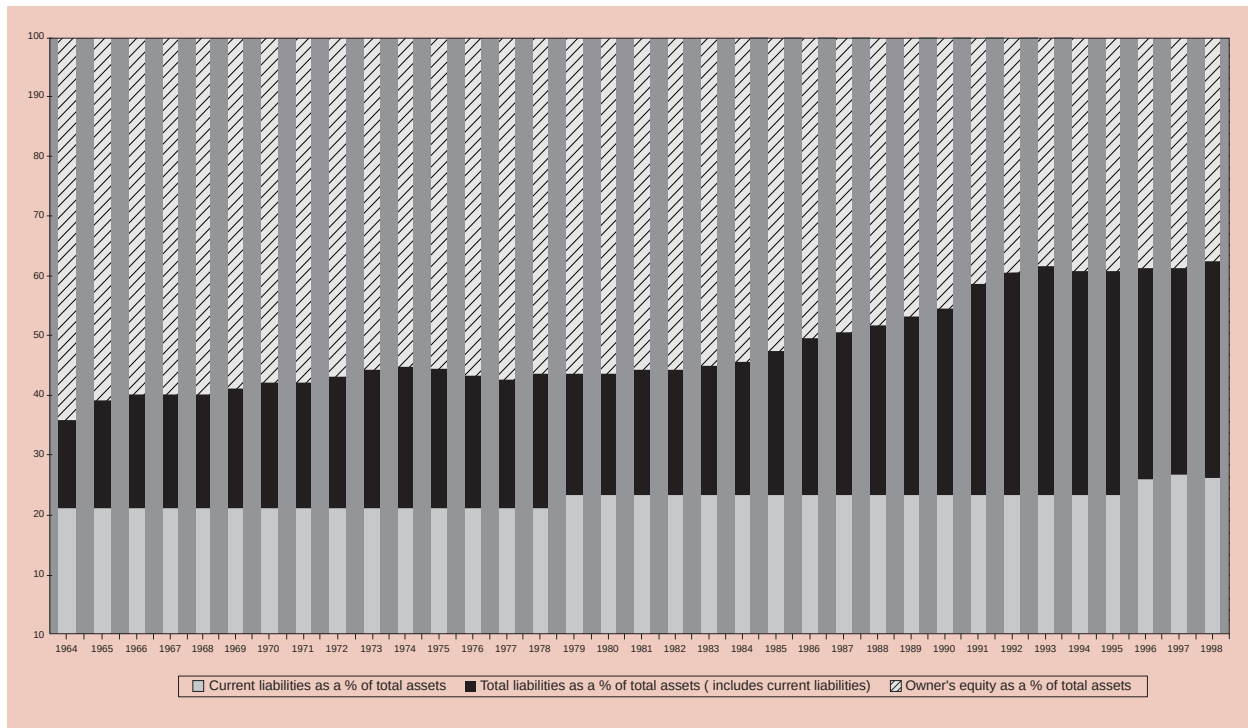
Another ratio, the **fixed asset/equity ratio**, indicates the extent to which shareholders have provided funds in relation to fixed assets. Some firms subtract intangibles from shareholders' equity to obtain tangible net worth. This results in a more conservative ratio. The higher the fixed assets in relation to equity, the greater the risk.

Exhibit 7-7 on the following page indicates the trend in current liabilities, total liabilities, and owner's equity of firms in the United States between 1964 and 1998. It shows that there has been a major shift in the capital structure of firms, toward a higher proportion of

EXHIBIT 7-6

NIKE, INC. Debt to Tangible Net Worth Ratio May 31, 1999 and 1998

	1999	1998
	(In millions)	
Total liabilities [Exhibit 7-4] [A]	\$1,913.1	\$2,135.8
Shareholders' equity	\$3,334.6	\$3,261.6
Less: Intangible assets	426.6	435.8
Adjusted shareholders' equity [B]	\$2,908.0	\$2,825.8
Debt to tangible net worth ratio [A ÷ B]	65.79%	75.58%

EXHIBIT 7-7**TRENDS IN CURRENT LIABILITIES, LONG-TERM LIABILITIES, AND OWNER'S EQUITY 1964-1998**

Source: Quarterly Financial Reports of Manufacturing, Mining & Trading, Department of Commerce. Washington, DC: Government Printing Office

debt in relation to total assets. This indicates a substantial increase in risk as management more frequently faces debt coming due. It also indicates that short-term debt is a permanent part of the financial structure of firms. This supports the decision to include short-term liabilities in the ratios determining long-term debt-paying ability (debt ratio, debt/equity ratio, and debt to tangible net worth ratio).

SPECIAL ITEMS THAT INFLUENCE A FIRM'S LONG-TERM DEBT-PAYING ABILITY

There are a number of special items that influence a firm's long-term debt-paying ability. These items are now reviewed.

Long-Term Assets Versus Long-Term Debt

The specific assets of the firm are important if the firm becomes unprofitable and the assets are sold. Therefore, consider the assets of the firm when determining the long-term debt-paying ability. The assets are insurance should the firm become unprofitable. The ability to analyze the assets, in relation to the long-term debt-paying ability, is limited, based on the information reported in the published financial statements. The statements do not extensively disclose market or liquidation values; they disclose only unrecovered cost for many items. The market value figure reported for some investments has been an exception.

A review of the financial statements is often of value if the firm liquidates or decides to reduce the scope of its operations. Examples of assets that may have substantial value would be land, timberlands, and investments.

When the Penn Central Company went bankrupt, it had substantial debt and operating losses. Yet because of assets that had substantial market values, creditors were repaid. In other cases, creditors receive nothing or only nominal amounts when a firm goes bankrupt.

Substantial assets that have a potential value higher than the book figures may also indicate an earnings potential that will be realized later. For example, knowing that a railroad owns land that contains millions or billions of tons of coal could indicate substantial profit potential, even if the coal is not economical to mine at the present time. In future years, as the price of competitive products such as oil and gas increase, the coal may become economical to mine. This happened in the United States in the late 1970s. Several railroads that owned millions or billions of tons of unmined coal found that the coal became very valuable as the price of oil and gas increased.

Long-Term Leasing

Earlier, this chapter explained the influence of long-term leasing in relation to the income statement. Now we will consider the influence of long-term leasing from the balance sheet perspective.

First, review some points made previously. The lessee classifies leases as either capital leases or operating leases. A capital lease is handled as if the lessee acquired the asset. The leased asset is classified as a fixed asset, and the related obligation is included in liabilities. Operating leases are not reflected on the balance sheet but in a footnote and on the income statement as rent expense.

Operating leases for a relatively long term (a type of long-term financing) should be considered in a supplemental manner as to their influence on the debt structure of the firms. Capital leases have already been considered in the debt ratios computed because the capital leases were part of the total assets and also part of the total liabilities on the balance sheet.

The capitalized asset amount will not agree with the capitalized liability amount because the liability is reduced by payments and the asset is reduced by depreciation taken. Usually, a company depreciates capital leases faster than payments are made. This would result in the capitalized asset amount being lower than the related capitalized liability amount. On the original date of the capital lease, the capitalized asset amount and the capitalized liability amount are the same.

The Nike footnote relating to long-term leases indicates the minimum future rentals under operating leases for years subsequent to May 31, 1999. These figures, shown below, do not include an amount for any possible contingent rentals because they are not practicable to estimate.

	Operating Leases
2000	\$ 96.1 million
2001	86.9
2002	75.9
2003	69.3
2004	58.8
2005 and later	368.2
	<u>\$755.2</u>

If these leases had been capitalized, the amount added to fixed assets and the amount added to liabilities would be the same at the time of the initial entry. As indicated previously,

the amounts would not be the same, subsequently, because the asset is depreciated at some selected rate, while the liability is reduced as payments are made. When incorporating the operating leases into the debt ratios, use the liability amount and assume that the asset and the liability amount would be the same since no realistic way exists to compute the difference.

It would not be realistic to include the total future rentals that relate to operating leases in the lease commitments footnote (\$755.2 million) because part of the commitment would be an interest consideration. Earlier, this chapter indicated that some firms estimate that one-third of the operating lease commitment is for interest. With a one-third estimate for interest, two-thirds is estimated for principal. For Nike, this amount is \$503.5 million ($\$755.2 \times \frac{2}{3}$). This amount can be added to fixed assets and long-term liabilities in order to obtain a supplemental view of the debt ratios that relate to the balance sheet. Exhibit 7-8 shows the adjusted debt ratio and debt/equity ratio for Nike at May 31, 1999; this increases the debt position by a substantial amount.

Pension Plans

The Employee Retirement Income Security Act (ERISA) became law in 1974 and substantially influenced the administration of pension plans, while elevating their liability status for the firm. This act includes provisions requiring minimum funding of plans, minimum rights to employees upon termination of their employment, and the creation of a special federal agency, the Pension Benefit Guaranty Corporation (PBGC), to help fund employee benefits when pension plans are terminated. The PBGC receives a fee for every employee covered by a pension plan subject to the PBGC. The PBGC has the right to impose a lien against a covered firm of 30% of the firm's net worth. This lien has the status of a tax lien and, therefore, ranks high among creditor claims. In practice, the PBGC has been reluctant to impose this lien except when a firm is in bankruptcy proceedings. This has resulted in the PBGC receiving a relatively small amount of assets when it has imposed the lien.

EXHIBIT 7-8

NIKE, INC.

Adjusted Debt Ratio and Debt/Equity Ratio Considering Operating Leases May 31, 1999

	1999 (In millions)
Adjusted debt ratio:	
Unadjusted total liabilities [Exhibit 7-4]	\$1,913.1
Plus: Estimated for operating leases ($\$755.2 \times \frac{2}{3}$)	503.5
Adjusted liabilities [A]	<u>\$2,416.6</u>
Unadjusted total assets	\$5,247.7
Plus: Estimated for operating leases	503.5
Adjusted assets [B]	<u>\$5,751.2</u>
Adjusted debt ratio [A ÷ B]	42.02%
Unadjusted debt ratio [Exhibit 7-4]	36.46%
Adjusted debt/equity:	
Adjusted liabilities (above) [A]	\$2,416.6
Shareholders' equity [B]	3,334.6
Adjusted debt/equity [A ÷ B]	72.47%
Unadjusted debt/equity [Exhibit 7-5]	57.37%

An important provision in a pension plan is the vesting provision. An employee vested in the pension plan is eligible to receive some pension benefits at retirement, regardless of whether the employee continues working for the employer. ERISA has had a major impact on reducing the vesting time. The original ERISA has been amended several times to increase the responsibility of firms regarding their pension plans.

In 1980, Congress passed the Multiemployer Pension Plan Amendment Act. Multiemployer pension plans are plans maintained jointly by two or more unrelated employers. This act provides for significant increased employer obligations for multiemployer pension plans and makes the PBGC coverage mandatory for multiemployer plans.

When a firm has a multiemployer pension plan, it normally covers union employees. Such a firm usually has other pension plans that cover nonunion employees. When disclosing a multiemployer pension plan, the firm normally includes the cost of the plan with the cost of the other pension plans. It is usually not practical to isolate the cost of these plans because of commingling. These plans operate usually on a pay-as-you-go basis, so no liability arises unless a payment has not been made. A potential significant liability arises if the company withdraws from the multiemployer plan. Unfortunately, the amount of this liability often cannot be ascertained from the pension footnote.

Ashland Coal Inc. included the following comment in a footnote with its 1996 annual report:

Under the labor contract with the United Mine Workers of America (UMWA), Ashland Coal made payments of \$1,076,000 in 1996, \$1,348,000 in 1995, and \$1,293,000 in 1994 into a multiemployer defined benefit pension plan trust established for the benefit of union employees. Payments are based on hours worked. Under the Multiemployer Pension Plan Amendments Act of 1980, a contributor to a multiemployer pension plan may be liable, under certain circumstances, for its proportionate share of the plan's unfunded vested benefits (withdrawal liability). Ashland Coal has estimated its share of such amount to be \$15,200,000 at December 31, 1996. Ashland Coal is not aware of any circumstances which would require it to reflect its share of unfunded vested pension benefits in its consolidated financial statements.

Defined Contribution Plan

A company-sponsored pension plan is either a defined contribution plan or a defined benefit plan. A **defined contribution plan** defines the contributions of the company to the pension plan. Once this defined contribution is paid, the company has no further obligation to the pension plan. This type of plan shifts the risk to the employee as to whether the pension funds will grow to provide for a reasonable pension payment upon retirement. With this type of plan, which gained popularity during the 1980s, there is no problem of estimating the company's pension liability or pension expense. Thus, defined contribution plans do not present major financial reporting problems.

For firms with defined contribution plans, try to grasp the significance by doing the following:

1. For a three-year period, compare pension expense with operating revenue. This will indicate the materiality of pension expense in relation to operating revenue and the trend.
2. For a three-year period, compare pension expense with income before income taxes. This will indicate the materiality of pension expense in relation to income and the trend.
3. Note any balance sheet items. (There will usually not be a balance sheet item because the firm is paying on a pay-as-you-go basis.)

Exhibit 7-9 contains the Newport Corporation statements of income and the footnote relating to a defined contribution plan. This information can be used to estimate the materiality of the defined contribution plan, as follows:

1. Comparison of pension expense with operating revenue:

	1998	1997	1996
Pension expense (A)	\$ 1,300,000	\$ 1,000,000	\$ 900,000
Revenues (B)	\$134,359,000	\$132,594,000	\$119,910,000
[A/B]	.97%	.75%	.75%

2. Comparison of pension expense with income before income taxes:

	1998	1997	1996
Pension expense (A)	\$ 1,300,000	\$ 1,000,000	\$ 900,000
Income before income taxes (B)	\$12,343,000	\$10,094,000	\$ 6,408,000
[A/B]	10.53%	9.91%	14.04%

3. Balance sheet items:

No balance sheet items are disclosed.

Thus, pension expenses as a percentage of revenues were .97%, .75%, and .75% in 1998, 1997, and 1996, respectively. Pension expenses as a percentage of income before income taxes were 10.53%, 9.91%, and 14.04% in 1998, 1997, and 1996, respectively. Pension expense appears to be material.

EXHIBIT 7-9

NEWPORT CORPORATION
Pension Footnote and Consolidated Statements of Income
1998 Annual Report

<i>(In thousands, except per share amounts)</i>	Year Ended December 31,		
	1998	1997	1996
Net sales	\$134,359	\$132,594	\$119,910
Cost of sales	75,491	74,844	67,103
Gross profit	58,868	57,750	52,807
Selling, general and administrative expense	33,017	35,825	36,741
Research and development expense	11,738	9,490	8,204
Income from operations	14,113	12,435	7,862
Interest expense	(1,891)	(1,992)	(1,931)
Other income (expense), net	121	(349)	477
Income before income taxes	12,343	10,094	6,408
Income tax provision	3,365	3,030	1,705
Net income	\$ 8,978	\$ 7,064	\$ 4,703

Note 14: Defined Contribution Plan

The Company sponsors a defined contribution plan. Generally, all U.S. employees are eligible to participate in and contribute to this plan. Company contributions to the plan are determined based on a percentage of contributing employees' compensation. Expense recognized for the plan totaled \$1.3 million, \$1.0 million and \$0.9 million for 1998, 1997 and 1996, respectively.

Nike does not have a defined contribution plan, but they do have a voluntary 401(k) employee savings plan. We can approach analysis of this plan in a manner similar to the analysis of a defined contribution pension plan. Note 10 (benefit plans) explains the following:

The Company has a voluntary 401(k) employee savings plan. The Company matches a portion of employee contributions with Common Stock, vesting that portion over 5 years. Company contributions to the savings plan were \$7.4 million, \$8.1 million and \$6.3 million for the years ended May 31, 1999, 1998 and 1997, respectively, and are included in selling and administrative expenses.

Thus, the savings plan expenses as a percentage of revenues were .08%, .08%, and .07% in 1999, 1998, and 1997, respectively. Savings plan expenses as a percentage of income before income taxes were .99%, 1.25%, and .49% in 1999, 1998, and 1997, respectively. Savings plan expenses appear to be immaterial.

Defined Benefit Plan

A defined benefit plan defines the benefits to be received by the participants in the plan. For example, the plan may call for the participant to receive 40% of his or her average pay for the three years before retirement. This type of plan leaves the company with the risk of having insufficient funds in the pension fund to meet the defined benefit. This type of plan was the predominant type of plan prior to the 1980s. Most companies still have a defined benefit plan, partly because of the difficulties involved in switching to a defined contribution plan. Some companies have terminated their defined benefit plan by funding the obligations of the plan and starting a defined contribution plan. In some cases, this has resulted in millions of dollars being transferred to the company from the pension plan after the defined benefit plan obligations have been met. The U.S. Congress added an excise tax on “reversions” in 1990. This excise tax can be as high as 50%. This has substantially slowed down the “reversions.”

A number of assumptions about future events must be made regarding a defined benefit plan. Some of these assumptions that relate to the future are interest rates, employee turnover, mortality rates, compensation, and pension benefits set by law. Assumptions about future events contribute materially to the financial reporting problems in the pension area. Two firms with the same plan may make significantly different assumptions, resulting in major differences in pension expense and liability.

There are many technical terms associated with defined benefit plans. A description of all of these terms is beyond the scope of this book.

For firms with defined benefit plans, try to grasp the significance by doing the following:

1. For a three-year period, compare pension expense with operating revenue. This will indicate the materiality of pension expense in relation to operating revenue and the trend.
2. For a three-year period, compare pension expense with income before income taxes. This will indicate the materiality of pension expense in relation to income and the trend.
3. Compare the benefit obligations with the value of plan assets. This can indicate significant underfunding or overfunding. Underfunding represents a potential liability. Overfunding represents an opportunity to reduce future pension expense. Overfunding can also be used to reduce related costs, such as disability benefits, retiree health costs, staff downsizings. Overfunding can also be used to take credits to the income statement.
4. Note the net balance sheet liability (asset) recognized.
5. Note assumptions as to the following:
 - a. Discount rate

The interest (discount) rate used to discount benefit obligations will have a signifi-

cant impact on the benefit obligations. The higher the interest rate used, the lower the present value of the liability and the lower the immediate pension cost. Changes in this interest rate could significantly increase (decrease) the present value of the liability and increase (decrease) the pension cost.

b. Rate of compensation increase

The more compensation increase assumed, the greater is the future pay that increases the benefit obligations. Changes in the rate of compensation could significantly increase (decrease) the projected benefit obligations. An increase in the rate of compensation projected would increase the projected benefit obligations. A decrease in the rate of compensation projected would decrease the projected benefit obligations.

c. Expected return on plan assets

The higher the expected return on plan assets, the lower is the projected benefit obligation. The lower the expected return on plan assets, the higher is the projected benefit obligation.

Exhibit 7-10 shows the Ashland Inc. pension footnote. We note that Ashland's pension plans are defined benefit plans. Observe the following relating to Ashland's defined benefit plans:

1. Pension expense (cost) in relation to operating revenue:

	1998	1997	1996
Pension expense (A)	\$ 40,000,000	\$ 48,000,000	\$ 45,000,000
Operating revenue (B)	\$6,534,000,000	\$12,833,000,000	\$12,313,000,000
Pension expense/operating revenue [A ÷ B]	.61%	.37%	.37%

A significant increase occurred in 1998 in relation to the two prior years.

2. Pension expense (cost) in relation to income before taxes:

	1998	1997	1996
Pension expense (A)	\$ 40,000,000	\$ 48,000,000	\$ 45,000,000
Income before income taxes (B)	\$317,000,000	\$319,000,000	\$208,000,000
Pension expense/income before income taxes [A ÷ B]	12.62%	15.05%	21.63%

Ashland's pension expense has declined in relation to income before income taxes, but it would be considered to be material.

3. Comparison of benefit obligations with the value of the plan assets:

	1998	1997
Benefit obligations	\$603,000,000	\$635,000,000
Plan assets	369,000,000	435,000,000
Excess of obligations over plan assets	<u>\$234,000,000</u>	<u>\$200,000,000</u>

There appears to be a significant underfunding of pension plans. This could result in future pension expense increases.

4. Net balance sheet liability (asset) recognized:

	1998	1997
Net liability recognized	<u>\$122,000,000</u>	<u>\$150,000,000</u>

A significant balance sheet liability has been recognized. The liability recognized is somewhat less than the excess of obligations over plan assets.

EXHIBIT 7-10

ASHLAND INC.
Pension Footnote
Postretirement Benefits Other than Pensions
Partial Income Statement

Note N - Employee Benefit Plans**Pension and other postretirement plans**

Ashland and its subsidiaries sponsor defined benefit pension plans that cover substantially all employees. Benefits under these plans are generally based on employees' years of service and compensation during the years immediately preceding their retirement. For certain plans, 50% of employees' leveraged employee stock ownership plan (LESOP) accounts are coordinated with and used to fund their pension benefits. Ashland determines the level of contributions to its pension plans annually and contributes amounts within the limitations imposed by Internal Revenue Service regulations.

Ashland and its subsidiaries also sponsor unfunded postretirement benefit plans, which provide health care and life insurance benefits for eligible employees who retire or are disabled. Retiree contributions to Ashland's health care plans are adjusted periodically, and the plans contain other cost-sharing features such as deductibles and coinsurance. Life insurance plans are generally noncontributory. Ashland funds the costs of benefits as they are paid.

Summaries of the changes in the benefit obligations and plan assets (primarily listed stocks and debt securities) and of the funded status of the plans follow.

<i>(In millions)</i>	<i>Pension benefits</i>		<i>Other postretirement benefits</i>	
	1998	1997	1998	1997
Change in benefit obligations				
Benefit obligations at October 1	\$635	\$533	\$308	\$273
Service cost	28	36	8	11
Interest cost	34	42	16	21
Retiree contributions	—	—	4	5
Benefits paid	(27)	(24)	(21)	(23)
Obligations assumed by MAP	(153)	—	(66)	—
Other-primarily actuarial loss	86	48	13	21
Benefit obligations at September 30	<u>\$603</u>	<u>\$635</u>	<u>\$262</u>	<u>\$308</u>
Change in plan assets				
Value of plan assets at October 1	\$435	\$348	\$ —	\$ —
Actual return on plan assets	19	74	—	—
Employer contributions	4	31	17	18
Retiree contributions	—	—	4	5
Benefits paid	(17)	(18)	(21)	(23)
Assets transferred to MAP	(72)	—	—	—
Value of plan assets at September 30	<u>\$369</u>	<u>\$435</u>	<u>\$ —</u>	<u>\$ —</u>
Funded status of the plans				
Accumulated obligations less plan assets ⁽¹⁾	\$103	\$ 6	\$262	\$308
Provision for future salary increases	131	194	—	—
Excess of obligations over plan assets ⁽¹⁾	234	200	262	308
Unrecognized actuarial loss	(106)	(42)	(12)	(25)
Unrecognized transition gain	—	3	—	—
Unrecognized prior service credit (cost)	(6)	(11)	48	101
Net liability recognized	<u>\$122</u>	<u>\$150</u>	<u>\$298</u>	<u>\$384</u>
Balance sheet liabilities (assets)				
Prepaid benefit costs	\$ (2)	\$ (2)	\$ —	\$ —
Accrued benefit liabilities	156	179	298	384
Intangible assets	(3)	(3)	—	—
Accumulated other comprehensive income	(29)	(24)	—	—
Net liability recognized	<u>\$122</u>	<u>\$150</u>	<u>\$298</u>	<u>\$384</u>

EXHIBIT 7-10*continued*

<i>(In millions)</i>	<i>Pension benefits</i>		<i>Other postretirement benefits</i>	
	1998	1997	1998	1997
Assumptions as of September 30				
Discount rate	7.00%	7.25%	7.00%	7.25%
Rate of compensation increase	5.00	5.00	—	—
Expected return on plan assets	9.00	9.00	—	—

⁽¹⁾ The projected benefit obligations, accumulated benefit obligations and plan assets for pension plans with accumulated benefit obligations in excess of plan assets were \$603 million, \$472 million and \$369 million as of September 30, 1998, and \$109 million, \$88 million and \$11 million as of September 30, 1997. Unfunded accumulated benefit obligations include \$84 million in 1998 and \$77 million in 1997 associated with nonqualified defined benefit plans.

The following table details the components of pension and other postretirement benefit costs.

<i>(In millions)</i>	<i>Pension benefits</i>			<i>Other postretirement benefits</i>		
	1998	1997	1996	1998	1997	1996
Service cost	\$28	\$36	\$31	\$ 8	\$11	\$11
Interest cost	34	42	39	16	21	19
Expected return on plan assets	(30)	(31)	(27)	—	—	—
Other amortization and deferral	8	1	2	(10)	(16)	(16)
	<u>\$40</u>	<u>\$48</u>	<u>\$45</u>	<u>\$14</u>	<u>\$16</u>	<u>\$14</u>

Ashland amended nearly all of its retiree health care plans in 1992 to place a cap on its contributions and to adopt a cost-sharing method based upon years of service. The cap limits Ashland's contributions to base year per capita costs, plus annual increases of up to 4.5% per year. These amendments reduced Ashland's obligations under its retiree health care plans at that time by \$197 million, which was being amortized to income over approximately 12 years. During 1998, Marathon Ashland Petroleum LLC (MAP) assumed certain of Ashland's postretirement benefit obligations, and \$38 million of the unrecognized credit from this plan amendment was applied against the carrying value of Ashland's investment in MAP. The remaining credit at September 30, 1998, will be amortized over approximately 6 years.

Other plans

Ashland sponsors a savings plan to assist eligible employees in providing for retirement or other future needs. Under that plan, Ashland contributes up to 4.2% of a participating employee's earnings (1.2% for LESOP participants prior to March 31, 1996). Company contributions amounted to \$15 million in 1998, \$21 million in 1997 and \$12 million in 1996.

ASHLAND INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENTS OF CONSOLIDATED INCOME (PARTIAL)
YEARS ENDED SEPTEMBER 30

<i>(In millions except per share data)</i>	1998	1997	1996
Revenues			
Sales and operating revenues (including excise taxes)	\$6,534	\$12,833	\$12,313
Equity income - Note D	329	39	33
Other income	70	89	66
	<u>6,933</u>	<u>12,961</u>	<u>12,412</u>
Costs and expenses			
Cost of sales and operating expenses	5,299	9,810	9,512
Excise taxes on products and merchandise	—	992	985
Selling, general and administrative expenses	1,006	1,350	1,257
Depreciation, depletion and amortization	181	348	299
	<u>6,486</u>	<u>12,500</u>	<u>12,053</u>
Operating income	447	461	359
Interest expense (net of interest income)	(130)	(142)	(151)
Income from continuing operations before income taxes	317	319	208
Income taxes - Note E	(114)	(127)	(72)
Income from continuing operations	<u>203</u>	<u>192</u>	<u>136</u>

5. Assumptions as to discount rate, rate of compensation increase, and expected return on plan assets:

	1998	1997
Discount rate	7.00%	7.25%

The discount rate was reduced to 7.00% from 7.25%. This increased the benefit obligations and the pension expense. According to the 1998 *Accounting Trends & Techniques*, the typical discount rate used between 1995 and 1997 was 7% to 8%¹.

	1998	1997
Rate of compensation increase	5.00%	5.00%

According to the 1998 *Accounting Trends & Techniques*, a substantial majority of firms used 5.00% or less during the period 1995–1997². Note that there was no change in the rate for Ashland.

	1998	1997
Expected return on plan assets	9.00%	9.00%

According to the 1998 *Accounting Trends & Techniques*, the most frequently used rates were 9.00% and 9.50% in 1997 and 1996³. Note that there was no change in the rate for Ashland.

Postretirement Benefits Other than Pensions

Some benefits other than pensions, such as medical insurance and life insurance contracts, accrue to employees upon retirement. These benefits can be substantial. Many firms have obligations in the millions of dollars. Prior to 1993, most firms did not have these obligations funded; therefore, for these firms, a potential for a significant liability existed.

Beginning in 1993, firms were required to accrue, or set up a reserve for, future postretirement benefits other than pensions (rather than deduct these costs when paid). Firms can usually spread the catch-up accrual costs over 20 years or take the charge in one lump sum. The amount involved is frequently material, so this choice can represent a major problem when comparing financial results of two or more firms. For some firms, the catch-up charge for medical insurance was so material that it resulted in a deficit in retained earnings or even a deficit to the entire stockholders' equity section.

Many firms reduce costs by changing their plans to limit health care benefits to retirees to a maximum fixed amount. This type of plan, in contrast to open-ended medical benefits, could materially reduce the firm's health care costs for retirees. Review the footnotes closely to determine how the firm records health care costs for retirees.

For firms with postretirement benefits other than pensions, you should try to grasp the significance using the same basic approach as was used for defined benefit plans for pensions. The exception is that there will be no rate of compensation increase.

Exhibit 7-10 shows the postretirement benefits other than pensions for Ashland Inc.

1. Expense (cost) in relation to operating revenue:

	1998	1997	1996
Expense (A)	\$14,000,000	\$16,000,000	\$14,000,000
Operating revenue (B)	\$6,534,000,000	\$12,833,000,000	\$12,313,000,000
Expense/operating revenue [A ÷ B]	.21%	1.25%	.11%

Expense in relation to operating revenue fluctuated substantially. This expense would likely be considered to be immaterial.

2. Expense (cost) in relation to income before taxes:

	1998	1997	1996
Expense (A)	\$14,000,000	\$16,000,000	\$14,000,000
Income before income taxes (B)	\$317,000,000	\$319,000,000	\$208,000,000
Expense/income before income taxes [A ÷ B]	4.42%	5.02%	6.73%

Postretirement expense has declined in relation to income before income taxes. This expense could be considered substantial.

3. Comparison of benefit obligations with the value of the plan assets:

	1998	1997
Benefit obligation	\$262,000,000	\$308,000,000
Plan assets	– 0 –	– 0 –
Excess of obligations over plan assets	<u>\$262,000,000</u>	<u>\$308,000,000</u>

This appears to be a significant underfunding of postretirement expense.

4. Net balance sheet liability (asset) recognized:

	1998	1997
Net liability recognized	<u>\$298,000,000</u>	<u>\$384,000,000</u>

A significant balance sheet liability has been recognized. The net balance sheet liability is more than the excess of obligations over plan assets.

5. Assumptions as to discount rate, and expected return on plan assets.

	1998	1997
Discount rate	7.00%	7.25%

The same rate as used for pension plans. The discount rate was reduced to 7.00% from 7.25%. This increased the benefit obligations and the expense.

	1998	1997
Expected Return on Plan Assets	----	----

A rate was not used for plan assets because there were no plan assets.

Joint Ventures

A **joint venture** is an association of two or more businesses established for a special purpose. Some joint ventures are in the form of partnerships or other unincorporated forms of business. Others are in the form of corporations jointly owned by two or more other firms.

The accounting principles for joint ventures are flexible because of their many forms. The typical problem concerns whether a joint venture should be carried as an investment or consolidated. Some joint ventures are very significant in relation to the parent firm. There is typically a question as to whether the parent firm has control or only significant influence. When the parent firm has control, it usually consolidates joint ventures by using a pro rata share. Other joint ventures are usually carried in an investment account by using the equity method. In either case, disclosure of significant information often appears in a footnote.

When a firm enters into a joint venture, it frequently makes commitments such as guaranteeing a bank loan for the joint venture or a long-term contract to purchase materials with the joint venture. This type of action can give the company significant potential liabilities or commitments that do not appear on the face of the balance sheet. This potential problem

exists with all joint ventures, including those that have been consolidated. To be aware of these significant potential liabilities or commitments, read the footnote that relates to the joint venture. Then consider this information in relation to the additional liabilities or commitments to which the joint venture may commit the firm.

LTV Corporation disclosed in a footnote to its 1994 annual report:

LTV has guaranteed approximately \$13 million per year through January 1999 for a joint venture's operating lease rental obligation. The Company has guaranteed \$5 million of debt of a company whose facilities are leased by the Company. The Company does not believe it is practicable to estimate the fair value of the guarantees and does not believe exposure to loss is likely.

Contingencies

A **contingency** is an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur.⁴

A contingency is characterized by an existing condition, uncertainty as to the ultimate effect, and its resolution depending on one or more future events. A loss contingency should be accrued if two conditions are met:⁵

1. Information prior to issuance of the financial statements indicates that it is *probable* that an asset has been impaired or a liability has been incurred at the date of the financial statements.
2. The amount of the loss can be *reasonably estimated*.

If a contingency loss meets one, but not both, of the criteria for recording and is, therefore, not accrued, disclosure by footnote is made when it is at *least reasonably possible* that there has been an impairment of assets or that a liability has been incurred. Examples of contingencies include warranty obligations and collectibility of receivables. If the firm guarantees the indebtedness of others, the contingency is usually disclosed in a footnote.

When examining financial statements, a footnote that describes contingencies should be closely reviewed for possible significant liabilities not disclosed on the face of the balance sheet.

The following covers gain contingencies:

1. Contingencies that might result in gains usually are not reflected in the accounts, since to do so might be to recognize revenue prior to its realization.
2. Adequate disclosure shall be made of contingencies that might result in gains, but care shall be exercised to avoid misleading implications as to the likelihood of realization.⁶

The footnotes of the firm should be reviewed for gain contingencies. Converse disclosed the following in the notes to its 1998 annual report:

At January 2, 1999, Converse had operating loss carryforwards of \$134,038. The loss carryforwards expire between the years 2009 and 2018. (dollars in thousands)

Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk

Credit and market risk for all financial instruments with off-balance-sheet risk require the following disclosure:

1. The face or contract amount.

2. The nature and terms including, at a minimum, a discussion of credit and market risk, cash requirements, and accounting policies.⁷

Disclosure is also required of the following regarding financial instruments with off-balance-sheet credit risk:

1. The amount of accounting loss the entity would incur if any party failed completely to perform according to the terms of the contract and the collateral or other security, if any, proved worthless.
2. The entity's policy of requiring collateral and a brief description of the collateral it currently holds.⁸

Accounting loss represents the worst-case loss if everything related to a contract went wrong. This includes the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract, as well as the possibility that changes in market prices may make a financial instrument less valuable or more troublesome.

In addition to requiring disclosure of matters relating to off-balance-sheet financial instruments, disclosure is required of credit risk concentration. This disclosure includes information on the extent of risk from exposures to individuals or groups of counterparties in the same industry or region. The activity, region, or economic characteristic that identifies a concentration requires a narrative description. The provision of requiring disclosure of credit risk concentration can be particularly significant to small companies. Examples are a retail store whose receivables are substantially with local residents and a local bank with a loan portfolio concentrated with debtors dependent on the local tourist business.

Exhibit 7-11 presents financial instruments with off-balance-sheet risk and financial instruments with concentrations of credit risk for Nordson Corporation as disclosed in its 1998 annual report.

Disclosures About Fair Value of Financial Instruments

Disclosure is required about the fair value of financial instruments. This includes financial instruments recognized and not recognized in the balance sheet (both assets and liabilities). When estimating fair value is not practicable, then descriptive information pertinent to estimating fair value should be disclosed.

The disclosure about fair value of financial instruments can be either in the body of the financial statements or in the footnotes.⁹ This disclosure could possibly indicate significant opportunity or additional risk to the company. For example, long-term debt disclosed at a fair value above the carrying amount increases the potential for a loss.

Exhibit 7-12 presents the fair value of financial instruments for Nordson Corporation, as disclosed in its 1998 annual report.

SUMMARY

This chapter covered two approaches to a firm's long-term debt-paying ability. One approach considers the firm's ability to carry debt as indicated by the income statement, and the other approach views it as indicated by the balance sheet. The ratios related to debt include the following:

$$\text{Times Interest Earned} = \frac{\text{Recurring Earnings, Excluding Interest Expense, Tax Expense, Equity Earnings, and Minority Earnings}}{\text{Interest Expense, Including Capitalized Interest}}$$

EXHIBIT 7-11**NORDSON CORPORATION****Off-Balance-Sheet Risk and Concentrations of Credit Risk
1998 Annual Report**

The Company operates internationally and enters into transactions denominated in foreign currencies. As a result, the Company is subject to the transaction exposures that arise from exchange rate movements between the dates foreign currency transactions are recorded and the dates they are settled. The Company enters into foreign currency forward exchange contracts to reduce these risks, and not for trading purposes. The maturities of these contracts are generally less than one year and usually less than 90 days.

The carrying amount of these forward contracts is included in receivables at differential between the contract rates and the spot rates. Gains and losses from foreign currency forward contracts are included in other income expense. The contracts require the company to buy or sell foreign currencies, usually in exchange for U.S. dollars. The following table summarizes, by currency, the contractual amounts of the Company's forward exchange contract at November 1998.

	Sell	Buy
	(In thousands)	
Contract amount:		
German marks	\$15,207	\$ 4,611
Japanese yen	15,759	5,084
Pound sterling	12,519	2,553
French francs	6,366	—
Italian lira	4,313	870
Other	11,317	7,543
Total	<u>\$65,481</u>	<u>\$20,661</u>

To manage interest rate exposure on outstanding balances of long-term debt, the Company enters into interest rate swaps under which it receives a fixed rate and pays a variable rate. No carrying value is assigned to these swaps. Net amounts to be paid or received under these agreements are to be recognized as adjustments to interest expense. A swap on Japanese (Y) 200 million of underlying principal expires in 2006. A swap on \$50 million of underlying principal expires in 2004 and at the option of the counter party can be extended to 2007.

The Company is exposed to credit-related losses in the event of non-performance by counterparties to financial instruments. The Company invests in securities with strong ratings and uses major banks throughout the world for cash deposits, forward exchange contracts and interest rate swaps. The Company's customers represent a wide variety of industries and geographic regions. As of November 1, 1998, there were no significant concentrations of credit risk.

$$\text{Fixed Charge Coverage} = \frac{\text{Recurring Earnings, Excluding Interest Expense, Tax Expense, Equity Earnings, and Minority Earnings} + \text{Interest Portion of Rentals}}{\text{Interest Expense, Including Capitalized Interest} + \text{Interest Portion of Rentals}}$$

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

$$\text{Debt/Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Stockholders' Equity}}$$

$$\text{Debt to Tangible Net Worth Ratio} = \frac{\text{Total Liabilities}}{\text{Stockholders' Equity} - \text{Intangible Assets}}$$

EXHIBIT 7-12

NORDSON CORPORATION
Fair Value of Financial Instruments
1998 Annual Report

NOTE 12 FINANCIAL INSTRUMENTS (IN PART)

The carrying amounts and fair values of the Company's financial instruments, other than receivables and accounts payable, are as follows:

	Carrying Amount	Fair Value
	(In thousands)	
1998:		
Cash and cash equivalents	\$6,820	\$6,820
Marketable securities	30	30
Notes payable	(93,851)	(93,851)
Long-term debt	(67,426)	(67,155)
Forward exchange contracts	(705)	(768)
Interest rate swaps	—	2,982
1997:		
Cash and cash equivalents	\$1,517	\$1,517
Marketable securities	200	200
Notes payable	(74,500)	(74,500)
Long-term debt	(65,294)	(64,365)
Forward exchange contracts	181	97
Interest rate swaps	—	544

The following methods and assumptions were used by the Company in estimating the fair value of financial instruments:

- Cash, cash equivalents, and notes payable are valued at their carrying amounts due to the relatively short period to maturity of the instruments.
- Marketable securities are valued at quoted market prices.
- Long-term debt is valued by discounting future cash flows at currently available taxable rates for borrowing arrangements with similar terms and conditions.
- The fair value of forward exchange contracts is estimated using quoted exchange rates of comparable contracts.
- The fair value of interest rate swaps is estimated using valuation techniques based on discounted future cash flows.

QUESTIONS

- Q 7-1.** Is profitability important to a firm's long-term debt-paying ability? Discuss.
- Q 7-2.** List the two approaches to examining a firm's long-term debt-paying ability. Discuss why each of these approaches gives an important view of a firm's ability to carry debt.
- Q 7-3.** What type of times interest earned ratio would be desirable? What type would not be desirable?
- Q 7-4.** Would you expect an auto manufacturer to finance a relatively high proportion of its long-term funds from debt? Discuss.

- Q 7-5.** Would you expect a telephone company to have a high debt ratio? Discuss.
- Q 7-6.** Why should capitalized interest be added to interest expense when computing times interest earned?
- Q 7-7.** Discuss how noncash charges for depreciation, depletion, and amortization can be used to obtain a short-run view of times interest earned.
- Q 7-8.** Why is it difficult to determine the value of assets?
- Q 7-9.** Is it feasible to get a precise measurement of the funds that could be available from long-term assets to pay long-term debts? Discuss.
- Q 7-10.** One of the ratios used to indicate long-term debt-paying ability compares total liabilities to total assets. What is the intent of this ratio? How precise is this ratio in achieving its intent?
- Q 7-11.** For a given firm, would you expect the debt ratio to be as high as the debt/equity ratio? Explain.
- Q 7-12.** Explain how the debt/equity ratio indicates the same relative long-term debt-paying ability as does the debt ratio, only in a different form.
- Q 7-13.** Why is it important to compare long-term debt ratios of a given firm with industry averages?
- Q 7-14.** How should lessees account for operating leases? Capital leases? Include both income statement and balance sheet accounts.
- Q 7-15.** A firm with substantial leased assets that have not been capitalized may be overstating its long-term debt-paying ability. Explain.
- Q 7-16.** Capital leases that have not been capitalized will decrease the times interest earned ratio. Comment.
- Q 7-17.** Indicate the status of pension liabilities under the Employee Retirement Income Security Act.
- Q 7-18.** Why is the vesting provision an important provision of a pension plan? How has the Employee Retirement Income Security Act influenced vesting periods?
- Q 7-19.** Indicate the risk to a company if it withdraws from a multiemployer pension plan or if the multiemployer pension plan is terminated.
- Q 7-20.** Operating leases are not reflected on the balance sheet, but they are reflected on the income statement in the rent expense. Comment on why an interest expense figure that relates to long-term operating leases should be considered when determining a fixed charge coverage.
- Q 7-21.** What portion of net worth can the federal government require a company to use to pay for pension obligations?
- Q 7-22.** Consider the debt ratio. Explain a position for including short-term liabilities in the debt ratio. Explain a position for excluding short-term liabilities from the debt ratio. Which of these approaches would be more conservative?
- Q 7-23.** Consider the accounts of bonds payable and reserve for rebuilding furnaces. Explain how one of these accounts could be considered a firm liability and the other could be considered a soft liability.

- Q 7-24.** Explain why deferred taxes that are disclosed as long-term liabilities may not result in actual cash outlays in the future.
- Q 7-25.** A firm has a high current debt/net worth ratio in relation to prior years, competitors, and the industry. Comment on what this tentatively indicates.
- Q 7-26.** Comment on the implications of relying on a greater proportion of short-term debt in relation to long-term debt.
- Q 7-27.** When a firm guarantees a bank loan for a joint venture that it participates in and the joint venture is handled as an investment, then the overall potential debt position will not be obvious from the face of the balance sheet. Comment.
- Q 7-28.** When examining financial statements, a footnote that describes contingencies should be reviewed closely for possible significant liabilities that are not disclosed on the face of the balance sheet. Comment.
- Q 7-29.** There is a chance that a company may be in a position to have large sums transferred from the pension fund to the company. Comment.
- Q 7-30.** Indicate why comparing firms for postretirement benefits other than pensions can be difficult.
- Q 7-31.** Speculate on why the disclosure of the concentrations of credit risk is potentially important to the users of financial reports.
- Q 7-32.** Comment on the significance of disclosing off-balance-sheet risk of accounting loss.
- Q 7-33.** Comment on the significance of disclosing the fair value of financial instruments.

To the Net



1. *The New York Times* reported the following on July 8, 1999, Section C, page 1.

The Walt Disney Company and its former studio chief, Jeffrey Katzenberg, reached a settlement of a lawsuit that had opened a curtain on the lines of Hollywood moguls whose egos, financial bonanzas and personal furies are usually kept veiled. And it brought to a close the glare of publicity that had both distracted and embarrassed two of the most powerful men in the American entertainment industry.

Mr. Katzenberg could eventually receive at least \$200 million, including the \$117 million that Disney had already paid him.

Go to the SEC site (www.sec.gov).

Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms lookup. Select a form (10-K). Enter Walt Disney Company. Select the 10-K that was filed on December 18, 1998. Go to footnote 13, Commitments and Contingencies.

- a. What do you find relating to the Katzenberg suit?
- b. Do you consider the Katzenberg settlement to be material? Discuss.
- c. Review the disclosure relating to the construction of a cruise ship. Do you find this disclosure to be material? Compare the disclosure relating to the construction of a cruise ship with the disclosure relating to pending lawsuits. Which is more objective?

To the Net

2. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K405). Enter Cooper Tire & Rubber. Select the 10-K405 that was filed on March 19, 1999.
- Determine the standard industrial classification.
 - Relating to postretirement benefits, complete the following table:

	1998	1997	1996
Postretirement benefit cost			
Operating revenue (net sales)			
Income before income taxes			
Benefit obligation	\$183,017,000	\$153,137,000	—
Plan assets	—	—	—
Net liability recognized	\$160,550,000	\$153,566,000	—
Discount rate	7.5%	8.0%	—
Expected return on plan assets	—	—	—

- Compute the following for 1998, 1997, and 1996:
 - Expense (cost) in relation to operating revenue
 - Expense (cost) in relation to income before taxes
- Compute the following for 1998 and 1997:
 - Comparison of benefit obligations with the value of the plan assets
 - Net balance sheet liability (asset) recognized
 - Assumptions as to discount rate
 - Assumptions as to expected return on plan assets
- Discuss the materiality of postretirement benefits. Consider computations in (c) and (d).
- According to the footnote, how could this liability (expense) be reduced?

PROBLEMS

- P 7-1.** Consider the following operating figures:

Net sales	\$1,079,143
Cost and deductions:	
Cost of sales	792,755
Selling and administration	264,566
Interest expense, net	4,311
Income taxes	5,059
	<u>1,066,691</u>
	<u>\$ 12,452</u>

Note: Depreciation expense totals \$40,000.

- Required**
- Compute the times interest earned.
 - Compute the cash basis times interest earned.

P 7-2. The Jones Petro Company reports the following consolidated statement of income:

Operating revenues	\$2,989
Costs and expenses:	
Cost of rentals and royalties	543
Cost of sales	314
Selling, service, administrative, and general expense	1,424
Total costs and expenses	2,281
Operating income	708
Other income	27
Other deductions (interest)	60
Income before income taxes	675
Income taxes	309
Income before outside shareholders' interests	366
Outside shareholders' interests	66
Net income	\$ 300

Note: Depreciation expense totals \$200; operating lease payments total \$150; and preferred dividends total \$50. Assume that 1/3 of operating lease payments is for interest.

- Required**
- Compute the times interest earned.
 - Compute the fixed charge coverage.

P 7-3. The Sherwill statement of consolidated income is as follows:

Net sales	\$658
Other income	8
	666
Costs and expenses:	
Cost of products sold	418
Selling, general, and administrative expenses	196
Interest	16
	630
Income before income taxes and extraordinary charges	36
Income taxes	18
Income before extraordinary charge	18
Extraordinary charge—losses on tornado damage (net)	4
Net income	\$ 14

Note: Depreciation expense totals \$200; operating lease payments total \$150; and preferred dividends total \$50. Assume that 1/3 of operating lease payments is for interest.

- Required**
- Compute the times interest earned.
 - Compute the fixed charge coverage.

P 7-4. The Kaufman Company balance sheet is shown on the next page.

- Required**
- Compute the debt ratio.
 - Compute the debt/equity ratio.
 - Compute the ratio of total debt to tangible net worth.
 - Comment on the amount of debt that the Kaufman Company has.

Assets

Current assets	
Cash	\$ 13,445
Short-term investments—at cost (approximate market)	5,239
Trade accounts receivable, less allowance of \$ 1,590	88,337
Inventories—at lower of cost (average method) or market:	
Finished merchandise	\$113,879
Work in process, raw materials and supplies	47,036
	160,915
Prepaid expenses	8,221
Total current assets	<u>276,157</u>
Other assets:	
Receivables, advances, and other assets	4,473
Intangibles	2,324
Total other assets	<u>6,797</u>
Property, plant, and equipment:	
Land	5,981
Buildings	78,908
Machinery and equipment	162,425
	247,314
Less allowances for depreciation	<u>106,067</u>
Net property, plant, and equipment	<u>141,247</u>
Total assets	<u><u>\$424,201</u></u>

Liabilities and Shareholders' Equity

Current liabilities:	
Notes payable	\$ 2,817
Trade accounts payable	23,720
Pension, interest, and other accruals	33,219
Taxes, other than income taxes	4,736
Income taxes	3,409
Total current liabilities	67,901
Long-term debt, 12% debentures	86,235
Deferred income taxes	8,768
Minority interest in subsidiaries	12,075
Total liabilities	<u>174,979</u>
Stockholders' equity:	
Serial preferred	9,154
Common \$5.25 par value	33,540
Additional paid-in capital	3,506
Retained earnings	203,712
	249,912
Less cost of common shares in treasury	690
Total shareholders' equity	<u>249,222</u>
Total liabilities and shareholders' equity	<u><u>\$424,201</u></u>

- P 7-5.** Individual transactions often have a significant impact on ratios. This problem will consider the direction of such an impact.

Ratio Transaction	Times Interest Earned	Debt Ratio	Debt/ Equity Ratio	Debt to Tangible Net Worth
a. Purchase of buildings financed by mortgage.	_____	_____	_____	_____
b. Purchase of inventory on short-term loan at 1% over prime rate.	_____	_____	_____	_____
c. Declaration and payment of cash dividend.	_____	_____	_____	_____
d. Declaration and payment of stock dividend.	_____	_____	_____	_____
e. Firm increases profits by cutting cost of sales.	_____	_____	_____	_____
f. Appropriation of retained earnings.	_____	_____	_____	_____
g. Sale of common stock.	_____	_____	_____	_____
h. Repayment of long-term bank loan.	_____	_____	_____	_____
i. Conversion of bonds to common stock outstanding.	_____	_____	_____	_____
j. Sale of inventory at greater than cost.	_____	_____	_____	_____

Required Indicate the effect of each of the transactions on the ratios listed. Use + to indicate an increase, – to indicate a decrease, and 0 to indicate no effect. Assume an initial times interest earned of more than 1, and a debt ratio, debt/equity ratio, and a total debt to tangible net worth of less than 1.

- P 7-6.** Mr. Parks has asked you to advise him on the long-term debt-paying ability of the Arodex Company. He provides you with the following ratios:

	2001	2000	1999
Times interest earned	8.2	6.0	5.5
Debt ratio	40%	39%	40%
Debt to tangible net worth	80%	81%	81%

- Required**
- Give the implications and the limitations of each item separately and then the collective influence that could be drawn from them about the Arodex Company's long-term debt position.
 - What warnings should you offer Mr. Parks about the limitations of ratio analysis for the purpose stated here?

- P 7-7.** For the year ended June 30, 2001, A.E.G. Enterprises presented the financial statements shown on the next page.

Early in the new fiscal year, the officers of the firm formalized a substantial expansion plan. The plan will increase fixed assets by \$190,000,000. In addition, extra inventory will be needed to support expanded production. The increase in inventory is purported to be \$10,000,000.

A.E.G. ENTERPRISES**Balance Sheet for June 30, 2001 (In thousands)**

Assets			
Current assets:			
Cash	\$ 50,000		
Accounts receivable	60,000		
Inventory	<u>106,000</u>		
Total current assets			\$216,000
Property, plant, and equipment	\$504,000		
Less: accumulated depreciation	<u>140,000</u>	364,000	
Patents and other intangible assets		<u>20,000</u>	
Total assets			<u>\$600,000</u>
Liabilities and Stockholders' Equity			
Current liabilities:			
Accounts payable	\$ 46,000		
Taxes payable	15,000		
Other current liabilities	<u>32,000</u>		
Total current liabilities			\$ 93,000
Long-term debt			100,000
Stockholders' equity:			
Preferred stock (\$100 par, 10% cumulative, 500,000 shares authorized and issued)			50,000
Common stock (\$1 par, 200,000,000 shares authorized, 100,000,000 issued)			100,000
Premium on common stock			120,000
Retained earnings			<u>137,000</u>
Total liabilities and stockholders' equity			<u>\$600,000</u>

A.E.G. ENTERPRISES**Income Statement****For the Year Ended June 30, 2001**

(In thousands except earnings per share)

Sales		\$936,000
Cost of sales		<u>671,000</u>
Gross profit		\$265,000
Operating expenses		
Selling	\$ 62,000	
General	<u>41,000</u>	<u>103,000</u>
Operating income		\$162,000
Other items:		
Interest expense		<u>20,000</u>
Earnings before provision for income tax		\$142,000
Provision for income tax		<u>56,800</u>
Net income		<u>\$ 85,200</u>
Earnings per share		<u>\$.83</u>

The firm's investment bankers have suggested the following three alternative financing plans:

Plan A: Sell preferred stock at par.

Plan B: Sell common stock at \$10 per share.

Plan C: Sell long-term bonds, due in 20 years, at par (\$1,000), with a stated interest rate of 16%.

Required

- a. For the year ended June 30, 2001, compute:
 1. Times interest earned
 2. Debt ratio
 3. Debt/equity ratio
 4. Debt to tangible net worth ratio
- b. Assuming the same financial results and statement balances, except for the increased assets and financing, compute the same ratios as in (a) under each financing alternative. Do not attempt to adjust retained earnings for the next year's profits.
- c. Changes in earnings and number of shares will give the following earnings per share: Plan A—.73 Plan B—.69 Plan C—.73. Based on the information given, discuss the advantages and disadvantages of each alternative.
- d. Why does the 10% preferred stock cost the company more than the 16% bonds?

P 7-8. The consolidated statement of earnings of Anonymous Corporation for the year ended December 31, 2001 is as follows:

Net sales	\$1,550,010,000
Other income, net	10,898,000
	<u>1,560,908,000</u>
Costs and expenses:	
Cost of goods sold	1,237,403,000
Depreciation and amortization	32,229,000
Selling, general and administrative	178,850,000
Interest	37,646,000
	<u>1,486,128,000</u>
Earnings from continuing operations before income taxes and equity earnings	74,780,000
Income taxes	37,394,000
Earnings from continuing operations before equity earnings	<u>37,386,000</u>
Equity in net earnings of unconsolidated subsidiaries and affiliated companies	27,749,000
Earnings from continuing operations	65,135,000
Earnings (losses) from discontinued operations, net of applicable income taxes	6,392,000
Net earnings	<u><u>\$ 71,527,000</u></u>

Required

- a. Compute the times interest earned for 2001.
- b. Compute the times interest earned for 2001, including the equity income in the coverage.
- c. What is the impact of including equity earnings from the coverage? Why should equity income be excluded from the times interest earned coverage?

- P 7-9.** The Allen Company and the Barker Company are competitors in the same industry. Selected financial data from their 2001 statements are shown below.

Balance Sheet
December 31, 2001

	Allen Company	Barker Company
Cash	\$ 10,000	\$ 35,000
Accounts receivable	45,000	120,000
Inventory	70,000	190,000
Investments	40,000	100,000
Intangibles	11,000	20,000
Property, plant, and equipment	180,000	520,000
Total assets	<u>\$356,000</u>	<u>\$985,000</u>
Accounts payable	\$ 60,000	\$165,000
Bonds payable	100,000	410,000
Preferred stock, \$1 par	50,000	30,000
Common Stock, \$10 par	100,000	280,000
Retained earnings	46,000	100,000
Total liabilities and capital	<u>\$356,000</u>	<u>\$985,000</u>

Income Statement
For the Year Ended December 31, 2001

	Allen Company	Barker Company
Sales	\$1,050,000	\$2,800,000
Cost of goods sold	725,000	2,050,000
Selling and administrative expenses	230,000	580,000
Interest expense	10,000	32,000
Income taxes	42,000	65,000
Net income	<u>\$ 43,000</u>	<u>\$ 73,000</u>
Industry Averages:		
Times interest earned		7.2 times
Debt ratio		40.3%
Debt/equity		66.6%
Debt to tangible net worth		72.7%

- Required**
- Compute the following ratios for each company:
 - Times interest earned
 - Debt ratio
 - Debt/equity ratio
 - Debt to tangible net worth
 - Is Barker Company in a position to take on additional long-term debt? Explain.
 - Which company has the better long-term debt position? Explain.

- P 7-10.** Consecutive five-year balance sheets and income statements of the Laura Gibson Corporation are shown on the next page.

- Required**
- Compute the following for the years ended December 31, 1997-2001:
 - Times interest earned
 - Fixed charge coverage
 - Debt ratio
 - Debt/equity ratio
 - Debt to tangible net worth

- b. Comment on the debt position and the trends indicated in the long-term debt-paying ability.

Laura Gibson Corporation Balance Sheets December 31, 1997 through December 31, 2001					
(Dollars in thousands)	2001	2000	1999	1998	1997
Assets					
Current Assets					
Cash	\$ 27,000	\$ 26,000	\$ 25,800	\$ 25,500	\$ 25,000
Accounts receivable, net	135,000	132,000	130,000	129,000	128,000
Inventories	128,000	130,000	134,000	132,000	126,000
Total current assets	290,000	288,000	289,800	286,500	279,000
Property, plant and equipment, net	250,000	248,000	247,000	246,000	243,000
Intangibles	20,000	18,000	17,000	16,000	15,000
Total assets	<u>\$560,000</u>	<u>\$554,000</u>	<u>\$553,800</u>	<u>\$548,500</u>	<u>\$537,000</u>
Liabilities and stockholders' equity					
Current liabilities					
Accounts payable	\$ 75,000	\$ 76,000	\$ 76,500	\$ 77,000	\$ 78,000
Income taxes	13,000	13,500	14,000	13,000	13,500
Total current liabilities	88,000	89,500	90,500	90,000	91,500
Long-term debt	170,000	168,000	165,000	164,000	262,000
Stockholders' equity	302,000	296,500	298,300	294,500	183,500
Total liabilities and stockholders' equity	<u>\$560,000</u>	<u>\$554,000</u>	<u>\$553,800</u>	<u>\$548,500</u>	<u>\$537,000</u>

Laura Gibson Corporation Statement of Earnings Years Ended December 31, 1997–2001					
(In thousands, except per share)	2001	2000	1999	1998	1997
Net sales	\$920,000	\$950,000	\$910,000	\$850,000	\$800,000
Cost of goods sold	<u>640,000</u>	<u>648,000</u>	<u>624,000</u>	<u>580,000</u>	<u>552,000</u>
Gross margin	280,000	302,000	286,000	270,000	248,000
Selling, and administrative expense	156,000	157,000	154,000	150,000	147,000
Interest expense	<u>17,000</u>	<u>16,000</u>	<u>15,000</u>	<u>14,500</u>	<u>23,000</u>
Earnings from continuing operations before income taxes	107,000	129,000	117,000	105,500	78,000
Income taxes	<u>36,300</u>	<u>43,200</u>	<u>39,800</u>	<u>35,800</u>	<u>26,500</u>
Earnings from continuing operations	<u>70,700</u>	<u>85,800</u>	<u>77,200</u>	<u>69,700</u>	<u>51,500</u>
Discontinued operating earnings (loss), net of taxes:					
From operations	(1,400)	1,300	1,400	1,450	1,600
On disposal	<u>(900)</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Earnings (loss) from discontinued operation	<u>(2,300)</u>	<u>1,300</u>	<u>1,400</u>	<u>1,450</u>	<u>1,600</u>
Net earnings	<u>\$ 68,400</u>	<u>\$ 87,100</u>	<u>\$ 78,600</u>	<u>\$ 71,150</u>	<u>\$ 53,100</u>
Earnings (loss) per share:					
Continuing operations	\$ 1.53	\$ 1.69	\$ 1.46	\$ 1.37	\$ 1.25
Discontinued operations	<u>(.03)</u>	<u>.01</u>	<u>.01</u>	<u>.01</u>	<u>.01</u>
Net earnings per share	<u>\$ 1.50</u>	<u>\$ 1.70</u>	<u>\$ 1.47</u>	<u>\$ 1.38</u>	<u>\$ 1.26</u>

Note: Operating lease payments were as follows: 2001, \$30,000; 2000, \$27,000; 1999, \$28,500; 1998, \$30,000; 1997, \$27,000. (Dollars in thousands)

Case 7-1

Expensing Interest Now and Later

Johnson & Johnson reported the following in its 1998 annual report:
Consolidated Statement of Earnings

<i>(Dollars in Millions Except Per Share Figures) (Note 1)</i>	1998	1997	1996
Sales to customers	\$23,657	\$22,629	\$21,620
Cost of products sold (1998 includes \$60 of inventory write-offs for restructuring)	7,496	7,152	7,018
Gross profit	16,161	15,477	14,602
Selling, marketing and administrative expenses	8,907	8,715	8,394
Research expense	2,269	2,140	1,905
Purchased in-process research and development (Notes 15 and 17)	164	—	—
Interest income	(262)	(203)	(139)
Interest expense, net of portion capitalized (Note 3)	110	120	125
Other expense, net	151	129	284
Restructuring charge (Note 15)	553	—	—
	<u>11,892</u>	<u>10,901</u>	<u>10,569</u>
Earnings before provision for taxes on income	4,269	4,576	4,033
Provision for taxes on income (Note 6)	1,210	1,273	1,146
Net earnings	<u>\$ 3,059</u>	<u>\$ 3,303</u>	<u>\$ 2,887</u>
Basic net earnings per share (Notes 1 and 19)	\$ 2.27	2.47	2.17
Diluted net earnings per share (Notes 1 and 19)	\$ 2.23	2.41	2.12

Notes to consolidated financial statements (In Part)

The Company capitalizes interest expense as part of the cost of construction of facilities and equipment. Interest expense capitalized in 1998, 1997, and 1996 was \$71, \$40, and \$55 million, respectively.

- Required**
- What is the amount of gross interest expense for 1998, 1997, and 1996?
 - What is the interest reported on the income statement for 1998, 1997, and 1996?
 - What was the interest added to the cost of property, plant, and equipment during 1998, 1997, and 1996?
 - When is capitalized interest recognized as an expense? Describe.
 - What was the effect on income from capitalizing interest? Describe.

Case 7-2

Consideration of Leases

Wal-Mart included the statements shown on the next two pages in its 1998 annual report:

Consolidated Statements of Income*(Amounts in millions except per share data)*

Fiscal years ended January 31,	1998	1997	1996
Revenues:			
Net sales	\$117,958	\$104,859	\$93,627
Other income—net	1,341	1,319	1,146
	<u>119,299</u>	<u>106,178</u>	<u>94,773</u>
Costs and Expenses:			
Cost of sales	93,438	83,510	74,505
Operating, selling and general and administrative expenses	19,358	16,946	15,021
Interest Costs:			
Debt	555	629	692
Capital leases	229	216	196
	<u>113,580</u>	<u>101,301</u>	<u>90,414</u>
Income Before Income Taxes, Minority Interest and Equity in Unconsolidated Subsidiaries	<u>5,719</u>	<u>4,877</u>	<u>4,359</u>
Provision for Income Taxes			
Current	2,095	1,974	1,530
Deferred	20	(180)	76
	<u>2,115</u>	<u>1,794</u>	<u>1,606</u>
Income Before Minority Interest and Equity in Unconsolidated Subsidiaries	3,604	3,083	2,753
Minority Interest and Equity in Unconsolidated Subsidiaries	(78)	(27)	(13)
Net Income	<u>\$ 3,526</u>	<u>\$ 3,056</u>	<u>\$ 2,740</u>
Net Income Per Share - Basic and Dilutive	<u>\$ 1.56</u>	<u>\$ 1.33</u>	<u>\$ 1.19</u>

Consolidated Balance Sheets*(Amounts in millions)*

January 31,	1998	1997
Assets		
<i>Current Assets:</i>		
Cash and cash equivalents	\$ 1,447	\$ 883
Receivables	976	845
Inventories at replacement cost	16,845	16,193
Less LIFO reserve	348	296
Inventories at LIFO cost	16,497	15,897
Prepaid expenses and other	432	368
Total Current Assets	<u>19,352</u>	<u>17,993</u>
<i>Property, Plant and Equipment, at Cost:</i>		
Land	4,691	3,689
Building and improvements	14,646	12,724
Fixtures and equipment	7,636	6,390
Transportation equipment	403	379
	<u>27,376</u>	<u>23,182</u>
Less accumulated depreciation	5,907	4,849
Net property, plant and equipment	<u>21,469</u>	<u>18,333</u>
<i>Property Under Capital Lease:</i>		
Property under capital lease	3,040	2,782
Less accumulated amortization	903	791
Net property under capital leases	<u>2,137</u>	<u>1,991</u>
<i>Other Assets and Deferred Charges</i>	<u>2,426</u>	<u>1,287</u>
Total Assets	<u>\$45,384</u>	<u>\$39,604</u>

Liabilities and Shareholders' Equity*Current Liabilities:*

Accounts payable	\$ 9,126	\$ 7,628
Accrued liabilities	3,628	2,413
Accrued income taxes	565	298
Long-term debt due within one year	1,039	523
Obligations under capital leases due within one year	102	95

Total Current Liabilities**14,460** 10,957*Long-Term Debt***7,191** 7,709*Long-Term Obligations Under Capital Leases***2,483** 2,307*Deferred Income Taxes and Other***809** 463*Minority Interest***1,938** 1,025*Shareholders' Equity*Preferred stock (\$.10 par value; 100 shares
authorized, none issued)

Common stock (\$.10 par value; 5,500 shares

authorized, 2,241 and 2,285 issued and outstanding
in 1998 and 1997, respectively)**224** 228

Capital in excess of par value

585 547

Retained earnings

18,167 16,768

Foreign currency translation adjustment

(473) (400)**Total Shareholders' Equity****18,503** 17,143**Total Liabilities and Shareholders' Equity****\$45,384** \$39,604**Selected Note****8 Long-term Lease Obligations**

The Company and certain of its subsidiaries have long-term leases for stores and equipment. Rentals (including, for certain leases, amounts applicable to taxes, insurance, maintenance, other operating expenses and contingent rentals) under all operating leases were \$596 million, \$561 million and \$531 million in 1998, 1997 and 1996, respectively. Aggregate minimum annual rentals at January 31, 1998, under non-cancelable leases are as follows (in millions):

Fiscal year	Operating leases	Capital leases
1999	\$ 404	\$ 347
2000	384	345
2001	347	344
2002	332	343
2002	315	340
Thereafter	<u>2,642</u>	<u>3,404</u>
Total minimum rentals	<u>\$4,424</u>	<u>5,123</u>
Less estimated executory costs		<u>73</u>
Net minimum lease payments		5,050
Less imputed interest at rates ranging from 6.1% to 14.0%		<u>2,465</u>
Present value of minimum lease payments		<u>\$2,585</u>

Certain of the leases provide for contingent additional rentals based on percentage of sales. Such additional rentals amounted to \$46 million, \$51 million and \$41 million in 1998, 1997 and 1996, respectively. Substantially all of the store leases have renewal options for additional terms from five to 25 years at comparable rentals.

The Company has entered into lease commitments for land and buildings for 38 future locals. These lease commitments with real estate developers provide for minimum rentals for 20 to 25 years, excluding renewal options, which if consummated based on current cost estimates, will approximate \$38 million annually over the lease terms.

- Required**
- Compute the following for 1998:
 - Times interest earned
 - Fixed charge coverage
 - Debt ratio
 - Debt/equity ratio
 - Compute the debt ratio, considering operating leases.
 - Give your opinion of the significance of considering operating leases in the debt ratio.
 - Net property under capital leases totaled \$2,137,000,000 at January 31, 1998. Obligations under capital leases totaled \$2,585,000,000 at January 31, 1998. Why do the assets under capital leases not equal the liabilities under capital leases?

Case 7-3

Lockout

The Celtics Basketball Holdings, L.P. and Subsidiary included the following footnote in its 1998 annual report:

Note G - Commitments and Contingencies (In Part)

National Basketball Association (“NBA”) players, including those that play for the Boston Celtics, are covered by a collective bargaining agreement between the NBA and the NBA Players Association (the “NBPA”) that was to be in effect through June 30, 2001 (the “Collective Bargaining Agreement”). Under the terms of the Collective Bargaining Agreement, the NBA had the right to terminate the Collective Bargaining Agreement after the 1997–98 season if it was determined that the aggregate salaries and benefits paid by all NBA teams for the 1997–98 season exceeded 51.8% of projected Basketball Related Income, as defined in the Collective Bargaining Agreement (“BRI”). Effective June 30, 1998, the Board of Governors of the NBA voted to exercise that right and reopen the Collective Bargaining Agreement, as it had been determined that the aggregate salaries and benefits paid by the NBA teams for the 1997–98 season would exceed 51.8% of projected BRI. Effective July 1, 1998, the NBA commenced a lockout of NBA players in support of its attempt to reach a new collective bargaining agreement. The NBA and the NBPA have been engaged in negotiations regarding a new collective bargaining agreement, but as of September 18, 1998, no agreement has been reached. In the event that the lockout extends into the 1998–99 season, NBA teams, including the Boston Celtics, will refund amounts paid by season ticket holders (plus interest) for any games that are canceled as a result of the lockout. In addition, as a result of the lockout, NBA teams have not made any payments due to players with respect to the 1998–99 season. The NBPA has disputed the NBA’s position on this matter, and both the NBA and the NBPA have presented their cases to an independent arbitrator, who will make his ruling no later than the middle of October 1998. As of September 18, 1998, the arbitrator has not ruled on this matter.

Although the ultimate outcome of this matter cannot be determined at this time, any loss of games as a result of the absence of a collective bargaining agreement or the continuation of the lockout will have a material adverse effect on the Partnership’s financial

condition and its results of operations. Further, if NBA teams, including the Boston Celtics, are required to honor the player contracts for the 1998–99 season and beyond without agreeing to a new collective bargaining agreement or without ending the lockout, which would result in the loss of games, the Partnership's financial condition and results of operations will be materially and adversely affected.

The Partnership has employment agreements with officers, coaches and players of the basketball team (Celtics Basketball). Certain of the contracts provide for guaranteed payments which must be paid even if the employee is injured or terminated. Amounts required to be paid under such contracts in effect as of September 18, 1998, including option years and \$8,100,000 included in accrued expenses at June 30, 1998, but excluding deferred compensation commitments disclosed in Note E - Deferred Compensation, are as follows:

Years ending June 30, 1999	\$32,715,000
2000	33,828,000
2001	27,284,000
2002	20,860,000
2003	19,585,000
2004 and thereafter	10,800,000

Commitments for the year ended June 30, 1999, include payments due to players under contracts for the 1998–99 season in the amount of \$18,801,000, which are currently not being paid as a result of the lockout described above.

Celtics Basketball maintains disability and life insurance policies on most of its key players. The level of insurance coverage maintained is based on management's determination of the insurance proceeds which would be required to meet its guaranteed obligations in the event of permanent or total disability of its key players.

Required Discuss how to incorporate the contingency footnote into an analysis of Celtics Basketball Holdings, L.P. and Subsidiary.

Case 7-4

Determine the Liability

Safeway Inc. presented the following as part of a footnote in its 1998 annual report:

Multi-Employer Pension Plans Safeway participates in various multi-employer pension plans, covering virtually all Company employees not covered under the Company's non-contributory pension plans, pursuant to agreements between the Company and employee bargaining units which are members of such plans. These plans are generally defined benefit plans; however, in many cases, specific benefit levels are not negotiated with or known by the employer-contributors. Contributions of \$119 million in 1998, \$130 million in 1997 and \$112 million in 1996 were made and charged to expense.

Under U.S. legislation regrading such pension plans, a company is required to continue funding its proportionate share of a plan's unfunded vested benefits in the event of withdrawal (as defined by the legislation) from a plan or plan termination. Safeway participates in a number of these pension plans, and the potential obligation as a participant in these plans may be significant. The information required to determine the total amount of this contingent obligation, as well as the total amount of accumulated benefits and net assets of such plans, is not readily available. During 1988 and 1987, the Company sold certain operations. In most cases the party acquiring the operation agreed to continue making

contributions to the plans. Safeway is relieved of the obligations related to these sold operations to the extent the acquiring parties continue to make contributions. Whether such sales could result in withdrawal under ERISA and, if so, whether such withdrawals could result in liability to the Company, is not determinable at this time.

Note: Sales were \$24,484,200,000, \$22,483,800,000, and \$17,269,000,000 in 1998, 1997, and 1996 respectively.

- Required**
- What were the contributions to multi-employer pension plans for 1998, 1997, and 1996. Comment.
 - Determine the total liability for multi-employer pension plans at the end of 1998.

Case 7-5

Play It Safe

Safeway Inc. presented the following consolidated statements of income and partial pension footnote with its 1998 annual report.

Consolidated Statements of Income (In Part)

<i>(In millions, except per-share amounts)</i>	52 weeks 1998	53 Weeks 1997	52 Weeks 1996
Sales	\$24,484.2	\$22,483.8	\$17,269.0
Cost of goods sold	(17,359.7)	(16,069.1)	(12,494.8)
Gross profit	7,124.5	6,414.7	4,774.2
Operating and administrative expense	(5,522.8)	(5,135.0)	(3,882.5)
Operating profit	1,601.7	1,279.7	891.7
Interest expense	(235.0)	(241.2)	(178.5)
Equity in earnings of unconsolidated affiliates	28.5	34.9	50.0
Other income, net	1.7	2.9	4.4
Income before income taxes and extraordinary loss	1,396.9	1,076.3	767.6
Income taxes	(590.2)	(454.8)	(307.0)
Income before extraordinary loss	806.7	621.5	460.6
Extraordinary loss related to early retirement of debt, net of income tax benefit of \$41.1	—	(64.1)	—
Net income	<u>\$ 806.7</u>	<u>\$ 557.4</u>	<u>\$ 460.6</u>

Note H: Employee Benefit Plans and Collective Bargaining Agreements (In Part)

Retirement Plans The Company maintains defined benefit, non-contributory retirement plans for substantially all of its employees not participating in multi-employer pension plans.

In connection with the Vons Merger, the Company assumed the obligations of Vons' retirement plan. The actuarial assumptions for the existing Vons' retirement plan are comparable to the existing plans of the Company. Vons' retirement plan has been combined with Safeway's for financial statement presentation.

The following tables provide a reconciliation of the changes in the retirement plans' benefit obligation and fair value of assets over the two-year period ended January 2, 1999, and a statement of the funded status as of year-end 1998 and 1997 (in millions):

	1998	1997
Change in benefit obligation:		
Beginning balance	\$1,056.8	\$ 867.1
Service cost	52.5	42.5
Interest cost	69.7	60.1
Plan amendments	18.2	25.1
Actuarial loss	65.1	45.4
Acquisition of Vons	—	83.9
Benefit payments	(79.8)	(70.3)
Change in assumptions	(0.5)	12.3
Currency translation adjustments	(16.3)	(9.3)
Ending balance	<u>\$1,165.7</u>	<u>\$1,056.8</u>

	1998	1997
Change in fair value of plan assets:		
Beginning balance	\$1,662.6	\$1,392.0
Actual return on plan assets	193.2	263.8
Acquisition of Vons	—	76.5
Employer contributions	6.8	10.0
Benefit payments	(79.8)	(70.3)
Currency translation adjustments	(16.7)	(9.4)
Ending balance	<u>\$1,766.1</u>	<u>\$1,662.6</u>

	1998	1997
Funded status:		
Fair value of plan assets	\$1,766.1	\$1,662.6
Projected benefit obligation	(1,165.7)	(1,056.8)
Funded status	600.4	605.8
Adjustment for difference in book and tax basis of assets	(165.1)	(165.1)
Unamortized prior service cost	95.5	93.7
Unrecognized gain	(161.2)	(193.0)
Prepaid pension cost	<u>\$ 369.6</u>	<u>\$ 341.4</u>

The following table provides the components of 1998 and 1997 net pension income for the retirement plans (in millions):

	1998	1997	1996
Estimated return on assets	\$141.5	\$118.3	\$148.2
Service cost	(52.5)	(42.5)	(41.3)
Interest cost	(69.7)	(60.1)	(51.7)
Amortization of prior service cost	(14.3)	(11.6)	(56.0)
Amortization of unrecognized gains	13.3	—	—
Net pension income	<u>\$ 18.3</u>	<u>\$ 4.1</u>	<u>\$ (0.8)</u>

Prior service costs are amortized on a straight-line basis over the average remaining service period of active participants. Actuarial gains and losses are amortized over the average remaining service life of active participants when the accumulation of such gains and losses exceeds 10% of the greater of the projected benefit obligation or the fair value of plan assets.

The actuarial assumptions used to determine year-end plan status were as follows:

	1998	1997	1996
Discount rate used to determine the projected benefit obligation:			
United States Plans	6.5%	7.0%	7.5%
Canadian Plans	6.3	6.3	7.0
Combined weighted average rate	6.5	6.8	7.4
Expected return on plan assets:			
United States Plans	9.0%	9.0%	9.0%
Canadian Plans	8.0	8.0	8.0
Rate of compensation increase:			
United States Plans	5.0%	5.0%	5.5%
Canadian Plans	4.5	4.5	5.5

Retirement Restoration Plan The Retirement Restoration Plan provides death benefits and supplemental income payments for senior executives after retirement. The Company recognized expense of \$5.0 million in 1998, \$4.3 million in 1997 and \$4.4 million in 1996. The aggregate projected benefit obligation of the Retirement Restoration Plan was approximately \$53.8 million at year-end 1998 and \$48.4 million at year-end 1997.

- Required**
- For 1998, 1997, and 1996, compare pension expense with operating revenue. Comment.
 - For 1998, 1997, and 1996, compare pension expense with income before income taxes. Comment.
 - Compare the benefit obligations with the value of plan assets. Comment.
 - Note the assumptions for the discount rate used to determine the projected benefit obligation, expected return on plan assets, and the rate of compensation increase. Comment.

Case 7-6

Retirement Plans Revisited

Lands' End, Inc. & Subsidiaries
Consolidated Statements of Operations

	For the Period Ended		
	February 2, 1996	January 27, 1995	January 28, 1994
(In thousands, except per share data)			
Net sales	\$1,031,548	\$ 992,106	\$ 869,975
Cost of sales	588,017	571,265	514,052
Gross profit	443,531	420,841	355,923
Selling, general, and administrative expenses	(392,484)	(357,516)	(2985,513)
Charges from sale of subsidiary	(1,882)	(3,500)	—
Income from operations	49,165	59,825	70,410
Other income (expense):			
Interest expense	(2,771)	(1,769)	(359)
Interest income	253	307	346
Other	4,278	1,300	(527)
Total other income (expense), net	1,760	(162)	(540)
Income before income taxes and cumulative effect of change in accounting	50,925	59,663	69,870
Income tax provision	20,370	23,567	27,441
Net income before cumulative effect of change in accounting	30,555	36,096	42,429
Cumulative effect of change in accounting for income taxes	—	—	1,300
Net income	<u>\$ 30,555</u>	<u>\$ 36,096</u>	<u>\$43,729</u>
Net income per share before cumulative effect of change in accounting	\$ 0.89	\$ 1.03	\$ 1.18
Cumulative per share effect of change in accounting	—	—	0.04
Net income per share	<u>\$ 0.89</u>	<u>\$ 1.03</u>	<u>\$ 1.22</u>

Lands' End, Inc. & Subsidiaries
Consolidated Balance Sheets (in Part)

(In thousands)	February 2, 1996	January 27, 1995
Total assets	<u>\$323,497</u>	<u>\$297,612</u>

A footnote from Lands' End 1996 annual report follows:

Note 7. Retirement Plan

The company has a retirement plan which covers most regular employees and provides for annual contributions at the discretion of the board of directors. Also included in the plan is a 401(k) feature that allows employees to make contributions, and the company matches a portion of those contributions. Total expense provided under this plan was \$3.2 million, \$3.5 million, and \$3.7 million for the years ended February 2, 1996, January 27, 1995, and January 28, 1994, respectively.

As of October 1, 1995, the "Lands' End, Inc. Retirement Plan" was amended to allow certain participants to invest their elective contributions, employer matching contributions, and profit sharing contributions in a "Lands' End, Inc. Stock Fund" established primarily for investing in common stock of the company at the fair market value.

Note: Annual report courtesy of Lands' End, Inc.

- Required**
- In general, what type of plan does Lands' End have?
 - Give your opinion as to the materiality of the pension plans.
 - Give your opinion as to the control of pension expense.

Case 7-7**Fair Value of Financial Instruments**

Fluor Corporation included the following footnote in its 1995 annual report:

Fair Value of Financial Instruments

The estimated fair value of the company's financial instruments is as follows:

Dollars in thousands/ At October 31	Carrying Amount	1995 Fair Value	Carrying Amount	1994 Fair Value
Assets				
Cash and cash equivalents	\$292,934	\$292,934	\$374,468	\$374,468
Marketable securities	137,758	137,758	117,618	19,555
Notes receivable including noncurrent portion	83,515	86,769	104,117	105,088
Long-term investments	30,990	32,127	15,811	16,616
Liabilities				
Commercial paper and notes payable	29,937	29,937	19,957	19,957
Long-term debt including current portion	27,248	28,420	62,367	64,405
Other noncurrent financial liabilities	2,572	2,572	2,691	2,691
Off-balance-sheet financial instruments				
Foreign currency contract obligations	—	(2,146)	—	219
Letters of credit	—	572	—	740
Line of credit	—	997	—	1,384

Fair values were determined as follows:

The carrying amounts of cash and cash equivalents, short-term notes receivable, commercial paper and notes payable approximates fair value because of the short-term maturity of these instruments.

Marketable securities and long-term investments are based on quoted market prices for these or similar instruments.

Long-term notes receivable are estimated by discounting future cash flows using the current rates at which similar loans would be made to borrowers with similar credit ratings.

The fair value of long-term debt, including current portion, is estimated based on quoted market prices for the same or similar issues or on the current rates offered to the company for debt of the same maturities.

Other noncurrent financial liabilities consist primarily of deferred payments, for which cost approximates fair value.

Foreign currency contract obligations are estimated by obtaining quotes from brokers.

Letters of credit and line of credit amounts are based on fees currently charged for similar agreements or on the estimated cost to terminate or settle the obligations.

Additional information:

	(Absolute dollars)		
	October 31, 1995	October 31, 1994	
Total assets	<u>\$3,228,906,000</u>	<u>\$2,824,768,000</u>	
	Year Ended October 31		
	1995	1994	1993
Earnings before taxes	<u>\$362,214,000</u>	<u>\$303,299,000</u>	<u>\$242,200,000</u>

Required

Give your opinion as to the fair value of financial instruments in relation to carrying amount. Develop data to support your opinion.

Endnotes

- 1 *Accounting Trends & Techniques* (Jersey City, NJ: American Institute of Certified Public Accountants, 1998), p. 323.
- 2 *Accounting Trends & Techniques*, p. 323.
- 3 *Accounting Trends & Techniques*, p. 323.
- 4 *Statement of Financial Accounting Standards No. 5*, "Accounting for Contingencies," (Stamford, CT: Financial Accounting Standards Board, 1975), paragraph 1.
- 5 *Statement of Financial Accounting Standards No. 5*, paragraph 8.
- 6 *Statement of Financial Accounting Standards No. 5*, paragraph 17.
- 7 *Statement of Financial Accounting Standards No. 105*, "Disclosure of Information About Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk," (Stamford, CT: Financial Accounting Standards Board, 1990), paragraph 17.
- 8 *Statement of Financial Accounting Standards No. 105*, paragraph 18.
- 9 *Statement of Financial Accounting Standards No. 107*, "Disclosure About Fair Value of Financial Instruments," (Stamford, CT: Financial Accounting Standards Board, 1991), paragraph 10.

CHAPTER

8

PROFITABILITY

PROFITABILITY IS THE ABILITY OF THE FIRM TO generate earnings. Analysis of profit is of vital concern to stockholders since they derive revenue in the form of dividends. Further, increased profits can cause a rise in market price, leading to capital gains. Profits are also important to creditors because profits are one source of

funds for debt coverage. Management uses profit as a performance measure.

In profitability analysis, absolute figures are less meaningful than earnings measured as a percentage of a number of bases: the productive assets, the owners' and creditors' capital employed, and sales.

PROFITABILITY MEASURES

The income statement contains several figures that might be used in profitability analysis. In general, the primary financial analysis of profit ratios should include only the types of income arising from the normal operations of the business. This excludes the following:

1. Discontinued operations
2. Extraordinary items
3. Cumulative effects of changes in accounting principles

Exhibit 4-3 in Chapter 4 illustrates an income statement with these items. Review this section on special income statement items in Chapter 4 before continuing with the discussion of profitability. Equity in earnings of nonconsolidated subsidiaries and the minority share of earnings are also important to the analysis of profitability. Chapter 4 covers these items, and Exhibits 4-5 and 4-9 illustrate the concepts.

Trend analysis should also consider only income arising from the normal operations of the business. An illustration will help justify this reasoning. XYZ Corporation had net income of \$100,000 in Year 1 and \$150,000 in Year 2. Year 2, however, included an extraordinary gain of \$60,000. In reality, XYZ suffered a drop in profit from operating income.

Net Profit Margin

A commonly used profit measure is return on sales, often termed net profit margin. If a company reports that it earned 6% last year, this statistic usually means that its profit was 6% of sales. Calculate **net profit margin** as follows:

$$\text{Net Profit Margin} = \frac{\text{Net Income Before Minority Share of Earnings, Equity Income and Nonrecurring Items}}{\text{Net Sales}}$$

This ratio gives a measure of net income dollars generated by each dollar of sales. While it is desirable for this ratio to be high, competitive forces within an industry, economic conditions, use of debt financing, and operating characteristics such as high fixed costs will cause the net profit margin to vary between and within industries.

Exhibit 8-1 shows the net profit margin using the 1999 and 1998 figures for Nike. This analysis shows that Nike's net profit margin improved substantially.

Several refinements to the net profit margin ratio can make it more accurate than the ratio computation in this book. Numerator refinements include removing "other income" and "other expense" items from net income. These items do not relate to net sales (denominator). Therefore, they can cause a distortion in the net profit margin.

EXHIBIT 8-1 NIKE, INC.

Net Profit Margin Years Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net income [A]	\$ 451.4	\$ 399.6
Net sales [B]	\$8,776.9	\$9,553.1
Net profit margin [A÷B]	5.14%	4.18%

This book does not adjust the net profit margin ratio for these items because this often requires an advanced understanding of financial statements beyond the level intended. Also, this chapter covers operating income margin, operating asset turnover, and return on operating assets. These ratios provide a look at the firm's operations.

When working the problems in this book, do not remove "other income" or "other expense" when computing the net profit margin unless otherwise instructed by the problem. In other analyses, if you elect to refine a net profit margin computation by removing "other income" or "other expense" items from net income, remove them net of the firm's tax rate. This is a reasonable approximation of the tax effect.

If you do not refine a net profit margin computation for "other income" and "other expense" items, at least observe whether the company has a net "other income" or a net "other expense." A net "other income" distorts the net profit margin on the high side, while a net "other expense" distorts the profit margin on the low side.

The Nike statement can be used to illustrate the removal of other income. Exhibit 8-2 shows the net profit margin computed with the other income removed for 1999 and 1998. The adjusted computation results in the 1999 net profit margin being reduced by .15% and the 1998 net profit margin being reduced by .13%. Both of these reductions are likely to be considered immaterial.

EXHIBIT 8-2 NIKE, INC.

Net Profit Margin (Revised Computation) Years Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net income	\$ 451.4	\$ 399.6
Tax rate:		
Provision for income taxes [A]	294.7	253.4
Income before income taxes [B]	746.1	653.0
Tax rate [A÷B]*	39.50%	38.81%
Other income	21.5	20.9
Other income × (1 – tax rate)	13.01	12.79
Net income less net of tax other income [C]	438.30	386.81
Net sales [D]	8,776.9	9,553.1
Adjusted net profit margin [C÷D]	4.99%	4.05%

* The tax rate could also be determined from the income tax footnote.

Total Asset Turnover

Total asset turnover measures the activity of the assets and the ability of the firm to generate sales through the use of the assets. Compute **total asset turnover** as follows:

$$\text{Total Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

Exhibit 8-3 shows total asset turnover for Nike for 1999 and 1998. The total asset turnover decreased from 1.78 to 1.65.

EXHIBIT 8-3 NIKE, INC.**Total Asset Turnover
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Net sales [A]	\$ 8,776.9	\$ 9,553.1
Average total assets:		
Beginning of year	5,397.4	5,361.2
End of year	5,247.7	5,397.4
Total	10,645.1	10,758.60
Average [B]	\$ 5,322.6	\$ 5,379.3
Total asset turnover [A÷B]	1.65 times	1.78 times

The total asset turnover computation has refinements that relate to assets (denominator) but do not relate to net sales (numerator). An example would be the exclusion of investments. This book does not make this refinement.

If the refinements are not made, observe the investment account and other assets that do not relate to net sales. The presence of these accounts distorts the total asset turnover on the low side. (Actual turnover is better than the computation indicates.)

Return on Assets

Return on assets measures the firm's ability to utilize its assets to create profits by comparing profits with the assets that generate the profits. Compute the **return on assets** as follows:

$$\text{Return on Assets} = \frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items}}{\text{Average Total Assets}}$$

Exhibit 8-4 shows the 1999 and 1998 return on assets for Nike. The return on total assets for Nike increased substantially in 1999.

Theoretically, the best average would be based on month-end figures, which are not available to the outside user. Computing an average based on beginning and ending figures provides a rough approximation that does not consider the timing of interim changes in assets. Such changes might be related to seasonal factors.

EXHIBIT 8-4 NIKE, INC.**Return on Assets
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Net income [A]	\$ 451.4	\$ 399.6
Average total assets [B]	\$5,322.6	\$5,379.3
Return on assets [A÷B]	8.48%	7.43%

However, even a simple average based on beginning and ending amounts requires two figures. Ratios for two years require three years of balance sheet data. Since an annual report only contains two balance sheets, obtaining the data for averages may be a problem. If so, ending balance sheet figures may be used consistently instead of averages for ratio analysis. Similar comments could be made about other ratios that utilize balance sheet figures.

DuPont Return on Assets

The net profit margin, the total asset turnover, and the return on assets are usually reviewed together because of the direct influence that the net profit margin and the total asset turnover have on return on assets. This book reviews these ratios together. When these ratios are reviewed together, it is called the **DuPont return on assets**.

The rate of return on assets can be broken down into two component ratios: the net profit margin and the total asset turnover. These ratios allow for improved analysis of changes in the return on assets percentage. E. I. DuPont de Nemours and Company developed this method of separating the rate of return ratio into its component parts. Compute the **DuPont return on assets** as follows:

$$\frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items}}{\text{Average Total Assets}} = \frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

Exhibit 8-5 shows the DuPont return on assets for Nike for 1999 and 1998. Separating the ratio into the two elements allows for discussion of the causes for the increase in the percentage of return on assets. Exhibit 8-5 indicates that Nike's return on assets increased because of an increase in net profit margin and a decrease in total asset turnover.

EXHIBIT 8-5 NIKE, INC.

DuPont Return on Assets Years Ended May 31, 1999 and 1998

	Return on Assets*	=	Net Profit Margin	x	Total Asset Turnover
1999	8.48%	=	5.14%	x	1.65
1998	7.43%	=	4.18%	x	1.78

* There are some minor differences due to rounding.

Interpretation Through DuPont Analysis

The following examples help to illustrate the use of this analysis:

Example 1

	Return on Assets	=	Net Profit Margin	×	Total Asset Turnover
Year 1	10%	=	5%	×	2.0
Year 2	10%	=	4%	×	2.5

Example 1 shows how a more efficient use of assets can offset rising costs such as labor or materials.

Example 2

	Return on Assets	=	Net Profit Margin	×	Total Asset Turnover
Firm A					
Year 1	10%	=	4.0%	×	2.5
Year 2	8%	=	4.0%	×	2.0
Firm B					
Year 1	10%	=	4.0%	×	2.5
Year 2	8%	=	3.2%	×	2.5

Example 2 shows how a trend in return on assets can be better explained through the breakdown into two ratios. The two firms have identical returns on assets. Further analysis shows that Firm A suffers from a slowdown in asset turnover. It is generating fewer sales for the assets invested. Firm B suffers from a reduction in the net profit margin. It is generating less profit per dollar of sales.

Variation in Computation of DuPont Ratios Considering Only Operating Accounts

It is often argued that only operating assets should be considered in the return on asset calculation. Operating assets exclude construction in progress, long-term investments, intangibles, and the other assets category from total assets. Similarly, operating income—the profit generated by manufacturing, merchandising, or service functions—that equals net sales less the cost of sales and operating expenses should also be used instead of net income.

The DuPont analysis, considering only operating accounts, requires a computation of operating income and operating assets. Exhibit 8-6 shows the computations of operating income and operating assets for Nike. This includes operating income for 1999 and 1998 and operating assets for 1999, 1998, and 1997.

EXHIBIT 8-6 NIKE, INC.

Operating Income and Operating Assets Years Ended May 31, 1999 and 1998

	1999	1998	
	(In millions)		
Operating income:			
Net sales [A]	\$8,776.9	\$9,553.1	
Operating expenses:			
Cost of products sold	\$5,493.5	\$6,065.5	
Selling, general and administrative	2,426.6	2,623.8	
Total operating expenses [B]	\$7,920.1	\$8,689.3	
Operating income [A-B]	\$ 856.8	\$ 863.8	
Operating assets:	1999	1998	1997
Total assets [A]	\$5,247.7	\$5,397.4	\$5,361.2
Less: Intangibles, deferred income taxes and other assets [B]	717.0	711.7	607.9
Operating assets [A-B]	\$4,530.7	\$4,685.7	\$4,753.3

The operating ratios may give significantly different results from net earnings ratios if a firm has large amounts of nonoperating assets. For example, if a firm has heavy investments in unconsolidated subsidiaries, and if these subsidiaries pay large dividends, then other income may be a large portion of net earnings. The profit picture may not be as good if these earnings from other sources are eliminated by analyzing operating ratios. Since earnings from investments are not derived from the primary business, the lower profit figures that represent normal earnings will typically be more meaningful.

Operating Income Margin

The **operating income margin** includes only operating income in the numerator. Compute the operating income margin as follows:

$$\text{Operating Income Margin} = \frac{\text{Operating Income}}{\text{Net Sales}}$$

Exhibit 8-7 indicates the operating income margin for Nike in 1999 and 1998. It shows a significant increase in 1999 in the operating income margin percentage.

EXHIBIT 8-7 NIKE, INC.

Operating Income Margin

	1999	1998
	(In millions)	
Operating Income [A]	\$856.8	\$863.8
Net sales [B]	\$8,776.9	\$9,553.1
Operating income margin [A ÷ B]	9.76%	9.04%

Operating Asset Turnover

This ratio measures the ability of operating assets to generate sales dollars. Compute operating asset turnover as follows:

$$\text{Operating Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Operating Assets}}$$

Exhibit 8-8 shows the operating asset turnover for Nike in 1999 and 1998. It indicates a decrease from 2.02 to 1.90. These are similar but slightly improved figures compared to those computed for the total asset turnover.

Return on Operating Assets

Adjusting for nonoperating items results in the following formula for return on **operating assets**:

$$\text{Return on Operating Assets} = \frac{\text{Operating Income}}{\text{Average Operating Assets}}$$

Exhibit 8-9 shows the return on operating assets for Nike for 1999 and 1998. It indicates an increase in the return on operating assets from 18.30% in 1998 to 18.59% in 1999.

EXHIBIT 8-8 NIKE, INC.**Operating Asset Turnover
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Net sales [A]	\$8,776.9	\$9,553.1
Average operating assets		
Beginning of year	\$4,685.7	\$4,753.3
End of year	4,530.7	4,685.7
Total [B]	\$9,216.4	\$9,439.0
Average [B÷2]=[C]	\$4,608.2	\$4,719.5
Operating asset turnover [A÷C]	1.90 times per year	2.02 times per year

EXHIBIT 8-9 NIKE, INC.**Return on Operating Assets
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Operating income [A]	\$ 856.8	\$ 863.8
Average operating assets [B]	\$4,608.2	\$4,719.5
Return on operating assets [A÷B]	18.59%	18.30%

The return on operating assets can be viewed in terms of the DuPont analysis that follows:

$$\text{DuPont Return on Operating Assets} = \text{Operating Income Margin} \times \text{Operating Asset Turnover}$$

Exhibit 8-10 indicates the DuPont return on operating assets for Nike for 1999 and 1998. This figure supports the conclusion that an increase in operating income margin and a decrease in operating asset turnover resulted in an increase in return on operating assets.

EXHIBIT 8-10 NIKE, INC.**DuPont Analysis with Operating Accounts
Years Ended May 31, 1999 and 1998**

	Return on Operating Assets*	=	Operating Income Margin	×	Operating Asset Turnover
1999	18.59%	=	9.76%	×	1.90
1998	18.30%	=	9.04%	×	2.02

*There are some minor differences due to rounding.

Sales to Fixed Assets

This ratio measures the firm's ability to make productive use of its property, plant, and equipment by generating sales dollars. Since construction in progress does not contribute to current sales, it should be excluded from net fixed assets. This ratio may not be meaningful because of old fixed assets or a labor-intensive industry. In these cases, the ratio is substantially higher because of the low fixed asset base. Compute the **sales to fixed assets** as follows:

$$\text{Sales to Fixed Assets} = \frac{\text{Net Sales}}{\text{Average Net Fixed Assets (Exclude Construction in Progress)}}$$

Exhibit 8-11 shows the sales to fixed assets for Nike for 1999 and 1998. It declined substantially between 1998 and 1999. Analysts interested in Nike should monitor this ratio closely in the future. It appears that sales increases have not kept pace with net fixed assets increases.

EXHIBIT 8-11 NIKE, INC.

Sales to Fixed Assets Years Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net sales [A]	\$8,776.9	\$9,553.1
Net fixed assets:		
Beginning of year	\$ 904.9	\$ 770.8
End of year	935.0	904.9
Total [B]	1,839.9	1,675.7
Average [(B)+2]=[C]	\$ 919.95	\$ 837.85
Sales to fixed assets [A÷C]	9.54 times per year	11.40 times per year

Return on Investment (ROI)

The **return on investment** applies to ratios measuring the income earned on the invested capital. These types of measures are widely used to evaluate enterprise performance. Since return on investment is a type of return on capital, this ratio measures the ability of the firm to reward those who provide long-term funds and to attract providers of future funds. Compute the return on investment as follows:

$$\text{Return on Investment} = \frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items} + [(\text{Interest Expense}) \times (1 - \text{Tax Rate})]}{\text{Average (Long-Term Liabilities + Equity)}}$$

This ratio evaluates the earnings performance of the firm without regard to the way the investment is financed. It measures the earnings on investment and indicates how well the firm utilizes its asset base. Exhibit 8-12 shows the return on investment for Nike for 1999 and 1998. From 1998 to 1999, this ratio increased moderately, from 12.14% to 12.76%.

EXHIBIT 8-12 NIKE, INC.**Return on Investment
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Interest expense [A]	\$ 44.1	\$ 60.0
Net income	451.4	399.6
Tax rate (see footnote)	39.45%	38.8%
1 – tax rate [B]	60.55%	61.20%
(Interest expense) × (1 – tax rate) [A×B]	26.70	36.71
Net income + [(interest expense) × (1 – tax rate)] [C]	\$ 478.10	\$ 436.32
Long-term liabilities and stockholders' equity:		
Beginning of year:		
Long-term liabilities	\$ 432.0	\$ 338.3
Total stockholders' equity	3,261.6	3,155.9
End of year:		
Long-term liabilities	466.2	432.0
Total stockholders' equity	3,334.6	3,261.6
Total [D]	<u>7,494.4</u>	<u>7,187.8</u>
Average [D÷2] = E	<u>\$3,747.2</u>	<u>\$3,593.9</u>
Return on investment [C÷E]	12.76%	12.14%

Return on Total Equity

The **return on total equity** measures the return to both common and preferred stockholders. Compute the return on total equity as follows:

$$\text{Return on Total Equity} = \frac{\text{Net Income Before Nonrecurring Items} - \text{Dividends on Redeemable Preferred Stock}}{\text{Average Total Equity}}$$

Preferred stock subject to mandatory redemption is termed **redeemable preferred stock**. The SEC requires that redeemable preferred stock be categorized separately from other equity securities because the shares must be redeemed in a manner similar to the repayment of debt. Most companies do not have redeemable preferred stock. For those firms that do, the redeemable preferred is excluded from total equity and considered part of debt. Similarly, the dividends must be deducted from income. They have not been deducted on the income statement, despite the similarity to debt and interest, because they are still dividends and payable only if declared.

Exhibit 8-13 shows the return on total equity for Nike for 1999 and 1998. It increased substantially from 12.45% in 1998 to 13.68% in 1999.

Return on Common Equity

This ratio measures the return to the common stockholder, the residual owner. Compute the **return on common equity** as follows:

$$\text{Return on Common Equity} = \frac{\text{Net Income Before Nonrecurring Items} - \text{Preferred Dividends}}{\text{Average Common Equity}}$$

EXHIBIT 8-13 NIKE, INC.**Return on Total Equity
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Net income	\$ 451.4	\$ 399.6
Less: Preferred dividends*	.2	.2
Adjusted income [A]	<u>\$ 451.2</u>	<u>\$ 399.4</u>
Total equity:		
Beginning of year	\$3,261.6	\$3,155.9
End of year	3,334.6	3,261.6
Total [B]	<u>6,596.2</u>	<u>6,417.5</u>
Average [B÷2] = C	<u>\$3,298.1</u>	<u>\$3,208.7</u>
Return on total equity [A÷C]	13.68%	12.45%

* $\$300,000 \times .06\% = \$18,000$ (6% represents an estimate)

The net income appears on the income statement. The preferred dividends appear most commonly on the statement of stockholders' equity. Common equity includes common capital stock and retained earnings less common treasury stock. This amount equals total equity minus the preferred capital and any minority interest included in the equity section.

Exhibit 8-14 shows the return on common equity for Nike for 1999 and 1998. Nike's return on common equity is the same as its return on total equity.

The Relationship Between Profitability Ratios

Technically, a ratio with a profit figure in the numerator and some type of "supplier of funds" figure in the denominator is a type of return on investment. Another frequently used

EXHIBIT 8-14 NIKE, INC.**Return on Common Equity
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Net income	\$ 451.4	\$ 399.6
Less: Preferred dividends*	.2	.2
Adjusted income [A]	<u>\$ 451.2</u>	<u>\$ 399.4</u>
Total common equity:		
Beginning of year	\$3,261.6	\$3,155.9
End of year	3,334.6	3,261.6
Total [B]	<u>6,596.2</u>	<u>6,417.5</u>
Average common equity [B÷2] = C	<u>\$3,298.1</u>	<u>\$3,208.7</u>
Return on common equity [A÷C]	13.68%	12.45%

* $\$300,000 \times .06\% = \$18,000$ (6% represents an estimate)

measure is a variation of the return on total assets. Compute this return on total assets variation as follows:

$$\text{Return on Total Assets Variation} = \frac{\text{Net Income} + \text{Interest Expense}}{\text{Average Total Assets}}$$

This ratio includes the return to all suppliers of funds, both long- and short-term, by both creditors and investors. It differs from the return on assets ratio previously discussed because it adds back the interest. It differs from the return on investment in that it does not adjust interest for the income tax effect, it includes short-term funds, and it uses the average investment. It will not be discussed or utilized further here because it does not lend itself to DuPont analysis.

Rates of return have been calculated on a variety of bases. The interrelationship between these ratios is of importance in understanding the return to the suppliers of funds. Exhibit 8-15 displays a comparison of profitability measures for Nike.

EXHIBIT 8-15 NIKE, INC.

Comparison of Profitability Measures Years Ended May 31, 1999 and 1998

	1999	1998
Return on assets	8.48%	7.43%
Return on investment	12.76%	12.14%
Return on total equity	13.68%	12.45%
Return on common equity	13.68%	12.45%

The return on assets measures the return to all providers of funds since total assets equal total liabilities and equity. This ratio will usually be the lowest since it includes all of the assets. The return on investment measures the return to long-term suppliers of funds, and it is usually higher than the return on assets because of the relatively low amount paid for short-term funds. This is especially true of accounts payable.

The rate of return on total equity will usually be higher than the return on investment because the rate of return on equity measures return only to the stockholders. A profitable use of long-term sources of funds from creditors provides a higher return to stockholders than the return on investment. In other words, the profits made on long-term funds from creditors were greater than the interest paid for the use of the funds.

Common stockholders absorb the greatest degree of risk and, therefore, usually earn the highest return. For the return on common equity to be the highest, the return on funds obtained from preferred stockholders must be more than the funds paid to the preferred stockholders.

Gross Profit Margin

Gross profit equals the difference between net sales revenue and the cost of goods sold. The cost of goods sold is the beginning inventory plus purchases minus the ending inventory. It is the cost of the product sold during the period. Changes in the cost of goods sold, which represents such a large expense for merchandising and manufacturing firms, can have a substantial impact on the profit for the period. Comparing gross profit to net sales is termed the **gross profit margin**. Compute the gross profit margin as follows:

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

This ratio should then be compared with industry data or analyzed by trend analysis. Exhibit 8-16 illustrates trend analysis. In this illustration, the gross profit margin has declined substantially over the three-year period. This could be attributable to a number of factors:

1. The cost of buying inventory has increased more rapidly than have selling prices.
2. Selling prices have declined due to competition.
3. The mix of goods has changed to include more products with lower margins.
4. Theft is occurring. If sales are not recorded, the cost of goods sold figure in relation to the sales figure is very high. If inventory is being stolen, the ending inventory will be low and the cost of goods sold will be high.

EXHIBIT 8-16

Gross Profit Margin Years Ended December 31, 1999, 1998, and 1997

	1999	1998	1997
Net sales [B]	\$5,000,000	\$4,500,000	\$4,000,000
Less: Cost of goods sold	<u>3,500,000</u>	<u>2,925,000</u>	<u>2,200,000</u>
Gross profit [A]	<u>\$1,500,000</u>	<u>\$1,575,000</u>	<u>\$1,800,000</u>
Gross profit margin [A÷B]	30.00%	35.00%	45.00%

Gross profit margin analysis helps a number of users. Managers budget gross profit levels into their predictions of profitability. Gross profit margins are also used in cost control. Estimations utilizing gross profit margins can determine inventory levels for interim statements in the merchandising industries. Gross profit margins can also be used to estimate inventory involved in insured losses. In addition, gross profit measures are used by auditors and the Internal Revenue Service to judge the accuracy of accounting systems.

Gross profit margin analysis requires an income statement in multiple-step format. Otherwise the gross profit must be computed, which is the case with Nike. Exhibit 8-17 presents Nike's gross profit margin, which has decreased in 1998 and then increased in 1999.

EXHIBIT 8-17 NIKE, INC.

Gross Profit Margin Years Ended May 31, 1999, 1998, and 1997

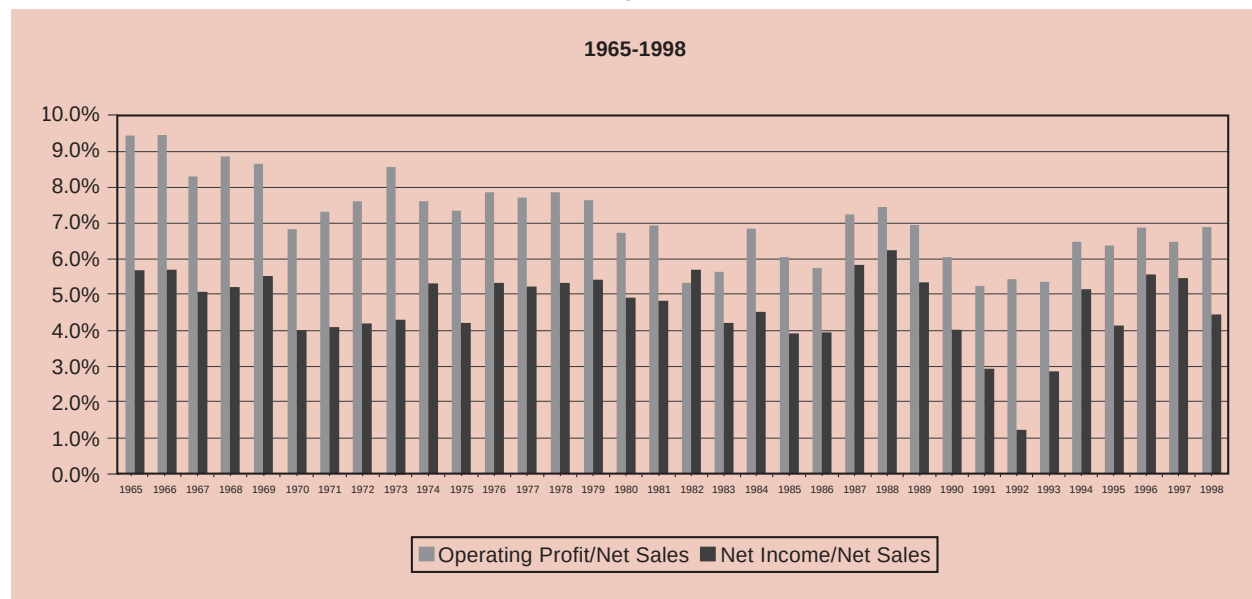
	1999	1998	1997
	(In Millions)		
Net sales [B]	\$8,776.9	\$9,553.1	\$9,186.5
Less: Cost of products sold	<u>5,493.5</u>	<u>6,065.5</u>	<u>5,503.0</u>
Gross profit [A]	<u>\$3,283.4</u>	<u>\$3,487.6</u>	<u>\$3,683.5</u>
Gross profit margin [A÷B]	37.41%	36.51%	40.10%

TRENDS IN PROFITABILITY

Exhibit 8-18 shows profitability trends for manufacturing for the period 1965-1998. Operating profit compared with net sales declined substantially over this period. Net income compared with net sales fluctuated substantially. This ratio recovered in recent years from a low in 1992. In general, there has been a decline in profitability. This decline in profitability probably occurred due to factors such as an increase in competition domestically and internationally. The decline in profitability indicates an increase in the risk of doing business.

EXHIBIT 8-18

TRENDS IN PROFITABILITY United States Manufacturing



Source: Quarterly Financial Reports of Manufacturing, Mining, & Trading, Department of Commerce, Washington, DC: Government Printing Office.

SEGMENT REPORTING

A public business enterprise reports financial and descriptive information about reportable operating segments. Operating segments are segments about which separate financial information is available that is evaluated by the chief operating decision maker in deciding how to allocate resources and in assessing performance. It requires information about the countries in which the firm earns revenues and holds assets, and about major customers.

Descriptive information must be disclosed about the way the operating segments were determined. Disclosure is required for products and services by the operating segments. Disclosure is also required about the differences between the measurements used in reporting segment information and those used in the firms general-purpose financial information.

Segment data can be analyzed both in terms of trends and ratios. Vertical and horizontal common-size analyzes can be used for trends. Examples of ratios would be relating profits to sales or identifiable assets.

Segment trends would be of interest to management and investors. The maximum benefits from this type of analysis come when analyzing a nonintegrated company in terms of product lines, especially with segments of relatively similar size.

Nike reported operating segments and related information in Note 16. Note 16 is partially included in Exhibit 8-19. This data should be reviewed, and consideration should be given to using vertical and horizontal analyzes and to computing ratios that appear meaningful. This type of review is illustrated in Exhibits 8-20 and 8-21.

Exhibit 8-20 presents some Nike segment information in vertical common-size analysis. Net revenue, contribution profit, capital expenditures, and depreciation are

EXHIBIT 8-19 NIKE, INC.

Segment Information (In Part) Years Ended May 31, 1999, 1998, and 1997

Year Ended May 31,	1999	(In millions) 1998	1997
NET REVENUE			
United States	\$4,723.7	\$5,139.4	\$5,201.6
Europe	2,255.8	2,096.1	1,789.8
Asia Pacific	844.5	1,253.9	1,241.9
Americas	507.1	599.0	449.2
Other brands	445.8	464.7	504.0
	<u>\$8,776.9</u>	<u>\$9,553.1</u>	<u>\$9,186.5</u>
CONTRIBUTION PROFIT			
United States	\$ 882.3	\$ 978.8	\$1,411.7
Europe	338.4	281.2	254.5
Asia Pacific	78.8	(26.8)	227.4
Americas	57.6	110.6	74.3
Other brands	22.4	(13.1)	34.7
Corporate	(589.3)	(617.7)	(655.1)
	<u>\$ 790.2</u>	<u>\$ 713.0</u>	<u>\$1,347.5</u>
CAPITAL EXPENDITURES			
United States	\$ 48.5		
Corporate	161.7		
United States and Corporate	<u>\$ 210.2</u>	<u>\$ 246.8</u>	<u>\$ 266.4</u>
Europe	87.7	121.0	90.0
Asia Pacific	43.7	103.5	69.7
Americas	12.5	12.6	6.4
Other brands	30.0	22.0	33.4
	<u>\$ 384.1</u>	<u>\$ 509.9</u>	<u>\$ 465.9</u>
DEPRECIATION			
United States	\$ 22.0		
Corporate	73.3		
United States and Corporate	<u>\$ 95.3</u>	<u>\$ 96.8</u>	<u>\$ 75.9</u>
Europe	40.6	37.8	27.0
Asia Pacific	20.8	23.4	13.8
Americas	6.8	4.7	2.6
Other brands	34.7	21.8	18.7
	<u>\$ 198.2</u>	<u>\$ 184.5</u>	<u>\$ 138.0</u>

EXHIBIT 8-20 NIKE, INC.**Segment Information—Common-Size Analysis**

Year Ended May 31,	1999	(In millions) 1998	1997
Net Revenue			
United States	53.82%	53.80%	56.62%
Europe	25.70	21.94	19.48
Asia Pacific	9.62	13.13	13.52
Americas	5.78	6.27	4.89
Other brands	5.08	4.86	5.49
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>
Contribution Profit			
United States	111.66%	137.28%	104.76%
Europe	42.82	39.44	18.89
Asia Pacific	9.97	(3.76)	16.88
Americas	7.29	15.51	5.51
Other brands	2.83	(1.84)	2.58
Corporate	(74.58)	(86.63)	(48.62)
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>
Capital Expenditures			
United States	12.63%		
Corporate	42.10		
United States and Corporate	54.73%	48.78%	57.18%
Europe	22.83	23.92	19.32
Asia Pacific	11.38	20.46	14.96
Americas	3.25	2.49	1.37
Other brands	7.81	4.35	7.17
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>
Depreciation			
United States	11.10%		
Corporate	36.98		
United States and Corporate	48.08%	52.47%	55.00%
Europe	20.48	20.49	19.57
Asia Pacific	10.49	12.68	10.00
Americas	3.43	2.55	1.88
Other brands	17.51	11.82	13.55
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

included. Based on this analysis, the United States is the dominant segment, followed by Europe. The proportion of revenue coming from the United States has declined, while the proportion of revenue coming from Europe has increased. Contribution profit coming from the United States has fluctuated substantially. Contribution profit from Europe increased substantially.

A review of Exhibit 8-21 (segment information - ratio analysis), indicates that contribution profit to net revenue declined substantially in the United States. But the United States still has the highest contribution profit to net revenue. The contribution profit to net revenue declined for Europe in 1998, but rebounded well in 1999.

EXHIBIT 8-21 NIKE, INC.**Segment Information—Ratio Analysis
Years Ended May 31, 1999, 1998, and 1997**

	1999	1998	1997
Contribution Profit to Net Revenue:			
United States	18.68%	19.05%	27.14%
Europe	15.00	13.42	14.22
Asia	9.33	Negative	18.31
Americas	11.36	18.46	16.54
Other brands	5.02	Negative	6.88
Depreciation to Capital Expenditures:			
United States	45.36%	—	—
Corporate	45.33	—	—
Europe	46.29	31.24%	30.00%
Asia Pacific	47.60	22.61	19.80
Americas	54.40	37.30	40.63
Other brands	115.67	99.09	55.99

**GAINS AND
LOSSES FROM
PRIOR PERIOD
ADJUSTMENTS**

Prior period adjustments result from certain changes in accounting principles, the realization of income tax benefits of preacquisition operating loss carryforwards of purchased subsidiaries, a change in accounting entity, and corrections of errors in prior periods. Prior period adjustments are charged to retained earnings.

These items are a type of gain or loss but they never go through the income statement. They are not recognized on the income statement. If material, they should be considered in analysis. Current period ratios would not be revised because these items relate to prior periods.

A review of the retained earnings account presented in the statement of stockholders' equity will reveal prior period adjustments.

Exhibit 8-22 presents a prior period adjustment from the 1998 annual report of the Nord Resources Corp. This prior period adjustment of \$15,705,000 increased retained earnings.

**EXHIBIT 8-22 NORD RESOURCES CORP.
Prior Period Adjustment
1998 Annual Report****INSURANCE RECOVERY**

The Company had certain amounts of insurance to cover risk of loss on its investment in SRL due to political violence and expropriation of SRL's assets. Under an insurance policy provided by an agency of the United States government, \$15,705,000 of coverage was provided for the Company's share of damage to property from political violence. This policy expired on December 31, 1995 and the insurer elected not to renew the coverage. The Company filed a claim under this policy for its 50% share of damage to mine assets resulting from events which began in January 1995. In September 1996, the Company received a \$1,500,000 provisional payment from the insurer under this policy. A further claim for the full amount covered by the policy was filed in February 1998, and the balance of \$14,205,000 was received in May 1998. These amounts totaling \$15,705,000 were recorded as a prior period adjustment to retained earnings in the Company's financial statements as of January 1, 1996.

**COMPREHENSIVE
INCOME**

Chapter 4 explained that the categories within accumulated other income are: (1) foreign currency translation adjustments, (2) unrealized holding gains and losses on available-for-sale marketable securities, (3) changes to stockholders equity resulting from additional minimum pension liability adjustments, and (4) unrealized gains and losses from derivative instruments. Chapter 4 also explained that there is considerable flexibility in reporting comprehensive income. One format uses a single income statement to report net income and comprehensive income. The second format reports comprehensive income in a separate statement of financial activity. The third format reports comprehensive income within the statement of changes in stockholders' equity.

Review the reporting of comprehensive income to determine which items are reported. Nike presents comprehensive income within the statement of changes in stockholders' equity. The only comprehensive income item reported by Nike is foreign currency translation adjustments.

Note that comprehensive income includes items not in net income. Our traditional profitability analysis includes items that related to net income. This excludes other comprehensive income items. Ratios in which you may want to consider including comprehensive income are: (1) return on assets, (2) return on investment, (3) return on total equity, and (4) return on common equity. For some firms, these ratios will change substantially. Exhibit 8-23 presents these ratios for Nike. For Nike, there was a moderate change in these profitability ratios.

EXHIBIT 8-23 NIKE, INC.**Selected Ratios Considering Comprehensive Income
Year Ended May 31, 1999**

Ratio	1999	
	Prior Computation	Including Comprehensive Income
Return on assets	8.48%	8.07%
Return on investment	12.76%	12.18%
Return on total equity	13.68%	13.03%
Return on common equity	13.68%	13.02%

**INTERIM
REPORTS**

Interim reports are an additional source of information on profitability. These are reports that cover fiscal periods of less than one year. The SEC requires that limited financial data be provided on Form 10-Q. The SEC also requires that these companies disclose certain quarterly information in notes to the annual report.

The same reporting principles used for annual reports should be employed for interim reports, with the intent that the interim reporting be an integral part of the annual report. For interim financial reports, timeliness of data offsets lack of detail. Some data included are:

1. Income statement amounts:
 - a. Sales or gross revenues
 - b. Provision for income taxes
 - c. Extraordinary items and tax effect

- d. Cumulative effect of an accounting change
- e. Net income
- 2. Earnings per share
- 3. Seasonal information
- 4. Significant changes in income tax provision or estimate
- 5. Disposal of segments of business and unusual items material to the period
- 6. Contingent items
- 7. Changes in accounting principles or estimates
- 8. Significant changes in financial position

Interim reports contain more estimates in the financial data than in the annual reports. Interim reports are also unaudited. For these reasons, they are less reliable than annual reports.

Income tax expense is an example of a figure that can require considerable judgment and estimation for the interim period. The objective with the interim income tax expense is to use an annual effective tax rate, which may require considerable estimation. Some reasons for this are foreign tax credits and the tax effect of losses in an interim period.

Interim statements must disclose the seasonal nature of the activities of the firm. It is also recommended that firms that are seasonal in nature supplement their interim report by including information for twelve-month periods ended at the interim date for the current and preceding years.

Interim statements can help the analyst determine trends and identify trouble areas before the year-end report is available. The information obtained (such as a lower profit margin) may indicate that trouble is brewing.

Nike included a section called “Selected Quarterly Financial Data” in its annual report. It indicates that the first quarter has the highest volume and is most profitable. This would be the months of June, July, and August. Revenue was down in each quarter compared with 1998. Although revenue was down in the third and fourth quarters in relation to 1998, gross margin was up substantially in the fourth quarter in relation to 1998.

SUMMARY

Profitability is the ability of a firm to generate earnings. It is measured relative to a number of bases, such as assets, sales, and investment.

The ratios related to profitability covered in this chapter are listed below:

$$\text{Net Profit Margin} = \frac{\text{Net Income Before Minority Share of Earnings, Equity Income and Nonrecurring Items}}{\text{Net Sales}}$$

$$\text{Total Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

$$\text{Return on Assets} = \frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items}}{\text{Average Total Assets}}$$

$$\text{DuPont Return on Operating Assets} = \text{Operating Income Margin} \times \text{Operating Asset Turnover}$$

$$\text{Operating Income Margin} = \frac{\text{Operating Income}}{\text{Net Sales}}$$

$$\text{Operating Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Operating Assets}}$$

$$\text{Return on Operating Assets} = \frac{\text{Operating Income}}{\text{Average Operating Assets}}$$

$$\text{Sales to Fixed Assets} = \frac{\text{Net Sales}}{\text{Average Net Fixed Assets} \\ (\text{Exclude Construction in Progress})}$$

$$\text{Return on Investment} = \frac{\text{Net Income Before Minority Share of} \\ \text{Earnings and Nonrecurring Items} + \\ [(\text{Interest Expense}) \times (1 - \text{Tax Rate})]}{\text{Average (Long-Term Liabilities + Equity)}}$$

$$\text{Return on Total Equity} = \frac{\text{Net Income Before Nonrecurring Items} - \\ \text{Dividends on Redeemable Preferred Stock}}{\text{Average Total Equity}}$$

$$\text{Return on Common Equity} = \frac{\text{Net Income Before Nonrecurring Items} - \\ \text{Preferred Dividends}}{\text{Average Common Equity}}$$

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

QUESTIONS

- Q 8-1.** Profits might be compared to sales, assets, or stockholders' equity. Why might all three bases be used? Will trends in these ratios always move in the same direction?
- Q 8-2.** What is the advantage of segregating extraordinary items in the income statement?
- Q 8-3.** If profits as a percent of sales decline, what can be said about expenses?
- Q 8-4.** Would you expect the profit margin in a quality jewelry store to differ from that of a grocery store? Comment.

- Q 8-5.** The ratio return on assets has net income in the numerator and total assets in the denominator. Explain how each part of the ratio could cause return on assets to fall.
- Q 8-6.** What is DuPont analysis, and how does it aid in financial analysis?
- Q 8-7.** How does operating income differ from net income? How do operating assets differ from total assets? What is the advantage in removing nonoperating items from the DuPont analysis?
- Q 8-8.** Why are equity earnings usually greater than cash flow generated from the investment? How can these equity earnings distort profitability analysis?
- Q 8-9.** Explain how return on assets could decline, given an increase in net profit margin.
- Q 8-10.** How is return on investment different from return on total equity? How does return on total equity differ from return on common equity?
- Q 8-11.** What is return on investment? What are some of the types of measures for return on investment? Why is the following ratio preferred?

$$\frac{\text{Net Income Before Minority Share of Earnings and Nonrecurring Items} + [(\text{Interest Expense}) \times (1 - \text{Tax Rate})]}{\text{Average (Long-Term Debt} + \text{Equity)}}$$

Why is the interest multiplied by $(1 - \text{Tax Rate})$?

- Q 8-12.** G. Herrich Company and Thomas, Inc. are department stores. For the current year, they reported a net income after tax of \$400,000 and \$600,000, respectively. Is Thomas, Inc. a more profitable company than G. Herrich Company? Discuss.
- Q 8-13.** Since interim reports are not audited, they are not meaningful. Comment.
- Q 8-14.** Speculate on why accounting standards do not mandate full financial statements in interim reports.
- Q 8-15.** Why may comprehensive income fluctuate substantially more than net income?

To the Net



- Go to the book's web site at accounting.swcollege.com, and click on the link to the IBM investor resources site. Click on the guide to understanding financials. Explore this area for a better understanding of financials. Among things you will find are a glossary, Internet links, and other resources to help you extend your investment-related education.
- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Safeway. Select the 10-K that was filed on March 24, 1999.
 - What is the standard industrial classification for Safeway?
 - Determine the recurring earnings for 1998, 1997, and 1996.
 - Determine the net income for 1998, 1997, and 1996.
 - Which of the earnings numbers would you want to include in your primary analysis of Safeway? Comment.

PROBLEMS

P 8-1. Ahl Enterprise lists the following data for 2001 and 2000:

	2001	2000
Net income	\$ 52,500	\$ 40,000
Net sales	1,050,000	1,000,000
Average total assets	230,000	200,000
Average common equity	170,000	160,000

Required Calculate the net profit margin, return on assets, total asset turnover, and return on common equity for both years. Comment on the results. (For return on assets and total asset turnover, use end-of-year total assets; for return on common equity, use end-of-year common equity.)

P 8-2. Income statement data for Starr Canning Corporation are as follows:

	2001	2000
Sales	\$1,400,000	\$1,200,000
Cost of goods sold	850,000	730,000
Selling expenses	205,000	240,000
General expenses	140,000	100,000
Income tax expense	82,000	50,000

Required

- Prepare an income statement in comparative form, stating each item for both years as a percent of sales (vertical common-size analysis).
- Comment on the findings in (a).

P 8-3. The balance sheet for Schultz Bone Company at December 31, 2001, had the following account balances:

Total current liabilities (non-interest-bearing)	\$450,000
Bonds payable, 6% (issued in 1982; due in 2010)	750,000
Preferred stock, 5%, \$100 par	300,000
Common stock, \$10 par	750,000
Premium on common stock	150,000
Retained earnings	600,000

Income before income tax was \$200,000, and income taxes were \$80,000 for the current year.

Required Calculate each of the following:

- Return on assets (using ending assets)
- Return on total equity (using ending total equity)
- Return on common equity (using ending common equity)
- Times interest earned

P 8-4. Revenue and expense data for Vent Molded Plastics and for the plastics industry as a whole are as shown on the next page.

Required Convert the dollar figures for Vent Molded Plastics into percentages based on net sales. Compare these with the industry average, and comment on your findings.

	Vent Molded Plastics	Plastics Industry
Sales	\$462,000	100.3%
Sales returns	4,500	.3
Cost of goods sold	330,000	67.1
Selling expenses	43,000	10.1
General expenses	32,000	7.9
Other income	1,800	.4
Other expense	7,000	1.3
Income tax	22,000	5.5

P 8-5. Day Ko Incorporated presented the following comparative income statements for 2001 and 2000:

	For the Years Ended	
	2001	2000
Net sales	\$1,589,150	\$1,294,966
Other income	22,334	20,822
	<u>1,611,484</u>	<u>1,315,788</u>
Costs and expenses:		
Material and manufacturing costs of products sold	651,390	466,250
Research and development	135,314	113,100
General and selling	526,680	446,110
Interest	18,768	11,522
Other	15,570	7,306
	<u>1,347,722</u>	<u>1,044,288</u>
Earnings before income taxes and minority equity	263,762	271,500
Provision for income taxes	114,502	121,740
Earnings before minority equity	149,260	149,760
Minority equity in earnings	11,056	12,650
Net earnings	<u>\$ 138,204</u>	<u>\$ 137,110</u>

Other relevant financial information follows:

	For the Years Ended	
	2001	2000
Average common shares issued	29,580	29,480
Total long-term debt	\$ 209,128	\$ 212,702
Total stockholders' equity (all common)	810,292	720,530
Total assets	1,437,636	1,182,110
Operating assets	1,411,686	1,159,666
Dividends per share	1.96	1.86
Stock price (December 31)	53 $\frac{3}{4}$	76 $\frac{1}{2}$

Required

- How did 2001 net sales compare to 2000?
- How did 2001 net earnings compare to 2000?
- Calculate the following for 2001 and 2000:
 - Net profit margin
 - Return on assets (using ending assets)
 - Total asset turnover (using ending assets)

continued

4. DuPont analysis
5. Operating income margin
6. Return on operating assets (using ending assets)
7. Operating asset turnover (using ending assets)
8. DuPont analysis with operating ratios
9. Return on investment (using ending liabilities and equity)
10. Return on equity (using ending common equity)
- d. Based on the above computations, summarize the trend in profitability for this firm.

P 8-6. Dorex, Inc. presented the following comparative income statements for 2001, 2000, and 1999:

	For the Years Ended		
	2001	2000	1999
Net sales	\$1,600,000	\$1,300,000	\$1,200,000
Other income	22,100	21,500	21,000
	<u>1,622,100</u>	<u>1,321,500</u>	<u>1,221,000</u>
Costs and expenses:			
Material and manufacturing costs of products sold	740,000	624,000	576,000
Research and development	90,000	78,000	71,400
General and selling	600,000	500,500	465,000
Interest	19,000	18,200	17,040
Other	14,000	13,650	13,800
	<u>1,463,000</u>	<u>1,234,350</u>	<u>1,143,240</u>

	For the Years Ended		
	2001	2000	1999
Earnings before income taxes and minority equity	159,100	87,150	77,760
Provision for income taxes	62,049	35,731	32,659
Earnings before minority equity	97,051	51,419	45,101
Minority equity in earnings	10,200	8,500	8,100
Net earnings	\$86,851	\$42,919	\$37,001

	For the Years Ended		
	2001	2000	1999
Other relevant financial information:			
Average common shares issued	29,610	29,100	28,800
Average long-term debt	\$211,100	\$121,800	\$214,000
Average stockholders' equity (all common)	811,200	790,100	770,000
Average total assets	1,440,600	1,220,000	1,180,000
Average operating assets	1,390,200	1,160,000	1,090,000

- Required**
- a. Calculate the following for 2001, 2000, and 1999:
 1. Net profit margin
 2. Return on assets

3. Total asset turnover
 4. DuPont analysis
 5. Operating income margin
 6. Return on operating assets
 7. Operating asset turnover
 8. DuPont analysis with operating ratios
 9. Return on investment
 10. Return on total equity
- b. Based on the above computations, summarize the trend in profitability for this firm.

P 8-7. Selected financial data for Squid Company are as follows:

	2001	2000	1999
Summary of operations:			
Net sales	\$1,002,100	\$980,500	\$900,000
Cost of products sold	520,500	514,762	477,000
Selling, administrative, and general expenses	170,200	167,665	155,700
Nonoperating income	9,192	8,860	6,500
Interest expense	14,620	12,100	11,250
Earnings before income taxes	287,588	277,113	249,550
Provision for income taxes	116,473	113,616	105,560
Net earnings	171,115	163,497	143,990
Financial information:			
Working capital	\$190,400	\$189,000	\$180,000
Average property, plant, and equipment	302,500	281,000	173,000
Average total assets	839,000	770,000	765,000
Average long-term debt	120,000	112,000	101,000
Average stockholders' equity	406,000	369,500	342,000

- Required**
- a. Compute the following for 2001, 2000, and 1999:
 1. Net profit margin
 2. Return on assets
 3. Total asset turnover
 4. DuPont analysis
 5. Return on investment
 6. Return on total equity
 7. Sales to fixed assets
 - b. Discuss your findings in (a).

P 8-8. The D. H. Muller Company presented the income statement in its 2001 annual report shown on the next page.

- Required**
- a. Based on these data, compute the following for 2001, 2000, and 1999:
 1. Net profit margin
 2. Return on assets (using total assets)
 3. Total asset turnover (using total assets)
 4. DuPont analysis
 5. Operating income margin
 6. Return on operating assets (using end-of-year operating assets)
 7. Operating asset turnover (using end-of-year operating assets)
 8. DuPont analysis with operating ratios
 9. Gross profit margin
 - b. Discuss your findings.

(Dollars in thousands except per-share amounts)	For the Years Ended		
	2001	2000	1999
Net sales	\$297,580	\$256,360	\$242,150
Cost of sales	206,000	176,300	165,970
Gross profit	91,580	80,060	76,180
Selling, administrative, and other expenses	65,200	57,200	56,000
Operating earnings	26,380	22,860	20,180
Interest expense	(5,990)	(5,100)	(4,000)
Other deductions, net	(320)	(1,100)	(800)
Earnings before income taxes, minority interests, and extraordinary items	20,070	16,660	15,380
Income taxes	(8,028)	(6,830)	(6,229)
Net earnings of subsidiaries applicable to minority interests	(700)	(670)	(668)
Earnings before extraordinary items	11,342	9,160	8,483
Extraordinary items:			
Gain on sale of investment, net of federal and state income taxes of \$520	—	1,050	—
Loss due to damages to South American facilities, net of minority interest of \$430	—	(1,600)	—
Net earnings	<u>\$ 11,342</u>	<u>\$ 8,610</u>	<u>\$ 8,483</u>
	2001	2000	1999
Earnings per common share:			
Earnings before extraordinary items	\$2.20	\$1.82	\$1.65
Extraordinary items	—	(.06)	—
Net earnings	<u>\$2.20</u>	<u>\$1.76</u>	<u>\$1.65</u>

The asset side of the balance sheet is summarized as follows:

(Dollars in thousands)	2001	2000	1999
Current assets	\$ 89,800	\$ 84,500	\$ 83,100
Property, plant, and equipment	45,850	40,300	39,800
Other assets (including investments, deposits, deferred charges, and intangibles)	10,110	12,200	13,100
Total assets	<u>\$145,760</u>	<u>\$137,000</u>	<u>\$136,000</u>

P 8-9. The following financial information is for the A. Galler Company for 2001, 2000, and 1999:

	2001	2000	1999
Income before interest	\$4,400,000	\$4,000,000	\$3,300,000
Interest expense	800,000	600,000	550,000
Income before tax	3,600,000	3,400,000	2,750,000
Tax	1,500,000	1,450,000	1,050,000
Net income	<u>\$2,100,000</u>	<u>\$1,950,000</u>	<u>\$1,700,000</u>
	2001	2000	1999
Current liabilities	\$2,600,000	\$2,300,000	\$2,200,000
Long-term debt	7,000,000	6,200,000	5,800,000
Preferred stock (14%)	100,000	100,000	100,000
Common equity	10,000,000	9,000,000	8,300,000

- Required**
- For 2001, 2000, and 1999, determine the following:
 - Return on assets (using end-of-year total assets)
 - Return on investment (using end-of-year long-term liabilities and equity)
 - Return on total equity (using ending total equity)
 - Return on common equity (using ending common equity)
 - Discuss the trend in these profit figures.
 - Discuss the benefit from the use of long-term debt and preferred stock.

P 8-10. The Dexall Company recently had a fire in its store. Management must determine the inventory loss for the insurance company. Since the firm did not have perpetual inventory records, the insurance company has suggested that it might accept an estimate using the gross profit test. The beginning inventory, as determined from the last financial statements, was \$10,000. Purchase invoices indicate purchases of \$100,000. Credit and cash sales during the period were \$120,000. Last year, the gross profit for the firm was 40%, which was also the industry average.

- Required**
- Based on these data, estimate the inventory loss.
 - If the industry average gross profit was 50%, why might the insurance company be leery of the estimated loss?

P 8-11. Transactions affect various financial statement amounts.

	Net Profit	Retained Earnings	Total Stockholders' Equity
a. A stock dividend is declared and paid.	_____	_____	_____
b. Merchandise is purchased on credit.	_____	_____	_____
c. Marketable securities are sold above cost.	_____	_____	_____
d. Accounts receivable are collected.	_____	_____	_____
e. A cash dividend is declared and paid.	_____	_____	_____
f. Treasury stock is purchased and recorded at cost.	_____	_____	_____
g. Treasury stock is sold above cost.	_____	_____	_____
h. Common stock is sold.	_____	_____	_____
i. A fixed asset is sold for less than book value.	_____	_____	_____
j. Bonds are converted into common stock.	_____	_____	_____

Required Indicate the effects of the transactions listed above on each of the following: net profit, retained earnings, total stockholders' equity. Use + to indicate an increase, – to indicate a decrease, and 0 to indicate no effect.

P 8-12. Consecutive five-year balance sheets and income statements of the Mary Lou Szabo Corporation are as follows:

MARY LOU SZABO CORPORATION
Balance Sheets
December 31, 1997, through December 31, 2001

(Dollars in thousands)	2001	2000	1999	1998	1997
Assets					
Current assets:					
Cash	\$ 24,000	\$ 25,000	\$ 26,000	\$ 24,000	\$ 26,000
Accounts receivable, net	120,000	122,000	128,000	129,000	130,000
Inventories	135,000	138,000	141,000	140,000	137,000
Total current assets	279,000	285,000	295,000	293,000	293,000
Property, plant and equipment, net	500,000	491,000	485,000	479,000	470,000
Goodwill	80,000	85,000	90,000	95,000	100,000
Total assets	<u>\$859,000</u>	<u>\$861,000</u>	<u>\$870,000</u>	<u>\$867,000</u>	<u>\$863,000</u>
Liabilities and Stockholders' Equity					
Current liabilities:					
Accounts payable	\$180,000	\$181,000	\$181,500	\$183,000	\$184,000
Income taxes	14,000	14,500	14,000	12,000	12,500
Total current liabilities	194,000	195,500	195,500	195,000	196,500
Long-term debt	65,000	67,500	79,500	82,000	107,500
Redeemable preferred stock	80,000	80,000	80,000	80,000	—
Total liabilities	<u>339,000</u>	<u>343,000</u>	<u>355,000</u>	<u>357,000</u>	<u>304,000</u>
Stockholders' equity:					
Preferred stock	70,000	70,000	70,000	70,000	120,000
Common stock	350,000	350,000	350,000	350,000	350,000
Paid-in capital in excess of par, common stock	15,000	15,000	15,000	15,000	15,000
Retained earnings	85,000	83,000	80,000	75,000	74,000
Total stockholders' equity	<u>520,000</u>	<u>518,000</u>	<u>515,000</u>	<u>510,000</u>	<u>559,000</u>
Total liabilities and stockholders' equity	<u>\$859,000</u>	<u>\$861,000</u>	<u>\$870,000</u>	<u>\$867,000</u>	<u>\$863,000</u>

MARY LOU SZABO CORPORATION
Statement of Earnings
Years Ended December 31, 1997–2001

(Dollars in thousands)	2001	2000	1999	1998	1997
Net sales	\$980,000	\$960,000	\$940,000	\$900,000	\$880,000
Cost of goods sold	<u>625,000</u>	<u>616,000</u>	<u>607,000</u>	<u>580,000</u>	<u>566,000</u>
Gross profit	355,000	344,000	333,000	320,000	314,000
Selling and administrative expense	(240,000)	(239,000)	(238,000)	(239,000)	(235,000)
Interest expense	<u>(6,500)</u>	<u>(6,700)</u>	<u>(8,000)</u>	<u>(8,100)</u>	<u>(11,000)</u>
Earnings from continuing operations before income taxes	108,500	98,300	87,000	72,900	68,000
Income taxes	<u>35,800</u>	<u>33,400</u>	<u>29,200</u>	<u>21,700</u>	<u>23,100</u>
Earnings from continuing operations	72,700	64,900	57,800	51,200	44,900
Extraordinary loss, net of taxes	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>(30,000)</u>
Net earnings	<u>\$ 72,700</u>	<u>\$ 64,900</u>	<u>\$ 57,800</u>	<u>\$ 51,200</u>	<u>\$ 14,900</u>
Earnings (loss) per share:					
Continuing operations	\$ 2.00	\$ 1.80	\$ 1.62	\$ 1.46	\$ 1.28
Extraordinary loss	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>(.85)</u>
Net earnings per share	<u>\$ 2.00</u>	<u>\$ 1.80</u>	<u>\$ 1.62</u>	<u>\$ 1.46</u>	<u>\$.43</u>

Note: Dividends on preferred stock were as follows:

Redeemable preferred stock	Preferred stock
1998–2001 \$6,400	1998–2001 \$6,300
	1997 \$10,800

- Required**
- a. Compute the following for the years ended December 31, 1997–2001:
 1. Net profit margin
 2. Total asset turnover
 3. Return on assets
 4. DuPont return on assets
 5. Operating income margin
 6. Operating asset turnover
 7. Return on operating assets
 8. DuPont return on operating assets
 9. Sales to fixed assets
 10. Return on investment
 11. Return on total equity
 12. Return on common equity
 13. Gross profit margin

Note: For ratios that call for using average balance sheet figures, compute the rate using average balance sheet figures and year-end balance sheet figures.

- b. Briefly comment on profitability and trends indicated in profitability. Also comment on the difference in results between using the average balance sheet figures and year-end figures.

Case 8-1

Johnny's Self-Service Station

John Dearden and his wife, Patricia, have been taking an annual vacation to Stowe, Vermont, each summer. They like the area very much and would like to retire someday in this vicinity. While in Stowe during the summer, they notice a “for sale” sign in front of a self-service station. John is 55 and is no longer satisfied with commuting to work in New York City. He decides to inquire about the asking price of the station. He is aware that Stowe is considered a good vacation area during the entire year, especially when the ski season is in progress.

On inquiry, John determines that the asking price of the station is \$70,000, which includes two pumps, a small building, and 1/8 acre of land.

John asks to see some financial statements and is shown profit and loss statements for 2001 and 2000 that have been prepared for tax purposes by a local accountant.

JOHNNY'S SELF-SERVICE STATION

Statement of Earnings

For the Years Ended December 31, 2001 and 2000

	2001	2000
Revenue	\$185,060	\$175,180
Expenses:		
Cost of goods sold	160,180	153,280
Depreciation (a)	1,000	1,000
Real estate and property taxes	1,100	1,050
Repairs and maintenance	1,470	1,200
Other expenses	680	725
Total expenses	164,430	157,255
Profit	\$ 20,630	\$ 17,925
(a) Building and equipment cost	\$30,000	
Original estimated life	30 years	
Depreciation per year	\$1,000	

John is also given an appraiser's report on the property. The land is appraised at \$50,000, and the equipment and building are valued at \$20,000. The equipment and building are estimated to have a useful life of ten years.

The station has been operated by Jeff Szabo without additional help. He estimates that if help were hired to operate the station, it would cost \$10,000 per year. John anticipates that he will be able to operate the station without additional help. John intends to incorporate. The anticipated tax rate is 50%.

Required

- Determine the indicated return on investment if John Dearden purchases the station. Include only financial data that will be recorded on the books. Consider 2001 and 2000 to be representative years for revenue and expenses.
- Determine the indicated return on investment if help were hired to operate the station.
- Why is there a difference between the rates of return in part (a) and part (b)? Discuss.
- Determine the cash flow for 2002 if John serves as the manager and 2002 turns out to be the same as 2001. Do not include the cost of the hired help. No inventory is on hand at the date of purchase, but an inventory of \$10,000 is on hand at the end of the year. There are no receivables or liabilities.
- Indicate some other considerations that should be analyzed.
- Should John purchase the station?

Case 8-2

The Tale of the Segments

The segment information from the 1998 annual report of the Kellogg Company follows:

Note 13 Operating segments

The Company manufactures and markets ready-to-eat cereal and other grain-based convenience food products, including toaster pastries, frozen waffles, cereal bars, and bagels, throughout the world. Principal markets for these products include the United States and Great Britain. Operations are managed via four major geographic areas—North America, Europe, Asia-Pacific, and Latin America—which are the basis of the Company's reportable operating segment information disclosed below. The measurement of operating segment results is generally consistent with the presentation of the Consolidated Statement of Earnings and Balance Sheet. Intercompany transactions between reportable operating segments were insignificant in all periods presented.

(millions)	1998	1997	1996
Net sales			
North America	\$4,175.9	\$4,260.8	\$4,086.3
Europe	1,698.5	1,702.0	1,749.6
Asia-Pacific	377.0	411.9	433.2
Latin America	510.7	455.4	407.5
Consolidated	\$6,762.1	\$6,830.1	\$6,676.6
Operating profit excluding non-recurring charges			
North America	\$ 831.6	\$ 884.8	\$ 762.3
Europe	211.4	305.8	305.1
Asia-Pacific	48.3	51.1	61.3
Latin America	107.2	111.8	94.2
Corporate and other	(232.9)	(160.3)	(127.9)
Consolidated (a)	\$ 965.6	\$1,193.2	\$1,095.0
Depreciation and amortization			
North America	\$ 152.1	\$ 153.7	\$ 135.1
Europe	54.6	59.6	59.9
Asia-Pacific	21.3	21.9	20.7
Latin America	14.2	12.5	10.2
Corporate and other	35.9	39.6	25.6
Consolidated	\$ 278.1	\$ 287.3	\$ 251.5

(millions)	1998	1997	1996
Total assets			
North America	\$2,430.8	\$2,519.2	\$2,574.0
Europe	1,336.0	1,154.5	1,254.1
Asia-Pacific	328.4	309.5	449.2
Latin America	380.9	361.4	285.6
Corporate and other	1,516.7	1,405.1	1,316.5
Elimination entries	(941.3)	(872.1)	(829.4)
Consolidated	\$5,051.5	\$4,877.6	\$5,050.0

(millions)	1998	1997	1996
Additions to long-lived assets			
North America	\$ 82.5	\$ 166.5	\$ 544.6
Europe	169.1	60.7	71.9
Asia-Pacific	40.3	24.3	34.7
Latin America	41.7	43.3	17.7
Corporate and other	98.5	94.9	138.3
Consolidated	\$ 432.1	\$ 389.7	\$ 807.2

(a) Reconciliation to operating profit as reported:

	1998	1997	1996
Operating profit excluding nonrecurring charges	\$ 965.6	\$1,193.2	\$1,095.0
Non-recurring charges	(70.5)	(184.1)	(136.1)
Operating profit as reported	\$ 895.1	\$1,009.1	\$ 958.9

Supplemental geographic information is provided below for revenues from external customers and long-lived assets:

(millions)	1998	1997	1996
Net sales			
United States	\$3,858.0	\$3,922.2	\$3,733.7
Great Britain	743.6	719.0	673.8
Other foreign countries	2,160.5	2,188.9	2,269.1
Consolidated	\$6,762.1	\$6,830.1	\$6,676.6
Long-lived assets			
United States	\$1,644.2	\$1,707.1	\$1,720.0
Great Britain	553.0	452.4	463.2
Other foreign countries	1,330.3	1,225.2	1,304.3
Consolidated	\$3,527.5	\$3,384.7	\$3,487.5

Supplemental product information is provided below for revenues from external customers:

(millions)	1998	1997	1996
Ready-to-eat cereal net sales	\$5,265.4	\$5,435.8	\$5,543.8
Convenience foods net sales	1,496.7	1,394.3	1,132.8
Consolidated	\$6,762.1	\$6,830.1	\$6,676.6

- Required**
1. Prepare horizontal common-size analysis for net sales by segment and consolidated total. Use 1996 as the base.
 2. Prepare horizontal common-size analysis for operating profit, excluding non-recurring charges by segment and consolidated total. Use 1996 as the base. (Exclude corporate and other.)
 3. Prepare horizontal common-size analysis for total assets by segment and consolidated total. Use 1996 as the base. (Exclude corporate and other and elimination entries.)
 - b. Use the supplemental geographic information for revenues from external customers and long-lived assets for the following:
 1. Net sales—Prepare horizontal common-size. Use 1996 as the base.

2. Long-lived assets—Prepare horizontal common-size. Use 1996 as the base.
- c. Use the supplemental product information for revenues and external customers for the following:
 1. Prepare horizontal common-size. Use 1996 as the base.
 2. Prepare vertical common-size for 1996, 1997, and 1998. Use consolidated as the base.
- d. Comment on possible significant insights from the analysis in parts (a) through (c).

Case 8-3

Insights on Geographic Area

Mattel, Inc. and subsidiaries presented the following note in their 1998 annual report:

Note 8 - Segment Information

In the 1998 fourth quarter, the Company adopted Statement of Financial Accounting Standards No. 131, *Disclosures about Segments of an Enterprise and Related Information*. This statement supercedes Statement of Financial Accounting Standards No. 14, *Financial Reporting for Segments of a Business Enterprise*, replacing the “industry segment” approach with the “management” approach. The management approach designates the internal organization that is used by management for making operating decisions and assessing performance as the source of the Company’s reportable segments. This statement requires disclosure of certain information by reportable segment, geographic area and major customer.

Mattel designs, manufactures and markets a broad variety of children’s products on a worldwide basis. These product lines are grouped into four major categories which represent the Company’s operating segments, as follows:

- Girls – including Barbie® fashion dolls and accessories, collector dolls, software, Fashion Magic®, American Girl®, Cabbage Patch Kids®, and Polly Pocket®
- Infant and Preschool – including Fisher-Price®, Disney preschool and plush, Power Wheels®, Sesame Street®, See ‘N Say®, Magna Doodle®, and View-Master®
- Entertainment – including Disney, Nickelodeon®, games, and puzzles
- Wheels – including Hot Wheels®, Matchbox®, Tyco®, Electric Racing, and Tyco® Radio Control

These operating segments all have similar economic characteristics, market children’s products, and share the same production process. Based on these similarities, the Company’s products can be aggregated into one reportable segment for purposes of this disclosure.

The table on the next page presents information by geographic area (in thousands). Revenues are attributed to countries based on location of customer. Long-lived assets principally include net property, plant and equipment, and goodwill.

	Net Sales	Long-Lived Assets
1998		
United States	\$3,298,838	\$1,301,237
Europe and Canada	1,096,287	222,893
Asia and Latin America	386,767	411,118
	4,781,892	1,935,248
Corporate and other	—	245,985
Consolidated total	\$4,781,892	\$2,181,233
1997		
United States	\$3,307,576	\$ 577,727
Europe and Canada	1,143,378	166,423
Asia and Latin America	383,662	346,549
	4,834,616	1,090,699
Corporate and other	—	229,625
Consolidated total	\$4,834,616	\$1,320,324
1996		
United States	\$2,829,123	\$ 582,038
Europe and Canada	1,275,706	231,805
Asia and Latin America	430,503	364,079
	4,535,332	1,177,922
Corporate and other	—	191,917
Consolidated total	\$4,535,332	\$1,369,839

Credit is granted to customers on an unsecured basis, and generally provides for extended payment terms which result in a substantial portion of trade receivables being collected during the latter half of the year. Customers accounting for more than 10% of the Company's consolidated net sales and related accounts receivable are shown below.

(In millions)	1998	1997	1996
Worldwide sales for the year ended			
Toys R Us	\$729.3	\$859.5	\$1,039.6
Wal-Mart	790.8	739.1	555.9
Accounts receivable as of December 31			
Toys R Us	\$148.9	\$260.7	\$185.0
Wal-Mart	291.4	178.6	90.4

- Required**
- a.
 1. Prepare horizontal common-size analysis for net sales. Use 1996 as the base.
 2. Prepare horizontal common-size analysis for long-lived assets. Use 1996 as the base. (Do not include corporate and other.)
 - b.
 1. Prepare horizontal common-size analysis for worldwide sales of Toys R Us and Wal-Mart. Use 1996 as the base. (Prepare the Toys R Us analysis and Wal-Mart analysis separately.)
 2. Prepare horizontal common-size analysis for accounts receivable as of December 31 for Toys R Us and for Wal-Mart. Use 1996 as the base. (Prepare the Toys R Us analysis and Wal-Mart analysis separately.)
 3. For 1998, what percentage of net sales was to Toys R Us and to Wal-Mart? (Prepare the Toys R Us and Wal-Mart analysis separately.)
 - c. Comment on possible significant insights from the analysis in parts (a) and (b).

Case 8-4

Tide, Pampers, and Etc.

The consolidated statements of earnings and balance sheets are presented for The Procter & Gamble Company and subsidiaries.

Consolidated Statements of Earnings

Amounts in Millions Except Per Share Amounts	Year ended June 30		
	1998	1997	1996
Net Sales	\$37,154	\$35,764	\$35,284
Cost of products sold	21,064	20,510	20,938
Marketing, research and administrative expenses	10,035	9,766	9,531
Operating Income	6,055	5,488	4,815
Interest expense	548	457	484
Other income, net	201	218	338
Earnings Before Income Taxes	5,708	5,249	4,669
Income taxes	1,928	1,834	1,623
Net Earnings	\$ 3,780	\$ 3,415	\$ 3,046
Basic Net Earnings Per Common Share	\$ 2.74	\$ 2.43	\$ 2.14
Diluted Net Earnings Per Common Share	\$ 2.56	\$ 2.28	\$ 2.01
Dividends Per Common Share	\$ 1.01	\$.90	\$.80

Consolidated Balance Sheets

Amounts in Millions Except Per Share Amounts	June 30	
	1998	1997
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 1,549	\$ 2,350
Investment securities	857	760
Accounts receivable	2,781	2,738
Inventories		
Materials and supplies	1,225	1,131
Work in process	343	228
Finished goods	1,716	1,728
Deferred income taxes	595	661
Prepaid expenses and other current assets	1,511	1,190
Total Current Assets	10,577	10,786
Property, Plant and Equipment		
Buildings	3,660	3,409
Machinery and equipment	15,953	14,646
Land	539	570
	20,152	18,625
Accumulated depreciation	(7,972)	(7,249)
Total Property, Plant and Equipment	12,180	11,376
Goodwill and Other Intangible Assets		
Goodwill	7,023	3,915
Trademarks and other intangible assets	1,157	1,085
	8,180	5,000
Accumulated depreciation	(1,169)	(1,051)
Total Goodwill and Other Intangible Assets	7,011	3,949
Other Non-Current Assets	1,198	1,433
Total Assets	<u>\$30,966</u>	<u>\$27,544</u>

Amounts in Millions Except Per Share Amounts	June 30	
	1998	1997
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	\$ 2,051	\$ 2,203
Accrued and other liabilities	3,942	3,802
Taxes payable	976	944
Debt due within one year	2,281	849
Total Current Liabilities	<u>9,250</u>	<u>7,798</u>
Long-Term Debt	5,765	4,143
Deferred Income Taxes	428	559
Other Non-Current Liabilities	3,287	2,998
Total Liabilities	<u>18,730</u>	<u>15,498</u>
Shareholders' Equity		
Convertible Class A preferred stock, stated value \$1 per share (600 shares authorized)	1,821	1,859
Non-Voting Class B preferred stock, stated value \$1 per share (200 shares authorized; none issued)	—	—
Common stock, stated value \$1 per share (5,000 shares authorized; shares outstanding: 1998—1,337.4 and 1997—1,350.8)	1,337	1,351
Additional paid-in capital	907	559
Reserve for employee stock ownership plan debt retirement	(1,616)	(1,634)
Accumulated other comprehensive income	(1,357)	(819)
Retained earnings	11,144	10,730
Total Shareholders' Equity	<u>12,236</u>	<u>12,046</u>
Total Liabilities and Shareholders' Equity	<u>\$30,966</u>	<u>\$27,544</u>

Note: Preferred dividends, net of tax benefit, of \$104 in 1998 and 1997.

- Required**
- Compute the following for 1998 and 1997:
 - Net profit margin
 - Total asset turnover (Use year-end assets.)
 - Return on assets (Use year-end assets.)
 - Operating income margin
 - Return on operating assets (Use year-end assets.)
 - Sales to fixed assets (Use year-end fixed assets.)
 - Return on investment (Use year-end balance sheets accounts.)
 - Return on total equity (Use year-end equity.)
 - Return on common equity (Use year-end common equity.)
 - Gross profit margin
 - Comment on trends in (a).

Case 8-5

Vehicles and Housing

The consolidated statements of income and retained earnings and the balance sheet are presented for Coachmen Industries, Inc.

Consolidated Statements of Income and Retained Earnings
For the years ended December 31

	1998	1997	1996
Net sales	\$756,029,526	\$661,591,185	\$606,474,128
Cost of goods sold	646,118,708	568,836,172	517,966,127
Gross profit	109,910,818	92,755,013	88,508,001
Operating expenses:			
Selling and delivery	35,973,828	31,605,666	27,719,131
General and administrative	28,009,137	25,889,028	21,116,814
	63,982,965	57,494,694	48,835,945
Operating income	45,927,853	35,260,319	39,672,056
Nonoperating income (expense):			
Interest expense	(1,738,608)	(2,544,021)	(1,572,092)
Investment income	4,831,102	4,975,360	1,615,442
Gain on sale of properties, net	46,302	137,246	726,023
Other income, net	1,223,959	996,720	1,041,401
	4,362,755	3,565,305	1,810,774
Income before income taxes and cumulative effect of accounting change	50,290,608	38,825,624	41,482,830
Income taxes	17,228,000	14,063,000	14,146,000
Income before cumulative effect of accounting change	33,062,608	24,762,624	27,336,830
Cumulative effect of accounting change for Company-owned life insurance policies	—	—	2,293,983
Net income	33,062,608	24,762,624	29,630,813
Retained earnings, beginning of year	115,984,289	94,670,593	67,824,816
Cash dividends (per common share: 1998—\$.20, 1997—\$.20 and 1996—\$.185)	(3,432,903)	(3,448,928)	(2,785,036)
Retained earnings, end of year	\$145,613,994	\$115,984,289	\$ 94,670,593
Earnings per common share:			
Income before cumulative effect of accounting change:			
Basic	\$ 1.93	\$ 1.44	\$ 1.79
Diluted	1.92	1.42	1.76
Net income:			
Basic	1.93	1.44	1.94
Diluted	1.92	1.42	1.91

Consolidated Balance Sheets**ASSETS**

	December 31	
	1998	1997
CURRENT ASSETS		
Cash and temporary cash investments	\$ 23,009,502	\$ 71,427,918
Marketable securities	31,279,433	15,852,718
Trade receivables, less allowance for doubtful receivables 1998 - \$768,000 and 1997 - \$1,354,000	27,584,551	25,212,595
Other receivables	1,838,171	2,980,257
Refundable income taxes	3,741,000	1,761,000
Inventories	93,349,453	68,416,006
Prepaid expenses and other	1,341,175	1,247,973
Deferred income taxes	3,268,000	3,040,000
Total current assets	<u>185,411,285</u>	<u>189,938,467</u>
PROPERTY AND EQUIPMENT, at cost		
Land and improvements	11,016,684	9,041,817
Buildings and improvements	53,761,414	39,950,161
Machinery and equipment	19,712,798	16,874,788
Transportation equipment	11,175,667	10,159,168
Office furniture and fixtures	8,850,146	5,712,961
	<u>104,516,709</u>	<u>81,738,895</u>
Less accumulated depreciation	<u>41,444,585</u>	<u>35,137,268</u>
	<u>63,072,124</u>	<u>46,601,627</u>
OTHER ASSETS		
Real estate held for sale	2,622,218	4,188,063
Rental properties	1,371,915	2,000,218
Intangibles, less accumulated amortization 1998 - \$516,913 and 1997 - \$516,469	4,553,105	4,927,807
Deferred income taxes	579,000	569,000
Other	10,866,639	10,836,844
	<u>19,992,877</u>	<u>22,521,932</u>
TOTAL ASSETS	<u><u>\$268,476,286</u></u>	<u><u>\$259,062,026</u></u>

LIABILITIES AND SHAREHOLDERS' EQUITY

	1998	1997
CURRENT LIABILITIES		
Current maturities of long-term debt	\$2,125,175	\$2,258,519
Accounts payable, trade	18,997,193	22,818,303
Accrued wages, salaries and commissions	4,357,878	4,876,790
Accrued dealer incentives	3,783,628	3,226,255
Accrued warranty expense	6,138,081	6,013,528
Accrued income taxes	1,509,429	1,529,543
Accrued insurance	1,862,811	2,319,518
Other accrued liabilities	6,943,999	6,633,762
Total current liabilities	45,718,194	49,676,218
LONG-TERM DEBT	10,191,476	12,591,144
OTHER	7,108,956	6,658,872
Total liabilities	63,018,626	68,926,234
COMMITMENTS AND CONTINGENCIES (Note 11)		
SHAREHOLDERS' EQUITY		
Common shares, without par value: authorized 60,000,000 shares; issued 1998 - 20,842,568 shares and 1997 - 20,689,214 shares	89,105,324	87,519,740
Additional paid-in capital	3,866,398	3,012,596
Retained earnings	145,613,994	115,984,289
Treasury shares, at cost, 1998 - 4,257,985 shares and 1997 - 3,387,648 shares	(33,128,056)	(16,380,833)
Total shareholders' equity	205,457,660	190,135,792
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$268,476,286	\$259,062,026

- Required**
- Compute the following for 1998 and 1997:
 - Net profit margin
 - Total asset turnover (Use year-end total assets.)
 - Return on assets (Use year-end total assets.)
 - Operating income margin
 - Return on operating assets (Use year-end operating assets.)
 - Sales to fixed assets (Use year-end fixed assets.)
 - Return on investment (Use year-end long-term liabilities + equity.)
 - Return on total equity (Use year-end total equity.)
 - Gross profit margin
 - Comment on trends in (a).

CHAPTER

9

FOR THE INVESTOR

CERTAIN TYPES OF ANALYSIS PARTICULARLY concern investors. While this chapter is not intended as a comprehensive guide to investment analysis, it will introduce certain types of analysis useful to the investor. In addition to

the analysis covered in this chapter, an investor would also be interested in the liquidity, debt, and profitability ratios covered in prior chapters.

LEVERAGE AND ITS EFFECTS ON EARNINGS

The use of debt, called *financial leverage*, has a significant impact on earnings. The existence of fixed operating costs, called *operating leverage*, also affects earnings. The higher the percentage of fixed operating costs, the greater the variation in income as a result of a variation in sales (revenue).

This book does not compute a ratio for operating leverage because it cannot be readily computed from published financial statements. This book does compute financial leverage because it is readily computed from published financial statements.

The expense of debt financing is interest, a fixed charge dependent on the amount of financial principal and the rate of interest. Interest is a contractual obligation created by the borrowing agreement. In contrast to dividends, interest must be paid regardless of whether the firm is in a highly profitable period or not. An advantage of interest over dividends is its tax deductibility. Because the interest is subtracted to calculate taxable income, income tax expense is reduced.

Definition of Financial Leverage and Magnification Effects

The use of financing with a fixed charge (such as interest) is termed **financial leverage**. Financial leverage is successful if the firm earns more on the borrowed funds than it pays to use them. It is not successful if the firm earns less on the borrowed funds than it pays to use them. Using financial leverage results in a fixed financing charge that can materially affect the earnings available to the common shareholders.

Exhibit 9-1 illustrates financial leverage and its magnification effects. In this illustration, earnings before interest and tax for the Dowell company are \$1,000,000. Further, the firm has interest expense of \$200,000 and a tax rate of 40%. The statement illustrates the effect of leverage on the return to the common stockholder. At earnings before interest and tax (EBIT) of \$1,000,000, the net income is \$480,000. If EBIT increases by 10% to

EXHIBIT 9-1

DOWELL COMPANY Financial Leverage Partial Income Statement to Illustrate Magnification Effects

	Base Year Figures	20% Decrease in Earnings Before Interest and Tax	10% Increase in Earnings Before Interest and Tax
Earnings before interest and tax	\$1,000,000	\$800,000	\$1,100,000
Interest	(200,000)	(200,000)	(200,000)
Earnings before tax	800,000	600,000	900,000
Income tax (40%)	(320,000)	(240,000)	(360,000)
Net income	<u>\$ 480,000</u>	<u>\$360,000</u>	<u>\$ 540,000</u>
Percentage change in net income (A)		25.0%	12.5%
Percentage change in earnings before interest and tax (B)		20.0%	10.0%
Degree of financial leverage (A÷B)		1.25	1.25

\$1,100,000, as in the exhibit, the net income rises by 12.5%. This magnification is caused by the fixed nature of interest expense. While earnings available to pay interest rise, interest remains the same, thus leaving more for the residual owners. Note that since the tax rate remains the same, earnings before tax change at the same rate as earnings after tax. Hence, this analysis could be made with either profit figure.

If financial leverage is used, a rise in EBIT will cause an even greater rise in net income, and a decrease in EBIT will cause an even greater decrease in net income. Looking again at the statement for the Dowell Company in Exhibit 9-1, when EBIT declined 20%, net income dropped from \$480,000 to \$360,000—a decline of \$120,000, or 25%, based on the original \$480,000. The use of financial leverage, termed **trading on the equity**, is only successful if the rate of earnings on borrowed funds exceeds the fixed charges.

Computation of the Degree of Financial Leverage

The degree of financial leverage is the multiplication factor by which the net income changes as compared to the change in EBIT. One way of computing it follows:

$$\frac{\% \text{ Change Net Income}}{\% \text{ Change EBIT}}$$

For the Dowell Company:

$$\frac{12.5\%}{10.0\%} = 1.25, = \frac{25.0\%}{20.0\%} = 1.25$$

The degree of financial leverage is 1.25. From a base EBIT of \$1,000,000, any change in EBIT will be accompanied by 1.25 times that change in net income. If net income before interest and tax rises 4%, earnings to the stockholder will rise 5%. If net income before interest and tax falls 8%, earnings to the stockholder will decline 10%. The degree of financial leverage (DFL) can be computed more easily as follows:

$$\text{Degree of Financial Leverage} = \frac{\text{Earnings Before Interest and Tax}}{\text{Earnings Before Tax}}$$

Again referring to the Dowell Company:

$$\text{Degree of Financial Leverage at Earnings} = \frac{\$1,000,000}{\$800,000} = 1.25$$

Before Interest and Tax on \$1,000,000

Note that the degree of financial leverage represents a particular base level of income. The degree of financial leverage may differ for other levels of income or fixed charges.

The degree of financial leverage formula will not work precisely when the income statement includes any of the following items:

1. Minority share of earnings
2. Equity income
3. Nonrecurring items
 - a. Discontinued operations
 - b. Extraordinary items
 - c. Cumulative effect of change in an accounting principle

When any of these items are included, they should be eliminated from the numerator and denominator. The all-inclusive formula follows:

$$\text{Degree of Financial Leverage} = \frac{\text{Earnings Before Interest, Tax, Minority Share of Earnings, Equity Income, and Nonrecurring Items}}{\text{Earnings Before Tax, Minority Share of Earnings, Equity Income, and Nonrecurring Items}}$$

This formula results in the ratio by which earnings before interest, tax, minority share of earnings, equity income, and nonrecurring items will change in relation to a change in earnings before tax, minority share of earnings, equity income, and nonrecurring items. In other words, it eliminates the minority share of earnings, equity income, and nonrecurring items from the degree of financial leverage.

Exhibit 9-2 shows the degree of financial leverage for 1999 and 1998 for Nike. The degree of financial leverage is 1.06 for 1999 and 1.09 for 1998. This is a very low degree of financial leverage. Therefore, the financial leverage at the end of 1999 indicates that as earnings before interest changes, net income will change by 1.06 times that amount. If earnings before interest increases, the financial leverage will be favorable. If earnings before interest decreases, the financial leverage will be unfavorable. In periods of relatively low interest rates or declining interest rates, financial leverage looks more favorable than in periods of high interest rates or increasing interest rates.

EXHIBIT 9-2 NIKE, INC.

Degree of Financial Leverage Base Years 1999 and 1998

	1999	1998
	(In millions)	
Income before income taxes [B]	\$746.1	\$653.0
Interest	44.1	60.0
Earnings before interest and tax [A]	<u>\$790.2</u>	<u>\$713.0</u>
Degree of financial leverage [A+B]	1.06	1.09

Summary of Financial Leverage

Two things are important in looking at financial leverage as part of financial analysis. First, how high is the degree of financial leverage? This is a type of risk (or opportunity) measurement from the viewpoint of the stockholder. The higher the degree of financial leverage, the greater the multiplication factor. Second, does the financial leverage work for or against the owners?

EARNINGS PER COMMON SHARE

Earnings per share—the amount of income earned on a share of common stock during an accounting period—applies only to common stock and to corporate income statements. Nonpublic companies, because of cost-benefit considerations, do not have to report earnings per share. Because earnings per share receives much attention from the financial community, investors, and potential investors, it will be described in some detail.

Fortunately, we do not need to compute earnings per share. The company is required to present it at the bottom of the income statement. Per-share amounts for discontinued operations, extraordinary items, and the cumulative effect of an accounting change must be presented on the face of the income statement or in the notes to the financial statements. Earnings per share for recurring items is the most significant for primary analysis.

Computing earnings per share initially involves net income, preferred stock dividends declared and accumulated, and the weighted average number of shares outstanding, as follows:

$$\text{Earnings per Common Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Number of Common Shares Outstanding}}$$

Since earnings pertain to an entire period, they should be related to the common shares outstanding during the period. Thus, the denominator of the equation is the weighted average number of common shares outstanding.

To illustrate, assume that a corporation had 10,000 shares of common stock outstanding at the beginning of the year. On July 1, it issued 2,000 shares, and on October 1, it issued another 3,000 shares. The weighted average number of shares outstanding would be computed as follows:

Months Shares Are Outstanding	Shares Outstanding	×	Fraction of Year Outstanding	=	Weighted Average
January–June	10,000		6/12		5,000
July–September	12,000		3/12		3,000
October–December	15,000		3/12		3,750
					<u>11,750</u>

When the common shares outstanding increase as a result of a stock dividend or stock split, retroactive recognition must be given to these events for all comparative earnings per share presentations. Stock dividends and stock splits do not provide the firm with more funds; they only change the number of outstanding shares. Earnings per share should be related to the outstanding common stock after the stock dividend or stock split. In the weighted average common shares illustration, if we assume that a 2-for-1 stock split took place on December 31, the denominator of the earnings per share computation becomes 23,500 ($11,750 \times 2$). The denominator of prior years' earnings per share computations would also be doubled. If we assume that net income is \$100,000 and preferred dividends total \$10,000 in this illustration, then the earnings per common share would be \$3.83 [$(\$100,000 - \$10,000)/23,500$].

The current earnings per share guidelines call for the presentation of basic earnings per share and diluted earnings per share. Basic earnings per share is computed by dividing net income less preferred dividends by the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share is computed by dividing net income less preferred dividends by the weighted average number of shares of common stock outstanding plus the dilutive effect of potentially dilutive securities. Potentially dilutive securities are convertible securities, warrants, options, or other rights that upon conversion or exercise could in the aggregate dilute earnings per common share.

Exhibit 9-3 presents the earnings per share of Nike for the years 1997, 1998, and 1999. There was a material decline in 1998 followed by an increase in 1999.

EXHIBIT 9-3 NIKE, INC.**Earnings Per Share
Years Ended May 31, 1999, 1998 and 1997**

	1999	1998	1997
Basic earnings per common share	<u>\$1.59</u>	<u>\$1.38</u>	<u>\$2.76</u>
Diluted earnings per common share	<u>\$1.57</u>	<u>\$1.35</u>	<u>\$2.68</u>

**PRICE/EARNINGS
RATIO**

The **price/earnings (P/E) ratio** expresses the relationship between the market price of a share of common stock and that stock's current earnings per share. Compute the P/E ratio as follows:

$$\text{Price/Earnings Ratio} = \frac{\text{Market Price per Share}}{\text{Diluted Earnings per Share}}$$

Using diluted earnings per share results in a higher price/earnings ratio, a conservative computation of the ratio. Ideally, the P/E ratio should be computed using diluted earnings per share for continuing earnings per share. This gives an indication of what is being paid for a dollar of recurring earnings.

P/E ratios are available from many sources, such as the *Wall Street Journal* and *Standard & Poor's Industry Surveys*. Exhibit 9-4 shows the P/E ratio for Nike for 1999 and 1998. The P/E ratio was 38.81 at the end of 1999 and 34.07 at the end of 1998. This indicates that the stock has been selling for about 38 times earnings. You can get a perspective on this ratio by comparing it to competitors, average P/E for the industry, and an average for all of the stocks on an exchange, such as the New York Stock Exchange. These averages will vary greatly over several years.

Investors view the P/E ratio as a gauge of future earning power of the firm. Companies with high growth opportunities generally have high P/E ratios; firms with low growth tend to have lower P/E ratios. However, investors may be wrong in their estimates of growth potential. One fundamental of investing is to be wiser than the market. An example would be buying a stock that has a relatively low P/E ratio when the prospects for the company are much better than reflected in the P/E ratio.

P/E ratios do not have any meaning when a firm has abnormally low profits in relation to the asset base or when a firm has losses. The P/E ratio in these cases would be abnormally high or negative.

EXHIBIT 9-4 NIKE, INC.**Price/Earnings Ratio
May 31, 1999 and 1998**

	1999	1998
Market price per common share (May 31, close) [A]	<u>\$60.938</u>	<u>\$46.00</u>
Earnings per share [B]	<u>\$ 1.57</u>	<u>\$ 1.35</u>
Price/earnings ratio [A ÷ B]	38.81	34.07

PERCENTAGE OF EARNINGS RETAINED

The proportion of current earnings retained for internal growth is computed as follows:

$$\text{Percentage of Earnings Retained} = \frac{\text{Net Income} - \text{All Dividends}}{\text{Net Income}}$$

The percentage of earnings retained is better for trend analysis if nonrecurring items are removed. This indicates what is being retained of recurring earnings. Determine dividends from the statement of stockholders' equity. Actual dividends paid may differ and can be determined from the statement of cash flows.

A problem occurs because the percentage of earnings retained implies that earnings represent a cash pool for paying dividends. Under accrual accounting, earnings do not represent a cash pool. Operating cash flow compared with cash dividends gives a better indication of the cash from operations and the dividends paid. Chapter 10 introduces this ratio.

Many firms have a policy on the percentage of earnings that they want retained—for example, between 60% and 75%. In general, new firms, growing firms, and firms perceived as growth firms will have a relatively high percentage of earnings retained. Many new firms, growing firms, and firms perceived as growing firms do not pay dividends.

In the *Almanac of Business and Industrial Financial Ratios*, the percentage of earnings retained is called the *ratio of retained earnings to net income*. The phrase *retained earnings* as used in the ratio in the *Almanac* is a misnomer. Retained earnings in this ratio does not mean accumulated profits, but rather that portion of income retained in a single year. Hence, this ratio has two different names.

Exhibit 9-5 shows the percentage of earnings retained by Nike, using 1999 and 1998 figures. Nike retains a substantial proportion of its profits for internal use. It has been adding substantial production capacity.

EXHIBIT 9-5 NIKE, INC.

Percentage of Earnings Retained Years Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Net income [B]	\$451.4	\$399.6
Less: Dividends	135.6	132.9
Earnings retained [A]	<u>\$315.8</u>	<u>\$266.7</u>
Percentage of earnings retained [A+B]	69.96%	66.74%

DIVIDEND PAYOUT

The **dividend payout ratio** measures the portion of current earnings per common share being paid out in dividends. Compute the dividend payout ratio as follows:

$$\text{Dividend Payout} = \frac{\text{Dividends per Common Share}}{\text{Diluted Earnings per Share}}$$

Earnings per share are diluted in the formula because this is the most conservative viewpoint. Ideally, diluted earnings per share should not include nonrecurring items since directors normally look at recurring earnings to develop a stable dividend policy.

The dividend payout ratio has a similar problem as the percentage of earnings retained. Investors may assume that dividend payout implies that earnings per share represent cash. Under accrual accounting, earnings per share do not represent a cash pool.

Most firms hesitate to decrease dividends since this tends to have adverse effects on the market price of the company's stock. No rule of thumb exists for a correct payout ratio. Some stockholders prefer high dividends; others prefer to have the firm reinvest the earnings in hopes of higher capital gains. In the latter case, the payout ratio would be a relatively smaller percentage.

Exhibit 9-6 presents Nike's 1999 and 1998 dividend payout ratios, which decreased from 34.07% in 1998 to 29.30% in 1999. These are conservative payout ratios. Often, to attract the type of stockholder who looks favorably on a low dividend payout ratio, a company must have a good return on common equity.

EXHIBIT 9-6 NIKE, INC.

Dividend Payout Years Ended May 31, 1999 and 1998

	1999	1998
Dividends per share [A]	\$.46	\$.46
Earnings per share [B]	\$ 1.57	\$ 1.35
Dividend payout ratio [A ÷ B]	29.30%	34.07%

Industry averages of dividend payout ratios are available in *Standard & Poor's Industry Surveys*. Although no correct payout exists, even within an industry, the outlook for the industry often makes the bulk of the ratios in a particular industry similar.

In general, new firms, growing firms, and firms perceived as growth firms have a relatively low dividend payout. Nike would be considered a growing firm.

DIVIDEND YIELD

The **dividend yield** indicates the relationship between the dividends per common share and the market price per common share. Compute the dividend yield as follows:

$$\text{Dividend Yield} = \frac{\text{Dividends per Common Share}}{\text{Market Price per Common Share}}$$

For this ratio, multiply the fourth quarter dividend declared by 4. This indicates the current dividend rate. Exhibit 9-7 shows the dividend yield for Nike for 1999 and 1998. The dividend yield has been relatively low.

EXHIBIT 9-7 NIKE, INC.

Dividend Yield May 31, 1999 and 1998

	1999	1998
Dividends per share [A]	\$.48	\$.48
Market price per share [B]	\$60.938	\$46.00
Dividend yield [A ÷ B]	.79%	1.04%

Since total earnings from securities include both dividends and price appreciation, no rule of thumb exists for dividend yield. The yield depends on the firm's dividend policy and the market price. If the firm successfully invests the money not distributed as dividends, the price should rise. If the firm holds the dividends at low amounts to allow for reinvestment of profits, the dividend yield is likely to be low. A low dividend yield satisfies many investors if the company has a record of above average return on common equity. Investors that want current income prefer a high dividend yield.

BOOK VALUE PER SHARE

A figure frequently published in annual reports is book value per share, which indicates the amount of stockholders' equity that relates to each share of outstanding common stock. The formula for book value per share follows:

$$\text{Book Value per Share} = \frac{\text{Total Stockholders' Equity} - \text{Preferred Stock Equity}}{\text{Number of Common Shares Outstanding}}$$

Preferred stock equity should be stated at liquidation price, if other than book, because the preferred stockholders would be paid this value in the event of liquidation. Liquidation value is sometimes difficult to locate in an annual report. If this value cannot be found, the book figure that relates to preferred stock may be used in place of liquidation value. Exhibit 9-8 shows the book value per share for Nike for 1999 and 1998. The book value increased from \$11.36 in 1998 to \$11.81 in 1999.

The market price of the securities usually does not approximate the book value. These historical dollars reflect past unrecovered cost of the assets. The market value of the stock, however, reflects the potential of the firm as seen by the investor. For example, land will be valued at cost, and this asset value will be reflected in the book value. If the asset were purchased several years ago and is now worth substantially more, however, the market value of the stock may recognize this potential.

Book value is of limited use to the investment analyst since it is based on the book numbers. When market value is below book value, investors view the company as lacking potential. A market value above book value indicates that investors view the company as having enough potential to be worth more than the book numbers. Note that Nike was selling materially above book value (Market 1999, \$60.938).

EXHIBIT 9-8 NIKE, INC.

Book Value per Share May 31, 1999 and 1998

	1999	1998
	(In millions)	
Shareholders' equity	\$3,334.6	\$3,261.6
Less:		
Preferred stock*	—	—
Adjusted shareholders' equity [A]	\$3,334.6	\$3,261.6
Shares outstanding [B]	282.3	287.0
Book value per share [A ÷ B]	\$ 11.81	\$ 11.36

When investors are pessimistic about the prospects for stocks, the stocks sell below book value. On the other hand, when investors are optimistic about stock prospects, the stocks sell above book value. There have been times when the majority of stocks sold below book value. There have also been times when the majority of stocks sold at a multiple of 5 or 6 times book value.

**STOCK
OPTIONS**

Corporations frequently provide stock options for employees and officers of the company. Setting aside shares for options has become increasingly popular in the United States. A substantial majority of public companies have employee stock-option programs.¹

A basic understanding of stock option accounting is needed in order to assess the stock option disclosure of a company. Employers are allowed to account for stock option plans under APB Opinion No. 25, "Accounting for Stock Issued to Employees," or under SFAS No. 123, "Accounting for Stock-Based Compensation." Therefore, a basic understanding of both of these standards is needed in order to assess the stock option disclosure of a company.

APB Opinion No. 25

Under APB Opinion No. 25, a stock option plan is either a noncompensatory plan or a compensatory plan. A noncompensatory plan attempts to raise capital or encourage widespread ownership of the corporation's stock among officers and employees. Because the officers and employees purchase the stock at only a slight discount from the market price, there is not a substantial dilution of the position of existing stockholders or a substantial compensation issue. For these plans, no compensation expense is recognized under APB Opinion No. 25. When these options are exercised, the shares are issued slightly below the market price.

A compensatory plan is available only to select individuals, such as officers of the company. These plans typically provide the potential for purchasing stock at a bargain rate.

Usually, the company records compensation only to the extent that the option price was below market price on the date the option was granted. Thus, when the option price is the market price (or above the market price) on the date of grant, no compensation is recorded. Thus, many accountants feel that compensation from stock option plans under APB Opinion No. 25 is understated because the individual purchases the stock substantially below market at date of exercise (the date that the options and cash are exchanged for stock).

SFAS No. 123

SFAS No. 123 introduces a fair value-based method of determining the options expense. Fair value is determined using an option-pricing model that considers the stock price at the grant date, the exercise price, the expected life of the option, the volatility of the underlying stock and the expected dividends on it, and the risk-free interest rate over the expected life of the option.

This standard treats both the compensatory and noncompensatory options similarly: compensation cost is measured by the estimated fair value at the grant date. Compensation cost is only recognized for the number of instruments that are actually vested.

The impact of SFAS No. 123 will vary from company to company. It typically results in compensation expense being recorded that would not have been recorded under APB

Opinion No. 25. This compensation expense can be substantial, resulting in lower net income and earnings per share.

Because of significant opposition from industry, the FASB made the accounting under this standard optional. Employers can stay on the old standard or adapt SFAS No. 123. Employers that stay on the old standard must comply with a footnote disclosure requirement under SFAS No. 123. This footnote will disclose the net income and earnings per share as if the fair value-based method of accounting had been applied.

Some companies with performance-based plans could possibly recognize less compensation expense under SFAS No. 123 than under the old standard. These companies will likely elect to adapt SFAS No. 123 in its entirety. Most companies are faced with additional compensation expense under SFAS No. 123. These companies will likely elect to stay on APB Opinion No. 25 and only provide the footnote disclosure.

The additional compensation expense disclosed in the footnote can be substantial. An example would be a high-tech company that is rewarding employees with substantial stock-based compensation.

Analysis

When stock options are exercised, the additional funds improve the short-run liquidity of the firm and its long-term debt position. Any improvement is almost always immaterial, however, because of the relatively small amount of funds involved.

Stock options do not require a cash outlay by the company issuing them but they are a form of potential dilution of the interest of stockholders. Extensive use of stock options would be of concern to existing and potential stockholders.

APB Opinion No. 25 Firms

For firms that elect to report under APB Opinion No. 25, there may have been some compensation expense recognized. This expense would be for plans where the exercise price was lower than the market value at the date of grant. Any compensation expense recognized will likely be immaterial and not disclosed.

These firms will disclose the impact on income and earnings per share based on the fair value at the grant date. To determine the materiality of the impact on income and earnings per share, compare the reported income (excluding nonrecurring items) with the pro forma presentation. Also compare the reported diluted earnings per share with the pro forma earnings per share.

Exhibit 9-9 presents the materiality of options compensation expense for Nike. For Nike, the impact from options would likely be considered moderate in 1999 and immaterial in 1998 and 1997.

SFAS No. 123 Firms

For some of these firms, the compensation expense may have been recognized. In these cases, the compensation expense would likely be immaterial. Firms electing to use SFAS No. 123 will likely elect to disclose only. Approach analysis of these firms in a manner similar to firms reporting under APB Opinion No. 25.

EXHIBIT 9-9 NIKE, INC.**Materiality of Options Compensation Expense
Years Ended May 31, 1999, 1998, and 1997**

	1999	1998	1997
	(In millions)		
Net income:			
Reported (B)	\$451.4	\$399.6	\$795.8
Pro forma (A)	\$434.3	\$388.7	\$788.7
Pro forma/Reported (A)÷(B)	96.21%	97.27%	99.11%
	1999	1998	1997
Earnings per share: (Diluted)			
Reported (B)	\$ 1.57	\$ 1.35	\$ 2.68
Pro forma (A)	\$ 1.51	\$ 1.32	\$ 2.66
Pro forma/Reported (A)÷(B)	96.18%	97.78%	99.25%

**STOCK
APPRECIATION
RIGHTS**

Some firms grant key employees **stock appreciation rights** instead of stock options or in addition to stock options. Stock appreciation rights give the employee the right to receive compensation in cash or stock (or a combination of these) at some future date, based on the difference between the market price of the stock at the date of exercise over a preestablished price.

The accounting for stock appreciation rights directs that the compensation expense recognized each period be based on the difference between the quoted market value at the end of each period and the option price. This compensation expense is then reduced by previously recognized compensation expense on the stock appreciation right. For example, assume that the option price is \$10.00 and the market value is \$15.00 at the end of the first period of the stock appreciation right. Compensation expense would be recognized at \$5.00 (\$15.00 – \$10.00) per share included in the plan. If 100,000 shares are in the plan, then the expense to be charged to the income statement would be \$500,000 (\$5.00 × 100,000 shares). If the market value is \$12.00 at the end of the second period of the stock appreciation right, expenses are reduced by \$3.00 per share. This is because the total compensation expense for the two years is \$2.00 (\$12.00 – \$10.00). Since \$5.00 of expense was recognized in the first year, \$3.00 of negative compensation is considered in the second year in order to total \$2.00 of expense. With 100,000 shares, the reduction to expenses in the second year would be \$300,000 (\$3.00 × 100,000 shares). Thus, stock appreciation rights can have a material influence on income, dictated by changing stock prices.

A company with outstanding stock appreciation rights describes them in a footnote to the financial statements. If the number of shares is known, a possible future influence on income can be computed, based on assumptions made regarding future market prices. For example, if the footnote discloses that the firm has 50,000 shares of stock appreciation rights outstanding, and the stock market price was \$10.00 at the end of the year, the analyst can assume a market price at the end of next year and compute the compensation expense for next year. With these facts and an assumed market price of \$15.00 at the end of next year, the compensation expense for next year can be computed to be \$250,000 [(\$15.00 – \$10.00) × 50,000 shares]. This potential charge to earnings should be considered as the stock is evaluated as a potential investment.

Stock appreciation rights tied to the future market price of the stock can represent a material potential drain on the company. Even a relatively small number of stock appreciation rights outstanding could be material. This should be considered by existing and potential stockholders. Some firms have placed limits on the potential appreciation in order to control the cost of appreciation rights.

Forbes reported the following in a May 17, 1999 article, “Safe Haven” :

“According to the Company’s latest filing with the SEC, both the Daimler-Benz and the Chrysler compensation systems disappeared when the merger was consummated. The Daimler bonus and the Chrysler option plan was replaced with performance-based stock appreciation rights.”

The General Electric Company 1998 annual report indicated that “at year-end 1998, there were 1.4 million SARs outstanding at an average exercise price of \$22.14.” The General Electric Company stock price during 1998 ranged from a low of \$69 to a high of \$103 15/16.

Per note 8 of the Nike 1999 annual report, Nike has the potential for outstanding stock appreciation rights. Apparently stock appreciation rights were not outstanding as of May 31, 1999.

SUMMARY

This chapter has reviewed certain types of analysis that particularly concern investors. Ratios relevant to this analysis include the following:

$$\text{Degree of Financial Leverage} = \frac{\text{Earnings Before Interest and Tax}}{\text{Earnings Before Tax}}$$

$$\text{All-Inclusive Degree of Financial Leverage} = \frac{\text{Earnings Before Interest, Tax, Minority Share of Earnings, Equity Income, and Nonrecurring Items}}{\text{Earnings Before Tax, Minority Share of Earnings, Equity Income, and Nonrecurring Items}}$$

$$\text{Earnings per Common Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Number of Common Shares Outstanding}}$$

$$\text{Price/Earnings Ratio} = \frac{\text{Market Price per Share}}{\text{Diluted Earnings per Share}}$$

$$\text{Percentage of Earnings Retained} = \frac{\text{Net Income} - \text{All Dividends}}{\text{Net Income}}$$

$$\text{Dividend Payout} = \frac{\text{Dividends per Common Share}}{\text{Diluted Earnings per Share}}$$

$$\text{Dividend Yield} = \frac{\text{Dividends per Common Share}}{\text{Market Price per Common Share}}$$

$$\text{Book Value per Share} = \frac{\text{Total Stockholders' Equity} - \text{Preferred Stock Equity}}{\text{Number of Common Shares Outstanding}}$$

QUESTIONS

- Q 9-1.** Give a simple definition of *earnings per share*.
- Q 9-2.** Assume that the corporation is a nonpublic company. Comment on the requirement for this firm to disclose earnings per share.
- Q 9-3.** Keller & Fink, a partnership, engages in the wholesale fish market. How would this company disclose earnings per share?
- Q 9-4.** Dividends on preferred stock total \$5,000 for the current year. How would these dividends influence earnings per share?
- Q 9-5.** The denominator of the earnings per share computation includes the weighted average number of common shares outstanding. Why use the weighted average instead of the year-end common shares outstanding?
- Q 9-6.** Preferred dividends decreased this year because some preferred stock was retired. How would this influence the earnings per share computation this year?
- Q 9-7.** Retroactive recognition is given to stock dividends and stock splits on common stock when computing earnings per share. Why?
- Q 9-8.** Why do many firms try to maintain a stable percentage of earnings retained?
- Q 9-9.** Define financial leverage. What is its effect on earnings? When is the use of financial leverage advantageous and disadvantageous?
- Q 9-10.** Given a set level of earnings before interest and tax, how will a rise in interest rates affect the degree of financial leverage?
- Q 9-11.** Why is the price/earnings ratio considered a gauge of future earning power?
- Q 9-12.** Why does a relatively new firm often have a low dividend payout ratio? Why does a firm with a substantial growth record and/or substantial growth prospects often have a low dividend payout ratio?
- Q 9-13.** Why would an investor ever buy stock in a firm with a low dividend yield?
- Q 9-14.** Why is book value often meaningless? What improvements to financial statements would make it more meaningful?
- Q 9-15.** Why should an investor read the footnote concerning stock options? How might stock options affect profitability?
- Q 9-16.** Why can a relatively small number of stock appreciation rights prove to be a material drain on future earnings and cash of a company?
- Q 9-17.** Explain how outstanding stock appreciation rights could increase reported income in a particular year.

To the Net



1. The Kroger Company reported the following in its 1998 annual report:

	1998	1997
Total return (share price appreciation)	65%	54%
Closing market price per share	\$60.50	\$36.75
Total market value of common stock	\$15,546,000,000	\$9,370,000,000
Diluted earnings per share before extraordinary items	\$2.03	\$1.69

- a. Go to the SEC site (www.sec.gov).

Click on the Edgar database. Click on Search the Edgar Database, and click on Quick Forms Lookup. Select a form (10-K). Enter Kroger. Select the 10-K that was filed on March 26, 1999. Determine the following:

	1998	1997
1. Total assets		
2. Total liabilities		
3. Total shareowners' deficit		
4. Cash dividends per common share		

- b. 1. Compute the price/earnings ratio for 1998 and 1997.
 2. Compute the dividend yield for 1998 and 1997.
 c. Considering the disclosures in this case, speculate on how the market arrived at a total market value of common stock of \$15,546,000,000 at the end of 1998.

2. Go to the SEC site (www.sec.gov).

Click on the Edgar database. Click on Search the Edgar Database, and click on Quick Forms Lookup. Select a form (10-K). Enter PepsiCo. Select the 10-K that was filed on March 24, 1999.

- a. Determine the standard industrial classification.
 b. List the earnings per share numbers for 1998, 1997, and 1996.
 c. For 1998, 1997, and 1996, which earnings per share number should be used in primary analysis? Explain.

PROBLEMS

P 9-1. McDonald Company shows the following condensed income statement information for the current year:

Revenue from sales		\$3,500,000
Cost of products sold		(1,700,000)
Gross profit		1,800,000
Operating expenses:		
Selling expenses	\$425,000	
General expenses	350,000	(775,000)
Operating income		1,025,000
Other income		20,000
Interest		(70,000)
Operating income before income taxes		975,000
Taxes related to operations		(335,000)
Income from operations		640,000
Extraordinary loss (less applicable income taxes of \$40,000)		(80,000)
Income before minority interest		560,000
Minority share of earnings		(50,000)
Net income		\$ 510,000

Required Calculate the degree of financial leverage.

P 9-2. A firm has earnings before interest and tax of \$1,000,000, interest of \$200,000, and net income of \$400,000 in Year 1.

Required

- Calculate the degree of financial leverage in base Year 1.
- If earnings before interest and tax increase by 10% in Year 2, what will be the new level of earnings, assuming the same tax rate as in Year 1?
- If earnings before interest and tax decrease to \$800,000 in Year 2, what will be the new level of earnings, assuming the same tax rate as in Year 1?

P 9-3. The following information was in the annual report of the Rover Company:

	2000	1999	1998
Earnings per share	\$ 1.12	\$ 1.20	\$ 1.27
Cash dividends per share (common)	\$.90	\$.85	\$.82
Market price per share	\$ 12.80	\$ 14.00	\$ 16.30
Total common dividends	\$ 21,700,000	\$ 19,500,000	\$ 18,360,000
Shares outstanding, end of year	24,280,000	23,100,000	22,500,000
Total assets	\$1,280,100,000	\$1,267,200,000	\$1,260,400,000
Total liabilities	\$ 800,400,000	\$ 808,500,000	\$ 799,200,000
Nonredeemable preferred stock	\$ 15,300,000	\$ 15,300,000	\$ 15,300,000
Preferred dividends	\$ 910,000	\$ 910,000	\$ 910,000
Net income	\$ 31,200,000	\$ 30,600,000	\$ 29,800,000

- Required**
- Based on these data, compute the following for 2000, 1999, and 1998:
 - Percentage of earnings retained
 - Price/earnings ratio
 - Dividend payout
 - Dividend yield
 - Book value per share
 - Discuss your findings from the viewpoint of a potential investor.

P 9-4. The following data relate to the Edger Company:

	2000	1999	1998
Earnings per share	\$ 2.30	\$ 3.40	\$ 4.54
Dividends per share	\$ 1.90	\$ 1.90	\$ 1.90
Market price, end of year	\$ 41.25	\$ 35.00	\$ 29.00
Net income	\$ 9,100,000	\$ 13,300,000	\$ 16,500,000
Total cash dividends	\$ 6,080,000	\$ 5,900,000	\$ 6,050,000
Order backlog at year-end	\$5,490,800,000	\$4,150,200,000	\$3,700,100,000
Net contracts awarded	\$2,650,700,000	\$1,800,450,000	\$3,700,100,000

Note: The stock was selling at 120.5%, 108.0%, and 105.0% of book value in 2000, 1999, and 1998, respectively.

- Required**
- Compute the following for 2000, 1999, and 1998:
 - Percentage of earnings retained
 - Price/earnings ratio
 - Dividend payout
 - Dividend yield
 - Book value per share
 - Comment on your results from (a). Include in your discussion the data on backlog and new contracts awarded.

P 9-5. The Dicker Company has the following pattern of financial data for Years 1 and 2:

	Year 1	Year 2
Net income	\$ 40,000	\$ 42,000
Preferred stock (5%)	\$450,000	\$550,000
Weighted average number of common shares outstanding	38,000	38,000

Required Calculate earnings per share and comment on the trend.

P 9-6. Assume the following facts for the current year:

- Common shares outstanding on January 1, 50,000 shares
- July 1, 2-for-1 stock split
- October 1, a stock issue of 10,000 shares

Required Compute the denominator of the earnings per share computation for the current year.

P 9-7. The XYZ Corporation reported earnings per share of \$2.00 in 1999. In 2000, the XYZ Corporation reported earnings per share of \$1.50. On July 1, 2000, and December 31, 2000, 2-for-1 stock splits were declared.

Required Present the earnings per share for a two-year comparative income statement that includes 2000 and 1999.

P 9-8. The Cook Company shows the following condensed income statement information for the year ended December 31, 2000:

Income before extraordinary gain	\$ 30,000
Plus: Extraordinary gain, net of tax expense of \$2,000	<u>5,000</u>
Net income	<u>\$ 35,000</u>

The company declared dividends of \$3,000 on preferred stock and \$5,000 on common stock. At the beginning of 2000, 20,000 shares of common stock were outstanding. On July 1, 2000, the company issued 1,000 additional common shares. The preferred stock is not convertible.

Required a. Compute the earnings per share.
b. How much of the earnings per share appears to be recurring?

P 9-9. Assume the following facts for the current year:

Net income	\$200,000
Common dividends	\$ 20,000
Preferred dividends (The preferred stock is not convertible.)	\$ 10,000
Common shares outstanding on January 1	20,000 shares
Common stock issued on July 1	5,000 shares
2-for-1 stock split on December 31	

Required a. Compute the earnings per share for the current year.
b. Earnings per share in the prior year was \$8.00. Use the earnings per share computed in part (a) and present a two-year earnings per share comparison for the current year and the prior year.

P 9-10. Smith and Jones, Inc. is primarily engaged in the worldwide production, processing, distribution, and marketing of food products. The following information is from its 2000 annual report:

	2000	1999
Earnings per share	\$ 1.08	\$ 1.14
Cash dividends per common share	\$.80	\$.76
Market price per common share	\$ 12.94	\$ 15.19
Common shares outstanding	25,380,000	25,316,000
Total assets	\$1,264,086,000	\$1,173,924,000
Total liabilities	\$ 823,758,000	\$ 742,499,000
Nonredeemable preferred stock	\$ 16,600,000	\$ 16,600,000
Preferred dividends	\$ 4,567,000	\$ 930,000
Net income	\$ 32,094,000	\$ 31,049,000

Required a. Based on these data, compute the following for 2000 and 1999:
1. Percentage of earnings retained 4. Dividend yield
2. Price/earnings ratio 5. Book value per share
3. Dividend payout
b. Discuss your findings from the viewpoint of a potential investor.

- P 9-11.** On December 31, 2000, Farley Camera, Inc. issues 5,000 stock appreciation rights to its president to entitle her to receive cash for the difference between the market price of its stock and a preestablished price of \$20. The date of exercise is December 31, 2003, and the required service period is the entire three years. The market price fluctuates as follows: 12/31/01—\$23.00; 12/31/02—\$21.00; 12/31/03—\$26.00. Farley Camera accrued the following compensation expense:

2001	\$15,000	2002	\$(10,000)	2003	\$25,000

- Required**
- What is the executive's main advantage of receiving stock appreciation rights over stock options?
 - In 2001, a \$15,000 expense is recorded. What is the offsetting account?
 - What is the financial impact on the company of the exercise of the stock appreciation rights in 2003? How does this impact affect financial statement analysis?

- P 9-12a.** A company has only common stock outstanding.

Required Answer the following multiple-choice question. Total stockholders' equity minus preferred stock equity divided by the number of shares outstanding represents the:

1. Return on equity	3. Book value per share
2. Stated value per share	4. Price/earnings ratio

- P 9-12b.** Maple Corporation's stockholders' equity at June 30, 2000, consisted of the following:

Preferred stock, 10%, \$50 par value; liquidating value, \$55 per share; 20,000 shares issued and outstanding	\$1,000,000
Common stock, \$10 par value; 500,000 shares authorized; 150,000 shares issued and outstanding	1,500,000
Retained earnings	500,000

Required Answer the following multiple-choice question. The book value per share of common stock is:

1. \$10.00	3. \$13.33
2. \$12.67	4. \$17.65

- P 9-13.** Consecutive five-year balance sheets and income statements of the Donna Szabo Corporation are as follows:

Donna Szabo Corporation
Balance Sheets
December 31, 1996 through December 31, 2000

(Dollars in thousands)	2000	1999	1998	1997	1996
Assets					
Current assets:					
Cash	\$ 26,000	\$ 27,000	\$ 29,000	\$ 28,000	\$ 27,000
Accounts receivable, net	125,000	126,000	128,000	130,000	128,000
Inventories	140,000	143,000	145,000	146,000	144,000
Total current assets	<u>291,000</u>	<u>296,000</u>	<u>302,000</u>	<u>304,000</u>	<u>299,000</u>
Property, plant, and equipment, net	<u>420,000</u>	<u>418,000</u>	<u>417,000</u>	<u>418,000</u>	<u>415,000</u>
Total assets	<u>\$711,000</u>	<u>\$714,000</u>	<u>\$719,000</u>	<u>\$722,000</u>	<u>\$714,000</u>

(Dollars in thousands)	2000	1999	1998	1997	1996
Liabilities and Stockholders' Equity					
Current liabilities:					
Accounts payable	\$120,000	\$122,000	\$122,500	\$124,000	\$125,000
Income taxes	12,000	13,000	13,500	13,000	12,000
Total current liabilities	132,000	135,000	136,000	137,000	137,000
Long-term debt	90,000	65,000	67,000	68,000	69,000
Stockholders' equity:					
Preferred stock	49,000	76,000	80,000	82,000	75,000
Common stock	290,000	290,000	290,000	290,000	290,000
Paid-in capital in excess of par, common stock	70,000	70,000	70,000	70,000	70,000
Retained earnings	80,000	78,000	76,000	75,000	73,000
Total stockholders' equity	489,000	514,00	516,000	517,000	508,000
Total liabilities and stockholders' equity	<u>\$711,000</u>	<u>\$714,000</u>	<u>\$719,000</u>	<u>\$722,000</u>	<u>\$714,000</u>

Donna Szabo Corporation
Statement of Earnings
Years Ended December 31, 1996–2000

(In thousands, except per share)	2000	1999	1998	1997	1996
Net sales	\$890,000	\$870,000	\$850,000	\$935,000	\$920,000
Cost of goods sold	(540,000)	(530,700)	(522,750)	(579,000)	(570,000)
Gross profit	350,000	339,300	327,250	356,000	350,000
Selling and administrative expense	(230,000)	(225,000)	(220,000)	(225,000)	(224,000)
Interest expense	(9,500)	(6,600)	(6,800)	(6,900)	(7,000)
Earnings from continuing operations before income taxes	110,500	107,700	100,450	124,100	119,000
Income taxes	(33,000)	(33,300)	(32,100)	(30,400)	(37,400)
Earnings from continuing operations	77,500	74,400	68,350	93,700	81,600
Extraordinary gains, net of taxes	20,000	—	—	—	—
Net earnings	<u>\$ 97,500</u>	<u>\$ 74,400</u>	<u>\$ 68,350</u>	<u>\$ 93,700</u>	<u>\$ 81,600</u>
Earnings per share:					
Continuing operations	\$2.67	\$ 2.57	\$ 2.36	\$ 3.23	\$ 2.81
Extraordinary gain	.69	—	—	—	—
Net earnings per share	<u>\$ 3.36</u>	<u>\$ 2.57</u>	<u>\$ 2.36</u>	<u>\$ 3.23</u>	<u>\$ 2.81</u>

Note: Additional data:

1. Preferred stock dividends (in thousands):

2000	\$3,920
1999	\$6,100
1998	\$6,400
1997	\$6,600
1996	\$6,000
2. Common shares outstanding, 29,000,000 (actual) (1996–2000)
3. Stock options outstanding, 1,000,000 (actual) (1996–2000)
4. Dividends per common share (actual):

2000	\$3.16
1999	\$2.29
1998	\$2.10
1997	\$2.93
1996	\$2.80
5. Market price per common share (actual):

2000	\$24.00
1999	\$22.00
1998	\$21.00
1997	\$37.00
1996	\$29.00

Required

- a. Compute or determine the following for the years 1996–2000.
 1. Degree of financial leverage
 2. Earnings per common share
 3. Price/earnings ratio
 4. Percentage of earnings retained
 5. Dividend payout
 6. Dividend yield
 7. Book value per share
 8. Materiality of options
- b. Comment from the perspective of an investor.

Case 9-1**Stock Split**

Micron Technology Inc. and subsidiaries reported the following in its 1994 annual report:

Micron Technology, Inc.
Consolidated Balance Sheet (In Part)
(Amounts in Millions)

	September 1, 1994	September 2, 1993
Shareholders' equity:		
Common stock, \$0.10 per value; authorized, 150.0 million shares; issued and outstanding, 101.9 and 95.8 million shares	\$ 10.2	\$ 4.0
Additional paid-in capital	369.7	353.3
Retained earnings	670.8	282.5
Unamortized stock compensation	(1.4)	(0.3)
Total shareholders' equity	<u>\$1,049.3</u>	<u>\$639.5</u>

Micron Technology, Inc.
Consolidated Statements of Operations (In Part)
(Amounts in millions, except for per share amounts)

Fiscal year ended	September 1, 1994	September 2, 1993	September 3, 1992
Net sales	\$1,628.6	\$828.3	\$506.3
Operating income	620.1	165.9	13.7
Net income	400.5	104.1	6.6
Earnings per share:			
Primary	\$ 3.83	\$ 1.04	\$ 0.07
Fully diluted	3.80	1.03	0.07
Number of shares used in per share calculation:			
Primary	104.5	100.2	97.3
Fully diluted	105.2	101.3	97.3

Note 1: (In Part)

On March 1, 1994, the company's board of directors announced a 5-for-2 stock split effected in the form of a stock dividend to shareholders of record as of April 1, 1994. A total of 60,942,448 additional shares were issued in conjunction with the stock split.

The company distributed cash in lieu of fractional shares resulting from the stock split. The company's par value of \$0.10 per share remained unchanged. As a result, \$6.1 million was transferred from additional paid-in capital to common stock. All historical share and per share amounts have been restated to reflect retroactively the stock split.

1993 Annual Report:
Micron Technology, Inc.
Consolidated Balance Sheet (In Part)
(Amounts in thousands)

	September 2, 1993	September 3, 1992
Shareholders' equity:		
Common stock, \$0.10 par value; authorized, 100,000,000 shares; issued and outstanding, 40,099,156 and 38,336,565	\$ 4,010	\$ 3,834
Additional paid-in capital	353,277	327,179
Retained earnings	282,468	180,341
Unamortized stock compensation	(246)	(187)
Total shareholders' equity	<u>\$639,509</u>	<u>\$511,167</u>

Micron Technology, Inc.
Consolidated Statements of Operations (In Part)
(Amounts in thousands except for per share amounts)

	September 2, 1993	September 3, 1992	August 29, 1991
Net sales	\$828,270	\$506,300	\$425,362
Operating income	\$165,946	\$ 13,716	\$ 11,761
Net income	\$104,065	\$ 6,626	\$ 5,079
Earnings per share:			
Primary	\$ 2.60	\$ 0.17	\$ 0.13
Fully diluted	2.57	0.17	0.13
Number of shares used in per share calculations:			
Primary	40,070,000	38,912,000	37,821,000
Fully diluted	40,520,000	38,912,000	38,032,000

- Required**
- The 1993 annual report indicated that 40,520,000 shares were used to compute the 1993 fully diluted earnings per share. The 1994 annual report indicated that 101,300,000 shares were used to compute the 1993 fully diluted earnings per share. Why was there the change in the number of shares? Show the calculation of the change in number of shares.
 - What caused the change in reported fully diluted earnings per share in 1993, from \$2.57 to \$1.03? Show the calculation.
 - Speculate on reasons for the stock split.
 - How will the book value per share be affected by the stock split?
 - For a stock split, the par, or stated value, of the stock is usually changed in proportion to the stock split, and no change is made to retained earnings, additional paid-in capital, or capital stock. How was this stock split handled?

Case 9-2

Why the Change?

USBANCOR presented the following with its 1998 annual report from the consolidated statement of income.

	1998	1997	1996
Year ended December 31	(In thousands, except per share data)		
Income before income taxes	\$28,799	\$32,800	\$27,263
Provision for income taxes	7,655	9,303	7,244
Net income	<u>\$21,144</u>	<u>\$23,497</u>	<u>\$20,019</u>
Per common share data: ¹			
Basic:			
Net income	\$1.51	\$1.56	\$1.28
Average number of shares outstanding	14,011,893	15,043,128	15,586,092
Diluted:			
Net income	\$1.48	\$1.54	\$1.28
Average number of shares outstanding	14,257,557	15,274,272	15,694,761
Cash dividends declared	\$.60	\$.53	\$.46

(1) All per share and share data have been adjusted to reflect a 3-for-1 split effected in the form of a 200% stock dividend that was distributed on July 31, 1998, to shareholders of record on July 16, 1998.

From consolidated balance sheet:

At December 31	1998	1997
	(In thousands)	
Stockholders' equity¹		
Preferred stock, no par value; 2,000,000 shares authorized: there were no shares issued and outstanding on December 31, 1998, and 1997	—	—
Common stock, par value \$2.50 per share; 24,000,000 shares authorized; 17,350,136 shares issued and 13,512,317 outstanding on December 31, 1998; 17,282,028 shares issued and 14,681,154 shares outstanding on December 31, 1997	\$ 43,375	\$ 14,402
Treasury stock at cost, 3,837,819 shares on December 31, 1998, and 2,600,874 shares on December 1997	(61,521)	(31,175)
Surplus	65,495	93,934
Retained earnings	91,737	78,866
Accumulated other comprehensive income	2,584	2,153
Total stockholders' equity	<u>141,670</u>	<u>158,180</u>
Total liabilities and stockholders' equity	<u>\$2,377,081</u>	<u>\$2,239,110</u>

(1) All share data has been adjusted to reflect a 3-for-1 stock split effected in the form of a 200% stock dividend that was distributed on July 31, 1998, to shareholders of record on July 16, 1998.

Per the 1998 annual report the market price for the common stock was \$19.88 for 1998 and \$24.33 for 1997.

- Required:**
- a.
 1. How many shares of common stock were outstanding at December 31, 1998?
 2. What was the weighted average common shares for the year ended December 31, 1998?
 3. Which share number is used to compute earnings per share?
 4. Why did the outstanding shares decrease between 1997 and 1998?
 - b. When computing the price/earnings ratio, should the basic or diluted earnings per share be used? Why?
 - c.
 1. For the 1997 annual report, would the net income have been \$23,497,000? Explain.
 2. For the 1997 annual report, would the diluted earnings per share have been \$1.54 for 1997? Explain.
 - d.
 1. Compute the book value for 1998 and 1997.
 2. Considering the earnings per share and the cash dividends per share for 1998, why did the book value decrease?
 - e. Compute the dividend payout for 1998, 1997, and 1996.

Case 9-3**Stock Split Revisited**

Selected data from the 1995 annual report of Lands' End, Inc. follows:

Lands' End, Inc. & Subsidiaries**Consolidated Statements of Operations (in Part)**

(In thousands, except per-share data)	For the Period Ended		
	January 27, 1995	January 28, 1994	January 29, 1993
Net income	\$36,096	\$43,729	\$33,500
Net income per share before cumulative effect of change in accounting	\$ 1.03	\$ 1.18	\$ 0.92
Cumulative effect of change in accounting	—	.04	—
Net income per share	<u>\$ 1.03</u>	<u>\$ 1.22</u>	<u>\$ 0.92</u>

Consolidated Balance Sheets (In Part)

(In thousands)	January 27, 1995	January 28, 1994
Shareholders' investment:		
Common stock, 40,221 and 20,110 shares issued, respectively	\$ 402	\$ 201
Donated capital	8,400	8,400
Paid-in capital	25,817	24,888
Deferred compensation	(1,421)	(2,001)
Currency translation adjustment	284	246
Retained earnings	229,554	193,460
Treasury stock, 5,395 and 2,154 shares at cost, respectively	(73,908)	(47,909)
Total shareholders' investment	<u>\$189,128</u>	<u>\$177,285</u>

Consolidated Statements of Shareholders' Investment

(In thousands)	For the Period Ended		
	January 27, 1995	January 28, 1994	January 29, 1993
Common Stock:			
Beginning balance	\$ 201	\$ 201	\$ 201
2-for-1 stock split	201	—	—
Ending balance	<u>\$ 401</u>	<u>\$ 201</u>	<u>\$ 201</u>
Donated Capital Balance	<u>\$ 8,400</u>	<u>\$ 8,400</u>	<u>\$ 8,400</u>
Paid-In Capital:			
Beginning balance	\$ 24,888	\$ 24,857	\$ 23,782
Tax benefit of stock options exercised	1,130	31	1,075
2-for-1 stock split	(201)	—	—
Ending balance	<u>\$ 25,817</u>	<u>\$ 24,888</u>	<u>\$ 24,857</u>
Deferred Compensation:			
Beginning balance	\$ (2,001)	\$ (1,680)	\$ (886)
Issuance of treasury stock	—	(564)	(985)
Amortization of deferred compensation	580	243	191
Ending balance	<u>\$ (1,421)</u>	<u>\$ (2,001)</u>	<u>\$ (1,680)</u>
Foreign Currency Translation:			
Beginning balance	\$ 246	\$ —	\$ —
Adjustment for the year	38	246	—
Ending balance	<u>\$ 284</u>	<u>\$ 246</u>	<u>\$ —</u>
Retained Earnings:			
Beginning balance	\$193,460	\$153,324	\$123,418
Net income	36,096	43,729	33,500
Cash dividends paid	—	(3,592)	(3,589)
Issuance of treasury stock	(2)	(1)	(5)
Ending balance	<u>\$229,554</u>	<u>\$193,460</u>	<u>\$153,324</u>
Treasury Stock:			
Beginning balance	\$ (47,909)	\$ (45,714)	\$ (28,283)
Purchase of treasury stock	(27,979)	(2,861)	(20,972)
Issuance of treasury stock	1,980	666	3,541
Ending balance	<u>\$ (73,908)</u>	<u>\$ (47,909)</u>	<u>\$ (45,714)</u>
Total Stockholders' Equity	<u>\$189,128</u>	<u>\$177,285</u>	<u>\$139,388</u>

Consolidated Statement of Cash Flows (in Part)

(In thousands)	For the Period Ended		
	January 27, 1995	January 28, 1994	January 29, 1993
Cash flows (used for) from financing activities:			
Proceeds from short-term and long-term debt	\$ 7,539	\$ 80	—
Payment of short-term and long-term debt	(40)	—	\$(16,349)
Tax effect of exercise of stock options	1,130	31	1,075
Purchase of treasury stock	(27,979)	(2,861)	(20,972)
Issuance of treasury stock	1,978	101	2,551
Cash dividends paid to common shareholders	—	(3,592)	(3,589)
Net cash flows used for financing activities	<u>\$ (17,372)</u>	<u>\$ (6,241)</u>	<u>\$(37,284)</u>

Note 1. Summary of significant accounting policies (in Part)**Net income per share**

Net income per share is computed by dividing net income by the weighted average number of common shares outstanding during each period. After the 2-for-1 stock split, the weighted average common shares outstanding were 35.2 million, 35.9 million and 36.3 million (see Note 2) for fiscal years 1995, 1994, and 1993, respectively. Common stock equivalents include awards, grants, and stock options issued by the company. The common stock equivalents do not significantly dilute basic earnings per share.

Note 2. Shareholders' investment (in Part)**Capital Stock**

Pursuant to shareholder approval in May 1994, the company increased its authorized common stock from 30 million shares of \$0.01 par value to 160 million shares. Also, the company is authorized to issue 5 million shares of preferred stock, \$0.01 par value. The company's board of directors has the authority to issue shares and to fix dividend, voting and conversion rights, redemption provisions, liquidation preferences, and other rights and restrictions of the preferred stock.

Ten-Year Consolidated Financial Summary (unaudited) (in Part)

(In thousands, except per share data)	1995	1994 ²	1993	1992
Per share of common stock: ¹				
Net income per share before cumulative effect of change in accounting	\$1.03	\$1.18	\$0.92	\$0.77
Cumulative effect of change in accounting	—	\$0.04	—	—
Net income per share	\$1.03	\$1.22	\$0.92	\$0.77
Cash dividends per share	—	\$0.10	\$0.10	\$0.10
Common shares outstanding	34,826	35,912	36,056	36,944

- (1) Net income per share (pro forma 1986 and 1987) was computed after giving retroactive effect to the 108-for-1 stock split in August 1986, the 2-for-1 stock split in August 1987, the 2-for-1 stock split in May 1994, and assuming that the shares sold in the October 1986 initial public offering were issued at the beginning of fiscal 1986.

- (2) Effective January 30, 1993, the company adopted Statement of Financial Accounting Standards (SFAS) No. 109, "Accounting for Income Taxes," which was recorded as a change in accounting principle at the beginning of fiscal 1994, with an increase to net income of \$1.3 million or \$0.04 per share.

Selected data from the 1993 annual report of Lands' End, Inc. follows:

Consolidated Balance Sheets (In Part)

(In thousands)	January 29, 1993	January 31, 1992
Shareholders' investment:		
Common stock, 20,110,294 shares issued	\$ 201	\$ 201
Donated capital	8,400	8,400
Paid-in capital	24,857	23,782
Deferred compensation	(1,680)	(886)
Retained earnings	153,324	123,418
Treasury stock, 2,082,035 and 1,638,840 shares at cost, respectively	(45,714)	(28,283)
Total shareholders' investment	<u>\$139,388</u>	<u>\$126,632</u>

Consolidated Statement of Operations (in Part)

(Dollars in thousands, except per-share data)	January 29, 1993	January 31, 1992	January 31, 1991
Net income	\$33,500	\$28,732	\$14,743
Net income per share	1.85	1.53	0.75

Note: Annual report courtesy of Lands' End, Inc.

Required

- a. The 1995 annual report discloses net income for the period ended January 29, 1993 of \$33,500,000 and net income per share of \$0.92 for this same period. The 1993 annual report discloses net income for the period ended January 29, 1993 of \$33,500,000 and net income per share of \$1.85 for this same period. Speculate on why the net income per share has changed.
- b.
 1. How many shares have been sold and paid for as of January 27, 1995?
 2. How many shares have been bought back and not retired as of January 27, 1995?
 3. How many shares are outstanding as of January 27, 1995?
- c. Indicate the total cash dividend paid for the period ended:
 1. January 27, 1995
 2. January 28, 1994
 3. January 29, 1993
- d. Indicate the amount paid for the purchase of treasury stock:
 1. For the period ended January 27, 1995
 2. For the period ended January 28, 1994
 3. For the period ended January 29, 1993
- e. Indicate the total paid to stockholders for the period ended:
 1. January 27, 1995
 2. January 28, 1994
 3. January 29, 1993
- f. What common share number was used to compute earnings per share for 1995?
- g. What is the par value of common stock?

Case 9-4**Stock Option Plans****Cooper Tire & Rubber Company and Xerox Corporation**

Selected data from the 1998 annual report of Cooper Tire & Rubber Company follows:

Stock Options (In Part)

The Company has elected to follow APB No. 25, "Accounting for Stock Issued to Employees," in accounting for employee stock options. Under APB No. 25, no compensation expense is recognized because the exercise price of the Company's employee stock options equals the market price of the underlying stock at the date of grant.

SFAS No. 123, "Accounting for Stock-Based Compensation," is effective for awards granted by the Company during fiscal years beginning after December 15, 1994. The Standard requires, if APB No. 25 is followed, disclosure of pro forma information regarding net income and earnings per share determined as if the Company accounted for its employee stock options under the fair value method. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	1998	1997	1996
Risk-free interest rate	5.5%	6.1%	6.6%
Dividend yield	1.3%	1.0%	1.0%
Expected volatility of the Company's common stock	.251	.197	.206
Expected life	5.0 years	6.2 years	5.4 years

The weighted-average fair value of options granted in 1998, 1997 and 1996 was \$5.84, \$7.52, and \$5.58, respectively. For purposes of pro forma disclosures, the estimated fair value of options is amortized to expense over the options' vesting period. The Company's reported and pro forma information follows:

	1998	1997	1996
Net income:			
Reported	\$126,967*	\$122,411*	\$107,884*
Pro forma	125,142*	121,603*	107,363*
Basic and diluted earnings per share:			
Reported	\$ 1.64	\$ 1.55	\$ 1.30
Pro forma	1.61	1.54	1.29

*In thousands

Xerox Corporation

Selected data from the 1998 annual report of Xerox follows:

17 Common Stock (In Part)

We do not recognize compensation expense relating to employee stock options because the exercise price of the option equals the fair value of the stock on the effective date of grant. If we had determined the compensation based on the value as determined by the modified Black-Scholes option pricing model, in accordance with SFAS No. 123, the pro forma net income and earnings per share would be as follows:

	1998	1997	1996
Net income - as reported	\$395*	\$1,452*	\$1,206*
Net income - pro forma	350*	1,429*	1,189*
Basic earnings per share - as reported	0.53	2.16	1.78
Basic earnings per share - pro forma	0.46	2.12	1.75
Diluted earnings per share - as reported	0.52	2.02	1.66
Diluted earnings per share - pro forma	0.45	1.99	1.64

*In millions

The effects of applying SFAS No. 123 in this pro forma disclosure are not necessarily indicative of future amounts.

As reflected in the pro forma amounts in the table above, the fair value of each option granted in 1998, 1997 and 1996 was \$13.31, \$9.03 and \$5.25, respectively. The fair value of each option granted was estimated on the date of grant using the following weighted average assumptions:

	1998	1997	1996
Risk-free interest rate	5.2%	6.1%	5.7%
Expected life in years	5.3	5.0	5.5
Expected volatility	24.9%	23.5%	22.0%
Expected dividend yield	1.4%	1.9%	2.6%

Required

- For Cooper Tire & Rubber Company:
 - Compute the difference between reported net income and pro forma net income for 1998, 1997, and 1996.
 - Compute the difference between reported basic and diluted earnings per share and pro forma earnings per share for 1998, 1997, and 1996.
 - Comment on the apparent materiality of stock options issued to employees.
- For Xerox Corporation:
 - Compute the difference between reported net income and pro forma net income for 1998, 1997, and 1996.
 - Compute the difference between reported diluted earnings per share and pro forma diluted earnings per share.
 - Comment on the apparent materiality of stock options issued to employees.
- Cooper specializes in the manufacturing and marketing of rubber products for consumer use. Xerox is a leader in the global document market. Considering the nature of these industries, which would you expect to make the more substantial use of employee options? Give your reasons.

Case 9-5

View This Investment

Selected data from the 1995 annual report of Tyco International is shown on the next page.

Required

- Compute the following for 1995 and 1994:
 - Degree of financial leverage
 - Price/earnings ratio
 - Percentage of earnings retained
 - Dividend yield
 - Book value per share
- Comment on the ratios computed under (a).

Consolidated Statement of Income
Year Ended June 30

(In thousands, except per share data)	1995	1994	1993
Sales	\$4,534,651	\$4,076,383	\$3,919,357
Costs and expenses:	3,313,301	3,003,194	2,909,947
Cost of sales	—	—	22,485
Nonrecurring inventory charge	735,917	682,568	682,520
Selling, general and administrative	37,170	—	—
Merger and transaction-related costs	—	—	39,325
Restructuring and severance charges	63,385	62,431	85,785
Interest	4,149,773	3,748,193	3,740,062
Income before income taxes, extraordinary item, and cumulative effect of accounting changes	384,878	328,190	179,295
Income taxes	168,285	138,999	84,837
Income before extraordinary item and cumulative effect of accounting changes	216,593	189,191	94,458
Extraordinary item, net of taxes	(2,600)	—	(2,816)
Income before cumulative effect of accounting changes	213,993	189,191	91,642
Cumulative effect of accounting changes	—	189,191	(71,040)
Net income	<u>\$213,993</u>	<u>\$189,191</u>	<u>\$ 20,602</u>
Income per share:			
Before extraordinary item and cumulative effect of accounting changes	\$ 2.87	\$ 2.56	\$ 1.30
Extraordinary item	(.03)	—	(.04)
Cumulative effect of accounting changes	—	—	(.98)
Net income	<u>\$ 2.84</u>	<u>\$ 2.56</u>	<u>\$.28</u>
Common equivalent shares	<u>75,509</u>	<u>73,770</u>	<u>72,316</u>

Consolidated Balance Sheet

At June 30 (in thousands, except share data)	1995	1994
Current assets:		
Cash and cash equivalents	\$ 66,021	\$ 75,843
Receivables, less allowance for doubtful accounts of \$29,554 in 1995 and \$29,311 in 1994	527,946	515,160
Contracts in process	104,526	79,475
Inventories	592,158	517,068
Deferred income taxes	108,118	105,614
Prepaid expenses	53,132	54,904
	<u>1,451,901</u>	<u>1,348,064</u>
Property, plant and equipment, net	658,471	609,873
Goodwill and other intangible assets	1,004,463	918,791
Reorganization value in excess of identifiable assets	108,801	115,201
Deferred income taxes	101,678	112,691
Other assets	56,147	39,978
Total assets	<u>\$3,381,461</u>	<u>\$3,144,598</u>

At June 30 (in thousands, except share data)	1995	1994
Current liabilities:		
Loans payable and current maturities of long-term debt	\$ 84,387	\$ 163,164
Accounts payable	417,395	332,004
Accrued expenses	423,387	382,576
Contracts in process—billings in excess of costs	75,546	63,324
Income taxes	72,370	73,301
Deferred income taxes	11,630	3,777
	<u>1,084,715</u>	<u>1,018,146</u>
Deferred income taxes	9,599	13,698
Long-term debt	506,417	588,491
Other liabilities	146,049	157,237
Commitments and contingencies	—	—
Shareholders' equity:		
Preferred stock, \$1 par value, authorized 2,000 shares; none outstanding	—	—
Common stock, \$.50 par value, authorized 180,000,000 shares; outstanding, 76,365,001 shares in 1995 and 71,084,293 shares in 1994, net of reacquired shares of 7,960,740 in 1995 and 7,600,747 in 1994	38,183	35,542
Capital in excess of par value, net of deferred compensation of \$21,636 in 1995 and \$9,318 in 1994	620,633	567,476
Currency translation adjustment	(9,451)	(40,874)
Retained earnings	985,316	804,882
	<u>1,634,681</u>	<u>1,367,026</u>
Total liabilities and shareholders' equity	<u>\$3,381,461</u>	<u>\$3,144,598</u>

Other selected data:

1. Market price per share of common stock:

	June 30, 1995	June 30, 1994
	<u>\$54.00</u>	<u>\$45 7/8</u>
2. Dividends paid	\$24,335,000	\$18,510,000
3. Dividends per share of common stock	\$.40	\$.40

Endnote

- 1 Justin, Fox, "The Next Best Thing to Free Money (Silicon Valley's Stock-Options Culture)," *Fortune*, July 7, 1997, p. 54.

CHAPTER

10

STATEMENT OF CASH FLOWS

Quote the Banker, “Watch Cash Flow”

Once upon a midnight dreary as I pondered weak and weary
Over many a quaint and curious volume of accounting lore,
Seeking gimmicks (without scruple) to squeeze through some new
tax loophole,
Suddenly I heard a knock upon my door,
Only this, and nothing more.

Then I felt a queasy tingling and I heard the cash a-jingling
As a fearsome banker entered whom I'd often seen before.
His face was money-green and in his eyes there could be seen
Dollar-signs that seemed to glitter as he reckoned up the score.
“Cash flow,” the banker said, and nothing more.

I had always thought it fine to show a jet black bottom line,
But the banker sounded a resounding, “No,
Your receivables are high, mounting upward toward the sky;
Write-offs loom. What matters is cash flow.”
He repeated, “Watch cash flow.”

Then I tried to tell the story of our lovely inventory
Which, though large, is full of most delightful stuff.
But the banker saw its growth, and with a mighty oath
He waved his arms and shouted, “Stop! Enough!
Pay the interest, and don't give me any guff!”

Next I looked for non-cash items which could add ad infinitum
 To replace the ever-outward flow of cash,
 But to keep my statement black I'd held depreciation back,
 And my banker said that I'd done something rash.
 He quivered, and his teeth began to gnash.

When I asked him for a loan, he responded, with a groan,
 That the interest rate would be just prime plus eight,
 And to guarantee my purity he'd insist on some security—
 All my assets plus the scalp upon my pate.
 Only this, a standard rate.

Though my bottom line is black, I am flat upon my back.
 My cash flows out and customers pay slow.
 The growth of my receivables is almost unbelievable;
 The result is certain—unremitting woe!
 And I hear the banker utter an ominous low mutter,
 “Watch cash flow.”

—Herbert S. Bailey, Jr.
 Reprinted with permission

Considering the importance of cash, it is not surprising that the statement of cash flows has become one of the primary financial statements. The statement of cash flows allow managers, equity analysts, commercial lenders, and investment bankers a thorough explanation of the changes that occurred in the firm's cash balances.

The statement of cash flows provides an explanation of the changes that occurred in the firm's cash balances for a specific period. Cash is considered to be the lifeblood of the firm. Understanding the flow of cash is critical to having a handle on the pulse of the firm.

BASIC ELEMENTS OF THE STATEMENT OF CASH FLOWS

The statement of cash flows is prepared using a concept of cash that includes not only cash itself but also short-term, highly liquid investments. This is referred to as the “cash and cash equivalent” focus. The category cash and cash equivalents includes cash on hand, cash on deposit, and investments in short-term, highly liquid investments. The cash flow statement analysis explains the change in these focus accounts by examining all the accounts on the balance sheet other than the focus accounts.

Management may use the statement of cash flows to determine dividend policy, cash generated by operations, and investing and financing policy. Outsiders, such as creditors or investors, may use it to determine such things as the firm's ability to increase dividends, its ability to pay debt with cash from operations, and the percentage of cash from operations in relation to the cash from financing.

The statement of cash flows must report all transactions affecting cash flow. A company will occasionally have investing and/or financing activities that have no direct effect on cash flow. For example, a company may acquire land in exchange for common stock. This is an investing transaction (acquiring the land) and a financing transaction (issuing the common stock). The conversion of long-term bonds into common stock involves two financing activities with no effect on cash flow. Since transactions such as these will have future effects on

cash flows, these transactions are to be disclosed in a separate schedule presented with the statement of cash flows.

The statement of cash flows classifies cash receipts and cash payments into operating, investing, and financing activities.¹ In brief, operating activities involve income statement items. Investing activities generally result from changes in long-term asset items. Financing activities generally relate to long-term liability and stockholders' equity items. A description of these activities and typical cash flows are as follows:

1. **Operating activities.** Operating activities include all transactions and other events that are not investing or financing activities. Cash flows from operating activities are generally the cash effects of transactions and other events that enter into the determination of net income.
Typical cash inflows:
 - From sale of goods or services
 - From return on loans (interest)
 - From return on equity securities (dividends)Typical cash outflows:
 - Payments for acquisitions of inventory
 - Payments to employees
 - Payments to governments (taxes)
 - Payments of interest expense
 - Payments to suppliers for other expenses
2. **Investing activities.** Investing activities include lending money and collecting on those loans and acquiring and selling investments and productive long-term assets.
Typical cash inflows:
 - From receipts from loans collected
 - From sales of debt or equity securities of other corporations
 - From sale of property, plant, and equipmentTypical cash outflows:
 - Loans to other entities
 - Purchase of debt or equity securities of other entities
 - Purchase of property, plant, and equipment
3. **Financing activities.** Financing activities include cash flows relating to liability and owners' equity.
Typical cash inflows:
 - From sale of equity securities
 - From sale of bonds, mortgages, notes, and other short- or long-term borrowingsTypical cash outflows:
 - Payment of dividends
 - Reacquisition of the firm's capital stock
 - Payment of amounts borrowed

The statement of cash flows presents cash flows from operating activities first, followed by investing activities and then financing activities. The individual inflows and outflows from investing and financing activities are presented separately. The operating activities section can be presented using the *direct method* or the *indirect method*. (The indirect method is sometimes referred to as the *reconciliation method*.) The direct method essentially presents the income statement on a cash basis, instead of an accrual basis. The indirect method adjusts net income for items that affected net income but did not affect cash.

SFAS No. 95 encouraged enterprises to use the direct method to present cash flows from operating activities. However, if a company uses the direct method, the standard requires a reconciliation of net income to net cash provided by operating activities in a separate schedule. If a firm uses the indirect method, it must make a separate disclosure of interest paid and income taxes paid during the period. Exhibit 10-1 presents skeleton formats of a statement of cash flows using the direct method and the indirect method.

EXHIBIT 10-1**JONES COMPANY EXAMPLE**

**Statement of Cash Flows—Comparison of Presentation
of Direct Method and Indirect Method
For Year Ended December 31, 20XX**

Direct Method	
Cash flows from operating activities:	
Cash received from customers	\$370,000
Cash paid to suppliers and employees	(310,000)
Interest received	10,000
Interest paid (net of amount capitalized)	(4,000)
Income taxes paid	(15,000)
Net cash provided by operations	<u>51,000</u>
Cash flows from investing activities:	
Capital expenditures	(30,000)
Proceeds from property, plant and equipment disposals	6,000
Net cash used in investing activities	<u>(24,000)</u>
Cash flows from financing activities:	
Net proceeds from repayment of commercial paper	(4,000)
Proceeds from issuance of long-term debt	6,000
Dividends paid	(5,000)
Net cash used in financing activities	<u>(3,000)</u>
Net increase in cash and cash equivalents	24,000
Cash and cash equivalents at beginning of period	8,000
Cash and cash equivalents at end of period	<u>\$ 32,000</u>
Reconciliation of net earnings to cash provided by operating activities:	
Net earnings	
Provision for depreciation	\$ 40,000
Provision for allowance for doubtful accounts	6,000
Deferred income taxes	1,000
Loss on property, plant and equipment disposals	1,000
	<u>2,000</u>
Changes in operating assets and liabilities:	
Receivables increase	(2,000)
Inventories increase	(4,000)
Accounts payable increase	5,000
Accrued income taxes increase	2,000
Net cash provided by operating activities	<u>\$ 51,000</u>
Supplemental schedule of noncash investing and financing activities:	
Land acquired (investing) by issuing bonds (financing)	<u>\$ 10,000</u>

EXHIBIT 10-1**continued**

Indirect Method	
Operating activities:	
Net earnings	\$40,000
Provision for depreciation	6,000
Provision for allowance for doubtful accounts	1,000
Deferred income taxes	1,000
Loss on property, plant and equipment disposals	2,000
Changes in operating assets and liabilities:	
Receivables increase	(2,000)
Inventories increase	(4,000)
Accounts payable increase	5,000
Accrued income taxes increase	2,000
Net cash provided by operating activities	<u>\$51,000</u>
Cash flows from investing activities:	
Capital expenditures	(30,000)
Proceeds from property, plant and equipment disposals	6,000
Net cash used in investing activities	<u>(24,000)</u>
Cash flows from financing activities:	
Net proceeds from repayment of commercial paper	(4,000)
Proceeds from issuance of long-term debt	6,000
Dividends paid	(5,000)
Net cash used in financing activities	<u>(3,000)</u>
Net increase in cash and cash equivalents	24,000
Cash and cash equivalents at beginning of period	8,000
Cash and cash equivalents at end of period	<u>\$32,000</u>
Supplemental disclosure of cash flow information:	
Interest paid	\$ 500
Income taxes paid	10,000
Supplemental schedule of noncash investing and financing activities:	
Land acquired (investing) and issuing bonds (financing)	<u>\$10,000</u>

The 1986 SFAS Exposure Draft, "Statement of Cash Flows," indicates that:

The principal advantage of the direct method is that it shows the operating cash receipts and payments. Knowledge of where operating cash flows came from and how cash was used in past periods may be useful in estimating future cash flows. The indirect method of reporting has the advantage of focusing on the differences between income and cash flow from operating activities.²

Exhibit 10-2 presents the 1999 Nike Statement of Cash Flows. This statement presents cash from operations, using the indirect method. The statement closely follows the standard format.

In addition to reviewing the flow of funds on a yearly basis, reviewing a flow of funds for a three-year period may be helpful. This can be accomplished by adding a total column to the statement that represents the total of each item for the three-year period. This has been done for Nike in Exhibit 10-2.

Some observations on the 1999 Nike Statement of Cash Flows, considering the three-year period ended May 31, 1999, follow:

1. Net cash provided by operating activities was the major source of cash.

2. Net cash used in investing activities, specifically additions to property, plant, and equipment, was the major use of cash.
3. Repurchase of stock was the major financing use of cash.
4. Cash dividends were approximately 20.23% of net cash provided by operating activities.

EXHIBIT 10-2**NIKE, INC.**
**Statement of Cash Flows, with Three-Year Total
For Years Ended May 31, 1999, 1998, and 1997**

	Total	1999	1998	1997
	(In millions)			
Cash provided (used) by operations:				
Net income	\$1,646.8	\$451.4	\$399.6	\$795.8
Income charges (credits) not affecting cash:				
Depreciation	520.7	198.2	184.5	138.0
Non-cash portion of restructuring charge	87.3	28.0	59.3	—
Deferred income taxes	(123.1)	37.9	(113.9)	(47.1)
Amortization and other	109.9	30.6	49.0	30.3
Changes in certain working capital components:				
Increase in inventories	(277.4)	197.3	(58.0)	(416.7)
Decrease (increase) in accounts receivable	(271.6)	134.3	79.7	(485.6)
Increase in other current assets	(15.8)	53.7	(12.6)	(56.9)
(Decrease) increase in accounts payable, accrued liabilities and income taxes payable	124.8	(170.4)	(70.1)	365.3
Cash provided by operations	<u>1,801.6</u>	<u>961.0</u>	<u>517.5</u>	<u>323.1</u>
Cash provided (used) by investing activities:				
Additions to property, plant and equipment	(1,355.9)	(384.1)	(505.9)	(465.9)
Disposals of property, plant and equipment	68.3	27.2	16.8	24.3
Increase in other assets	(192.0)	(60.8)	(87.4)	(43.8)
Decrease in other liabilities	(28.1)	1.2	(87.4)	(10.8)
Cash used by investing activities	<u>(1,507.7)</u>	<u>(416.5)</u>	<u>(595.0)</u>	<u>(496.2)</u>
Cash provided (used) by financing activities:				
Additions to long-term debt	402.0	—	101.5	300.5
Reductions in long-term debt, including current portion	(9.2)	(1.5)	(2.5)	(5.2)
(Decrease) increase in notes payable	(41.1)	(61.0)	(73.0)	92.9
Proceeds from exercise of options	112.9	54.4	32.2	26.3
Repurchase of stock	(502.1)	(299.8)	(202.3)	—
Dividends - common and preferred	(364.4)	(136.2)	(127.3)	(100.9)
Cash (used) provided by financing activities	<u>(401.9)</u>	<u>(444.1)</u>	<u>(271.4)</u>	<u>313.6</u>
Effect of exchange rate changes on cash	<u>1.0</u>	<u>(10.9)</u>	<u>12.1</u>	<u>(0.2)</u>
Effect of May 1996 cash flow activity for certain subsidiaries	<u>43.0</u>	<u>—</u>	<u>—</u>	<u>43.0</u>
Net (decrease) increase in cash and equivalents	<u>(64.0)</u>	<u>89.5</u>	<u>(336.8)</u>	<u>183.3</u>
Cash and equivalents, beginning of year (period)	<u>262.1</u>	<u>108.6</u>	<u>445.4</u>	<u>262.1</u>
Cash and equivalents, end of year (period)	<u>\$ 198.1</u>	<u>\$198.1</u>	<u>\$108.6</u>	<u>\$445.4</u>
Supplemental disclosure of cash flow information:				
Cash paid during the year for:				
Interest (net of amount capitalized)	\$143.3	\$47.1	\$52.2	\$44.0
Income taxes	\$1,135.5	\$231.9	\$360.5	\$543.1

Exhibit 10-3 presents the 1998 cash flow statement of Rowe Furniture, with a total column for the three-year period. This firm presented the cash flows from operating activities using the direct method. Note the following with regard to Exhibit 10-3:

1. Net cash provided by operations represented the major source of cash.
2. Capital expenditures represented the major outflow of cash under investing activities.
3. Cash proceeds from issuance of long-term debt was more than the cash provided by operations.

Exhibit 10-4 on page 365 restates the 1998 cash flows for Rowe Furniture, viewing inflows and outflows separately. Some observations regarding Exhibit 10-4 follow:

1. Approximately 88% of the total cash inflows came from operations.
2. Approximately 87% of the total cash outflows related to operations.
3. Approximately 5% of the total cash outflows related to payments to acquire businesses.
4. Approximately 12% of the inflows came from proceeds from issuance of long-term debt.

EXHIBIT 10-3**ROWE FURNITURE CORPORATION****Consolidated Statement of Cash Flows, with Three-Year Total**

	Total	Year Ended		
		11/29/98	11/30/97	12/1/96
		(in thousands)		
Increase (Decrease) in Cash				
Cash flows from operating activities:				
Cash received from customers	\$469,843	\$189,437	\$142,136	\$138,270
Cash paid to suppliers and employees	(437,148)	(180,372)	(128,135)	(128,641)
Income taxes paid, net of refunds	(14,197)	(6,403)	(3,781)	(4,013)
Interest paid	(1,316)	(694)	(279)	(343)
Interest received	1,122	337	306	479
Other receipts-net	2,956	706	960	1,290
Net cash and cash equivalents provided by operating activities	21,260	3,011	11,207	7,042
Cash flows from investing activities:				
Proceeds from sale of property and equipment	373	—	338	35
Capital expenditures	(14,071)	(6,951)	(3,261)	(3,859)
Payments to acquire businesses	(10,442)	(10,442)	—	—
Investment in Storehouse, Inc. (Note 2)	(2,500)	(2,500)	—	—
Net cash used in investing activities	(26,640)	(19,893)	(2,923)	(3,824)
Cash flows from financing activities:				
Net borrowings (payments) under line of credit	(42)	362	(1,879)	1,475
Proceeds from issuance of long-term debt	25,000	25,000	—	—
Payments to reduce long-term debt	(2,498)	(1,444)	(420)	(634)
Proceeds from issuance of common stock	1,605	968	388	249
Dividends paid	(3,881)	(1,498)	(1,308)	(1,075)
Purchase of treasury stock	(12,647)	(4,876)	(6,112)	(1,659)
Net cash provided by (used in) financing activities	7,537	18,512	(9,331)	(1,644)
Net increase (decrease) in cash and cash equivalents	2,157	1,630	(1,047)	1,574
Cash at beginning of year (period)	323	850	1,897	323
Cash at end of year (period)	\$ 2,480	\$ 2,480	\$ 850	\$ 1,897

EXHIBIT 10-3

continued

	Total	Year Ended		
		11/29/98	11/30/97	12/1/96
Reconciliation of Net Earnings to Net Cash Provided by Operating Activities				
Net earnings	\$24,538	\$11,200	\$ 6,286	\$7,052
Adjustments to reconcile net earnings to net cash provided by operating activities:				
Depreciation and amortization	9,037	3,773	2,777	2,487
Provision for deferred compensation	2,758	762	979	1,017
Payments made for deferred compensation	(1,542)	(590)	(526)	(426)
Deferred income taxes	175	545	(50)	(320)
Provision for losses on accounts receivable (recoveries)	3,124	(1,285)	3,919	490
Loss (gain) on disposition of assets	163	—	(124)	287
Change in operating assets and liabilities net of effects of acquisition of businesses:				
Decrease (increase) in accounts receivable	(10,398)	(3,963)	(1,982)	(4,453)
Decrease (increase) in inventories	(4,172)	(2,164)	(2,071)	63
Decrease (increase) in prepaid expenses	118	(468)	(8)	594
Decrease (increase) in cash value of life insurance	(348)	(112)	(120)	(116)
Decrease (increase) in other assets	470	490	(35)	15
Increase (decrease) in accounts payable	(689)	(2,549)	2,326	(466)
Increase (decrease) in accrued expenses	(1,974)	(2,628)	(164)	818
Total adjustments	(3,278)	(8,189)	4,921	(10)
Net cash provided by operating activities	\$21,260	\$ 3,011	\$11,207	\$7,042
Supplemental Disclosures of Cash Flows:				
Fair value of assets acquired other than cash	\$31,955	\$31,955	—	—
Liabilities assumed	(18,513)	(18,513)	—	—
Convertible debentures issued	(3,000)	(3,000)	—	—
Payments to acquire businesses	\$10,442	\$10,442	—	—

**FINANCIAL
RATIOS AND
THE STATEMENT
OF CASH
FLOWS**

Financial ratios that relate to the statement of cash flows were slow in being developed. This was related to several factors. For one thing, most financial ratios traditionally related an income statement item(s) to a balance sheet item(s). This became the normal way of approaching financial analysis, and the statement of cash flows did not become a required statement until 1987. Thus, it took a while for analysts to become familiar with the statement.

Ratios have now been developed that relate to the cash flow statement. Some of these ratios are as follows:

1. Operating cash flow/current maturities of long-term debt and current notes payable
2. Operating cash flow/total debt
3. Operating cash flow per share
4. Operating cash flow/cash dividends

**Operating Cash Flow/Current Maturities of
Long-Term Debt and Current Notes Payable**

The **operating cash flow/current maturities of long-term debt and current notes payable** is a ratio that indicates a firm's ability to meet its current maturities of debt. The

EXHIBIT 10-4

ROWE FURNITURE CORPORATION
Statement of Cash Flows (Inflows and Outflows by Activity)
Year Ended November 29, 1998

(In thousands)	Inflows	Outflows	Percent Inflow	Percent Outflow
Cash flows from operating activities:				
Cash received from customers	\$189,437		87.37	
Cash paid to suppliers and employees		\$180,372		83.82
Income taxes paid, net of refunds		6,403		2.98
Interest paid		694		.32
Interest received	337		.16	
Other receipts - net	706		.33	
Net cash and cash equivalents provided by operating activities	<u>190,480</u>	<u>187,469</u>	<u>87.86</u>	<u>87.12</u>
Cash flows from investing activities:				
Capital expenditures		6,951		3.23
Payments to acquire businesses		10,442		4.85
Investments in Storehouse, Inc.		2,500		1.16
Net cash used in investing activities	<u>—</u>	<u>19,893</u>	<u>—</u>	<u>9.24</u>
Cash flows from financing activities:				
Net borrowings (payments) under line of credit	362		.17	
Proceeds from issuance of long-term debt	25,000		11.53	
Payments to reduce long-term debt		1,444		.67
Proceeds from issuance of common stock	968		.45	
Dividends paid		1,498		.70
Purchase of treasury stock		4,876		2.27
Net cash provided by (used in) financing activities	<u>26,330</u>	<u>7,818</u>	<u>12.14</u>	<u>3.63</u>
Total cash	216,810	<u>215,180</u>	<u>100.00</u>	<u>100.00</u>
Total outflows	215,180			
Net increase in cash	<u>\$ 1,630</u>			

higher this ratio, the better the firm's ability to meet its current maturities of debt. The higher this ratio, the better the firm's liquidity. This ratio relates to the liquidity ratios discussed in Chapter 6.

The formula for this ratio is:

$$\frac{\text{Operating Cash Flow}}{\text{Current Maturities of Long-Term Debt and Current Notes Payable}}$$

It is computed for Nike for 1999 and 1998 in Exhibit 10-5. For Nike, this ratio improved in 1999.

Operating Cash Flow/Total Debt

The **operating cash flow/total debt** indicates a firm's ability to cover total debt with the yearly operating cash flow. The higher the ratio, the better the firm's ability to carry its total debt. From a debt standpoint, this is considered to be important. It relates to the debt ratios presented in Chapter 7. It is a type of income view of debt, except that operating cash flow is the perspective instead of an income figure.

EXHIBIT 10-5 NIKE, INC.

**Operating Cash Flow/Current Maturities of Long-Term Debt and
Current Notes Payable
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Operating cash flow [A]	<u>\$961.0</u>	<u>\$517.5</u>
Current maturities of long-term debt and current notes payable [B]	<u>\$420.1</u>	<u>\$481.8</u>
Operating cash flow/current maturities of long-term debt and current notes payable [A+B]	2.29 times	1.07 times

The operating cash flow is the same cash flow amount that is used for the operating cash flow/current maturities of long-term debt and current notes payable. The total debt figure is the same total debt amount that was computed in Chapter 7 for the debt ratio and the debt/equity ratio. For the primary computation of the operating cash flow/total debt ratio, all possible balance sheet debt items are included, as was done for the debt ratio and the debt/equity ratio. This is the more conservative approach to computing the ratio. In practice, many firms are more selective in what is included in debt. Some include only short-term liabilities and long-term items, such as bonds payable. The formula for operating cash flow/total debt is as follows:

$$\frac{\text{Operating Cash Flow}}{\text{Total Debt}}$$

The operating cash flow/total debt ratio is computed in Exhibit 10-6 for Nike for the years ended May 31, 1999 and 1998. It indicates that cash flow is significant in relation to total debt in both years, especially in 1999.

Operating Cash Flow per Share

Operating cash flow per share indicates the funds flow per common share outstanding. It is usually substantially higher than earnings per share because depreciation has not been deducted.

In the short run, operating cash flow per share is a better indication of a firm's ability to make capital expenditure decisions and pay dividends than is earnings per share. This ratio should not be viewed as a substitute for earnings per share in terms of a firm's

EXHIBIT 10-6 NIKE, INC.

**Operating Cash Flow/Total Debt
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Operating cash flow [A]	<u>\$ 961.0</u>	<u>\$ 517.5</u>
Total debt [B]	<u>\$1,913.1</u>	<u>\$2,135.8</u>
Operating cash flow/total debt [A÷B]	50.23%	24.23%

profitability. For this reason, firms are prohibited from reporting cash flow per share on the face of the statement of cash flows or elsewhere in its financials. However, it is a complementary ratio that relates to the ratios of relevance to investors (discussed in Chapter 9).

The operating cash flow per share formula is as follows:

$$\frac{\text{Operating Cash Flow} - \text{Preferred Dividends}}{\text{Common Shares Outstanding}}$$

The operating cash flow amount is the same figure that was used in the two previous cash flow formulas in this chapter. For common shares outstanding, use the shares that were used for the purpose of computing earnings per share on the most diluted basis. This figure is available when doing internal analysis. It is also in a firm's 10-K annual report. Some companies disclose these shares in the annual report. This share number cannot be computed from information in the annual report, except for very simple situations.

When these share amounts are not available, use the outstanding shares of common stock. This will result in an approximation of the operating cash flow per share. The advantage of using the number of shares used for earnings per share is that this results in an amount that can be compared to earnings per share, and it avoids distortions.

Operating cash flow per share is computed for Nike for 1999 and 1998 in Exhibit 10-7. Operating cash flow per share was significantly more than earnings per share in both 1999 and 1998. Operating cash flow per share significantly increased in 1999.

Operating Cash Flow/Cash Dividends

The **operating cash flow/cash dividends** indicates a firm's ability to cover cash dividends with the yearly operating cash flow. The higher the ratio, the better the firm's ability to cover cash dividends. This ratio relates to the investor ratios discussed in Chapter 9.

The operating cash flow/cash dividends formula is as follows:

$$\frac{\text{Operating Cash Flow}}{\text{Cash Dividends}}$$

EXHIBIT 10-7 NIKE, INC.

Operating Cash Flow per Share Years Ended May 31, 1999 and 1998

	1999	1998
	(In millions)	
Operating cash flow	\$961.0	\$517.5
Less preferred dividends*	.2	.2
Operating cash flow after preferred dividends [A]	<u>\$960.8</u>	<u>\$517.3</u>
Number of common shares based on the weighted average number of shares outstanding [B]		
(Diluted average common shares outstanding) [B]	<u>288.3</u>	<u>295.0</u>
Operating cash flow per share [A÷B]	\$ 3.33	\$ 1.75

*Preferred dividends not disclosed. The author used the balance sheet number of .3 (\$300,000) for redeemable preferred stock times 6%. The 6% is an estimate.

The operating cash flow amount is the same figure that was used in the three previous formulas in this chapter. Operating cash flow/cash dividends is computed for Nike for 1999 and 1998 in Exhibit 10-8. It indicates a good coverage of cash dividends in both 1999 and 1998. There was a significant increase in the cash dividends coverage in 1999.

EXHIBIT 10-8 NIKE, INC.
**Operating Cash Flow/Cash Dividends
Years Ended May 31, 1999 and 1998**

	1999	1998
	(In millions)	
Operating cash flow [A]	<u>\$961.0</u>	<u>\$517.5</u>
Cash dividends [B]	<u>\$136.2</u>	<u>\$127.3</u>
Operating cash flow/cash dividends [A÷B]	7.06 times per year	4.07 times per year

**ALTERNATIVE
CASH FLOW**

There is no standard definition of cash flow in the financial literature. Often, cash flow is used to mean net income plus depreciation expense. This definition of cash flow could be used to compute the cash flow amount for the formulas introduced in this chapter. However, this is a narrow definition of cash flow, and it is considered less useful than the net cash flow from operating activities.

**PROCEDURES
FOR
DEVELOPMENT
OF THE
STATEMENT OF
CASH FLOWS**

Cash inflows and outflows are determined by analyzing all balance sheet accounts other than the cash and cash equivalent accounts. The following account balance changes indicate cash inflows:

1. Decreases in assets (e.g., the sale of land for cash)
2. Increases in liabilities (e.g., the issuance of long-term bonds)
3. Increases in stockholders' equity (e.g., the sale of common stock)

Cash outflows are indicated by the following account balance changes:

1. Increases in assets (e.g., the purchase of a building for cash)
2. Decreases in liabilities (e.g., retirement of long-term debt)
3. Decreases in stockholders' equity (e.g., the payment of a cash dividend)

Transactions within any individual account may result in both a source and a use of cash. For example, the land account may have increased, but analysis may indicate that there was both an acquisition and a disposal of land.

Exhibit 10-9 contains the data needed for preparing a statement of cash flows for ABC Company for the year ended December 31, 2000. These data will be used to illustrate the preparation of the statement of cash flows.

Three techniques may be used to prepare the statement of cash flows: (1) the visual method, (2) the T-account method, and (3) the worksheet method. The visual method can be used only when the financial information is not complicated. When the financial information is complicated, either the T-account method or the worksheet method must be used. This

EXHIBIT 10-9**ABC COMPANY****Financial Information for Statement of Cash Flows**

Balance Sheet Information			
Accounts	Balances December 31, 1999	December 31, 2000	Category
Assets:			
Cash	\$ 2,400	\$ 3,000	Cash
Accounts receivable, net	4,000	3,900	Operating
Inventories	5,000	6,000	Operating
Total current assets	11,400	12,900	
Land	10,000	19,500	Investing
Equipment	72,000	73,000	Investing
Accumulated depreciation	(9,500)	(14,000)	Operating
Total assets	<u>\$83,900</u>	<u>\$91,400</u>	
Liabilities:			
Accounts payable	\$ 4,000	\$ 2,900	Operating
Taxes payable	1,600	2,000	Operating
Total current liabilities	5,600	4,900	
Bonds payable	35,000	40,000	Financing
Stockholders' Equity:			
Common stock, \$10 par	36,000	39,000	Financing
Retained earnings	7,300	7,500	*
Total liabilities and stockholders' equity	<u>\$83,900</u>	<u>\$91,400</u>	
Income Statement Information			
	For the Year Ended December 31, 2000		Category
Sales		\$22,000	Operating
Operating expenses		17,500	Operating
Operating income		4,500	
Gain on sale of land		1,000	Investing
Income before tax expense		5,500	
Tax expense		2,000	Operating
Net income		<u>\$ 3,500</u>	
Supplemental Information			Category
(a) Dividends declared and paid are \$3,300.			Financing
(b) Land was sold for \$1,500.			Investing
(c) Equipment was purchased for \$1,000.			Investing
(d) Bonds payable were retired for \$5,000.			Financing
(e) Common stock was sold for \$3,000.			Financing
(f) Operating expenses include depreciation expense of \$4,500.			Operating
(g) The land account and the bonds payable account increased by \$10,000 because of a noncash exchange.			Investing and Financing
*Retained earnings is decreased by cash dividends, \$3,300 (financing), and increased by net income, \$3,500. Net income can be a combination of operating, investing, and financing activities. In this exhibit, all of the net income relates to operating activities, except for the gain on sale of land (investing).			

book illustrates only the visual method because of the emphasis on using financial accounting information, not on preparing financial statements. For an explanation of the T-account method and the worksheet method, consult an intermediate accounting textbook.

Following the steps in developing the statement of cash flows, first compute the change in cash and cash equivalents. For ABC Company, this is the increase of \$600 in the cash account—the net increase in cash.

For the second step, compute the net change in each balance sheet account other than the cash account. The changes in the balance sheet accounts for ABC Company follow:

Assets:

Accounts receivable decrease	\$ 100	Operating
Inventories increase	1,000	Operating
Land increase	9,500	Investing
Equipment increase	1,000	Investing
Accumulated depreciation increase (contra-asset—a change would be similar to a change in liabilities)	4,500	Operating

Liabilities:

Accounts payable decrease	1,100	Operating
Taxes payable increase	400	Operating
Bonds payable increase	5,000	Financing

Stockholders' equity:

Common stock increase	3,000	Financing
Retained earnings increase	200	*

*This is a combination of operating, financing, and investing activities.

For the third step, consider the changes in the balance sheet accounts along with the income statement for the current period and the supplementary information. The cash flows are segregated into cash flows from operating activities, cash flows from investing activities, and cash flows from financing activities. Noncash investing and/or financing activities should be shown in a separate schedule with the statement of cash flows.

To illustrate the direct and indirect methods of presenting operating activities, the ABC Company income statement is used, along with the relevant supplemental information and balance sheet accounts. For the direct approach, the income statement is adjusted to present the revenue and expense accounts on a cash basis. Exhibit 10-10 illustrates the accrual basis income statement adjusted to a cash basis. Exhibit 10-11 shows the statement of cash flows for ABC Company, using the direct approach for presenting cash flows from operations.

When the cash provided by operations is presented using the direct approach, the income statement accounts are usually described in terms of receipts or payments. For example, “sales” on the accrual basis income statement is usually described as “receipts from customers” when presented on a cash basis.

Exhibit 10-12 on page 373 shows the statement of cash flows for ABC Company, using the indirect approach. To compute cash flows from operations, we start with net income and add back or deduct adjustments necessary to change the income on an accrual basis to income on a cash basis, after eliminating gains or losses that relate to investing or financing activities. Notice on the ABC Company schedule of change from accrual to cash basis income statement (Exhibit 10-10) that the adjustments include noncash flow items on the income statement, changes in balance sheet accounts related to operations, and gains and losses on the income statement related to investing or financing activities.

EXHIBIT 10-10**ABC COMPANY****Schedule of Change from Accrual Basis to Cash Basis Income Statement**

	Accrual Basis	Adjustments*	Add (Subtract)	Cash Basis
Sales	\$22,000	Decrease in receivables	100	\$22,100
Operating expenses	17,500	Depreciation expense	(4,500)	
		Increase in inventories	1,000	
		Decrease in accounts payable	1,100	15,100
Operating income	4,500			7,000
Gain on sale of land	1,000	This gain is related to investing activities.	(1,000)	-0-
Income before tax expense	5,500			7,000
Tax expense	2,000	Increase in taxes payable	(400)	1,600
Net income	<u>\$ 3,500</u>			<u>\$ 5,400</u>

*Adjustments are for noncash flow items in the income statement, changes in balance sheet accounts related to cash flow from operations, and the removal of gains and losses on the income statement that are related to investing or financing activities.

The noncash flow items in the income statement are removed from the account. For example, depreciation expense may be in the cost of goods sold, and this expense would be removed from the cost of goods sold.

Changes in balance sheet accounts related to cash flow from operations are adjusted to the related income statement account as follows:

Revenue accounts	\$ XXX
Add decreases in asset accounts and increases in liability accounts	+ XXX
Deduct increases in asset accounts and decreases in liability accounts	- XXX
Cash inflow	<u>\$ XXX</u>
Expense accounts	
Add increases in asset accounts and decreases in liability accounts	+ XXX
Deduct decreases in asset accounts and increases in liability accounts	- XXX
Cash outflow	<u>\$ XXX</u>

For the indirect approach, follow these directions when adjusting the net income (or loss) to net cash flows from operating activities:

Net income (loss)	\$ XXX
Noncash flow items:	
Add expense	+ XXX
Deduct revenues	- XXX
Changes in balance sheet accounts related to operations:*	
Add decreases in assets and increases in liabilities	+ XXX
Deduct increases in assets and decreases in liabilities	- XXX
Gains and losses on the income statement that are related to investing or financing activities:	
Add losses	+ XXX
Deduct gains	- XXX
Net cash provided by operating activities	<u>\$ XXX</u>

*These are usually the current asset and current liability accounts.

EXHIBIT 10-11**ABC COMPANY****Direct Approach for Presenting Cash Flows from Operations****Statement of Cash Flows****For the Year Ended December 31, 2000**

Cash flows from operating activities:		
Receipts from customers	\$22,100	
Payments to suppliers	(15,100)	
Income taxes paid	(1,600)	
Net cash provided by operating activities		\$ 5,400
Cash flows from investing activities:		
Proceeds from sale of land	1,500	
Purchase of equipment	(1,000)	
Net cash provided by investing activities		500
Cash flows from financing activities:		
Dividends declared and paid	(3,300)	
Retirement of bonds payable	(5,000)	
Proceeds from common stock	3,000	
Net cash used for financing activities		(5,300)
Net increase in cash		<u>\$ 600</u>
Reconciliation of net income to net cash provided by operating activities:		
Net income		\$ 3,500
Adjustments to reconcile net income to net cash provided by operating activities:		
Decrease in accounts receivable		100
Depreciation expense		4,500
Increase in inventories		(1,000)
Decrease in accounts payable		(1,100)
Gain on sale of land		(1,000)
Increase in taxes payable		400
Net cash provided by operating activities		<u>\$ 5,400</u>
Supplemental schedule of noncash investing and financing activities:		
Land acquired by issuing bonds		<u>\$10,000</u>

The remaining changes in balance sheet accounts (other than those used to compute cash provided by operating activities) and the remaining supplemental information are used to determine the cash flows from investing activities and cash flows from financing activities. These accounts are also used to determine noncash investing and/or financing.

Some observations on the ABC Company statement of cash flows follow:

1. Net cash provided by operating activities	\$5,400
2. Net cash provided by investing activities	\$ 500
3. Net cash used for financing activities	\$5,300
4. Net increase in cash	\$ 600

As previously indicated, when the operations section has been presented using the direct method, additional observations can be determined by preparing the statement of

EXHIBIT 10-12

ABC COMPANY
Indirect Approach for Presenting Cash Flows from Operations
Statement of Cash Flows
For the Year Ended December 31, 2000

Cash flows from operating activities:		
Net income	\$ 3,500	
Add (deduct) items not affecting operating activities:		
Depreciation expense	4,500	
Decrease in accounts receivable	100	
Increase in inventories	(1,000)	
Decrease in accounts payable	(1,100)	
Increase in taxes payable	400	
Gain on sale of land	(1,000)	
Net cash provided by operating activities		\$ 5,400
Cash flows from investing activities:		
Proceeds from sale of land	1,500	
Purchase of equipment	(1,000)	
Net cash provided by investing activities		500
Cash flows from financing activities:		
Dividends declared and paid	(3,300)	
Retirement of bonds payable	(5,000)	
Proceeds from common stock	3,000	
Net cash used for financing activities		(5,300)
Net increase in cash		<u>\$ 600</u>
Supplemental disclosure of cash flow information:		
Cash paid during the year for:		
Interest net of amount capitalized		\$ 0
Income taxes		1,600
Supplemental schedule of noncash investing and financing activities:		
Land acquired by issuing bonds		\$10,000

cash flows to present inflows and outflows separately. This has been done in Exhibit 10-13. Some observations from the summary of cash flows in Exhibit 10-13 follow:

Inflows:

1. Receipts from customers represent approximately 83% of total cash flow.
2. Proceeds from common stock sales approximate 11% of total cash inflow.
3. Proceeds from sales of land approximate 6% of total cash inflow.

Outflows:

1. Payments to suppliers represent approximately 58% of total cash outflow.
2. Retirement of bonds payable approximates 19% of total cash outflow.
3. Dividends paid approximate 13% of total cash outflow.

EXHIBIT 10-13**ABC COMPANY****Statement of Cash Flows****For the Year Ended December 31, 2000****(Inflows and Outflows, by Activity—Inflows Presented on Direct Basis)**

	Inflows	Outflows	Inflow Percent	Outflow Percent
Operating activities:				
Receipts from customers	\$22,100		83.1%	
Payments to suppliers		\$15,100		58.1%
Income taxes paid		1,600		6.2
Cash flow from operating activities	22,100	16,700	83.1	64.3
Investing activities:				
Proceeds from sale of land	1,500		5.6	
Purchase of equipment		1,000		3.8
Cash flow from investing activities	1,500	1,000	5.6	3.8
Financing activities:				
Dividends declared and paid		3,300		12.7
Retirement of bonds payable		5,000		19.2
Proceeds from common stock	3,000		11.3	
Cash flow from financing activities	3,000	8,300	11.3	31.9
Total cash inflows/outflows	26,600	26,000	100.0	100.0
Total cash outflows	26,000			
Net increase in cash	\$ 600			

SUMMARY

The statement of cash flows provides cash flow information that is critical for users to make informed decisions. The statement of cash flows should be reviewed for several time periods in order to determine the major sources of cash and the major uses of cash.

The ratios related to the statement of cash flows are the following:

$$\frac{\text{Operating Cash Flow/}}{\text{Current Maturities of Long-Term Debt and Current Notes Payable}} = \frac{\text{Operating Cash Flow}}{\text{Current Maturities of Long-Term Debt and Current Notes Payable}}$$

$$\frac{\text{Operating Cash Flow/Total Debt}}{\text{Total Debt}} = \frac{\text{Operating Cash Flow}}{\text{Total Debt}}$$

$$\text{Operating Cash Flow per Share} = \frac{\text{Operating Cash Flow} - \text{Preferred Dividends}}{\text{Common Shares Outstanding}}$$

$$\frac{\text{Operating Cash Flow/Cash Dividends}}{\text{Cash Dividends}} = \frac{\text{Operating Cash Flow}}{\text{Cash Dividends}}$$

QUESTIONS

- Q 10-1.** If a firm presents an income statement and a balance sheet, why is it necessary that a statement of cash flows also be presented?
- Q 10-2.** Into what three categories are cash flows segregated on the statement of cash flows?
- Q 10-3.** Using the descriptions of assets, liabilities, and stockholders' equity, summarize the changes to these accounts for cash inflows and changes to these accounts for cash outflows.
- Q 10-4.** The land account may be used only to explain a use of cash, but not a source of cash. Comment.
- Q 10-5.** Indicate the three techniques that may be used to complete the steps in developing the statement of cash flows.
- Q 10-6.** There are two principal methods of presenting cash flow from operating activities—the direct method and the indirect method. Describe these two methods.
- Q 10-7.** Depreciation expense, amortization of patents, and amortization of bond discount are examples of items that are added to net income when using the indirect method of presenting cash flows from operating activities. Amortization of premium on bonds and a reduction in deferred taxes are examples of items that are deducted from net income when using the indirect method of presenting cash flows from operating activities. Explain why these adjustments to net income are made to compute cash flows from operating activities.
- Q 10-8.** What is the meaning of the term cash in the statement of cash flows?
- Q 10-9.** What is the purpose of the statement of cash flows?
- Q 10-10.** Why is it important to disclose certain noncash investing and financing transactions, such as exchanging common stock for land?
- Q 10-11.** Would a write-off of uncollectible accounts against allowance for doubtful accounts be disclosed on a cash flow statement? Explain.
- Q 10-12.** Fully depreciated equipment costing \$60,000 was discarded, with no salvage value. What effect would this have on the statement of cash flows?
- Q 10-13.** For the current year, a firm reported net income from operations of \$20,000 on its income statement and an increase of \$30,000 in cash from operations on the statement of cash flows. Explain some likely reasons for the greater increase in cash from operations than net income from operations.
- Q 10-14.** A firm owed accounts payable of \$150,000 at the beginning of the year and \$250,000 at the end of the year. What influence will the \$100,000 increase have on cash from operations?
- Q 10-15.** A member of the Board of Directors is puzzled by the fact that the firm has had a very profitable year but does not have enough cash to pay its bills on time. Explain to the director how a firm can be profitable, yet not have enough cash to pay its bills and dividends.
- Q 10-16.** Depreciation is often considered a major source of funds. Do you agree? Explain.
- Q 10-17.** Pickerton started the year with \$50,000 in accounts receivable. The firm ended the year with \$20,000 in accounts receivable. How did this decrease influence cash from operations?
- Q 10-18.** The Aerco Company acquired equipment in exchange for \$50,000 in common stock. Should this transaction be on the statement of cash flows?

Q 10-19. Operating cash flow per share is a better indicator of profitability than is earnings per share. Do you agree? Explain.

Q 10-20. The Hornet Company had operating cash flow of \$60,000 during a year in which it paid dividends of \$11,000. What does this indicate about Hornet's dividend-paying ability?

To the Net



- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Northrop Grumman. Select the 10-K that was filed on March 23, 1999.
 - Determine the standard industrial classification.
 - Review the consolidated statements of cash flows. Under what method is the operating activities presented? What advantage does this presentation have over the alternative presentation?
- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Dell Computer. Select the 10-K that was filed on April 27, 1999.
 - Determine the standard industrial classification.
 - Determine the numbers for the following:

	January 29, 1999	February 1, 1998
	(In Millions)	
Accounts receivable, net	_____	_____
Inventories	_____	_____
Accounts payable	_____	_____

- Perform a horizontal common-size analysis of (b) with February 1, 1998, as the base.
- Determine the numbers for the following:

	Fiscal Year Ended	
	January 29, 1999	February 1, 1998
	(In Millions)	
Net revenue	_____	_____
Net income	_____	_____
Net cash provided by operating activities	_____	_____

- Perform a horizontal common-size analysis of (d) with February 1, 1998, as the base.
- Comment on the material in (b)–(e), paying particular attention to cash flow.

PROBLEMS

P 10-1. The following material relates to the Darrow Company:

Data	Cash Flows Classification			Effect on Cash		Noncash Trans- actions
	Operating Activity	Investing Activity	Financing Activity	Increase	Decrease	
a. Net loss	_____	_____	_____	_____	_____	_____
b. Increase in inventory	_____	_____	_____	_____	_____	_____
c. Decrease in receivables	_____	_____	_____	_____	_____	_____
d. Increase in prepaid insurance	_____	_____	_____	_____	_____	_____
e. Issuance of common stock	_____	_____	_____	_____	_____	_____
f. Acquisition of land, using notes payable	_____	_____	_____	_____	_____	_____
g. Purchase of land, using cash	_____	_____	_____	_____	_____	_____
h. Paid cash dividend	_____	_____	_____	_____	_____	_____
i. Payment of income taxes	_____	_____	_____	_____	_____	_____
j. Retirement of bonds, using cash	_____	_____	_____	_____	_____	_____
k. Sale of equipment for cash	_____	_____	_____	_____	_____	_____

Required Place an X in the appropriate columns for each of the situations.

P 10-2.

Data	Cash Flows Classification			Effect on Cash		Noncash Trans- actions
	Operating Activity	Investing Activity	Financing Activity	Increase	Decrease	
a. Net income	_____	_____	_____	_____	_____	_____
b. Paid cash dividend	_____	_____	_____	_____	_____	_____
c. Increase in receivables	_____	_____	_____	_____	_____	_____
d. Retirement of debt—paying cash	_____	_____	_____	_____	_____	_____
e. Purchase of treasury stock	_____	_____	_____	_____	_____	_____
f. Purchase of equipment	_____	_____	_____	_____	_____	_____

(continued)

Data	Cash Flows Classification			Effect on Cash		Noncash Trans- actions
	Operating Activity	Investing Activity	Financing Activity	Increase	Decrease	
g. Sale of equipment	_____	_____	_____	_____	_____	_____
h. Decrease in inventory	_____	_____	_____	_____	_____	_____
i. Acquisition of land, using common stock	_____	_____	_____	_____	_____	_____
j. Retired bonds, using common stock	_____	_____	_____	_____	_____	_____
k. Decrease in accounts payable	_____	_____	_____	_____	_____	_____

Required Place an X in the appropriate columns for each of the situations.

P 10-3. The BBB Company balance sheet and income statement follow:

BBB COMPANY

Balance Sheet

December 31, 2002 and 2001

	December 31	
	2002	2001
Assets		
Cash	\$ 4,500	\$ 4,000
Marketable securities	2,500	2,000
Accounts receivable	6,800	7,200
Inventories	7,500	8,000
Total current assets	21,300	21,200
Land	11,000	12,000
Equipment	24,000	20,500
Accumulated depreciation—equipment	(3,800)	(3,000)
Building	70,000	70,000
Accumulated depreciation—building	(14,000)	(12,000)
Total assets	<u>\$108,500</u>	<u>\$108,700</u>
Liabilities and Stockholders' Equity		
Accounts payable	\$ 7,800	\$ 7,000
Wages payable	1,050	1,000
Taxes payable	500	1,500
Total current liabilities	9,350	9,500
Bonds payable	30,000	30,000
Common stock, \$10 par	32,000	30,000
Additional paid-in capital	21,000	19,200
Retained earnings	16,150	20,000
Total liabilities and stockholders' equity	<u>\$108,500</u>	<u>\$108,700</u>

BBB COMPANY
Income Statement
For Year Ended December 31, 2002

Sales		\$38,000
Operating expenses:		
Depreciation expense	\$ 2,800	
Other operating expenses	<u>35,000</u>	<u>37,800</u>
Operating income		200
Gain on sale of land		<u>800</u>
Income before tax expense		1,000
Tax expense		<u>500</u>
Net income		<u>\$ 500</u>
Supplemental information:		
Dividends declared and paid	\$ 4,350	
Land sold for cash	1,800	
Equipment purchased for cash	3,500	
Common stock sold for cash	<u>3,800</u>	

- Required**
- Prepare a statement of cash flows for the year ended December 31, 2002. (Present the cash flows from operations, using the indirect method.)
 - Comment on the statement of cash flows.

P 10-4. The income statement and other selected data for the Frish Company are shown below:

FRISH COMPANY
Income Statement
For Year Ended December 31, 2002

Net sales	\$640,000
Expenses:	
Cost of goods sold	360,000
Selling and administrative expense	43,000
Other expense	<u>2,000</u>
Total expenses	<u>405,000</u>
Income before income tax	235,000
Income tax	<u>92,000</u>
Net income	<u>\$143,000</u>
Other data:	
a. Cost of goods sold, including depreciation expense of \$15,000	
b. Selling and administrative expense, including depreciation expense of \$5,000	
c. Other expense, representing amortization of goodwill, \$3,000, and amortization of bond premium, \$1,000	
d. Increase in accounts receivable	\$ 27,000
e. Increase in accounts payable	15,000
f. Increase in inventories	35,000
g. Decrease in prepaid expenses	1,000
h. Increase in accrued liabilities	3,000
i. Decrease in income taxes payable	<u>10,000</u>

- Required**
- Prepare a schedule of change from accrual basis to cash basis income statement.
 - Using the schedule of change from accrual basis to cash basis income statement computed in (a), present the cash provided by operations, using (1) the direct approach and (2) the indirect approach.

P 10-5. The income statement and other selected data for the Boyer Company are shown below:

BOYER COMPANY

Income Statement

For Year Ended December 31, 2002

Sales		\$19,000
Operating expenses:		
Depreciation expense	\$ 2,300	
Other operating expenses	<u>12,000</u>	<u>14,300</u>
Operating income		4,700
Loss on sale of land		<u>1,500</u>
Income before tax expense		3,200
Tax expense		<u>1,000</u>
Net income		<u>\$2,200</u>
Supplemental information:		
a. Dividends declared and paid		\$ 800
b. Land purchased		3,000
c. Land sold		500
d. Equipment purchased		2,000
e. Bonds payable retired		2,000
f. Common stock sold		1,400
g. Land acquired in exchange for common stock		3,000
h. Increase in accounts receivable		400
i. Increase in inventories		800
j. Increase in accounts payable		500
k. Decrease in income taxes payable		400

- Required**
- Prepare a schedule of change from an accrual basis to a cash basis income statement.
 - Using the schedule of change from accrual basis to cash basis income statement computed in (a), present the cash provided by operations, using (1) the direct approach and (2) the indirect approach.

P 10-6. Sampson Company's balance sheet for December 31, 2002, as well as the income statement for the year ended December 31, 2002, are on the following page.

- Required**
- Prepare the statement of cash flows for the year ended December 31, 2002, using the indirect method for net cash flow from operating activities.
 - Prepare the statement of cash flows for the year ended December 31, 2002, using the direct method for net cash flow from operating activities.
 - Comment on significant items disclosed in the statement of cash flows.

SAMPSON COMPANY**Balance Sheet****December 31, 2002 and 2001**

	2002	2001
Assets		
Cash	\$ 38,000	\$ 60,000
Net receivables	72,000	65,000
Inventory	98,000	85,000
Plant assets	195,000	180,000
Accumulated depreciation	(45,000)	(35,000)
Total assets	<u>\$358,000</u>	<u>\$355,000</u>
Liabilities and Stockholders' Equity		
Accounts payable	\$ 85,000	\$ 80,000
Accrued liabilities (related to cost of sales)	44,000	61,000
Mortgage payable	11,000	—
Common stock	180,000	174,000
Retained earnings	38,000	40,000
Total liabilities and stockholders' equity	<u>\$358,000</u>	<u>\$355,000</u>

SAMPSON COMPANY**Income Statement****For Year Ended December 31, 2002**

Net sales	\$145,000
Cost of sales	<u>108,000</u>
Gross profit	37,000
Other expenses	<u>6,000</u>
Profit before taxes	31,000
Tax expense	<u>12,000</u>
Net income	<u>\$ 19,000</u>

Other data:

1. Dividends paid in cash during 2002 were \$21,000.
2. Depreciation is included in the cost of sales.
3. The change in the accumulated depreciation account is the depreciation expense for the year.

P 10-7. The Arrowbell Company is a growing company. Two years ago, it decided to expand in order to increase its production capacity. The company anticipates that the expansion program can be completed in another two years. Financial information for Arrowbell is on the following pages.

- Required**
- a. Comment on the short-term debt position, including computations of current ratio, acid-test ratio, cash ratio, and operating cash flow/current maturities of long-term debt and current notes payable.
 - b. If you were a supplier to this company, what would you be concerned about?
 - c. Comment on the long-term debt position, including computations of the debt ratio, debt/equity, debt to tangible net worth, and operating cash flow/total debt. Review the statement of operating cash flows.
 - d. If you were a banker, what would you be concerned about if this company approached you for a long-term loan to continue its expansion program?
 - e. What should management consider doing at this point in regard to the company's expansion program?

ARROWBELL COMPANY
Sales and Net Income

Year	Sales	Net Income
1998	\$2,568,660	\$145,800
1999	2,660,455	101,600
2000	2,550,180	52,650
2001	2,625,280	86,800
2002	3,680,650	151,490

ARROWBELL COMPANY
Balance Sheet
December 31, 2002 and 2001

	2002	2001
Assets		
Current assets:		
Cash	\$ 250,480	\$ 260,155
Accounts receivable (net)	760,950	690,550
Inventories at lower-of-cost-or-market	725,318	628,238
Prepaid expenses	18,555	20,250
Total current assets	1,755,303	1,599,193
Plant and equipment:		
Land, buildings, machinery, and equipment	3,150,165	2,646,070
Less: Accumulated depreciation	650,180	525,650
Net plant and equipment	2,499,985	2,120,420
Other assets:		
Cash surrender value of life insurance	20,650	18,180
Other	40,660	38,918
Total other assets	61,310	57,098
Total assets	<u>\$4,316,598</u>	<u>\$3,776,711</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Notes and mortgages payable, current portion	\$ 915,180	\$ 550,155
Accounts payable and accrued liabilities	1,160,111	851,080
Total current liabilities	2,075,291	1,401,235
Long-term notes and mortgages payable, less current portion above	550,000	775,659
Total liabilities	<u>2,625,291</u>	<u>2,176,894</u>
Stockholders' equity:		
Capital stock, par value \$1.00; authorized, 800,000; issued and outstanding, 600,000 (1997 and 1996)	600,000	600,000
Paid in excess of par	890,000	890,000
Retained earnings	201,307	109,817
Total stockholders' equity	<u>1,691,307</u>	<u>1,599,817</u>
Total liabilities and stockholders' equity	<u>\$4,316,598</u>	<u>\$3,776,711</u>

ARROWBELL COMPANY
Statement of Cash Flows
For Years Ended December 31, 2002 and 2001

	<u>2002</u>	<u>2001</u>
Cash flows from operating activities:		
Net income	\$151,490	\$ 86,800
Noncash expenses, revenues, losses, and gains included in income:		
Depreciation	134,755	102,180
Increase in accounts receivable	(70,400)	(10,180)
Increase in inventories	(97,080)	(15,349)
Decrease in prepaid expenses in 2002, increase in 2001	1,695	(1,058)
Increase in accounts payable and accrued liabilities	<u>309,031</u>	<u>15,265</u>
Net cash provided by operating activities	<u>429,491</u>	<u>177,658</u>
Cash flows from investing activities:		
Proceeds from retirement of property, plant, and equipment	10,115	3,865
Purchases of property, plant, and equipment	(524,435)	(218,650)
Increase in cash surrender value of life insurance	(2,470)	(1,848)
Other	<u>(1,742)</u>	<u>(1,630)</u>
Net cash used for investing activities	<u>(518,532)</u>	<u>(218,263)</u>
Cash flows from financing activities:		
Retirement of long-term debt	(225,659)	(50,000)
Increase in notes and mortgages payable	365,025	159,155
Cash dividends	<u>(60,000)</u>	<u>(60,000)</u>
Net cash provided by financing activities	<u>79,366</u>	<u>49,155</u>
Net increase (decrease) in cash	<u>\$ (9,675)</u>	<u>\$ 8,550</u>

P 10-8. The balance sheet for December 31, 2002, income statement for the year ended December 31, 2002, and the statement of cash flows for the year ended December 31, 2002, of the Bennett Company are on the next two pages.

The president of the Bennett Company cannot understand why Bennett is having trouble paying current obligations. He notes that business has been very good, as sales have more than doubled, and the company achieved a profit of \$69,000 in 2002.

- Required**
- Comment on the statement of cash flows.
 - Compute the following liquidity ratios for 2002:
 - Current ratio
 - Acid-test ratio
 - Operating cash flow/current maturities of long-term debt and current notes payable
 - Cash ratio
 - Compute the following debt ratios for 2002:
 - Times interest earned
 - Debt ratio
 - Operating cash flow/total debt

(continued)

- d. Compute the following profitability ratios for 2002:
 1. Return on assets (using average assets)
 2. Return on common equity (using average common equity)
- e. Compute the following investor ratio for 2002: Operating cash flow/cash dividends.
- f. Give your opinion as to the liquidity of Burnett.
- g. Give your opinion as to the debt position of Burnett.
- h. Give your opinion as to the profitability of Burnett.
- i. Give your opinion as to the investor ratio.
- j. Give your opinion of the alternatives Burnett has in order to ensure that it can pay bills as they come due.

BERNETT COMPANY**Balance Sheet****December 31, 2002 and 2001**

	2002	2001
Assets		
Cash	\$ 5,000	\$ 28,000
Accounts receivable, net	92,000	70,000
Inventory	130,000	85,000
Prepaid expenses	4,000	6,000
Land	30,000	10,000
Building	170,000	30,000
Accumulated depreciation	(20,000)	(10,000)
Total assets	<u>\$411,000</u>	<u>\$219,000</u>
Liabilities and Stockholders' Equity		
Accounts payable	\$ 49,000	\$ 44,000
Income taxes payable	5,000	4,000
Accrued liabilities	6,000	5,000
Bonds payable (current \$10,000 at 12/31/02)	175,000	20,000
Common stock	106,000	96,000
Retained earnings	70,000	50,000
Total liabilities and stockholders' equity	<u>\$411,000</u>	<u>\$219,000</u>

BERNETT COMPANY**Income Statement****For Year Ended December 31, 2002**

Sales	<u>\$500,000</u>
Less expenses:	
Cost of goods sold	
(includes depreciation of \$4,000)	310,000
Selling and administrative expenses	
(includes depreciation of \$6,000)	80,000
Interest expense	<u>11,000</u>
Total expenses	<u>401,000</u>
Income before taxes	99,000
Income tax expense	<u>30,000</u>
Net income	<u>\$ 69,000</u>

BERNETT COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2002

Net cash flow from operating activities:		
Net income	\$ 69,000	
Noncash expenses, revenues, losses and gains included in income:		
Depreciation	10,000	
Increase in receivables	(22,000)	
Increase in inventory	(45,000)	
Decrease in prepaid expenses	2,000	
Increase in accounts payable	5,000	
Increase in income taxes payable	1,000	
Increase in accrued liabilities	<u>1,000</u>	
Net cash flow from operating activities		\$ 21,000
Cash flows from investing activities:		
Increase in land	\$ (20,000)	
Increase in buildings	<u>(140,000)</u>	
Net cash used by investing activities		(160,000)
Cash flows from financing activities:		
Bond payable increase	\$ 155,000	
Common stock increase	10,000	
Cash dividends paid	<u>(49,000)</u>	
Net cash provided by financing activities:		<u>116,000</u>
Net decrease in cash		<u><u>(\$23,000)</u></u>

P 10-9. The Zaro Company's balance sheet for December 31, 2002, income statement for the year ended December 31, 2002, and the statement of cash flows for the year ended December 31, 2002, are shown below and on the following page.

ZARO COMPANY
Balance Sheet
December 31, 2002 and 2001

	2002	2001
Assets		
Cash	\$ 30,000	\$ 15,000
Accounts receivable, net	75,000	87,000
Inventory	90,000	105,000
Prepaid expenses	3,000	2,000
Land	25,000	25,000
Building and equipment	122,000	120,000
Accumulated depreciation	<u>(92,000)</u>	<u>(80,000)</u>
Total assets	<u>\$253,000</u>	<u>\$274,000</u>
Liabilities and Stockholders' Equity		
Accounts payable	\$ 25,500	\$ 32,000
Income taxes payable	2,500	3,000
Accrued liabilities	5,000	5,000
Bonds payable (current \$20,000 at 12/31/02)	90,000	95,000
Common stock	85,000	85,000
Retained earnings	<u>45,000</u>	<u>54,000</u>
Total liabilities and stockholders' equity	<u>\$253,000</u>	<u>\$274,000</u>

ZARO COMPANY
Income Statement
For Year Ended December 31, 2002

Sales	\$400,000
Less expense:	
Cost of goods sold (includes depreciation of \$5,000)	\$280,000
Selling and administrative expenses (includes depreciation expenses of \$7,000)	78,000
Interest expense	8,000
Total expenses	<u>\$366,000</u>
Income before taxes	34,000
Income tax expense	14,000
Net income	<u>\$ 20,000</u>

ZARO COMPANY
Statement of Cash Flows
For Year Ended December 31, 2002

Net cash flow from operating activities:		
Net income	\$ 20,000	
Noncash expenses, revenues, losses, and gains included in income:		
Depreciation	12,000	
Decrease in accounts receivable	12,000	
Decrease in inventory	15,000	
Increase in prepaid expenses	(1,000)	
Decrease in accounts payable	(6,500)	
Decrease in income taxes payable	(500)	
Net cash flow from operating activities		\$ 51,000
Cash flows from investing activities:		
Increase in buildings and equipment	\$ (2,000)	
Net cash used by investing activities		(2,000)
Cash flows from financing activities:		
Decrease in bonds payable	\$ (5,000)	
Cash dividends paid	(29,000)	
Net cash used for financing activities:		(34,000)
Net increase in cash		<u>\$ 15,000</u>

The president of the Zaro Company cannot understand how the company was able to pay cash dividends that were greater than net income and at the same time increase the cash balance. He notes that business was down slightly in 2002.

Required

- a. Comment on the statement of cash flows.
- b. Compute the following liquidity ratios for 2002:
 1. Current ratio
 2. Acid-test ratio
 3. Operating cash flow/current maturities of long-term debt and current notes payable
 4. Cash ratio

- c. Compute the following debt ratios for 2002:
 1. Times interest earned
 2. Debt ratio
- d. Compute the following profitability ratios for 2002:
 1. Return on assets (using average assets)
 2. Return on common equity (using average common equity)
- e. Give your opinion as to the liquidity of Zaro.
- f. Give your opinion as to the debt position of Zaro.
- g. Give your opinion as to the profitability of Zaro.
- h. Explain to the president how Zaro was able to pay cash dividends that were greater than net income and at the same time increase the cash balance.

- P 10-10.** The Ladies Store presented the statement of cash flows for the year ended December 31, 2002, shown below.

THE LADIES STORE
Statement of Cash Flows
For Year Ended December 31, 2002

Cash received:	
From sales to customers	\$150,000
From sales of bonds	100,000
From issuance of notes payable	40,000
From interest on bonds	<u>5,000</u>
Total cash received	<u>295,000</u>
Cash payments:	
For merchandise purchases	110,000
For purchase of truck	20,000
For purchase of investment	80,000
For purchase of equipment	45,000
For interest	2,000
For income taxes	<u>15,000</u>
Total cash payments	<u>272,000</u>
Net increase in cash	<u><u>\$ 23,000</u></u>

Note: Depreciation expense was \$15,000.

- Required**
- a. Prepare a statement of cash flows in proper form.
 - b. Comment on the major flows of cash.

- P 10-11.** Answer the following multiple-choice questions:
- a. Which of the following could lead to cash flow problems?
 1. Tightening of credit by suppliers
 2. Easing of credit by suppliers
 3. Reduction of inventory
 4. Improved quality of accounts receivable
 5. Selling of bonds

- b. Which of the following would not contribute to bankruptcy of a profitable firm?
 - 1. Substantial increase in inventory
 - 2. Substantial increase in receivables
 - 3. Substantial decrease in accounts payable
 - 4. Substantial decrease in notes payable
 - 5. Substantial decrease in receivables
- c. Which of the following current asset or current liability accounts is not included in the computation of cash flows from operating activities?
 - 1. Change in accounts receivable
 - 2. Change in inventory
 - 3. Change in accounts payable
 - 4. Change in accrued wages
 - 5. Change in notes payable to banks
- d. Which of the following items is not included in the adjustment of net income to cash flows from operating activities?
 - 1. Increase in deferred taxes
 - 2. Amortization of goodwill
 - 3. Depreciation expense for the period
 - 4. Amortization of premium on bonds payable
 - 5. Proceeds from selling land
- e. Which of the following represents an internal source of cash?
 - 1. Cash inflows from financing activities
 - 2. Cash inflows from investing activities
 - 3. Cash inflows from selling land
 - 4. Cash inflows from operating activities
 - 5. Cash inflows from issuing stock
- f. How would revenue from services be classified?
 - 1. Investing inflow
 - 2. Investing outflow
 - 3. Operating inflow
 - 4. Operating outflow
 - 5. Financing outflow
- g. What type of account is inventory?
 - 1. Investing
 - 2. Financing
 - 3. Operating
 - 4. Noncash
 - 5. Sometimes operating and sometimes investing
- h. How would short-term investments in marketable securities be classified?
 - 1. Operating activities
 - 2. Financing activities
 - 3. Investing activities
 - 4. Noncash activities
 - 5. Cash and cash equivalents

P 10-12. The Szabo Company presented the following data with the 2002 financial statements:

SZABO COMPANY

Statements of Cash Flows

Years Ended December 31, 2002, 2001, and 2000

	2002	2001	2000
Increase (Decrease) in Cash:			
Cash flows from operating activities:			
Cash received from customers	\$173,233	\$176,446	\$158,702
Cash paid to suppliers and employees	(150,668)	(157,073)	(144,060)
Interest received	132	105	89
Interest paid	(191)	(389)	(777)
Income taxes paid	(6,626)	(4,754)	(845)
Net cash provided by operations	<u>15,880</u>	<u>14,335</u>	<u>13,109</u>
Cash flows from investing activities:			
Capital expenditures	(8,988)	(5,387)	(6,781)
Proceeds from property, plant, and equipment disposals	<u>1,215</u>	<u>114</u>	<u>123</u>
Net cash used in investing activities	<u>(7,773)</u>	<u>(5,273)</u>	<u>(6,658)</u>
Cash flows from financing activities:			
Net increase (decrease) in short-term debt	—	5,100	7,200
Increase in long-term debt	4,100	3,700	5,200
Dividends paid	(6,050)	(8,200)	(8,000)
Purchase of common stock	(8,233)	(3,109)	(70)
Net cash used in financing activities	<u>(10,183)</u>	<u>(2,509)</u>	<u>4,330</u>
Net increase (decrease) in cash and cash equivalents	(2,076)	6,553	10,781
Cash and cash equivalents at beginning of year	<u>24,885</u>	<u>18,332</u>	<u>7,551</u>
Cash and cash equivalents at end of year	<u>\$ 22,809</u>	<u>\$ 24,885</u>	<u>\$ 18,332</u>

Reconciliation of Net Income to Net Cash Provided by Operating Activities

	2002	2001	2000
Net income	\$ 7,610	\$ 3,242	\$ 506
Provision for depreciation and amortization	12,000	9,700	9,000
Provision for losses on accounts receivable	170	163	140
Gain on property, plant, and equipment disposals	(2,000)	(1,120)	(1,500)
Changes in operating assets and liabilities:			
Accounts receivable	(2,000)	(1,750)	(1,600)
Inventories	(3,100)	(2,700)	(2,300)
Other assets	—	—	(57)
Accounts payable	—	5,100	7,200
Accrued income taxes	1,200	—	—
Deferred income taxes	2,000	1,700	1,720
Net cash provided by operating activities	<u>\$15,880</u>	<u>\$14,335</u>	<u>\$13,109</u>

- Required**
- Prepare a statement of cash flows with a three-year total column for 2000–2002.
 - Comment on significant trends you detect in the statement prepared in (a).
 - Prepare a statement of cash flows, with inflow/outflow for the year ended December 31, 2002.
 - Comment on significant trends you detect in the statement prepared in (c).

P 10-13. Consider the following data for three different companies:

	(\$000 Omitted)		
	Owens	Arrow	Alpha
Net cash provided (used) by:			
Operating activities	\$(2,000)	\$2,700	\$(3,000)
Investing activities	(6,000)	(600)	(400)
Financing activities	9,000	(400)	(2,600)
Net increase (decrease) in cash	<u>\$ 1,000</u>	<u>\$1,700</u>	<u>\$(6,000)</u>

The patterns of cash flows for these firms differ. One firm is a growth firm that is expanding rapidly, another firm is in danger of bankruptcy, while another firm is an older firm that is expanding slowly.

- Required** Select the growth firm, the firm in danger of bankruptcy, and the firm that is the older firm expanding slowly. Explain your selection.

- P 10-14.** The following information was taken from the 2002 financial statements of the Jones Corporation:

Accounts receivable, January 1, 2002	\$ 30,000
Accounts receivable, December 31, 2002	40,000
Sales (all credit sales)	480,000

Note: No accounts receivable were written off or recovered during the year.

- Required**
- Determine the cash collected from customers by the Jones Corporation in 2002.
 - Comment on why cash collected from customers differed from sales.

- P 10-15.** Webster Corporation's statement of cash flows for the year ended December 31, 2002, was prepared using the indirect method, and it included the following items:

Net income	\$100,000
Noncash adjustments:	
Depreciation expense	20,000
Decrease in accounts receivable	8,000
Decrease in inventory	25,000
Increase in accounts payable	<u>10,000</u>
Net cash flows from operating activities	<u>\$163,000</u>

Note: Webster Corporation reported revenues from customers of \$150,000 in its 2002 income statement.

- Required**
- What amount of cash did Webster receive from customers during the year ended December 31, 2002?
 - Did depreciation expense provide cash inflow? Comment.

Case 10-1**Cash Flow Tales**

Osmonics included the following data in its 1995 annual report:

From the consolidated balance sheets:**Liabilities and Shareholders' Equity**

(In thousands, except share amounts)

	December 31	
	1995	1994
Current liabilities		
Accounts payable	\$ 12,247	\$ 6,459
Notes payable and current portion of long-term debt (Note 7)	1,695	744
Accrued compensation and employee benefits	4,231	4,154
Reserve for discontinued operations	1,957	2,088
Other accrued liabilities	8,612	7,187
Total current liabilities	<u>28,742</u>	<u>20,632</u>
Long-term debt (Note 7)	<u>12,441</u>	<u>14,050</u>
Deferred income taxes (Note 10)	4,954	2,913
Other liabilities	450	689
Commitments and contingencies (Note 12)	—	—
Shareholders' equity		
Common stock, \$0.01 par value		
Authorized—20,000,000		
Issued—1995: 12,773,184		
1994: 12,701,041	129	127
Capital in excess of par value	21,709	21,000
Retained earnings	52,620	41,408
Unrealized gain on marketable securities (Note 4)	3,694	1,038
Cumulative effect of foreign currency translation adjustments	<u>319</u>	<u>178</u>
Total shareholders' equity	<u>78,471</u>	<u>63,751</u>
Total liabilities and shareholders' equity	<u>\$125,058</u>	<u>\$102,035</u>

From the consolidated statements of income:**Year ended December 31**

	1995	1994	1993
Net income per share	\$.88	\$.79	\$.63
Average shares outstanding	12,745,000	12,668,000	12,624,000

Consolidated Statements of Cash Flows	Year ended December 31		
	1995	1994	1993
Cash flows from operations:			
Net income	\$11,212	\$ 9,955	\$ 7,895
Noncash items included in net income:			
Depreciation and amortization	3,222	3,048	3,080
Deferred income taxes	(91)	(341)	281
Gain on sale of land and investments	(810)	—	(499)
Changes in assets and liabilities (net of business acquisitions):			
Reserve for VAT tax	—	(1,605)	(1,030)
Accounts receivable	(4,232)	(1,463)	181
Inventories	(6,085)	(2,584)	2,785
Other current assets	(507)	1,475	(302)
Accounts payable and accrued liabilities	4,292	1,499	209
Reserve for deferred compensation	(432)	(78)	72
Reserves for losses of discontinued operations	—	—	(471)
Net cash provided (used) by operations	<u>6,569</u>	<u>9,906</u>	<u>12,201</u>
Cash flows from investing activities:			
Business acquisitions (net of cash acquired)	(5,380)	(673)	—
Purchase of investments	(6,633)	(17,467)	(15,253)
Maturities and sales of investments	13,228	11,225	8,680
Purchase of property and equipment	(12,568)	(3,435)	(3,257)
Proceeds from sale of subsidiary	—	—	613
Other	(315)	190	(111)
Net cash provided (used) for investing activities	<u>(11,668)</u>	<u>(10,160)</u>	<u>(9,328)</u>
Cash flows from financing activities:			
Notes payable and current debt	(299)	282	(376)
Reduction of long-term debt	(311)	(521)	(552)
Issuance of common stock	<u>711</u>	<u>680</u>	<u>295</u>
Net cash provided (used) in financing activities	<u>101</u>	<u>441</u>	<u>(633)</u>
Effect of exchange rate changes on cash	<u>(94)</u>	<u>(444)</u>	<u>143</u>
Increase (decrease) in cash and cash equivalents	(5,092)	(257)	2,383
Cash and cash equivalents—beginning of year	<u>9,453</u>	<u>9,710</u>	<u>7,327</u>
Cash and cash equivalents—end of year	<u>\$ 4,361</u>	<u>\$ 9,453</u>	<u>\$ 9,710</u>

- Required**
- Compute and comment on the following for 1995 and 1994:
 - Operating cash flow/current maturities of long-term debt and current notes payable.
 - Operating cash flow/total debt.
 - Operating cash flow per share.
 - Operating cash flow/cash dividends.
 - Comment on significant cash inflows and outflows.
 - Why is depreciation added to net income as part of the reconciliation of net income to net cash provided by operating activities?

Case 10-2**Watch the Cash**

The Arden Group, Inc. presented these statements of cash flows in its 1998 annual report:

Fiscal Year

The Company operates on a fiscal year ending on the Saturday closest to December 31. Fiscal years for the financial statements included herein ended on January 2, 1999 (52 weeks), January 3, 1998 (53 weeks) and December 28, 1996 (52 weeks).

Statements of Cash Flows

<i>(In Thousands)</i>	1998	1997	1996
Cash flows from operating activities:			
Cash received from customers	\$ 296,751	\$ 274,683	\$ 252,482
Cash paid to suppliers and employees	(278,213)	(254,622)	(242,869)
Sales (purchases) of trading securities, net		8,851	(1,311)
Interest and dividends received	1,449	1,683	1,678
Interest paid	(751)	(705)	(878)
Income taxes paid	(6,689)	(3,831)	(2,694)
Net cash provided by operating activities	<u>12,547</u>	<u>26,059</u>	<u>6,408</u>
Cash flows from investing activities:			
Capital expenditures	(4,244)	(7,896)	(12,841)
Deposits for property in escrow			2,664
Transfer to discontinued operations		(2,575)	(456)
Purchases of available-for-sale securities	(3,793)	(3,202)	
Sales of available-for-sale securities	268	1,380	
Proceeds from the sale of property, plant and equipment, liquor licenses and leasehold interests	3,171	163	2,338
Payments received on notes from the sale of property, plant and equipment and liquor licenses		53	3
Net cash used in investing activities	<u>(4,598)</u>	<u>(12,077)</u>	<u>(8,292)</u>
Cash flows from financing activities:			
Purchase and retirement of stock		(13,966)	(1,613)
Principal payments on long-term debt	(1,188)	(799)	(752)
Principal payments under capital lease obligations	(230)	(205)	(325)
Loan payments received from officer/director	40	114	
Proceeds from equipment financing		2,500	
Purchase of Company debentures	(23)		(55)
Net cash used in financing activities	<u>(1,401)</u>	<u>(12,356)</u>	<u>(2,745)</u>
Net increase (decrease) in cash	6,548	1,626	(4,629)
Cash at beginning of year	<u>7,099</u>	<u>5,473</u>	<u>10,102</u>
Cash at end of year	<u>\$ 13,647</u>	<u>\$ 7,099</u>	<u>\$ 5,473</u>

**Reconciliation of Net Income to Net Cash Provided
by Operating Activities:**

	1998	1997	1996
Net income	\$10,081	\$ 5,959	\$3,523
Adjustments to reconcile net income to net cash provided by operating activities:			
Loss from discontinued operations		2,738	456
Depreciation and amortization	5,618	5,111	4,686
Unrealized loss on trading securities			151
Provision for losses on accounts and notes receivable	92	62	55
Deferred income taxes	(865)	270	578
Net loss (gain) from the disposal of property, plant and equipment, liquor licenses and early lease terminations	(409)	731	(556)
Realized gains on marketable securities, net	(408)	(605)	
Gain on purchase of 7% debentures	(2)		(5)
Change in assets and liabilities net of effects from noncash investment and financing activities:			
(Increase) decrease in assets:			
Marketable securities		8,851	(1,347)
Accounts and notes receivable	794	1,639	8
Inventories	756	(824)	(556)
Other current assets	(239)	(274)	(456)
Other assets	(103)	(90)	(548)
Increase (decrease) in liabilities:			
Accounts payable and other accrued expenses	(2,611)	3,847	492
Deferred income taxes on unrealized gains		(275)	
Other liabilities	(157)	(1,081)	(73)
Net cash provided by operating activities	<u>\$12,547</u>	<u>\$26,059</u>	<u>\$6,408</u>

Required

- Prepare the statement of cash flows, with a total column for the three-year period ended January 2, 1999. Do not include reconciliation of net income to net cash provided by operating activities.
- Comment on significant cash flow items in the statement prepared in (a).
- Prepare the statement of cash flows for 1998, with inflows separated from outflows. Present the data in dollars and percentages. Do not include reconciliation of net income to net cash provided by operating activities.
- Comment on significant cash flow items in the statement prepared in (c).

Case 10-3**Rapidly Expanding**

The data for this case was extracted from the 1996 Annual Report of Best Buy Co., Inc.

Future Growth

Fiscal 1997 promises to be a challenging year for all retailers. A more cautious consumer outlook and higher levels of consumer debt may signal a softer retail environment during the first half of this fiscal year. Also, increased competition in the PC industry and the anticipated slowdown of personal computer sales will mean additional pressure on sales and margins. The initiatives we have implemented in major appliances and ESP sales will help offset this anticipated slowdown.

In addition, we intend to moderate overall new store growth and open 20 to 25 new retail locations. Half of these stores are expected to open in the new markets of Philadelphia, Pennsylvania, and Tampa, Florida. The remainder will increase our presence in existing markets where we have established advertising, administrative, regional management and distribution leverage. We intend to finance this expansion with internally generated funds.

This more conservative store expansion will allow us to refine our stores' operations and focus our retail efforts on our four major categories of product specialization. Our plan is to simplify our retail procedures while improving our level of customer service. We will strengthen the training programs for our retail personnel to prepare them for the challenges ahead. A well-trained sales force will help us attract and retain customers while enhancing our market position. Our store teams will be more actively engaged in the presentation of new product technologies, technical services, appropriate product accessories, ESPs and classroom training. This will enhance consumers' knowledge and their shopping experience. We intend to improve overall product in-stock by establishing improved standards of inventory management.

Our Strategy

We believe that our retail strategy is right for today's consumer and expect to improve our execution in all our product categories. Fiscal 1996 was a challenging year for retail, and we thank our employees, shareholders and vendor partners for their continued commitment and support. We are confident that the initiatives we are implementing will result in strengthened execution of our retail strategy and market-leading position as we enter our 30th year of business.

Richard M. Schulze
Founder, Chairman & CEO

Bradbury H. Anderson
President & COO

Selected Consolidated Financial and Operating Data
(Dollars in thousands, except per share amounts)

Fiscal Period	1996⁽¹⁾	1995	1994⁽²⁾	1993	1992
Statement of Earnings Data					
Revenues	\$7,217,448	\$5,079,557	\$3,006,534	\$1,619,978	\$929,692
Gross profit	936,571	690,393	456,925	284,034	181,062
Selling, general and administrative expenses	813,988	568,466	379,747	248,126	162,286
Operating income	122,583	121,927	77,178	35,908	18,776
Earnings before cumulative effect of accounting change	48,019	57,651	41,710	19,855	9,601
Net earnings	48,019	57,651	41,285	19,855	9,601
Per-Share Data					
Earnings before cumulative effect of accounting change	\$ 1.10	\$ 1.33	\$ 1.01	\$.57	\$.33
Net earnings	1.10	1.33	1.00	.57	.33
Common stock price: High	29 5/8	45 1/4	31 7/16	15 23/32	11 25/32
Low	12 3/4	22 1/8	10 27/32	4 23/32	2 21/32
Weighted average shares outstanding (000s)	43,640	43,471	41,336	34,776	28,848
Operating and Other Data					
Comparable stores sales increase ⁽³⁾	5.5%	19.9%	26.9%	19.4%	14.0%
Number of stores (end of period)	251	204	151	111	73
Average revenues per store ⁽⁴⁾	\$ 31,100	\$ 28,400	\$ 22,600	\$ 17,600	\$ 14,300
Gross profit percentage	13.0%	13.6%	15.2%	17.5%	19.5%
Selling, general and administrative expense percentage	11.3%	11.2%	12.6%	15.3%	17.5%
Operating income percentage	1.7%	2.4%	2.6%	2.2%	2.0%
Inventory turns ⁽⁵⁾	4.8×	4.7×	5.0×	4.8×	5.1×
Balance Sheet Data (at period end)					
Working capital	\$ 585,855	\$ 609,049	\$ 362,582	\$ 118,921	\$ 126,817
Total assets	1,890,832	1,507,125	952,494	439,142	337,218
Long-term debt, including current portion	229,855	240,965	219,710	53,870	52,980
Convertible preferred securities	230,000	230,000	—	—	—
Shareholders' equity	431,614	376,122	311,444	182,283	157,568

This table should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and the Consolidated Financial Statements and Notes thereto.

(1) Fiscal 1996 contained 53 weeks. All other periods presented contained 52 weeks.

(2) During fiscal 1994, the Company adopted FAS 109, resulting in a cumulative effect adjustment of (\$425) or (\$.01) per share.

(3) Comparable stores are stores open at least 14 full months.

(4) Average revenues per store are based upon total revenues for the period divided by the weighted average number of stores open during such period.

(5) Inventory turns are calculated based upon a rolling 12-month average of inventory balances.

Management's Discussion & Analysis of Financial Condition and Results of Operations (In Part)

Liquidity and Capital Resources

The Company has funded the retail growth and the increase in distribution capacity in the last two years through a combination of long-term financing, working capital and cash flow from operations. In fiscal 1995, the Company issued \$230 million of 6 1/2% monthly income convertible preferred securities which mature in November 2024. The Company also entered into a master lease facility which has provided over \$125 million in financing for retail store and distribution center development in fiscal 1995 and 1996. The funds from these two long-term financings and the increase in the Company's credit facility to \$550 million in fiscal 1996 have supported the Company's growth. The proceeds from the \$150 million note offering in October 1993 were also used to support much of the Company's expansion and growth in fiscal 1995. In fiscal 1994, the \$86 million in proceeds from a Common Stock offering and the proceeds of the 1993 note offering were used to provide the financing necessary for business expansion that year. Cash flow from operations, before changes in working capital, improved to over \$100 million in fiscal 1996, an increase from the \$97 million in fiscal 1995 and \$65 million in fiscal 1994.

Over the past two fiscal years, the Company has developed 50 new and relocated stores in order to secure the desired store locations and assure timely completion of the stores. The Company also built two of the brown goods distribution centers opened in the last two years, including the Company's newest 780,000-square-foot distribution center in Findlay, Ohio, opened in September 1995. Interim financing for these properties was provided either through working capital or the Company's master lease agreement. The Company's practice is to lease rather than own real estate, and for those sites developed using working capital, it is the Company's intention to enter into sale/leaseback transactions and recover the cost of development. The costs of this development are classified in the balance sheet as recoverable costs from developed properties. Proceeds from the sale of properties were nearly \$90 million in fiscal 1996 and \$43 million in fiscal 1995. In fiscal 1994, the Company sold 17 store locations for an aggregate of \$44 million in a single sale/leaseback transaction. At fiscal 1996 year end, the Company had approximately \$125 million in recoverable costs related to developed properties. A difficult credit market for retail real estate has delayed the sale of certain of these properties, the majority of which were opened late in fiscal 1996. These properties are expected to be sold and leased back during fiscal 1997.

Current assets increased to \$1.6 billion at March 2, 1996, compared to \$1.2 billion at February 25, 1995, primarily as a result of the increased inventory levels necessary to support the larger stores and higher sales volumes. The 47 new stores added approximately \$160 million in inventory. Inventory turns were 4.8 times in fiscal 1996, comparable to the prior year. Increases in trade payables and secured inventory financing arrangements at year end supported most of the increase in inventory. Higher business volumes in February 1996 as compared to February 1995 resulted in higher year-end receivables. The Company sells the receivables from sales on the Company's private label credit card, without recourse, to an unrelated third party. An increase in recoverable costs from developed properties also contributed to the increase in current assets.

The Company's revolving credit facility provides for borrowings of \$250 million throughout the year and an increase to \$550 million on a seasonal basis from July through December. Borrowings under the facility are unsecured and are limited to certain percentages of inventories. The underlying agreement requires that the maximum balance outstanding be reduced to \$50 million for a period of 45 days, following the holi-

day season. This facility expires in June 1998. The Company also has \$185 million available, increasing to \$310 million on a seasonal basis, under an inventory financing facility provided by a commercial credit corporation.

The Company's expansion plans for fiscal 1997 reflect management's expectations for a slowing economy and the Company's desire to fund growth with internally generated funds. The Company plans to open approximately 20 to 25 new stores, including entry into the new major markets of Philadelphia, Pennsylvania in May and Tampa, Florida in the third quarter. The remainder of the new stores opened will be in existing markets. The Company also intends to remodel or relocate ten stores to larger facilities during fiscal 1997. Only six of the new and relocated stores are expected to be developed by the Company. Management believes the Company's existing distribution facilities are adequate to support the planned expansion and operations in fiscal 1997.

Each new store requires approximately \$3.0 to \$4.0 million in working capital for merchandise inventory (net of vendor financing), fixtures and leasehold improvements. Management expects that there will be adequate funds available, including funds generated from the sale of developed property owned at the end of fiscal 1996, to finance the \$80 million in planned capital expenditures in addition to the anticipated property development in fiscal 1997.

Management believes that funds available from the Company's revolving credit facility, inventory financing programs and expected vendor terms, along with cash on hand and anticipated cash flow from operations, will be sufficient to support planned store expansion and the increased assortment in the appliance category in the coming year.

Consolidated Balance Sheets
(Dollars in thousands, except per-share amounts)

	March 2 1996	February 25 1995
Assets		
Current Assets:		
Cash and cash equivalents	\$ 86,445	\$ 144,700
Receivables	121,438	84,440
Recoverable costs from developed properties	126,237	86,222
Merchandise inventories	1,201,142	907,677
Deferred income taxes	20,165	15,022
Prepaid expenses	5,116	2,606
Total current assets	<u>1,560,543</u>	<u>1,240,667</u>
Property and Equipment:		
Land and buildings	16,423	13,524
Leasehold improvements	131,289	93,889
Furniture, fixtures and equipment	266,582	191,084
Property under capital leases	29,421	27,096
	<u>443,715</u>	<u>325,593</u>
Less accumulated depreciation and amortization	<u>132,676</u>	<u>88,116</u>
Net property and equipment	<u>311,039</u>	<u>237,477</u>
Other Assets:		
Deferred income taxes	7,204	9,223
Other assets	<u>12,046</u>	<u>19,758</u>
Total other assets	<u>19,250</u>	<u>28,981</u>
Total Assets	<u>\$1,890,832</u>	<u>\$1,507,125</u>

Liabilities and Shareholders' Equity

Current Liabilities:		
Accounts payable	\$ 673,852	\$ 395,337
Obligations under financing arrangements	93,951	81,755
Accrued salaries and related expenses	26,890	23,785
Accrued liabilities	125,582	77,102
Deferred service plan revenue and warranty reserve	30,845	24,942
Accrued income taxes		14,979
Current portion of long-term debt	23,568	13,718
Total current liabilities	974,688	631,618
Deferred service plan revenue and warranty reserve, long-term	48,243	42,138
Long-term debt	206,287	227,247
Convertible preferred securities of subsidiary	230,000	230,000
Shareholders' equity:		
Preferred stock, \$1.00 par value:		
Authorized—400,000 shares; Issued and outstanding—none	—	—
Common stock, \$.10 par value:		
Authorized—120,000,000 shares; Issued and outstanding—42,842,000 and 42,216,000 shares, respectively	4,284	4,221
Additional paid-in capital	236,392	228,982
Retained earnings	190,938	142,919
Total shareholders' equity	431,614	376,122
Total Liabilities and Shareholders' Equity	<u>\$1,890,832</u>	<u>\$1,507,125</u>

- Required**
- Prepare the following liquidity ratios for 1996 and 1995:
 - Current ratio
 - Acid-test ratio
 - Prepare the following long-term debt-paying ratios for 1996 and 1995:
 - Times interest earned
 - Debt ratio
 - Operating cash flow/total debt
 - Prepare the following profitability ratios for 1996 and 1995:
 - Total asset turnover (using year-end total assets)
 - Return on assets (using year-end total assets)
 - Return on total equity (using year-end total equity)
 - Operating cash flow per share (using weighted average shares outstanding)
 - Prepare the following investor analysis ratios for 1996 and 1995:
 - Degree of financial leverage
 - Price/earnings ratio (the high and low market price for the year—two computations)
 - Percentage of earnings retained
 - Book value

(continued)

Consolidated Statement of Earnings
(Dollars in thousands, except per-share amounts)

For The Fiscal Years Ended	March 2, 1996	February 25, 1995	February 26, 1994
Revenues	\$7,217,448	\$5,079,557	\$3,006,534
Cost of goods sold	<u>6,280,877</u>	<u>4,389,164</u>	<u>2,549,609</u>
Gross profit	936,571	690,393	456,925
Selling, general and administrative expenses	<u>813,988</u>	<u>568,466</u>	<u>379,747</u>
Operating income	122,583	121,927	77,178
Interest expense, net	<u>43,594</u>	<u>27,876</u>	<u>8,800</u>
Earnings before income taxes and cumulative effect of change in accounting principle	78,989	94,051	68,378
Income taxes	<u>30,970</u>	<u>36,400</u>	<u>26,668</u>
Earnings before cumulative effect of change in accounting principle	48,019	57,651	41,710
Cumulative effect of change in accounting for income taxes	<u>—</u>	<u>—</u>	<u>(425)</u>
Net Earnings	<u><u>\$ 48,019</u></u>	<u><u>\$ 57,651</u></u>	<u><u>\$ 41,285</u></u>
Earnings per Share:			
Earnings before cumulative effect of change in accounting principle	\$ 1.10	\$ 1.33	\$ 1.01
Cumulative effect of change in accounting for income taxes			(.01)
Net Earnings per Share	<u><u>\$ 1.10</u></u>	<u><u>\$ 1.33</u></u>	<u><u>\$ 1.00</u></u>
Weighted Average Common Shares Outstanding (000)	<u><u>43,640</u></u>	<u><u>43,471</u></u>	<u><u>41,336</u></u>

- e. Using the Selected Consolidated Financial and Operating Data, compute horizontal common-size analysis for 1992–1996 for the following items:
 1. Revenues
 2. Gross profit
 3. Selling, general, and administrative expenses
 4. Operating income
 5. Net earnings
 6. Number of stores
 7. Average revenue per store
 8. Total assets
 9. Shareholders' equity
- f. Prepare an executive summary relating to liquidity, debt, profitability, and investor analysis. Consider data computed and data disclosed in the case.

Consolidated Statements of Cash Flows**(Dollars in thousands, except per-share amounts)**

For The Fiscal Years Ended	March 2, 1996	February 25, 1995	February 26, 1994
Operating Activities:			
Net earnings	\$ 48,019	\$ 57,651	\$ 41,285
Charges to earnings not affecting cash:			
Depreciation and amortization	54,862	38,570	22,412
Loss on disposal of property and equipment	1,267	760	719
Cumulative effect of change in accounting for income taxes	—	—	425
	<u>104,148</u>	<u>96,981</u>	<u>64,841</u>
Changes in operating assets and liabilities:			
Receivables	(36,998)	(31,496)	(14,976)
Merchandise inventories	(293,465)	(269,727)	(387,959)
Deferred income taxes and prepaid expenses	(5,634)	(5,929)	(5,234)
Accounts payable	278,515	106,920	175,722
Other current liabilities	40,946	46,117	33,014
Deferred service plan revenue and warranty reserve	<u>12,008</u>	<u>19,723</u>	<u>8,393</u>
Total cash provided by/(used in) operating activities	<u>99,520</u>	<u>(37,411)</u>	<u>(126,199)</u>
Investing Activities:			
Additions to property and equipment	(126,201)	(118,118)	(101,412)
Recoverable costs from developed properties	(40,015)	(86,222)	—
Decrease (increase) in other assets	7,712	(11,676)	(6,592)
Proceeds from sale/leasebacks	—	24,060	44,506
Total cash used in investing activities	<u>(158,504)</u>	<u>(191,956)</u>	<u>(63,498)</u>
Financing Activities:			
Long-term debt payments	(14,600)	(10,199)	(6,977)
Increase in obligations under financing arrangements	12,196	70,599	6,285
Common stock issued	3,133	2,366	86,513
Proceeds from issuance of convertible preferred securities	—	230,000	—
Long-term debt borrowings	—	21,429	160,310
Payments on revolving credit line, net	—	—	(3,700)
Total cash provided by financing activities	<u>729</u>	<u>314,195</u>	<u>242,431</u>
Increase (Decrease) in Cash and Cash Equivalents	(58,255)	84,828	52,734
Cash & Cash Equivalents at Beginning of Period	<u>144,700</u>	<u>59,872</u>	<u>7,138</u>
Cash & Cash Equivalents at End of Period	<u>\$ 86,445</u>	<u>\$ 144,700</u>	<u>\$ 59,872</u>

Case 10-4**The Retail Mover**

This case represents a retail company. The dates and format have been changed.

a.

	December 31, 1995	December 31, 1994
Selected Balance Sheet Data		
Total current assets	\$719,478,441	\$628,408,895
Total current liabilities	\$458,999,682	\$366,718,656

The Retail Mover
Statement of Cash Flows
Year Ended December 31, 1995

Net cash flow from operating activities:	
Net income	\$39,577,000
Noncash expenses, revenues, losses, and gains included in income:	
Increase in equity in Zeller's Limited	(2,777,000)
Depreciation and amortization	9,619,000
Net increase in reserves	74,000
Increase in deferred federal income taxes	232,000
Net increase in receivables	(51,463,995)
Net increase in inventories	(38,364,709)
Net increase in prepaid taxes, rents, etc.	(209,043)
Increase in accounts payable	9,828,348
Increase in salaries, wages, and bonuses	470,054
Increase in taxes withheld from employees compensation	301,035
Decrease in taxes other than federal income taxes	(659,021)
Increase in federal income taxes payable	4,007,022
Increases in deferred credits, principally income taxes related to installment sales (short-term)	14,045,572
Rounding difference in working capital	520
Net cash outflow from operating activities	(15,319,217)
Cash flows from investing activities:	
Investment in properties, fixtures, and improvements	(16,141,000)
Investment in Zeller's Limited	(436,000)
Increase in sundry accounts (net)	(48,000)
Net cash outflow from investing activities	(16,625,000)
Cash flows from financing activities:	
Sales of common stock to employees	5,219,000
Dividends to stockholders	(20,821,000)
Purchase of treasury stock	(13,224,000)
Purchase of preferred stock for cancellation	(948,000)
Retirement of 4 3/4% sinking fund debentures	(1,538,000)
Increase in short-term notes payable	56,323,016
Increase in bank loans	7,965,000
Net cash inflow from financing activities	32,976,016
Net increase in cash and short-term securities	\$ 1,031,799

b.

	December 31, 1997
Selected Balance Sheet Data	
Total current assets	\$1,044,689,000
Total current liabilities	661,058,000
The Retail Mover Statement of Cash Flows Year Ended December 31, 1998	
Net cash flow from operating activities:	
Net income	\$ 10,902,000
Noncash expenses, revenues, losses, and gains included in income:	
Undistributed equity in net earnings of unconsolidated subsidiaries	(3,570,000)
Depreciation and amortization of properties	13,579,000
Increase in deferred federal income taxes—non-current	2,723,000
Decrease in deferred contingent compensation and other liabilities	(498,000)
Net receivables increase	(52,737,000)
Merchandise inventories increase	(51,104,000)
Other current assets increase	(8,935,000)
Accounts payable for merchandise decrease	(2,781,000)
Salaries, wages and bonuses decrease	(3,349,000)
Other accrued expenses increase	3,932,000
Taxes withheld from employees increase	2,217,000
Sales and other taxes increase	448,000
Federal income taxes payable decrease	(8,480,000)
Increase in deferred income taxes related to installment sales	4,449,000
Net cash flow from operating activities	<u>(93,204,000)</u>
Cash flows from investing activities:	
Investments on properties, fixtures and improvements	(23,143,000)
Increase in other assets—net	(642,000)
Investment in Granjewel Jewelers & Distributors, Inc.	<u>(5,700,000)</u>
Net cash outflow from investing activities	<u>(29,485,000)</u>
Cash flows from financing activities:	
Increase in short-term notes payable to banks	100,000,000
Receipts from employees under stock purchase contracts	2,584,000
Short-term commercial notes	73,063,000
Cash dividends to stockholders	(21,122,000)
Decrease in long-term debt	(6,074,000)
Purchase of cumulative preferred stock, for cancellation	(618,000)
Purchase of treasury common stock	(136,000)
Bank loans decreased	<u>(10,000,000)</u>
Net cash inflow from financing activities	<u>137,697,000</u>
Net increase in cash	<u>\$ 15,008,000</u>

c. **Income Statement Data related to 1997 and 1998. (In Part)**

	1998	1997
Net earnings (loss)	(\$177,340,000)	\$10,902,000

Balance Sheet Data related to 1997 and 1998 (In Part)

	December 31, 1998	December 31, 1997
Assets		
Current assets:		
Cash notes	\$ 79,642,000	\$ 45,951,000
Customers' installment accounts receivable	518,387,000	602,305,000
Less:	(79,510,000)	(16,315,000)
Allowance for doubtful accounts	(1,386,000)	(4,923,000)
Unearned credit insurance premiums	(37,523,000)	(59,748,000)
Deferred finance income	399,968,000	521,319,000
Merchandise inventories	407,357,000	450,637,000
Other accounts receivable, refundable taxes and claims	31,223,000	19,483,000
Prepaid expenses	6,591,000	7,299,000
Total current assets	<u>\$924,781,000</u>	<u>\$ 1,044,689</u>
Liabilities		
Current liabilities:		
Bank loans	\$600,000,000	—
Short-term commercial notes	—	453,097,000
Current portion of long-term debt	995,000	
Accounts payable for merchandise	50,067,000	58,192,000
Salaries, wages and bonuses	10,808,000	14,678,000
Other accrued expenses	49,095,000	14,172,000
Taxes withheld from employees	1,919,000	4,412,000
Sales and other taxes	17,322,000	13,429,000
Federal income taxes payable	17,700,000	—
Deferred income taxes related to installment sales	2,000,000	103,078,000
Total current liabilities	<u>749,906,000</u>	<u>661,058,000</u>
Other liabilities		
Long-term debt	216,341,000	220,336,000
Deferred federal income taxes	—	14,649,000
Deferred contingent compensation and other liabilities	2,183,000	4,196,000
Total other liabilities	<u>218,524,000</u>	<u>239,181,000</u>
Total liabilities	<u>\$968,430,000</u>	<u>\$900,239,000</u>

Required

- a. Compute and comment on the following for 1994, 1995, and 1997:
1. working capital
 2. current ratio

- b. Comment on the difference between net income and net cash outflow from operating activities for the year ended December 31, 1995 and December 31, 1997.
- c. This company reported a loss of \$177,340,000 for 1998. Reviewing the balance sheet data, speculate on major reasons for this loss.
- d. Considering (a), (b), and (c), comment on the wisdom of the short-term bank loan in 1998. (Consider the company's perspective and the bank's perspective.)

Case 10-5

Non-Cash Charges

Owens Corning Fiberglass Corporation

For Immediate Release (February 6, 1992)

Owens Corning Takes \$800 Million Non-Cash Charge to Accrue For Future Asbestos Claims

"This action demonstrates our desire to put the asbestos situation behind us," new chairman and CEO Glen H. Hiner says.

Toledo, Ohio, February 6, 1992—Owens Corning Fiberglass Corp. (NYSE:OCF) today announced that its results for the fourth quarter and year ended December 31, 1991, include a special non-cash charge of \$800 million to accrue for the estimated uninsured cost of future asbestos claims the Company may receive through the balance of the decade. "This action demonstrates our desire to put the asbestos situation behind us," said Glen Hiner, Owens Corning's new chairman and chief executive officer. "After a thorough review of the situation with outside consultants, we believe this accrual will be sufficient to cover the company's uninsured costs for cases received until the year 2000. We will, of course, make adjustments to our reserves if that becomes appropriate, but this is our best estimate of these uninsured costs. "With this action," Mr. Hiner continued, "everyone can now focus once again on the fundamental strengths of the Company. We generate considerable amounts of cash, our operating divisions are leaders in every market they serve throughout the world, and we have taken a number of steps in the last few years to strengthen our competitive position even further.

###

Owens Corning Fiberglass Corporation

For Immediate Release (June 20, 1996)

Owens Corning Initiates Federal Lawsuit, Records Post-1999 Asbestos Provisions and Announces Dividend

NEW YORK, New York, June 20, 1996 — A Federal lawsuit aimed at fraudulent testing procedures for asbestos-related illnesses, involving tens of thousands of pending cases, was filed yesterday by Owens Corning. The Company also announced the quantification of liabilities related to post-1999 asbestos claims, the reinstatement of an annual dividend and a sales goal of \$5 billion by 1999.

The specific announcements are as follows:

- A lawsuit, alleging falsified medical test results in tens of thousands of asbestos claims, was filed on June 19, 1996, in the U.S. District Court for the Eastern District of Louisiana against the owners and operators of three pulmonary function testing laboratories. Overall, a total of 40,000 cases may be impacted by the investigation for fraudulent testing procedures. The lawsuit is the subject of a separate press release also disseminated this morning.
- A net, after-tax charge of \$545 million, or \$9.56 per fully diluted share for asbestos claims—received after 1999—will be recorded in the second quarter of 1996, as detailed in a Form 8-K filed this morning with the SEC. Cash payments associated with this charge will begin after the year 2000 and will be spread over 15 years or more.
- The Board of Directors has approved an annual dividend policy of 25 cents per share and declared a quarterly dividend of 6-1/4 cents per share payable on October 15, 1996, to shareholders of record as of September 30, 1996.
- The company expects to reach its sales goal of \$5 billion in 1999 — a full year ahead of the original goal.

“The asbestos charge quantifies what we expect to be the cost to Owens Corning of post-1999 claims,” stated Glen H. Hiner, chairman and chief executive officer. “We further believe that the present value of the Owens Corning asbestos liability, including the current charge, is less than the current discount in our stock price.”

In addition to these developments, Owens Corning announced it is engaged in substantive discussions with 30 of the principal plaintiff law firms in an effort to obtain further resolution of its asbestos liability. These discussions have encompassed the possibility of global as well as individual law firm settlements.

“These meetings are by mutual consent,” stated Hiner. “The discussions will continue and we expect to know by year end whether we can achieve further agreement. Plaintiff attorneys involved in the talks stated they will not serve any more non-malignancy claims on Owens Corning while negotiations continue.”

In reference to the dividend, Hiner stated, “we were able to initiate this action because debt has been reduced to target levels and cash flow from operations will be in excess of internal funding requirements.

“We are delighted to be able to reward our shareholders with a dividend,” said Hiner. “Reinstating the dividend has been a priority of mine since joining the company and I am pleased that we now are in a position to set the date.”

The Toledo-based company had 1995 sales of \$3.6 billion and employs 18,000 people in more than 30 countries.

#####

Owens Corning
Consolidated Statement of Cash Flows (In Part)

For the years ended December 31, 1997, 1996 and 1995 (In millions of dollars)

	1997	1996	1995
Net Cash Flow from Operations			
Net income (loss)	\$ 47	\$ (284)	\$ 231
Reconciliation of net cash provided by operating activities:			
Noncash items:			
Provision for asbestos litigation claims (Note 22)	—	875	—
Cumulative effect of accounting change (Note 6)	15	—	—
Provision for depreciation and amortization	173	141	132
Provision (credit) for deferred income taxes (Note 11)	110	(258)	142
Other (Note 4)	49	(2)	(2)
(Increase) decrease in receivables (Note 13)	57	20	36
(Increase) decrease in inventories	60	(71)	(15)
Increase (decrease) in accounts payable and accrued liabilities	(60)	103	(50)
Disbursements (funding) of VEBA trust	19	45	(64)
Proceeds from insurance for asbestos litigation claims, excluding Fibreboard (Note 22)	97	101	251
Payments for asbestos litigation claims, excluding Fibreboard (Note 22)	(300)	(267)	(308)
Other	(136)	(68)	(68)
Net cash flow from operations	<u>131</u>	<u>335</u>	<u>285</u>

April 29, 1998

Owens Corning opened a new front in its battle to avoid being swamped by tens of thousands of damage claims filed by people who say they got sick from exposure to asbestos-containing insulation produced by the company. Owens Corning charged in U.S. District Court in Toledo, Ohio, that Allstate Insurance Co. is guilty of breach of contract by failing to provide coverage.

Owens Corning announced in March 1998 that it might have to spend more than expected to resolve asbestos claims because of growing damage awards to people with a severe form of asbestos-linked cancer called mesothelioma.

- Required**
- In the long run, cash receipts from operations is equal to revenue from operations. Comment.
 - February 6, 1992—Owens Corning announced a special noncash charge of \$800 million to accrue for the estimated uninsured cost of future asbestos claims the company may receive through the balance of the decade. How much will the noncash charge reduce gross earnings in 1992? Over what period of time is the expected outflow?

- c. June 20, 1996—Owens Corning announced a net, after-tax charge of \$545 million for asbestos claims received after 1999. How much will this charge reduce net income in 1996? Over what period of time is the cash outflow expected?
- d. Assume Owens Corning receives money related to the federal lawsuit alleging falsified medical tests. In what period will the cash inflow be recorded? When will the related revenue be recorded?
- e. April 29, 1998—Owens Corning filed suit against Allstate Insurance Co. related to asbestos exposure coverage. What are the apparent implications if Owens Corning does not win the suit?
- f. Owens Corning announced in March 1998 that it might have to spend more than expected to resolve asbestos claims. What does this imply as to future expenses and cash outflow related to asbestos claims?
- g. Owens Corning, Consolidated Statement of Cash Flows, for the years ended December 31, 1997, 1996, and 1995.
 - 1. What year has a charge for asbestos litigation claims?
 - 2. What years have cash inflow from proceeds from insurance for asbestos litigation claims?
 - 3. What years have payments for asbestos litigation claims?

Case 10-6

Cash Movements and Periodic Income Determination

“The estimating of income, under conditions of uncertainty as well as of certainty, requires that the accountant trace carefully the relation between income flows and cash movements.”

“While it is true that there may not be an equality between the amount of revenue and the amount of cash receipts for any period less than the duration of enterprise existence, receipts are the elements with which we construct all measures of revenue. A dollar is received at some time during the life of the enterprise for each dollar of revenue exhibited during the fiscal period. The sum of the annual revenues for all fiscal periods is equal to the amount of ultimate total revenue. There may be no equality between the amount of expense and the amount of cash disbursements for the fiscal period and yet the two sums are equal for the life of the enterprise. A dollar is disbursed at some time during the enterprise existence for each dollar exhibited as expense of the fiscal period.¹”

“The accountant’s problem is essentially one of reconciling cash receipts with revenues and cash disbursements with expenses. That is, for every revenue recognized but not received in cash during the current period, an asset of equal value must be recorded (or a liability must be amortized); for every expense recognized but not paid in cash in the current period, a liability of equal value must be recognized but not paid in cash in the current period, a liability of equal value must be recognized (or an asset must be amortized).”

¹ Edward G. Nelson, “The Relationship between the Balance Sheet and the Profit and Loss Statement,” *The Accounting Review*, Vol. XVIII (April, 1942), p. 133.

NOTE: This case includes excerpts from “Cash Movements And Periodic Income Determination,” Reed K. Storey, *The Accounting Review*, Vol. XXXV, No. 3 (July, 1960), pp. 449–454.

Required

- a. Income determination is an exact science. Comment.
- b. Cash flow must be estimated. Comment.
- c. In the long run, cash receipts from operations is equal to revenue from operations. Comment.
- d. Assume that a firm has a negative cash flow from operations in the short run. How could this negative cash flow from operations be compensated for in the short run? Discuss.
- e. Assume that the reported operating income has been substantially more than the cash flow from operations for the past two years. Comment on what will need to happen to future cash flow from operations in order for the past reported income to hold up.

Endnotes

- 1 The effect of exchange rate changes on cash is presented separately at the bottom of the statement.
- 2 *Exposure Draft*, "Statement of Cash Flows" (Stamford, CT: Financial Accounting Standards Board, 1986), p. 21.

11

SUMMARY ANALYSIS - NIKE, INC. (INCLUDES 1999 FINANCIAL STATEMENTS)

USERS MUST BE ABLE TO APPLY AND UNDERSTAND financial statement analysis. They must study ratio and trend analysis for meaning. This analysis is the difficult aspect of interpreting financial statements. Chapters 6 through 10 have illustrated the technique of

calculating ratios for the analysis of Nike, Inc.

This summary analysis brings together the analysis in chapters 6 through 10 relating to Nike. It adds information on selected competitors and the industry. It also adds some common-size analysis.

NIKE — BACKGROUND INFORMATION

Bill Bowerman, head track coach, University of Oregon, teamed up with Philip Knight a former student, to form Blue Ribbon Sports in 1964. Blue Ribbon Sports became Nike in 1972. The name “Nike” was chosen because Nike was the Greek goddess of victory.

Nike specialized in athletic footwear until 1979. In 1979 the Nike apparel line appeared. In 1996 the Nike equipment division formed.

By 1999 Nike was the world’s largest supplier of athletic footwear and one of the world’s large suppliers of athletic apparel. Nike products are sold in approximately 110 countries. Nike is about the only sports footwear and apparel company with the infrastructure to sell extensively worldwide.

Bill Bowerman retired from the Board in June, 1999, and passed away in December, 1999. Philip Knight is the chairman of the Board & Chief Executive Officer of Nike.

ANALYSIS OF NIKE

Management Discussion and Analysis (See Annual Report)

Highlights

- In fiscal year 1999, net income increased 13% to \$451.4 million, or \$1.57 per diluted share. Net income included a net pre-tax restructuring charge of \$45.1 million, \$27.3 million after taxes, or \$0.10 per diluted.
- Excluding fiscal years 1999 and 1998 restructuring charges, fiscal 1999 net income remained constant with the prior year.
- Fiscal year 1999 revenues declined for the first time in five years, dropping 8% to \$8.78 billion.
- Gross margins as percentage of revenues improved to 37.4%, compared to 36.5% in the prior year.
- Selling and administrative expenses dropped by nearly \$200 million or 7.5%, and were 27.6% of revenues compared with 27.5% in the prior year.

Vertical Common-Size Statement of Income (Exhibit 1)

EXHIBIT 1		NIKE, INC.		
Vertical Common-Size Statement of Income				
Year Ended May 31				
	1999	1998	1997	
Revenues	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	
Costs and expenses:				
Costs of sales	62.59	63.49	59.90	
Selling and administrative	27.65	27.47	25.08	
Interest expense	.50	.63	.57	
Other income/expense, net	.24	.22	.35	
Restructuring charge	<u>.51</u>	<u>1.36</u>	<u>—</u>	
	<u>91.50</u>	<u>93.16</u>	<u>85.90</u>	
Income before income taxes	8.50	6.84	14.10	
Income taxes	<u>3.36</u>	<u>2.65</u>	<u>5.44</u>	
Net income	<u><u>5.14</u></u>	<u><u>4.18</u></u>	<u><u>8.66</u></u>	
Note: There are some rounding differences.				

Highlights (Exhibit 1)

- Cost of sales increased substantially in 1998, with some improvement in 1999.
- Selling and administrative expense increased substantially in 1998; 1999 was approximately the same as 1998.
- Interest expense increased substantially in 1998, with substantial improvement in 1999.
- Substantial restructuring charge in both 1998 and 1999.
- Income before income taxes declined substantially in 1998, with an improvement in 1999.

Horizontal Common-Size Statement of Income (Exhibit 2)

EXHIBIT 2		NIKE, INC.		
Horizontal Common Size Statement of Income				
Year Ended May 31				
	1999	1998	1997	
Revenues	95.54%	103.99%	100.00%	
Costs and expenses:				
Cost of sales	99.83	110.22	100.00	
Selling and administrative	105.33	113.90	100.00	
Interest expense	84.32	114.72	100.00	
Other income/expense, net	66.56	64.71	100.00	
Restructuring charge, net	N/A	N/A	—	
	101.76	112.78	100.00	
Income before income taxes	57.61	50.42	100.00	
Income taxes	59.01	50.74	100.00	
Net income	56.72	50.21	100.00	
Basic earnings per common share	57.61	50.00	100.00	
Diluted earnings per common share	58.58	50.37	100.00	

Highlights (Exhibit 2)

- Substantial decrease in revenue in 1999.
- Substantial increase in cost of sales in 1998, followed by a substantial decrease in 1999.
- Substantial increase in interest expense in 1998, followed by a substantial decrease in 1999.
- Income before income taxes declined materially in 1998, with some improvement in 1999.
- Net income declined materially in 1998, with some improvement in 1999 (same for earnings per share).

Three-Year Ratio Comparison (Exhibit 3)

The use of financial ratios can be very helpful in analysis, but caution must be exercised in drawing conclusions from the absolute numbers. Many potential problems were discussed in previous chapters. Keep these potential problems in mind when using ratios. Nike uses a year ended May 31, and has somewhat of a seasonal business. This could influence some of its ratios, particularly liquidity ratios.

EXHIBIT 3 NIKE, INC.**Three-Year Ratio Comparison**

	Unit	1999	1998	1997
Liquidity:				
Days' sales in receivables	Days	67.08	66.71	71.97
Accounts receivable turnover	Times per period	5.23	5.37	5.74
Accounts receivable turnover	Days	69.84	67.96	63.59
Days' sales in inventory	Days	79.69	84.03	88.79
Merchandise inventory turnover	Times per period	4.23	4.44	4.85
Inventory turnover	Days	86.24	82.29	75.27
Operating cycle	Days	156.08	150.25	138.86
Working capital (in millions)		1,818.0	1,828.8	1,964.0
Current ratio	NA	2.26	2.07	2.05
Acid-test ratio	NA	1.20	1.05	1.18
Cash ratio	NA	.14	.06	.24
Sales to working capital	Times per period	4.81	5.04	4.68
Operating cash flow/current maturities of long-term debt and notes payable	Times per period	2.29	1.07	.58
Long-term debt-paying ability:				
Times interest earned	Times per period	15.49	10.72	24.45
Fixed charge coverage	Times per period	8.85	6.89	16.54
Debt ratio	%	36.46	39.57	41.14
Debt equity	%	57.37	65.48	69.88
Debt to tangible net worth	%	65.79	75.58	81.93
Operating cash flow/total debt	%	50.23	24.23	14.65
Profitability:				
Net profit margin	%	5.14	4.18	8.66
Restructuring charge removed		5.45	5.00	8.66
Total asset turnover	Times per period	1.65	1.78	1.97
Return on assets		8.48	7.43	17.09
Restructuring charge removed		8.99	8.91	17.09
Operating income margin	%	9.76	9.04	15.02
Operating asset turnover	Times per period	1.90	2.02	2.32
Return on operating assets	%	18.59	18.30	34.92
Sales to fixed assets	Times per period	9.54	11.40	11.73
Return on investment	%	12.76	12.14	27.70
Restructuring charge removed		13.49	14.35	27.70
Return on total equity	%	13.68	12.45	28.49
Restructuring charge removed		14.51	14.92	28.49
Return on common equity	%	13.68	12.45	28.49
Restructuring charge removed		14.51	14.92	28.49
Gross profit margin	%	37.41	36.51	40.10
Investor analysis:				
Degree of financial leverage	NA	1.06	1.09	1.04
Restructuring charge removed		1.06	1.08	1.04
Earnings per share	\$	1.57	1.35	2.68
Price/earnings ratio	NA	38.81	34.07	21.46
Percentage of earnings retained	%	69.96	66.74	86.39
Dividend payout ratio	%	29.30	34.07	14.18
Dividend yield	%	.79	1.04	.70
Book value per share	\$	11.81	11.36	10.71
Materiality of option compensation expense:				
Pro forma/Reported net income	%	96.21	97.27	99.11
Pro forma/Reported earnings per share	%	96.18	97.78	99.25
Operating cash flow per share	\$	3.33	1.75	1.09
Operating cash flow/cash dividends	Times per year	7.06	4.07	3.20
Year-end market price	\$	60.938	46.00	57.50

Liquidity

- Mixed results as to liquidity of receivables. Days' sales in receivables declined, which would be a good trend. Turnover of receivables declined, which would be a negative.
- Mixed results as to liquidity of inventory. Days' sales in inventory declined, which would be a good trend. Turnover of inventory declined, which would be a negative.
- Operating cycle increased. In general we would like to reduce the operating cycle.
- The current ratio and the acid-test increased, indicating improved liquidity.
- The cash ratio indicates reduced liquidity, with some improvement in 1999.
- Sales to working capital improved slightly.
- Material improvement in operating cash flow in relation to current maturities of long-term debt and notes payable.

Summary

In general, liquidity improved and appears to be good.

Long-term debt-paying ability

- Substantial decline in coverage of interest and fixed charges in 1998, but both improved in 1999.
- Substantial improvement on the balance sheet as indicated by the debt ratio, debt equity, and debt to tangible net worth.
- Substantial improvement in operating cash flow in relation to total debt.

Summary

Long-term debt-paying ability improved and appears to be good.

Profitability

- Major decline in profitability when 1997 is considered to be the base. Many ratios indicate somewhat of an improvement in 1999.

Summary

Material decline in profitability in 1998, followed by some improvement in 1999. In general, profitability appears to be good.

Investor analysis

- Degree of financial leverage indicates that Nike is not highly leveraged.
- Earnings per share declined materially in 1998, followed by a substantial increase in 1999.
- Price/earnings ratio increased materially between 1997 and 1999. The stock market price improved slightly, while the earnings declined materially.
- Percentage of earnings retained decreased materially, but there is still a substantial percentage of earnings retained.
- Dividend yield is immaterial.
- Book value per share increased somewhat.
- Materiality of options compensation expense appears to be immaterial.
- Operating cash flow per share increased materially in 1998 and 1999.
- Cash dividend is covered well by operating cash flow, and the coverage has materially increased.
- The year-end market price increased slightly between 1997 and 1999.

Summary

Investor indicators are mixed but appear to be relatively good

Ratio Comparison with Selected Competitors (Exhibit 4)

Reebok and Converse were selected as competitors for ratio comparison. Both of these companies are United States companies that are in the athletic shoe and apparel business. They are somewhat smaller than Nike, as indicated by revenue and total assets. Nike is the dominant company in the athletic shoe and apparel business.

Revenue:

Nike	\$8,776,900,000	(Year ended May 31, 1999)
Reebok	\$3,224,592,000	(Year ended December 31, 1998)
Converse	\$349,335,000	(Fiscal year ended January 2, 1999)

Total Assets:

Nike	\$5,247,700,000	(May 31, 1999)
Reebok	\$1,739,624,000	(December 31, 1998)
Converse	\$234,694,000	(January 2, 1999)

Again, caution must be exercised in drawing conclusions from the absolute numbers. Keep potential problems in mind when drawing conclusions. Some of the potential problems on this comparison are the different year-ends, somewhat seasonal business, and different size of firms. This could influence some of the ratios, particularly liquidity ratios.

Liquidity

- In the receivables area Reebok appears to be better than Nike, with Converse trailing.
- Nike appears to be materially ahead of the competition in the inventory area.
- Nike's operating cycle appears to be materially lower than the competition. This is a positive liquidity indication.
- Nike's current ratio and acid-test ratio is higher than Reebok and materially higher than Converse.
- Nike's sales to working capital is somewhat better than Reebok. Converse has a very high sales to working capital. For Converse, this may indicate an inadequate working capital.
- Operating cash flow/current maturities of long-term debt and notes payable appears to be materially better for Nike than the competition.

Summary

Nike's liquidity position appears to be somewhat better than Reebok and materially better than Converse.

Long-term debt-paying ability

- Nike has a superior debt position, as indicated by the times interest earned and the fixed charge coverage.
- Nike has a superior debt position, as indicated by the debt ratio, debt equity, and debt to tangible net worth.
- Nike's operating cash flow/total debt is materially better than the competition.

Summary

Nike's debt indicators appear to be materially better than the debt indicators for the competition.

Profitability

- Net profit margin, return on assets, operating income margin, return on operating assets, return on investment, return on total equity and return on common equity are materially better for Nike than for the competitors.

EXHIBIT 4

NIKE, INC.

Ratio Comparison with Selected Competitors

Year Ended May 31, 1999 (Nike), Year Ended December 31, 1998 (Reebok), and Fiscal Year Ended January 2, 1999 (Converse)

	Unit	Nike 1999	Reebok 1998	Converse 1998
Liquidity:				
Days' sales in receivables	Days	67.08	63.98	70.92
Accounts receivable turnover	Times per period	5.23	5.51	4.60
Accounts receivable turnover	Days	69.84	66.27	79.34
Days' sales in inventory	Days	79.69	95.87	109.49
Merchandise inventory turnover	Times per period	4.23	3.71	2.86
Inventory turnover	Days	86.24	98.43	127.45
Operating cycle	Days	156.08	164.70	206.79
Working capital (in millions)	\$	1,818.0	749.5	7.1
Current ratio	NA	2.26	2.22	1.05
Acid-test ratio	NA	1.20	1.14	.45
Cash ratio	NA	.14	.29	2.43
Sales to working capital	Times per period	4.81	4.30	43.69
Operating cash flow/current maturities of long-term debt and notes payable	Times per period	2.29	1.13	.06
Long-term debt-paying ability:				
Times interest earned	Times per period	15.49	1.61	Negative numerator
Fixed charge coverage	Times per period	8.85	1.49	Negative numerator
Debt ratio	%	36.46	69.86	135.54
Debt equity	%	57.37	231.75	Negative denominator
Debt to tangible net worth	%	65.79	266.66	Negative denominator
Operating cash flow/total debt	%	50.23	12.49	.21
Profitability:				
Net profit margin	%	5.14	.78	Negative numerator
Restructuring charge removed		5.45	1.51	—
Total asset turnover	Times per period	1.65	1.84	1.44
Return on assets		8.48	1.44	Negative numerator
Restructuring charge removed		8.99	2.79	—
Operating income margin	%	9.76	4.46	Negative numerator
Operating asset turnover	Times per period	1.90	1.97	1.69
Return on operating assets	%	18.59	8.79	Negative numerator
Sales to fixed assets	Times per period	9.54	19.57	15.07
Return on investment	%	12.76	5.75	Negative numerator
Restructuring charge removed		13.49	7.80	—
Return on total equity	%	13.68	4.64	Negative numerator
Restructuring charge removed		14.51	9.23	—
Return on common equity	%	13.68	4.64	Negative numerator
Restructuring charge removed		14.51	9.23	—
Gross profit margin	%	37.41	36.81	22.92
Investor analysis:				
Degree of financial leverage	NA	1.06	2.64	Negative numerator & denominator
Restructuring charge removed		1.06	1.84	(1.32)
Earnings per share	\$	1.57	.42	Negative denominator
Price/earnings ratio	NA	38.81	35.42	Negative numerator & denominator
Percentage of earnings retained	%	69.96	100.00	Negative denominator
Dividend payout ratio	%	29.30	0.00	Negative denominator
Dividend yield	%	.79	.00	.00
Book value per share	\$	11.81	9.27	Negative numerator
Materiality of option compensation expense:				
Pro forma/Reported net income	%	96.21	112.88	Negative numerator
Pro forma/Reported earnings per share	%	96.18	116.67	Negative numerator
Operating cash flow per share	\$	3.33	2.66	.03
Operating cash flow/cash dividends	Times per year	7.06	No Dividends	No Dividends
Year-end market price	\$	60.938	14.875	2.375

- Total asset turnover and operating asset turnover appear to be somewhat better for Reebok.
- Sales to fixed assets is better for Reebok and Converse. It is difficult to draw conclusions from this, since much of the production is done by other companies.
- Gross profit margin is slightly better for Nike than Reebok and materially better than Converse.

Summary

Nike's profitability appears to be materially better than the profitability of these competitors.

Investor analysis

- Degree of financial leverage is low for Nike and much higher for Reebok. A meaningful number could not be computed for Converse.
- Earnings per share is much higher for Nike than Reebok. Converse had a loss.
- The price/earnings ratio is somewhat higher for Nike than Reebok. A meaningful number could not be computed for Converse.
- Only Nike pays a dividend. Nike's percentage of earnings retained and dividend payout ratio appear to be conservative.
- Dividend yield is low for Nike and there is no dividend yield for Reebok or Converse.
- Book value per share is somewhat higher for Nike than Reebok. Book value per share is negative for Converse.
- Operating cash flow per share is materially better for Nike than Reebok or Converse.
- Operating cash flow/cash dividends appears to be good at Nike. This is not an issue for the competitors because they do not pay a dividend.
- Year-end market price is materially higher for Nike than it is for Reebok or Converse.

Summary

In general the investor analysis appears to be better for Nike than for its competitors.

Ratio Comparison with Industry (Exhibit 5)

Comparison with the industry is frequently a problem as to the quality of the comparison. The companies in the industry will typically be using different accounting methods. An example would be costing of inventory, with some companies using LIFO, some using FIFO and some using an average. Industry ratios frequently do not address issues such as income statement unusual or infrequent items, equity earnings, discontinued operations, extraordinary items, or minority earnings.

The industry ratios available are frequently of a broader industry coverage than the ideal. Nike is under SIC Rubber & Plastics footwear (3021). Robert Morris Associates Annual Statement Studies publishes some industry material using SIC 3021. The U.S. Department of Commerce publishes Quarterly Financial Report for Manufacturing, Mining and Trade Corporations. This publication has industry numbers for a broader category, SIC Major Group 30. Dun & Bradstreet publishes Industry Norm & Key Business Ratios with the SIC Major Group 30.

Companies in the athletic shoe and athletic apparel business did not have good volume in 1998. This is in contrast to the general footwear and apparel sales, which increased moderately.

Although there are problems with using industry comparisons, the effort is usually beneficial. It is necessary to be cautious when drawing conclusions. You may want to review "Caution in Using Industry Averages" in Chapter 5.

EXHIBIT 5 NIKE, INC.**Ratio Comparison with Industry**

			Industry	
	Unit	Nike	Ratio	Source
Liquidity:				
Days' sales in receivables	Days	67.08	44.29	DC
Accounts receivable turnover	Times per period	5.23	7.20	RMA
Accounts receivable turnover	Days	69.84	49.86	RMA
Days' sales in inventory	Days	79.69	57.03	RMA
Merchandise inventory turnover	Times per period	4.23	6.40	RMA
Inventory turnover	Days	86.24	57.03	RMA
Operating cycle	Days	156.08	106.89	RMA
Working capital (in millions)	\$	1,818.0		Not applicable
Current ratio	NA	2.26	1.80	RMA
Acid-test ratio	NA	1.20	.90	RMA
Cash ratio	NA	.14	.24	DC
Sales to working capital	Times per period	4.81	8.30	RMA
Operating cash flow/current maturities of long-term debt and notes payable	Times per period	2.29		Not available
Long-term debt-paying ability:				
Times interest earned	Times per period	15.49	5.40	RMA
Fixed charge coverage	Times per period	8.85		Not available
Debt ratio	%	36.46	56.52	RMA
Debt equity	%	57.37	130.00	RMA
Debt to tangible net worth	%	65.79		Not available
Operating cash flow/total debt	%	50.23		Not available
Profitability:				
Net profit margin	%	5.14	4.26	DC
Total asset turnover	Times per period	1.65	4.94	DC
Return on assets		8.48	7.49	DC
Operating income margin	%	9.76	24.64	DC
Operating asset turnover	Times per period	1.90	4.60	RMA
Return on operating assets	%	18.59		Not available
Sales to fixed assets	Times per period	9.54	19.57	DC
Return on investment	%	12.76	5.75	Not available
Return on total equity	%	13.68	4.64	DC
Return on common equity	%	13.68	4.64	Not available
Gross profit margin	%	37.41	36.81	IN
Investor analysis:				
Degree of financial leverage	NA	1.06		Not available
Earnings per share	\$	1.57		Not available
Price/earnings ratio	NA	38.81	24.53	S&P
Percentage of earnings retained	%	69.96	61.87	DC
Dividend payout ratio	%	29.30		Not available
Dividend yield	%	.79	1.30	S&P
Book value per share	\$	11.81		Not applicable
Materiality of option compensation				
Pro forma/Reported net income	%	96.21		Not available
Pro forma/Reported earnings per share	%	96.18		Not available
Operating cash flow per share	\$	3.33		Not applicable
Operating cash flow/cash dividends	Times per year	7.06		Not available
Year-end market price	\$	60.938		Not applicable

Index: Industry statistics are directly from or computed from the following sources:

DC = U.S. Department of Commerce - Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations, SIC Major Group 30.

IN = Dun & Bradstreet - Industry Norm & Key Business Ratios - SIC Major Group 30.

RMA = Robert Morris Associates, Annual Statement Studies - SIC 3021.

S&P = Standard & Poor's, The Outlook, Super Composite 1,500

Liquidity

- Nike receivables appear to be substantially less liquid than the industry.
- Nike inventory appears to be substantially less liquid than the industry.
- With receivables and inventory being less liquid than the industry, the operating cycle is much longer for Nike than the industry.
- The current ratio and acid-test ratio are higher for Nike than the industry. This does not necessarily indicate better liquidity because of the longer operating cycle.
- Sales to working capital is substantially lower for Nike than the industry. This is likely caused by the higher receivables and inventory at Nike.

Summary

Nike's liquidity does not appear to be as good as the industry liquidity.

Long-term debt-paying ability

- Nike's times interest earned is materially better than the industry.
- Nike's debt position is much better than the industry, as indicated by the debt ratio and debt equity.

Summary

Nike's long-term debt-paying ability appears to be materially better than the industry.

Profitability

- Several ratios indicate better profitability for Nike than the industry. These ratios are net profit margin, return on assets, return on investment, return on total equity, return on common equity, and gross profit margin.
- Ratios indicating less profitability for Nike are total asset turnover, operating asset turnover, and sales to fixed assets.

Summary

Profitability of Nike appears to be better than the industry. This is especially the case considering return on investment, return on total equity, and return on common equity.

Investor analysis

- The price/earnings ratio is substantially higher for Nike.
- The dividend yield is much lower for Nike than the industry, but neither would be considered to be high.

Summary

Only a few comparisons were possible in the investor area. The price/earnings ratio tentatively indicates that investors look more favorably to the future prospects of Nike than they do of the industry.

SUMMARY

In general, the years 1997-1999 appear to be good for Nike in terms of liquidity. The current ratio and the acid-test ratio appear to be adequate.

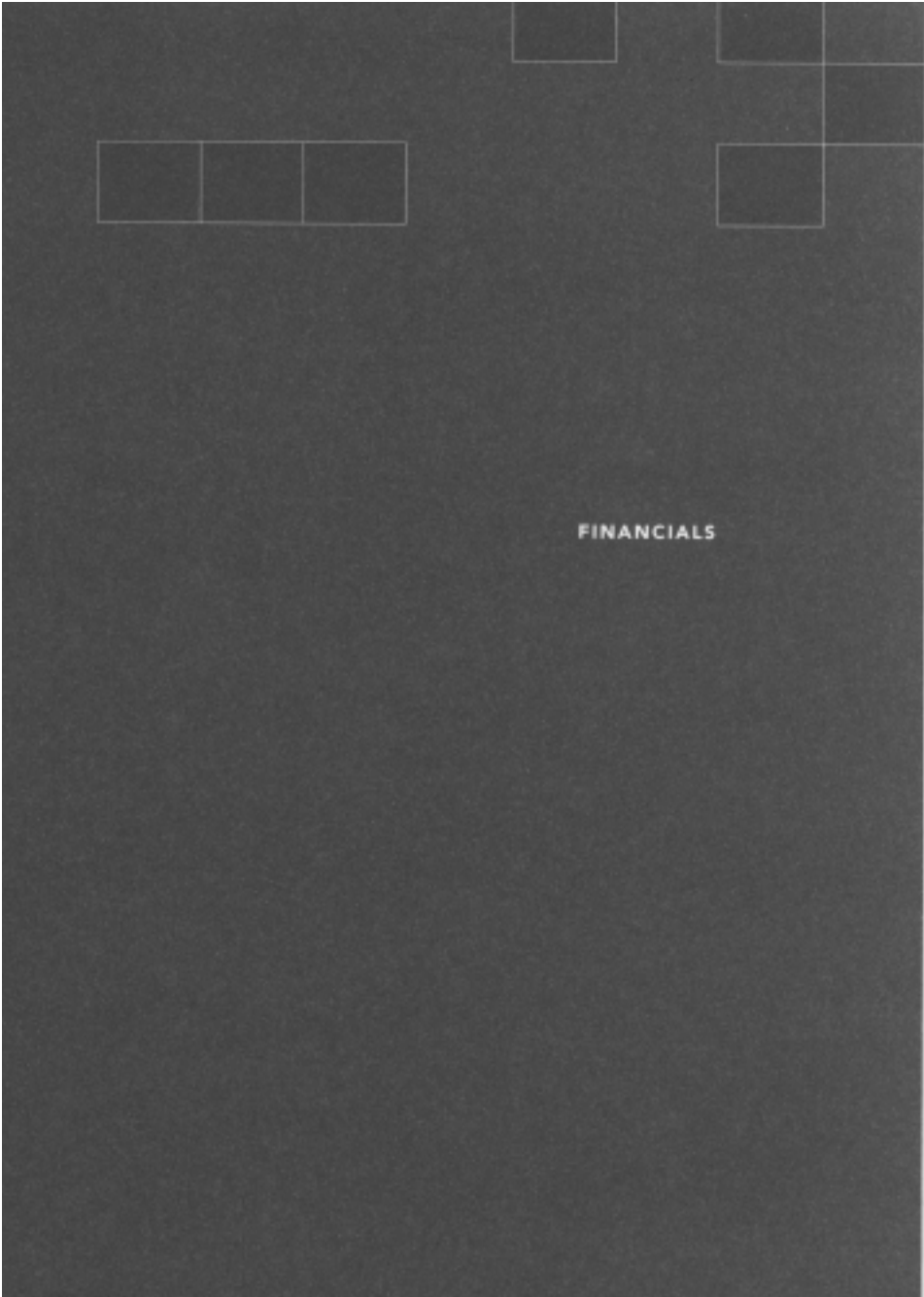
The debt position appears to be very good. This appears to be the case from an income statement view and a balance sheet view.

Profitability was down in 1998 and 1999, although profitability appears to be very good in these years when compared with competitors in the athletic shoe and athletic apparel business. Profitability appears to be better than the industry.

Nike appears to be a good company to sell products to on credit (liquidity would be particularly important) and to lend money to (liquidity and debt position would be particularly important). Nike's liquidity and debt position should also be considered when investing, but investors tend to pay a great deal of attention to profitability. Profits were down in 1998 compared with 1997 and improved in 1999. Profit comparison appears to be good when considering close competitors. Profitability appears to be better than the industry.

NIKE 1999 FINANCIAL STATEMENTS

Included here are the 1999 financials of Nike, with the exception of financial history (eleven-year selected summary), financial highlights, and selected quarterly financial data.



MANAGEMENT DISCUSSION AND ANALYSIS

1999

15

HIGHLIGHTS

- In fiscal year 1999, net income increased 13% to \$451.4 million, or \$1.57 per diluted share. Net income included a net pre-tax restructuring charge of \$45.1 million, \$27.3 million after taxes, or \$0.10 per diluted share.
- Excluding fiscal years 1999 and 1998 restructuring charges, fiscal 1999 net income remained constant with the prior year.
- Fiscal year 1999 revenues declined for the first time in five years, dropping 8% to \$8.78 billion.
- Gross margins as percentage of revenues improved to 37.4%, compared to 36.5% in the prior year.
- Selling and administrative expenses dropped by nearly \$200 million or 7.5%, and were 27.6% of revenues compared with 27.5% in the prior year.

RESULTS OF OPERATIONS

FISCAL 1999 COMPARED TO FISCAL 1998

Despite an overall revenue decline, net income increased 13% over the prior year. An improved gross margin percentage, reduced selling and administrative expenses, along with a lower net restructuring charge in fiscal 1999 compared to the prior year, primarily drove this increase. Excluding both the 1999 and 1998 restructuring charges, our net income was relatively flat year on year. Continued cost control activities and the effect of improved inventory levels on our margins were key factors that offset the effects of reduced revenues. Revenues decreased for the first time in five years. In the United States, revenues declined by 8%, Asia Pacific's revenues reduced by over a third compared to last year, while Europe revenues increased 8%. We put a considerable amount of effort into improving product buying patterns and, as a result, the composition and levels of inventory resulted in improved gross margins relative to a year ago. The activities associated with the fiscal 1998 restructuring charge helped to reduce selling and administrative expenses in fiscal 1999 by nearly \$200 million. We continue to evaluate our cost structure in light of existing and planned revenue levels. In fiscal 1999, we took specific action to improve operating efficiencies and reduce costs. Some of these actions resulted in a restructuring charge in fiscal year 1999 (see below and Note 13 for a more complete analysis of this charge).

Total NIKE brand revenues decreased 8% compared to fiscal 1998. Had this decrease been measured in dollars constant with that of the prior year, the net decrease would not have been materially different. The U.S., which represents our largest market segment, experienced the largest dollar reduction, decreasing \$415.7 million, or 8%. Sales of U.S. footwear decreased 7.3%, representing a decrease in pairs sold of 6.3% and a decrease in average selling price of 2.6%. The reduction in sales was primarily attributable to the continued soft retail environment as retailers adjusted their buying patterns to avoid inventory build-ups. Revenues from nearly all customer accounts and distribution channels were down. However, certain product categories improved over the prior year. Running, which is the largest U.S. footwear category, increased 3%, and Brand Jordan improved by 23%. Basketball and Training (which together with Running and Brand Jordan comprise over 56% of the total U.S. footwear business) decreased 30% and 26%, respectively. Apparel revenues in the U.S. decreased 11%. Three of the top five apparel categories experienced revenue decreases, including: Branded Athletic (down 20%); Accessories (down 30%); and Special Make-Up product (down 12%). Tee shirt revenues increased 5%, while Kids remained flat with last year.

Non-U.S. NIKE brand revenues decreased \$341.6 million, or 8.7%, an 8.0% decrease had the dollar remained constant with that of the prior year. Sales outside the USA now represent 43% of total NIKE brand revenues. Revenues in Europe increased 8% (6% in constant dollars), driven by a 26% increase in Apparel. Apparel sales in Europe surpassed the \$1 billion mark for the first time. During the last four years, Europe has experienced a 23% compounded annual revenue growth rate. Asia Pacific declined 33% in total revenues (29% in constant dollars), due to the continued weak market

16

conditions in that region. However, as discussed further below, increasing futures orders in that region, compared with the previous year, would indicate an improvement in this trend. The Americas region, including the start up operations of the Africa region, decreased 15%, (10% in constant dollars).

The countries outside the U.S. that represent the largest percentage of our total international businesses are: the United Kingdom, which increased 4% in real and constant dollars; Japan, which decreased 37% in real and constant dollars; France, which increased 16% (14% in constant dollars); Italy, which increased 13% (11% in constant dollars); Spain, which increased 8% (6% in constant dollars); Canada, which decreased 22%, (16% in constant dollars); and Germany, which increased 7% (4% in constant dollars).

The decrease in other brands is predominately due to reduced sales of in-line skating and roller hockey categories at Bauer NIKE Hockey. Other brands include Cole Haan, Bauer NIKE Hockey Inc., (formerly Bauer Inc.), Sports Specialties Corp., (NIKE Team Sports Inc. effective June 1, 1999), and NIKE IHM, Inc. (formerly Tetra Plastics, Inc.).

We currently expect that revenues in fiscal year 2000 will be up slightly compared to fiscal 1999. Futures orders (see further discussion below) is one indication of revenue trends over the next two quarters. Footwear futures orders are trending up in every region, and are positive in every region except the Americas. Apparel futures orders are mixed. In the U.S., apparel futures have trended down for seven straight quarters. In Europe apparel futures orders are strong, and they are significantly improved in Asia Pacific.

The breakdown of revenues follows:

(in millions)

MAY 31,	1999	1998	% CHG	1997	% CHG
USA Region					
Footwear	\$3,244.6	\$3,498.7	(7.3)%	\$3,753.6	(6.8)%
Apparel	1,385.3	1,556.3	(11.0)%	1,406.6	(10.6)%
Equipment and other	93.8	84.4	11.1%	41.4	103.9%
Total USA	4,723.7	5,139.4	(8.1)%	5,201.6	(1.2)%
Europe Region					
Footwear	1,182.7	1,266.6	(6.6)%	1,197.1	5.8%
Apparel	1,005.1	795.9	26.3%	592.0	34.4%
Equipment and other	68.0	33.6	102.4%	0.7	4700.0%
Total Europe	2,255.8	2,096.1	7.6%	1,789.8	17.1%
Asia Pacific Region					
Footwear	455.3	790.7	(42.4)%	859.0	(8.0)%
Apparel	366.0	453.4	(19.3)%	382.8	(18.4)%
Equipment and other	23.2	9.8	136.7%	0.1	9700.0%
Total Asia Pacific	844.5	1,253.9	(32.7)%	1,241.9	1.0%
Americas Region					
Footwear	335.8	403.0	(16.7)%	334.9	20.3%
Apparel	158.4	186.2	(14.9)%	112.2	66.0%
Equipment and other	12.9	9.8	31.6%	2.1	366.7%
Total Americas	507.1	599.0	(15.3)%	449.2	33.3%
Total Nike brand	8,331.1	9,088.4	(8.3)%	8,632.5	4.7%
Other brands	445.8	464.7	(4.1)%	504.0	(7.8)%
Total Revenues	\$8,776.9	\$9,553.1	(8.1)%	\$9,186.5	4.0%

[illegible]

Gross margins increased to 37.4% of revenues in fiscal 1999, up 90 basis points from the previous year. The increase over the prior year can be attributed to reduced levels of closeout product sales. In addition, we are selling a much greater percentage of our closeout product through our own factory outlets, which has resulted in improved gross margins on close-out sales and lower reserves against our overall inventory. While sales of in-line product decreased 7%, our closeout sales decreased by 14%. As a result, despite the decline in our in-line business in fiscal 1999, in-line sales increased to 92.2% of our overall business, an increase of 60 basis points over the prior year. Reducing our inventory levels was a key initiative for NIKE in fiscal year 1999. Our finished goods inventory decreased in all regions, most notably in Asia Pacific, which decreased 31%, Europe, which decreased 26%, and the U.S., which decreased 4%. Aggressive selling of U.S. apparel closeout inventories, and the effects of the foreign exchange rates on non-U.S. sales, predominately in Europe, negatively affected gross margins. Gross margins as a percentage of revenues should improve slightly in fiscal 2000, primarily due to a much improved inventory position going into the year compared with the same period last year. Selling and administrative expenses decreased nearly \$200 million compared to fiscal year 1998, and totalled 27.6% of revenues, up slightly from 27.5% in the prior year. Key drivers of this reduction were the actions taken in fiscal year 1998 to reduce our overall cost structure, which resulted in a restructuring charge in quarter four of fiscal year 1998. Although total NIKE brand salaries and wages increased 2% over the prior year, wholesale business salaries and wages decreased 7%, driven by the headcount reductions which occurred as part of the restructuring activities. Offsetting this were increases in salaries and wages of Retail operations, given the addition of 44 NIKE factory stores and 5 Niketowns over the last two years. Other significant reductions to selling and administrative expenses were advertising costs, which were down 19%, and sports marketing expenses, which were down 4%. As a percentage of revenues, selling and administrative costs in fiscal 2000 should be consistent with that of fiscal 1999. Although we have taken action to further align our costs with expected revenue levels, (see fiscal 1999 Restructuring Charge below), expenses in fiscal year 2000 will be affected by investments in a new company-wide system development project, planned start up activities around new NIKE Retail stores, increased spending for demand creation, and the transition into expanded headquarters in Oregon.

The reduction in interest expense of \$15.9 million (or 26.5%) compared to last year is due primarily to lower levels of short term borrowings given decreased working capital throughout the year. See further discussion under Liquidity and Capital Resources below.

Other income/expense was a net expense of \$21.5 million in fiscal 1999. Included in this amount is a credit of \$15.0 million related to the change in accounting for substantially all inventories in the U.S. from the last-in, first-out (LIFO) method to the first-in, first-out (FIFO) method. The change was effected in the fourth quarter of fiscal 1999 and was not considered significant to show the cumulative effect or to restate comparable income statements as dictated by Accounting Principles Board Opinion No. 20. This change was predicated on the fact that the LIFO method no longer matches the realities of how we do business. Exclusive of this credit, other income/expense was a net expense of \$36.5 million, an increase over the prior year of \$20.9 million. The increase is primarily attributable to the losses incurred on the disposal of assets of \$14.3 million, most significantly related to production and planning software development costs that were abandoned. The majority of the remainder of other income/expense is comprised of interest income, profit sharing expense, foreign exchange conversion gains and losses, and the amortization of goodwill, which remained relatively consistent with prior year amounts.

Worldwide futures and advance orders for NIKE brand athletic footwear and apparel scheduled for delivery from June through November 1999 totaled \$4.2 billion, 4% higher than such orders booked in the comparable period of fiscal 1999. The orders and percentage growth in these orders is not necessarily indicative of our expectation of revenue growth in subsequent periods. This is because the mix of orders can shift between advance/futures and at-once orders. In addition, exchange rate fluctuations as well as differing levels of order cancellations can cause differences in the comparisons between futures orders and actual revenues.

18

* FISCAL 1998 COMPARED TO FISCAL 1997

Decreasing revenue growth, a lower gross margin percentage and higher selling and administrative expenses, as well as a fourth quarter restructuring charge, all contributed to fiscal 1998's decrease in net income compared to the prior year. The Asian economic crisis and declining revenues in the United States were the primary reasons for the lower earnings. Consumer spending declined considerably in Asia during fiscal 1998 as a result of macroeconomic issues facing that region. As a result, revenue growth in the Asia Pacific region fell well short of our expectations, resulting in excess inventory levels and increased levels of discounted product sales, both having a negative impact on that region's gross margin percentage. Additionally, spending did not adjust as quickly as the sudden decline in revenue growth, resulting in significantly higher selling and administrative costs as a percentage of revenues in that region.

Revenues increased 4% over fiscal 1997, and would have increased 7% had the dollar remained constant with that of the prior year. Despite the economic issues facing the Asian markets, total non-U.S. revenues increased 12%, 21% on a constant dollar basis, and represented 43% of total NIKE revenues. Revenue increases were experienced in every region except the U.S.

The countries outside the U.S. that represented the largest percent of our total international business were: Japan, which increased 4% (13% in constant dollars); the United Kingdom, which increased 11% (10% in constant dollars); Canada which increased 32% (36% in constant dollars); France, which increased 15% (25% in constant dollars); Italy, which increased 35% in both real and constant dollars; and Spain, which increased 40% (54% in constant dollars). Notable countries that experienced revenue reductions were Korea which decreased 29% (7% in constant dollars) and Germany, which decreased 6% (but increased 7% in constant dollars).

U.S. revenues decreased 1% compared to the prior year. U.S. footwear and apparel revenues decreased 2% compared to the prior year. U.S. footwear, representing NIKE's largest market segment, decreased over \$255 million in sales, or 7%, representing a decrease in pairs sold of 3%, and a decrease of 4% in average selling price. The reduction in sales was primarily attributable to the glut of inventory at retail, which reduced customer order volumes and increased order cancellation rates. The decrease in average selling price was due to increased mix of lower priced product, given the higher volume of close-out sales. U.S. apparel increased \$150 million, or 11%, over the prior year. Nearly all categories experienced revenue increases, the largest individual categories being Training (up 10%), Accessories (up 6%), Kids (up 41%), Tee-shirts (up 5%) and Golf (up 57%).

Gross margins declined to 36.5% of revenues in fiscal 1998, down 360 basis points from the previous year. Significant to this decline were the increased levels of close-out sales at greatly reduced selling prices, and increased levels of inventory reserves against higher close-out inventory levels, particularly in the U.S. and Asia. The combination of these two factors reduced annual margins by more than 200 basis points. Other reasons for the reduced gross margin percentage were the strengthening of the U.S. dollar, which can inhibit our ability to price products competitively in international markets, fixed costs associated with distribution facilities, increasing royalty costs associated with athlete endorsement contracts, and increased levels of research and development costs.

Selling and administrative expenses increased \$320.1 million over the prior year, representing 27.5% of revenues compared to 25.1% in the prior year. The most significant increases were in the wage base, which was up 14% overall, led principally by the U.S. and Asia Pacific, endorsement contract-related costs, which were up 47% primarily as a result of significant new contracts in Soccer and Golf categories, along with enhanced arrangements with the NFL, WNBA, and NBA, and rent and depreciation, which were up 54% and 33%, respectively, relating principally to expanded Retail outlets and Niketown stores, along with capital projects in the distribution and computer infrastructure areas.

Interest expense increased \$7.7 million, or 14.6%, compared to the prior year. The increase was due to the addition of long-term debt of approximately \$100 million in June 1997, to fund capital projects, offset by lower levels of short-term borrowings.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000

As further explained in Note 1 to the Consolidated Financial Statements, prior to fiscal year 1997, certain of our non-U.S. operations reported their results of operations on a one month lag which allowed more time to compile results. Beginning in the first quarter of fiscal year 1997, the one month lag was eliminated and the May 1996 charge from operations for these entities of \$4.1 million was recorded to retained earnings. This change did not have a material effect on the annual results of operations.

During fiscal 1999, a \$60.1 million restructuring charge was incurred as a result of certain actions taken to better align our cost structure with expected revenue growth rates. As a result of the plans detailed below, we expect to remove approximately \$36 million from our cost structure in future years. Some of the savings will not be experienced for one to two years as personnel transitions are scheduled to occur over time.

The second major component of the 1999 charge was a write-off of certain equipment, hardware and software development costs at one of our U.S. distribution centers due to a change in strategy around how we flow product for a specific type of business.

115 (continued)

DESCRIPTION	CASH/NON-CASH	FY99 RESTRUCTURING CHARGE	ACTIVITY	RESERVE BALANCE AT 3/31/99
Elimination of Job Responsibilities				
Company-Wide		\$ (39.9)	\$ 21.9	\$ (18.0)
Severance packages	cash	(28.0)	11.7	(16.3)
Lease cancellations & commitments	cash	(2.4)	1.6	(0.8)
Write-down of assets	non-cash	(7.8)	7.8	—
Other	cash/non-cash	(1.7)	0.8	(0.9)
Change in warehouse distribution strategy		(20.2)	20.2	—
Write-down of assets	non-cash	(20.2)	20.2	—
Effect of foreign currency translation		—	0.1	0.1
Total		\$ (60.1)	\$ 42.2	\$ (17.9)

20

FISCAL 1998 RESTRUCTURING CHARGE

During the fourth quarter of fiscal 1998, we recorded a restructuring charge of \$129.9 million as a result of certain of our actions to better align our overall cost structure and organization with planned revenue levels. As a result of the specific plans described below, we were able to remove approximately \$100 million from our cost structure in fiscal 1999 and beyond. These savings were predominately due to reduced wage-related costs, reduced carrying cost of property, plant and equipment, reduced rent charges (associated with office and expatriate housing) and other miscellaneous savings.

During fiscal 1999, it was determined that a total of \$15 million of the restructuring accrual was not required due to changes in estimates related to severance payments of \$4 million, a \$3.6 million change in estimated vendor software costs related to Japan's software development, lease commitments of \$3 million due to changes in sub-leasing arrangements, and other changes of \$4 million. The \$15 million is included as an offset in the restructuring charge on the income statement.

The restructuring activities (shown below in tabular format) primarily related to the following:

The elimination of job responsibilities company-wide. Employees were terminated from all regions and almost all areas of NIKE, including marketing, sales and administrative areas. Related charges include severance packages, both cash payments made directly to terminated employees as well as outplacement services, lease cancellations and commitments, for both excess office space and expatriate employee housing, and write-down of assets no longer in use. Such assets, which include office equipment and expatriate employee housing and furniture have been sold or abandoned as of May 31, 1999. A total of 1,039 employees were terminated as part of the plan, of which 1,034 have been paid and have left NIKE as of May 31, 1999. The remaining five will receive their severance packages and leave during the first quarter of fiscal year 2000.

Downsizing of the Asia Pacific Headquarters in Hong Kong. We made the decision to reduce the size of the Asia Pacific headquarters' operations and to relocate the regional headquarter responsibilities to our worldwide headquarters in the U.S. Included in the restructuring charge are costs associated with the termination of employees, lease cancellations and commitments and the write-down of assets no longer in use. Such assets have been sold or abandoned as of May 31, 1999. A total of 118 employees were terminated as part of the plan. All of them have left and been paid their severance as of May 31, 1999.

Downsizing of the Japan distribution center. We are in the process of constructing a new distribution center in Japan. Due to the economic downturn in the Asia Pacific region and the impact on our business in Japan, the forecasted volume of inventories and product flow decreased significantly from the original plans. Because of this, we redesigned the distribution center to efficiently accommodate new forecasted volumes of inventories and product flow. The remaining amount of the accrual is a payment due to the software vendor involved and payment is expected to be made during the first quarter of fiscal year 2000.

Cancellation of endorsement contracts. As a result of the downturn in our business, we have refocused our marketing along core product categories. We went through a process of reviewing all endorsement contracts in non-core product categories and the charge included the final settlements for those contracts where termination agreements with endorsees were reached, releasing the endorsees from all contractual obligations. The final outstanding payment is expected to be made in the first quarter of fiscal year 2000.

Exiting certain manufacturing operations at Bauer NIKE Hockey subsidiary. The charge related to the decision to exit certain manufacturing operations at Bauer NIKE Hockey and consisted of machinery and equipment that has been sold or abandoned as of May 31, 1999, as well as the disposal of two operating plants. The two operating plants have been disposed of as of May 31, 1999. As a result of the reduced level of manufacturing operations, 51 employees were terminated, all of which have left as of May 31, 1999, however some severance payments have yet to be made and are expected to be paid in the first quarter of fiscal year 2000.

				1999	21
(in millions)					
DESCRIPTION	CASH/NON-CASH	FY98 RESTRUCTURING CHARGE	ACTIVITY	RESERVE BALANCE AT 5/31/99	
Elimination of Job Responsibilities Company-Wide		\$ (49.8)	\$ 46.5	\$ (3.3)	
Severance packages	cash	(29.1)	28.2	(0.9)	
Lease cancellations & commitments	cash	(10.8)	8.4	(2.4)	
Write-down of assets	non-cash	(9.6)	9.6	—	
Other	cash	(0.3)	0.3	—	
Downsizing the Asia Pacific Headquarters in Hong Kong		(13.1)	13.0	(0.1)	
Severance packages	cash	(4.6)	4.6	—	
Lease cancellations & commitments	cash	(5.5)	5.4	(0.1)	
Write-down of assets	non-cash	(3.0)	3.0	—	
Downsizing the Japan Distribution Center		(31.6)	30.5	(1.1)	
Write-off of assets	non-cash	(12.5)	12.5	—	
Software development costs	cash/non-cash	(19.1)	18.0	(1.1)	
Cancellation of Endorsement Contracts	cash	(5.6)	5.3	(0.3)	
Exiting Certain Manufacturing Operations at Bauer NIKE Hockey		(22.7)	21.7	(1.0)	
Write-down of assets	non-cash	(14.7)	14.7	—	
Divestiture of manufacturing facilities	non-cash	(5.2)	5.2	—	
Lease cancellations & commitments	cash	(1.6)	0.9	(0.7)	
Severance packages	cash	(1.2)	0.9	(0.3)	
Other		(7.1)	6.4	(0.7)	
Cash	cash	(0.6)	0.6	—	
Non-cash	non-cash	(6.5)	5.8	(0.7)	
Effect of foreign currency translation		—	0.2	0.2	
Total		\$ (129.9)	\$ 123.6	\$ (6.3)	

22

EURO CONVERSION

On January 1, 1999, eleven of the fifteen member countries of the European Union established permanent, fixed conversion rates between their existing currencies and the European Union's new common currency, the euro. During the transition period ending December 31, 2001, public and private parties may pay for goods and services using either the euro or the participating country's legacy currency. Beginning January 1, 2002, euro denominated bills and coins will be issued, with the legacy currencies being completely withdrawn from circulation on June 30, 2002.

We have had a dedicated project team working on euro strategy since January 1998. We are in the process of making modifications to information technology systems including marketing, order management, purchasing, invoicing, payroll, and cash management. Many of our systems are already euro compliant. Our plan is to have most systems converted to euro compliance by the end of calendar year 2000, well ahead of the end of the transitional period.

We believe the introduction of the euro may create a move towards a greater level of price harmonization although differing country costs and value added tax rates will continue to result in price differences at a retail level. We have a process in place to analyze price trends among countries. Currency exchange and hedging costs will typically be reduced, due to the introduction of the euro.

The costs of implementing the euro are generally related to modification of existing systems, and are estimated to be approximately \$14 million. These costs will be expensed as incurred. NIKE believes that the conversion to the euro will not be material to our financial condition or results of operations.

YEAR 2000

The Year 2000 issue (the "Year 2000" or "Y2K" issue) is the result of computer programs using two digits rather than four to define the applicable year. Such software may recognize a date using "00" as the year 1900 or some other year, rather than the year 2000. This could result in system failures or miscalculations leading to disruptions in NIKE's activities and operations. If we, our significant suppliers or customers fail to make necessary modifications, conversions and contingency plans on a timely basis, the Year 2000 issue could have a material adverse effect on our financial condition, results of operations or liquidity.

State of Readiness. PROJECT CATEGORIES. In May 1997, NIKE established a corporate-wide project team to oversee, monitor and coordinate the Company-wide Year 2000 effort. Our Year 2000 project focuses on three areas: (1) information technology (IT) systems, such as application software, mainframes, PCs, networks and production control systems; (2) non-IT systems, such as equipment, machinery, climate control and security systems, which may contain microcontrollers with embedded technology; and (3) suppliers and customers.

NIKE uses a four-phase approach to fix or replace non-compliant IT systems:

- (1) inventory, assessment of risks and impact and prioritization of projects:
 - Tier 1—critical (vital to business operations)
 - Tier 2—high priority (important to business operations)
 - Tier 3—moderate priority (minor disruption to operations expected if non-compliant)
 - Tier 4—low priority (will not disrupt operations even if non-compliant);
- (2) remediation (fix, replace or develop contingency plans for non-compliant systems);
- (3) testing (validation) and implementation; and
- (4) completion and auditing results where appropriate.

When appropriate, we have engaged the services of independent consultants to analyze and develop testing standards, quality assurance and contingency plans. We use our internal auditing department to review Year 2000 compliance and have consulted with external independent consultants to evaluate and review those results.

[illegible]

NON-IT PROJECTS. By early 1999, we had identified 27 major internal non-IT remediation projects worldwide. We have completed our assessment and prioritization of all of our major non-IT systems. We have designated all 27 of these projects as high priority. These include facilities that are critical to NIKE's business operations, potentially including equipment, machinery, climate control and security systems at regional headquarters, key distribution centers, and in countries with significant sales. We are currently remediating these priority non-IT projects and expect to complete them all as Year 2000 compliant by August 31, 1999. All other non-IT projects are classified as non-priority non-IT projects, which include climate control, security and mechanical systems in all other facilities. To the extent that these non-priority, non-IT projects may not be completed by December 31, 1999, we do not expect that any non-compliance or failure of these systems, individually or in the aggregate, will have a material adverse effect on NIKE's manufacturing, distribution, inventory control or the management and collection of our accounts receivable. For this reason, we have not set a completion date for remediation of the remaining non-priority non-IT systems.

SUPPLIERS AND CUSTOMERS. We have focused our Year 2000 compliance efforts on our significant suppliers and customers—those that are material to our business—and are assessing the Year 2000 readiness of these significant suppliers and customers. We have assessed the Year 2000 readiness of 469 of our suppliers, 163 of which we consider to be significant suppliers. We have also assessed the Year 2000 readiness of 151 customers, 59 of which we consider to be significant customers. We have relationships with significant suppliers and customers in most of the locations in which we operate. The level of preparedness of our significant suppliers and customers varies greatly from operation to operation and country to country. NIKE relies on suppliers to timely deliver a broad range of goods and services worldwide, including raw materials, footwear, apparel, accessories, equipment, advertising, transportation services, banking services, telecommunications and utilities. Moreover, our suppliers rely on countless other suppliers, over which we may have little or no influence regarding Year 2000 compliance.

We have sent surveys to all of our significant suppliers and customers to determine the extent to which we may be affected by those third parties' Y2K preparedness plans. A substantial majority of our significant suppliers and customers have not responded to our surveys, have not provided assurance of their Year 2000 readiness, or have not responded with sufficient detail for us to determine their Year 2000 readiness. In the absence of adequate responses, we are making independent assessments of our significant suppliers and customers and the countries in which they operate. These assessments include direct contact and discussions with persons coordinating Y2K compliance efforts for our significant suppliers and customers. We also research regulatory filings and other public information available to NIKE provided by our significant suppliers and customers and, in general, countries in which they operate. We have identified as higher risk many of the countries that have been widely identified by government agencies and public reports as being significantly behind in their Y2K status.

Contingency Plans. Having completed our identification and assessment of major projects, our “worst-case scenario” would be a failure of multiple significant suppliers to supply merchandise or services for a prolonged period of time that would materially impair our ability to ship product in a timely and reliable manner to our customers. Although the

24

occurrence of this scenario could have a material adverse effect on NIKE, we do not have a basis to determine at this time whether such a scenario is reasonably likely to occur. We believe that suppliers and customers present the area of greatest risk to disruption of our operations because of our limited ability to influence actions of third parties or to estimate the level and impact of their noncompliance throughout the extended supply chain.

We are currently developing contingency plans for our significant suppliers and customers, which we expect to finalize by September 30, 1999. In addition, we are developing contingency plans that assume some estimated level of non-compliance by, or business disruption to, certain other suppliers and customers on a case-by-case basis. We will continue to develop on an as-needed basis throughout 1999. We are also developing contingency plans for our Tier 1 IT systems, which we expect to finalize by August 31, 1999.

The contingency plans for our suppliers and customers include, where appropriate, (1) booking orders and manufacturing and shipping products before anticipated business disruptions, (2) shifting production capacity from facilities that NIKE determines to be at high risk of noncompliance or business disruption, (3) consolidating finance vendors and (4) temporarily discontinuing business with suppliers determined to be high risk of noncompliance or business disruption and finding alternative suppliers.

The contingency plans for our Tier 1 IT systems include, where appropriate, (1) manual work processes, (2) storing additional sets of backup data before critical process dates, (3) off-site system recovery, and (4) temporarily shifting production software from one hardware system to another. In addition, personnel we deem essential to system operation and recovery are scheduled to be available during high-risk periods.

We continually update our assessments and revise our contingency plans for our significant suppliers and customers as we receive additional information from them concerning their Y2K preparedness. However, judgments regarding contingency plans—such as how to develop them and to what extent—are subject to many variables and uncertainties. There can be no assurance that NIKE will correctly anticipate the level, impact or duration of noncompliance by its suppliers and customers. As a result, there is no certainty that our contingency plans will be sufficient to mitigate the impact of noncompliance by suppliers and customers and some material adverse effect to NIKE may result from one or more third parties regardless of our contingency plans. The failure of any contingency plans could have a material adverse effect on NIKE's financial condition, results of operations or liquidity.

Cost. Costs associated with our efforts around Year 2000 issues are expensed as incurred, unless they relate to the purchase of hardware and software, and software development, in which case they are capitalized. As of May 31, 1999, NIKE estimates that total costs related to the Year 2000 issue will be approximately \$110 to \$120 million, of which approximately \$91 million have been incurred. Of the \$91 million, approximately \$34 million are external expenses, \$15 million internal costs and \$42 million replacement projects. Approximately \$10 million of the non-replacement expenses will be capitalized; the remainder has been expensed as incurred. NIKE funds Year 2000 costs through operating cash flows. We presently believe that the total cost of achieving Year 2000 compliant systems will not be material to our financial condition, liquidity or results of operations.

Estimates of time, cost and risk estimates are based on currently available information. Developments that could affect estimates include, but are not limited to: the availability and cost of trained personnel; the ability to locate and correct all relevant computer code and systems; cooperation and Year 2000 readiness of our suppliers and customers (and their suppliers and customers); and the ability to correctly anticipate risks and implement suitable contingency plans in the event of system failures at NIKE or with our suppliers and customers (and their suppliers and customers).

The above section, even if incorporated by reference into other documents or disclosures, is a Year 2000 Readiness Disclosure as defined under the Year 2000 Information and Readiness Disclosure Act of 1998.

1999 25

RECENTLY ISSUED ACCOUNTING STANDARD

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, "Accounting for Derivative Instruments and Hedging Activities" (FAS 133). In May 1999, the Financial Accounting Standards

Board delayed the required implementation date by one year, making it effective for all fiscal quarters of fiscal years beginning after June 15, 2000 (June 1, 2001 for NIKE). This statement will require us to recognize all derivatives on the balance sheet at fair value. Changes in the fair value of derivatives will be recorded in current earnings or other comprehensive income, depending on the intended use of the derivative and the resulting designation. The ineffective portion of all hedges will be recognized in current-period earnings. Management has not yet determined the impact that the adoption of FAS 133 will have on NIKE's results from operations or financial position.

LIQUIDITY AND CAPITAL RESOURCES

NIKE's financial position remains strong at May 31, 1999. Shareholders' equity increased \$73 million and remained at \$3.3 billion. Compared to May 31, 1998 total assets decreased 3%, or \$149.7 million. Working capital decreased \$10.8 million to remain at \$1.8 billion, and NIKE's current ratio was 2.26:1 at May 31, 1999 compared to 2.07:1 at May 31, 1998.

Cash provided by operations reached nearly \$1 billion, an increase of \$443.5 million over the prior year, primarily due to increased net income and a significant reduction in working capital. Inventories decreased \$197 million, or 14%, as we focused on reducing the levels of excess and slow-moving inventory relative to a year ago. Accounts receivable decreased \$134 million, or 8%, primarily due to lower revenue levels as well as a slight improvement in our receivable collection days.

Additions to property, plant and equipment for fiscal year 1999 were \$384 million compared to \$506 million for fiscal year 1998. The largest single project was the expansion of our world headquarters. Other expenditures in the U.S. were for warehouse expansions, retail store additions and ongoing investments in systems infrastructure. Approximately \$144 million of the total additions occurred outside of the U.S. and were due mostly to warehouse and retail expansions. We expect fiscal year 2000 capital expenditures to be approximately \$200 million more than fiscal year 1999 levels, primarily due to the fact that we have, subsequent to the date of the financial statements, consummated a purchase of a distribution facility in Japan. Until recently we had intended to lease the facility. As part of the purchase, certain long-term debt obligations were assumed in the amount of approximately \$106 million. The remainder of the purchase was financed by short term borrowings.

Long term debt levels have remained consistent with that of prior year. In fiscal year 1997, we filed a shelf registration with the Securities and Exchange Commission (SEC) for the sale of up to \$500 million of debt securities. Under this program, we have issued \$300 million of medium-term notes, \$200 million in fiscal 1997, maturing December 1, 2003, and \$100 million in fiscal year 1998, maturing in three to five years. The proceeds were swapped into Dutch Guilders to obtain medium-term fixed rate financing to support the growth of our European operations. In February of 1999, we filed a shelf registration with the SEC for again, the sale of up to \$500 million in debt securities, of which \$200 million had been previously registered but not issued under the fiscal year 1997 registration discussed above.

In addition, during fiscal year 1999 we have used cash to reduce notes payable, fund property, plant and equipment additions, repurchase stock, and pay dividends.

Management believes that significant funds generated by operations, together with access to sufficient sources of funds, will adequately meet our anticipated operating, global infrastructure expansion, and capital needs. Significant short- and long-term lines of credit are maintained with banks which, along with cash on hand, provide adequate operating

liquidity. Our commercial paper program, under which there was \$179 million and \$92 million outstanding at May 31, 1999 and 1998, respectively, also provides liquidity.

Dividends per share of common stock for fiscal 1999 rose \$.02 over fiscal 1998 to \$.48 per share. Dividend declaration in all four quarters has been consistent since February 1984. Based upon current projected earnings and cash flow requirements, we anticipate continuing a dividend and reviewing its amount at the November Board of Directors meeting. Our policy continues to target an annual dividend in the range of 15% to 25% of trailing twelve-month earnings.

In the fourth quarter, NIKE purchased a total of 0.6 million shares of our Class B common stock for approximately \$37 million under the \$1 billion four-year program approved in December 1997. During all of fiscal 1999, we purchased 7.4 million shares for a total of \$302 million. Funding has, and is expected to continue to, come from operating cash flow in conjunction with short-term borrowings. The timing and the amount of shares purchased will be dictated by working capital needs and stock market conditions.

MARKET RISK

We are exposed to the impact of foreign currency fluctuations and interest rate changes due to our international sales, production, and funding requirements. In the normal course of business, we employ established policies and procedures to manage exposure to fluctuations in the value of foreign currencies and interest rates using a variety of financial instruments. It is our policy to utilize financial instruments to reduce risks where internal netting and other strategies cannot be effectively employed. Foreign currency and interest rate transactions are used only to the extent considered necessary to meet our objectives and we do not enter into foreign currency or interest rate transactions for speculative purposes.

In addition to product sales and costs, we have foreign currency risk related to debt that is denominated in currencies other than the U.S. dollar. Our foreign currency risk management objective is to protect cash flows resulting from sales, purchases and other costs from the adverse impact of exchange rate movements. Foreign exchange risk is managed by using forward exchange contracts and purchased options to hedge certain firm commitments and the related receivables and payables, including third party or intercompany transactions. Purchased currency options are used to hedge certain anticipated but not yet firmly committed transactions expected to be recognized within one year. By policy, we maintain hedge coverage between minimum and maximum percentages. Cross-currency swaps are used to hedge foreign currency denominated payments related to intercompany loan agreements. Hedged transactions are denominated primarily in European currencies, Japanese yen and Canadian dollar.

We are exposed to changes in interest rates primarily as a result of our long-term debt used to maintain liquidity and fund capital expenditures and international expansion. Our interest rate risk management objective is to limit the impact of interest rate changes on earnings and cash flows and to reduce overall borrowing costs. To achieve our objectives we maintain fixed rate debt as a percentage of aggregate debt and finance working capital needs through our payables agreement with Nissho Iwai American Corporation, various bank loans, and commercial paper.

MARKET RISK MEASUREMENT

We monitor foreign exchange risk and related derivatives use using a variety of techniques including a review of market value, sensitivity analysis, and Value-at-Risk (VaR). The VaR determines the maximum potential one-day loss in the fair value of foreign exchange rate-sensitive financial instruments. The VaR model estimates assume normal market conditions and a 95% confidence level. There are various modeling techniques that can be used in the VaR computation. Our computations are based on interrelationships between currencies and interest rates (a "variance/

1999

27

co-variance" technique). We determined these interrelationships by observing foreign currency market changes and interest rate changes over the preceding 90 days. The value of foreign currency options does not change on a one-to-one basis with changes in the underlying currency rate. We adjusted the potential loss in option value for the estimated sensitivity (the "delta" and "gamma") to changes in the underlying currency rate. The model includes all of our forwards, options, cross-currency swaps and yen-denominated debt (i.e., our market-sensitive derivative and other financial instruments as defined by the SEC). Anticipated transactions, firm commitments and accounts receivable and payable denominated in foreign currencies, which certain of these instruments are intended to hedge, were excluded from the model.

The VaR model is a risk analysis tool and does not purport to represent actual losses in fair value that we will incur, nor does it consider the potential effect of favorable changes in market rates. It also does not represent the maximum possible loss that may occur. Actual future gains and losses will differ from those estimated because of changes or differences in market rates and interrelationships, hedging instruments and hedge percentages, timing and other factors. The estimated maximum one-day loss in fair value on NIKE's foreign currency sensitive financial instruments, derived using the VaR model, was \$10.9 million and \$11.7 million at May 31, 1999 and May 31, 1998, respectively. We believe that this amount is immaterial and that such a hypothetical loss in fair value of our derivatives would be offset by increases in the value of the underlying transactions being hedged.

Our interest rate risk is also monitored using a variety of techniques. Notes 5 and 14 to the Consolidated Financial Statements outline the principal amounts, weighted average interest rates, fair values and other terms required to evaluate the expected cash flows and sensitivity to interest rate changes.

Special Note Regarding Forward-Looking Statements and Analyst Reports. Certain written and oral statements made or incorporated by reference from time to time by NIKE or its representatives in this report, other reports, filings with the Securities and Exchange Commission, press releases, conferences, or otherwise, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 ("the Act"). Forward-looking statements include, without limitation, any statement that may predict, forecast, indicate, or imply future results, performance, or achievements, and may contain the words "believe," "anticipate," "expect," "estimate," "project," "will be," "will continue," "will likely result," or words or phrases of similar meaning. Forward-looking statements involve risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. The risks and uncertainties are detailed from time to time in reports filed by NIKE with the SEC, including Forms 8-K, 10-Q, and 10-K, and include, among others, the following: international, national and local general economic and market conditions (including the current Asian economic problem); the size and growth of the overall athletic footwear, apparel, and equipment markets; intense competition among designers, marketers, distributors and sellers of athletic footwear, apparel, and equipment for consumers and end-users; demographic changes; changes in consumer preferences; popularity of particular designs, categories of products, and sports; seasonal and geographic demand for NIKE products; the size, timing and mix of purchases of NIKE's products; fluctuations and difficulty in forecasting operating results, including, without limitation, the fact that advance "futures" orders may not be indicative of future revenues due to the changing mix of futures and at-once orders; the ability of NIKE to sustain, manage or forecast its growth and inventories; new product development and introduction; the ability to secure and protect trademarks, patents, and other intellectual property; performance and reliability of products; customer service; adverse publicity; the loss of significant customers or suppliers; dependence on distributors; business disruptions; increased costs of freight and transportation to meet delivery deadlines; changes in business strategy or development plans; general risks associated with doing business outside the United States, including, without limitation, import duties, tariffs, quotas and political and economic instability; changes in government regulations; liability and other claims asserted against NIKE; the ability to attract and retain qualified personnel; and other factors referenced or incorporated by reference in this report and other reports.

The risks included here are not exhaustive. Other sections of this report may include additional factors which could adversely impact NIKE's business and financial performance. Moreover, NIKE operates in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for management to predict all such risk factors, nor can it assess the impact of all such risk factors on NIKE's business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

Investors should also be aware that while NIKE does, from time to time, communicate with securities analysts, it is against NIKE's policy to disclose to them any material non-public information or other confidential commercial information. Accordingly, shareholders should not assume that NIKE agrees with any statement or report issued by any analyst irrespective of the content of the statement or report. Furthermore, NIKE has a policy against issuing or confirming financial forecasts or projections issued by others. Thus, to the extent that reports issued by securities analysts contain any projections, forecasts or opinions, such reports are not the responsibility of NIKE.

FINANCIAL REPORTING

Management of NIKE, Inc. is responsible for the information and representations contained in this report. The financial statements have been prepared in conformity with the generally accepted accounting principles we considered appropriate in the circumstances and include some amounts based on our best estimates and judgments. Other financial information in this report is consistent with these financial statements.

Our accounting systems include controls designed to reasonably assure that assets are safeguarded from unauthorized use or disposition and which provide for the preparation of financial statements in conformity with generally accepted accounting principles. These systems are supplemented by the selection and training of qualified financial personnel and an organizational structure providing for appropriate segregation of duties.

An Internal Audit department reviews the results of its work with the Audit Committee of the Board of Directors, presently consisting of three outside directors. The Audit Committee is responsible for recommending to the Board of Directors the appointment of the independent accountants and reviews with the independent accountants, management and the internal audit staff, the scope and the results of the annual examination, the effectiveness of the accounting control system and other matters relating to the financial affairs of NIKE as they deem appropriate. The independent accountants and the internal auditors have full access to the Committee, with and without the presence of management, to discuss any appropriate matters.

REPORT OF INDEPENDENT ACCOUNTANTS

1999

29

Portland, Oregon
June 29, 1999
To the Board of Directors and
Shareholders of NIKE, Inc.

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income, of cash flows and of shareholders' equity present fairly, in all material respects, the financial position of NIKE, Inc. and its subsidiaries at May 31, 1999 and 1998, and the results of their operations and their cash flows for each of the three years in the period ended May 31, 1999, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PricewaterhouseCoopers LLP

30	NIKE, INC. CONSOLIDATED STATEMENT OF INCOME (in millions, except per share data)				
YEAR ENDED MAY 31,		1999	1998	1997	
Revenues		\$8,776.9	\$9,553.1	\$9,186.5	
Costs and expenses:					
Costs of sales		5,493.5	6,065.5	5,503.0	
Selling and administrative		2,426.6	2,623.8	2,303.7	
Interest expense (Notes 4 and 5)		44.1	60.0	52.3	
Other income/expense, net (Notes 1, 10 and 11)		21.5	20.9	32.3	
Restructuring charge, net (Note 13)		45.1	129.9	—	
		8,030.8	8,900.1	7,891.3	
Income before income taxes		746.1	653.0	1,295.2	
Income taxes (Note 6)		294.7	253.4	499.4	
Net income		\$451.4	\$399.6	\$795.8	
Basic earnings per common share (Notes 1 and 9)		\$1.59	\$1.38	\$2.76	
Diluted earnings per common share (Notes 1 and 9)		\$1.57	\$1.35	\$2.68	

NIKE, INC. CONSOLIDATED BALANCE SHEET (in millions)				1999	31
MAY 31,				1999	1998
ASSETS					
Current Assets:					
Cash and equivalents				\$ 198.1	\$ 108.6
Accounts receivable, less allowance for doubtful accounts of \$73.2 and \$71.4				1,540.1	1,674.4
Inventories (Note 2)				1,199.3	1,396.6
Deferred income taxes (Notes 1 and 6)				120.6	156.8
Income taxes receivable				15.9	—
Prepaid expenses (Note 1)				190.9	196.2
Total current assets				3,264.9	3,532.6
Property, plant and equipment, net (Note 3)				1,265.8	1,153.1
Identifiable intangible assets and goodwill (Note 1)				426.6	435.8
Deferred income taxes and other assets (Notes 1 and 6)				290.4	275.9
Total assets				\$5,247.7	\$5,397.4
LIABILITIES AND SHAREHOLDERS' EQUITY					
Current Liabilities:					
Current portion of long-term debt (Note 5)				\$ 1.0	\$ 1.6
Notes payable (Note 4)				419.1	480.2
Accounts payable (Note 4)				373.2	584.6
Accrued liabilities				653.6	608.5
Income taxes payable				—	28.9
Total current liabilities				1,446.9	1,703.8
Long-term debt (Notes 5 and 14)				386.1	379.4
Deferred income taxes and other liabilities (Notes 1 and 6)				79.8	52.3
Commitments and contingencies (Notes 12 and 15)				—	—
Redeemable Preferred Stock (Note 7)				0.3	0.3
Shareholders' equity:					
Common Stock at stated value (Note 8):					
Class A convertible – 100.7 and 101.5 shares outstanding				0.2	0.2
Class B – 181.6 and 185.5 shares outstanding				2.7	2.7
Capital in excess of stated value				334.1	262.5
Accumulated other comprehensive income				(68.9)	(47.2)
Retained earnings				3,066.5	3,043.4
Total shareholders' equity				3,334.6	3,261.6
Total liabilities and shareholders' equity				\$5,247.7	\$5,397.4

32	NIKE, INC. CONSOLIDATED STATEMENT OF CASH FLOWS (in millions)		
YEAR ENDED MAY 31,	1999	1998	1997
Cash provided (used) by operations:			
Net income	\$451.4	\$399.6	\$795.8
Income charges (credits) not affecting cash:			
Depreciation	198.2	184.5	138.0
Non-cash portion of restructuring charge	28.0	59.3	—
Deferred income taxes	37.9	(113.9)	(47.1)
Amortization and other	30.6	49.0	30.3
Changes in certain working capital components:			
Decrease (increase) in inventories	197.3	(58.0)	(416.7)
Decrease (increase) in accounts receivable	134.3	79.7	(485.6)
Decrease (increase) in other current assets and income taxes receivable	53.7	(12.6)	(56.9)
(Decrease) increase in accounts payable, accrued liabilities and income taxes payable	(170.4)	(70.1)	365.3
Cash provided by operations	961.0	517.5	323.1
Cash provided (used) by investing activities:			
Additions to property, plant and equipment	(384.1)	(505.9)	(465.9)
Disposals of property, plant and equipment	27.2	16.8	24.3
Increase in other assets	(60.8)	(87.4)	(43.8)
Increase (decrease) in other liabilities	1.2	(18.5)	(10.8)
Cash used by investing activities	(416.5)	(595.0)	(496.2)
Cash provided (used) by financing activities:			
Additions to long-term debt	—	101.5	300.5
Reductions in long-term debt including current portion	(1.5)	(2.5)	(5.2)
(Decrease) increase in notes payable	(61.0)	(73.0)	92.9
Proceeds from exercise of options	54.4	32.2	26.3
Repurchase of stock	(299.8)	(202.3)	—
Dividends – common and preferred	(136.2)	(127.3)	(100.9)
Cash (used) provided by financing activities	(444.1)	(271.4)	313.6
Effect of exchange rate changes on cash	(10.9)	12.1	(0.2)
Effect of May 1996 cash flow activity for certain subsidiaries (Note 1)	—	—	43.0
Net increase (decrease) in cash and equivalents	89.5	(336.8)	183.3
Cash and equivalents, beginning of year	108.6	445.4	262.1
Cash and equivalents, end of year	\$198.1	\$108.6	\$445.4
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	\$ 47.1	\$ 52.2	\$ 44.0
Income taxes	231.9	360.5	543.1

NIKE, INC. CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY (in millions)								1999	33
	COMMON STOCK				CAPITAL IN EXCESS OF STATED VALUE	ACCUMULATED OTHER COMPREHENSIVE INCOME	RETAINED EARNINGS	TOTAL	
	CLASS A		CLASS B						
	SHARES	AMOUNT	SHARES	AMOUNT					
BALANCE AT MAY 31, 1996	51.1	\$0.2	92.5	\$2.7	\$154.8	\$ (16.5)	\$2,290.2	\$2,431.4	
Stock options exercised			1.5		55.8			55.8	
Conversion to Class B Common Stock	(0.3)		0.3					—	
Two-for-one Stock Split October 23, 1996	50.9		93.3						
Dividends on Common Stock							(108.2)	(108.2)	
Comprehensive income:									
Net income							795.8	795.8	
Net income for the month ended May 1996, due to the change in fiscal year-end of certain non-U.S. operations (Note 1)							(4.1)	(4.1)	
Foreign currency translation (net of tax benefit of \$4.1)						(14.8)		(14.8)	
Comprehensive income						(14.8)	791.7	776.9	
BALANCE AT MAY 31, 1997	101.7	0.2	187.6	2.7	210.6	(31.3)	2,973.7	3,155.9	
Stock options exercised			2.1		57.2			57.2	
Conversion to Class B Common Stock	(0.2)		0.2					—	
Repurchase of Class B Common Stock			(4.4)		(5.3)		(197.0)	(202.3)	
Dividends on Common Stock							(132.9)	(132.9)	
Comprehensive income:									
Net income							399.6	399.6	
Foreign currency translation (net of tax benefit of \$4.4)						(15.9)		(15.9)	
Comprehensive income						(15.9)	399.6	383.7	
BALANCE AT MAY 31, 1998	101.5	0.2	185.5	2.7	262.5	(47.2)	3,043.4	3,261.6	
Stock options exercised			2.7		80.5			80.5	
Conversion to Class B Common Stock	(0.8)		0.8					—	
Repurchase of Class B Common Stock			(7.4)		(8.9)		(292.7)	(301.6)	
Dividends on Common Stock							(135.6)	(135.6)	
Comprehensive income:									
Net income							451.4	451.4	
Foreign currency translation (net of tax benefit of \$6.1)						(21.7)		(21.7)	
Comprehensive income						(21.7)	451.4	429.7	
BALANCE AT MAY 31, 1999	100.7	\$0.2	181.6	\$2.7	\$334.1	\$ (68.9)	\$3,066.5	\$3,334.6	

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis of consolidation: The consolidated financial statements include the accounts of NIKE, Inc. and its subsidiaries (the Company). All significant intercompany transactions and balances have been eliminated. Prior to fiscal year 1997, certain of the Company's non-U.S. operations reported their results of operations on a one month lag which allowed more time to compile results. Beginning in the first quarter of fiscal year 1997, the one month lag was eliminated. As a result, the May 1996 charge from operations for these entities of \$4.1 million was recorded directly to retained earnings in the first quarter of fiscal year 1997.

Recognition of revenues: Revenues recognized include sales plus fees earned on sales by licensees. Sales are recognized upon shipment of product.

Advertising and Promotion: Advertising production costs are expensed the first time the advertisement is run. Media (TV and print) placement costs are expensed in the month the advertising appears. Accounting for endorsement contracts, the majority of the Company's promotional expenses, is based upon specific contract provisions. Generally, endorsement payments are expensed uniformly over the term of the contract after giving recognition to periodic performance compliance provisions of the contracts. Contracts requiring prepayments are included in prepaid expenses or other assets depending on the length of the contract. Total advertising and promotion expenses were \$978.6 million, \$1.13 billion and \$978.3 million for the years ended May 31, 1999, 1998 and 1997, respectively. Included in prepaid expenses and other assets was \$152.2 million and \$175.9 million at May 31, 1999 and 1998, respectively, relating to prepaid advertising and promotion expenses.

Cash and equivalents: Cash and equivalents represent cash and short-term, highly liquid investments with original maturities of three months or less.

Inventory valuation: Inventories are stated at the lower of cost or market. All non-U.S. inventories are valued on a first-in, first-out (FIFO) basis. In the fourth quarter of fiscal year 1999, the Company changed its method of determining cost for substantially all of its U.S. inventories from last-in, first-out (LIFO) to FIFO. See Note 11.

Property, plant and equipment and depreciation: Property, plant and equipment are recorded at cost. Depreciation for financial reporting purposes is determined on a straight-line basis for buildings and leasehold improvements and principally on a declining balance basis for machinery and equipment, based upon estimated useful lives ranging from two to forty years.

Identifiable intangible assets and goodwill: At May 31, 1999 and 1998, the Company had patents, trademarks and other identifiable intangible assets with a value of \$213.0 million and \$220.7 million, respectively. The Company's excess of purchase cost over the fair value of net assets of businesses acquired (goodwill) was \$324.8 million and \$321.0 million at May 31, 1999 and 1998, respectively.

Identifiable intangible assets and goodwill are being amortized over their estimated useful lives on a straight-line basis over five to forty years. Accumulated amortization was \$111.2 million and \$105.9 million at May 31, 1999 and 1998, respectively. Amortization expense, which is included in other income/expense, was \$19.4 million, \$19.8 million and \$19.8 million for the years ended May 31, 1999, 1998 and 1997, respectively. Intangible assets are periodically reviewed by the Company for impairments to assess if the fair value is less than the carrying value.

Foreign currency translation: Adjustments resulting from translating foreign functional currency financial statements into U.S. dollars are included in the currency translation adjustment, a component of accumulated other comprehensive income in shareholders' equity.

1999 35

Derivatives: The Company enters into foreign currency contracts in order to reduce the impact of certain foreign currency fluctuations. Firmly committed transactions and the related receivables and payables may be hedged with forward exchange contracts or purchased options. Anticipated, but not yet firmly committed, transactions may be hedged through the use of purchased options. Premiums paid on purchased options and any gains are included in prepaid expenses or accrued liabilities and are recognized in earnings when the transaction being hedged is recognized. Gains and losses arising from foreign currency forward and option contracts, and cross-currency swap transactions are recognized in income or expense as offsets of gains and losses resulting from the underlying hedged transactions. Hedge effectiveness is determined by evaluating whether gains and losses on hedges will offset gains and losses on the underlying exposures. This evaluation is performed at inception of the hedge and periodically over the life of the hedge. Occasionally, hedges may cease to be effective or may be terminated prior to recognition of the underlying transaction. Gains and losses on these hedges are deferred and included in the basis of the underlying transaction. Hedges are terminated if the underlying transaction is no longer expected to occur and the related gains and losses are recognized in earnings. Cash flows from risk management activities are classified in the same category as the cash flows from the related investment, borrowing or foreign exchange activity. See Note 15 for further discussion.

Income taxes: Income taxes are provided currently on financial statement earnings of non-U.S. subsidiaries expected to be repatriated. The Company intends to determine annually the amount of undistributed non-U.S. earnings to invest indefinitely in its non-U.S. operations.

The Company accounts for income taxes using the asset and liability method. This approach requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of other assets and liabilities. See Note 6 for further discussion.

Earnings per share: Basic earnings per common share is calculated by dividing net income by the average number of common shares outstanding during the year. Diluted earnings per common share is calculated by adjusting outstanding shares, assuming conversion of all potentially dilutive stock options.

On October 23, 1996 the Company issued additional shares in connection with a two-for-one stock split effected in the form of a 100% stock dividend on outstanding Class A and Class B common stock. The per common share amounts in the Consolidated Financial Statements and accompanying notes have been adjusted to reflect the stock split.

Management estimates: The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates, including estimates relating to assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Reclassifications: Certain prior year amounts have been reclassified to conform to fiscal year 1999 presentation. These changes had no impact on previously reported results of operations or shareholders' equity.

NOTE 2 - INVENTORIES:

Inventories by major classification are as follows:

MAY 31,	1999	1998
Finished goods	\$1,132.7	\$1,303.8
Work-in-progress	44.8	34.7
Raw materials	21.8	58.1
	\$1,199.3	\$1,396.6

The excess of replacement cost over LIFO cost was \$5.6 million and \$21.9 million at May 31, 1999 and May 31, 1998 respectively. As stated in Note 1, the Company changed its inventory valuation method for substantially all U.S. inventories in fiscal year 1999.

36

NOTE 3 - PROPERTY, PLANT AND EQUIPMENT:

Property, plant and equipment includes the following:

(in millions)

MAY 31,	1999	1998	
Land	\$ 99.6	\$ 93.0	
Buildings	374.2	337.3	
Machinery and equipment	923.3	887.4	
Leasehold improvements	273.4	253.7	
Construction in process	330.8	248.2	
	2,001.3	1,819.6	
Less accumulated depreciation	735.5	666.5	
	\$1,265.8	\$1,153.1	

Capitalized interest expense was \$6.9 million, \$6.5 million and \$2.8 million for the fiscal years ended May 31, 1999, 1998 and 1997, respectively.

NOTE 4 - SHORT-TERM BORROWINGS AND CREDIT LINES:

Notes payable to banks and interest bearing accounts payable to Nissho Iwai American Corporation (NIAC) are summarized below:

(in millions)

MAY 31,	1999		1998		
	BORROWINGS	INTEREST RATE	BORROWINGS	INTEREST RATE	
BANKS:					
Non-U.S. Operations	\$239.8	3.87%	\$368.4	6.47%	
U.S. Operations	179.3	4.85%	111.8	5.64%	
	\$419.1		\$480.2		
NIAC	\$ 98.0	5.30%	\$280.1	5.99%	

The Company has outstanding loans at interest rates at various spreads above the banks' cost of funds for financing non-U.S. operations. Certain of these loans are secured by accounts receivable and inventory. U.S. operations were funded principally with commercial paper.

[illegible]

Ratings for the Company to issue commercial paper, which is required to be supported by committed and uncommitted lines of credit, are A1 by Standard and Poor's Corporation and P1 by Moody's Investor Service. At May 31, 1999 there was \$179.3 million outstanding and at May 31, 1998 there was \$91.6 million outstanding under these arrangements.

The Company purchases through NIAC substantially all of the athletic footwear and apparel it acquires from non-U.S. suppliers. Accounts payable to NIAC are generally due up to 120 days after shipment of goods from the foreign port. Interest on such accounts payable accrues at the ninety day London Interbank Offered Rate (LIBOR) as of the beginning of the month of the invoice date, plus .30%.

At May 31, 1999, the Company had no outstanding borrowings under its \$500 million unsecured multiple option facility with 10 banks, which matures on October 31, 2002, and on May 31, 1999 the Company had no outstanding borrowings under its \$250 million unsecured multiple option facility with 8 banks, which matures on May 18, 2000. These agreements contain optional borrowing alternatives consisting of a committed revolving loan facility and a competitive bid facility. The interest rate charged on both the \$500 million and the \$250 million agreements is determined by the borrowing option and, under the committed revolving loan facility, is either the LIBOR rate plus .19% or the higher of the Fed Funds rate plus .50% or the Prime Rate. The \$500 million and the \$250 million agreements provide for annual fees of .07%, and .045% respectively, of the total commitment. Under these agreements, the Company must maintain, among other things, certain minimum specified financial ratios with which the Company was in compliance at May 31, 1999.

NOTE 5 - LONG-TERM DEBT:

Long-term debt includes the following:

See: [multilingual](#)

MAY 31,	1999	1998
6.375% Medium term notes, payable December 1, 2003	\$199.5	\$199.3
4.30% Japanese yen notes, payable June 26, 2011	84.6	77.1
6.51% Medium term notes, payable June 16, 2000	50.0	50.0
6.69% Medium term notes, payable June 17, 2002	50.0	50.0
Other	3.0	4.6
Total	387.1	381.0
Less current maturities	1.0	1.6
	\$386.1	\$379.4

In December of 1996, the Company filed a \$500 million shelf registration with the Securities and Exchange Commission (SEC) and issued \$200 million seven-year notes, maturing December 1, 2003. In June of 1997, the Company issued an additional \$100 million medium-term notes under this program with maturities of June 16, 2000 and June 17, 2002. Interest on these notes is paid semi-annually. The proceeds were subsequently exchanged for Dutch Guilders and loaned to a European subsidiary. The Company entered into swap transactions to hedge the foreign currency exposure related to the repayment of the intercompany loan. In February of 1999, the Company filed a shelf registration with the SEC for the sale of up to \$500 million in debt securities, of which \$200 million had been previously registered but not issued under the December 1996 registration.

In June of 1996, the Company's Japanese subsidiary borrowed 10.5 billion Japanese Yen in a private placement with a maturity of June 26, 2011. Interest is paid semi-annually. The agreement provides for early retirement after year ten.

The Company's long-term debt ratings are A by Standard and Poor's Corporation and A1 by Moody's Investor Service.

Amounts of long-term maturities in each of the five fiscal years 2000 through 2004 are \$1.0 million, \$31.0 million, \$0.4 million, \$50.2 million and \$199.6 million, respectively.

38

NOTE 4 – INCOME TAXES:

Income before income taxes and the provision for income taxes are as follows:

(in millions)

YEAR ENDED MAY 31,	1999	1998	1997	
Income before income taxes:				
United States	\$ 598.7	\$ 648.2	\$1,008.0	
Foreign	147.4	4.8	287.2	
	\$ 746.1	\$ 653.0	\$1,295.2	
Provision for income taxes:				
Current:				
United States				
Federal	\$ 210.2	\$ 258.4	\$ 359.4	
State	34.3	43.1	74.7	
Foreign	50.1	69.4	112.7	
	294.6	370.9	546.8	
Deferred:				
United States				
Federal	(7.6)	(40.2)	(21.1)	
State	4.0	(8.8)	(5.1)	
Foreign	3.7	(68.5)	(21.2)	
	0.1	(117.5)	(47.4)	
	\$ 294.7	\$ 253.4	\$ 499.4	

A benefit was recognized for foreign loss carryforwards of \$113.4 million at May 31, 1999 of which \$74.3 million, \$42.4 million, \$18.2 million and \$23.4 million expire in fiscal years 2003, 2004, 2005, and 2006, respectively. Foreign loss carryforwards of \$155.1 million do not expire.

As of May 31, 1999 the Company had utilized all foreign tax credits.

					1999	39

Deferred tax liabilities (assets) are comprised of the following:

(in millions)

MAY 31,	1999	1998	
Undistributed earnings of foreign subsidiaries	\$ 9.8	\$ 2.1	
Other	16.1	12.3	
Gross deferred tax liabilities	25.9	14.4	
Allowance for doubtful accounts	(16.2)	(18.8)	
Inventory reserves	(17.8)	(41.5)	
Deferred compensation	(33.2)	(30.8)	
Reserves and accrued liabilities	(59.0)	(68.1)	
Tax basis inventory adjustment	(17.8)	(19.5)	
Depreciation	(33.7)	(17.3)	
Foreign loss carryforwards	(94.6)	(89.6)	
Other	(18.4)	(19.9)	
Gross deferred tax assets	(290.7)	(305.5)	
Net deferred tax assets	\$(264.8)	\$(291.1)	

A reconciliation from the U.S. statutory federal income tax rate to the effective income tax rate follows:

YEAR ENDED MAY 31,	1999	1998	
U.S. Federal statutory rate	35.0%	35.0%	
State income taxes, net of federal benefit	3.3	3.4	
Other, net	1.2	0.4	
Effective income tax rate	39.5%	38.8%	

NOTE 7 - REDEEMABLE PREFERRED STOCK:

NIAC is the sole owner of the Company's authorized Redeemable Preferred Stock, \$1 par value, which is redeemable at the option of NIAC at par value aggregating \$0.3 million. A cumulative dividend of \$1.00 per share is payable annually on May 31 and no dividends may be declared or paid on the Common Stock of the Company unless dividends on the Redeemable Preferred Stock have been declared and paid in full. There have been no changes in the Redeemable Preferred Stock in the three years ended May 31, 1999. As the holder of the Redeemable Preferred Stock, NIAC does not have general voting rights but does have the right to vote as a separate class on the sale of all or substantially all of the assets of the Company and its subsidiaries, on merger, consolidation, liquidation or dissolution of the Company or on the sale or assignment of the NIKE trademark for athletic footwear sold in the United States.

40

NOTE B - COMMON STOCK:

The authorized number of shares of Class A Common Stock no par value and Class B Common Stock no par value are 110.0 million and 350.0 million, respectively. In fiscal year 1997 the Company announced a two-for-one stock split which was effected in the form of a 100% stock dividend on outstanding Class A and Class B Common Stock, paid October 23, 1996. Each share of Class A Common Stock is convertible into one share of Class B Common Stock. Voting rights of Class B Common Stock are limited in certain circumstances with respect to the election of directors.

The Company's Employee Incentive Compensation Plan (the "1980 Plan") was adopted in 1980 and expired on December 31, 1990. The 1980 Plan provided for the issuance of up to 13.4 million shares of the Company's Class B Common Stock in connection with the exercise of stock options granted under such plan. No further grants will be made under the 1980 Plan.

In 1990, the Board of Directors adopted, and the shareholders approved, the NIKE, Inc. 1990 Stock Incentive Plan (the "1990 Plan"). The 1990 Plan provides for the issuance of up to 25.0 million shares of Class B Common Stock in connection with stock options and other awards granted under such plan. The 1990 Plan authorizes the grant of incentive stock options, non-statutory stock options, stock appreciation rights, stock bonuses, and the sale of restricted stock. The exercise price for incentive stock options may not be less than the fair market value of the underlying shares on the date of grant. The exercise price for non-statutory stock options and stock appreciation rights, and the purchase price of restricted stock, may not be less than 75% of the fair market value of the underlying shares on the date of grant. No consideration will be paid for stock bonuses awarded under the 1990 Plan. The 1990 Plan is administered by a committee of the Board of Directors. The committee has the authority to determine the employees to whom awards will be made, the amount of the awards, and the other terms and conditions of the awards. As of May 31, 1999, the committee has granted substantially all non-statutory stock options at 100% of fair market value on the date of grant under the 1990 Plan.

In addition to the option plans discussed above, the Company has several agreements outside of the plans with certain directors, endorers and employees. As of May 31, 1999, 8.0 million options with exercise prices ranging from \$0.417 per share to \$53.625 per share had been granted. The aggregate compensation expenses related to these agreements is \$21.3 million and is being amortized over vesting periods from October 1980 through December 2001. The outstanding agreements expire through December 2009.

During 1995, the Financial Accounting Standards Board issued SFAS 123, "Accounting for Stock Based Compensation," which defines a fair value method of accounting for an employee stock option or similar equity instrument and encouraged, but does not require, all entities to adopt that method of accounting. Entities electing not to adopt the fair value method of accounting must make pro forma disclosures of net income and earnings per share, as if the fair value based method of accounting defined in this statement has been applied.

The Company has elected not to adopt the fair value method; however, as required by SFAS 123, the Company has computed for pro forma disclosure purposes, the value of options granted during fiscal years 1999, 1998 and 1997 using the Black-Scholes option pricing model. The weighted average assumptions used for stock option grants for 1999, 1998 and 1997 were a dividend yield of 1%, expected volatility of the market price of the Company's common stock of 34% for 1999, 32% for 1998 and 30% for 1997, a weighted-average expected life of the options of approximately five years and interest rates of 5.48% and 4.93% for fiscal 1999, 4.38% and 4.28% for fiscal 1998 and 6.42% and 6.56% for fiscal 1997. These interest rates are reflective of option grant dates made throughout the year.

Options were assumed to be exercised over the 5 year expected life for purposes of this valuation. Adjustments for forfeitures are made as they occur. For the years ended May 31, 1999, 1998 and 1997, the total value of the options granted, for which no previous expense has been recognized, was computed as approximately \$61.6 million, \$31.9 million and \$29.1 million respectively, which would be amortized on a straight-line basis over the vesting period of the options. The weighted average fair value per share of the options granted in 1999, 1998 and 1997 are \$17.33, \$18.54 and \$17.39 respectively.

1999

41

If the Company had accounted for these stock options issued to employees in accordance with SFAS 123, the Company's pro forma net income and pro forma net income per share would have been reported as follows:

(in millions, except per share data)

YEAR ENDED MAY 31,	1999			1998			1997		
	NET INCOME	DILUTED EPS	BASIC EPS	NET INCOME	DILUTED EPS	BASIC EPS	NET INCOME	DILUTED EPS	BASIC EPS
As reported	\$451.4	\$1.57	\$1.59	\$399.6	\$1.35	\$1.38	\$795.8	\$2.68	\$2.76
Pro Forma	434.3	1.51	1.53	388.7	1.32	1.35	788.7	2.66	2.73

The pro forma effects of applying SFAS 123 may not be representative of the effects on reported net income and earnings per share for future years since options vest over several years and additional awards are made each year.

The following summarizes the stock option transactions under plans discussed above (adjusted for all applicable stock splits):

	SHARES IN THOUSANDS	WEIGHTED AVERAGE OPTION PRICE
OPTIONS OUTSTANDING MAY 31, 1996	12,186	\$13.67
Exercised	(2,012)	11.28
Surrendered	(55)	23.50
Granted	1,692	48.93
OPTIONS OUTSTANDING MAY 31, 1997	11,811	19.05
Exercised	(2,132)	11.28
Surrendered	(270)	23.50
Granted	1,964	55.83
OPTIONS OUTSTANDING MAY 31, 1998	11,373	26.30
Exercised	(2,665)	15.25
Surrendered	(399)	46.70
Granted	3,556	48.76
Options outstanding May 31, 1999	11,865	\$34.97
OPTIONS EXERCISABLE AT MAY 31,		
1997	5,219	\$11.33
1998	6,826	15.98
1999	5,991	22.13

The following table sets forth the exercise prices, the number of options outstanding and exercisable and the remaining contractual lives of the Company's stock options at May 31, 1999:

EXERCISE PRICE	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE	
	NUMBER OF OPTIONS OUTSTANDING (thousands)	WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE CONTRACTUAL LIFE REMAINING (yrs)	NUMBER OF OPTIONS EXERCISABLE (thousands)	WEIGHTED AVERAGE EXERCISE PRICE
\$ 5.1013 - \$14.9375	3,601	\$12.73	3.48	3,601	\$12.73
18.0313 - 48.2500	3,592	34.97	6.83	1,985	31.70
48.4375 - 48.4375	3,030	48.44	9.13	—	—
48.6875 - 74.8750	1,642	58.92	8.29	405	58.83

42

NOTE 9 - EARNINGS PER SHARE:

SFAS 128, "Earnings per Share" replaces primary and fully diluted earnings per share with basic and diluted earnings per share. Under the new requirements, the dilutive effect of stock options is excluded from the calculation of basic earnings per share. Diluted earnings per share is calculated similarly to fully diluted earnings per share as required under APB 15. SFAS 128 became effective for the Company's fiscal 1998 financial statements. All prior period earnings per share data presented have been restated to conform to the provisions of this statement.

The following represents a reconciliation from basic earnings per share to diluted earnings per share:

(In millions, except per share data)

YEAR ENDED MAY 31,	1999	1998	1997
Determination of shares:			
Average common shares outstanding	283.3	288.7	288.4
Assumed conversion of stock options	5.0	6.3	8.6
Diluted average common shares outstanding	288.3	295.0	297.0
Basic earnings per common share	\$ 1.59	\$ 1.38	\$ 2.76
Diluted earnings per common share	\$ 1.57	\$ 1.35	\$ 2.68

NOTE 10 - BENEFIT PLANS:

The Company has a profit sharing plan available to substantially all employees. The terms of the plan call for annual contributions by the Company as determined by the Board of Directors. Contributions of \$12.8 million, \$11.2 million and \$18.5 million to the plan are included in other expense in the consolidated financial statements for the years ended May 31, 1999, 1998 and 1997, respectively. The Company has a voluntary 401(k) employee savings plan. The Company matches a portion of employee contributions with Common Stock, vesting that portion over 5 years. Company contributions to the savings plan were \$7.4 million, \$8.1 million and \$6.3 million for the years ended May 31, 1999, 1998 and 1997, respectively, and are included in selling and administrative expenses.

NOTE 11 - OTHER INCOME/EXPENSE, NET:

Included in other income/expense for the years ended May 31, 1999, 1998 and 1997, was interest income of \$13.0 million, \$16.5 million and \$20.1 million, respectively. In addition, included in other income/expense was income of \$15.0 million related to the change in accounting for inventories in the U.S. from the LIFO to the FIFO method. The change was effected in the fourth quarter of fiscal 1999 and was not considered significant to show the cumulative effect or to restate comparable income statements as dictated by Accounting Principles Board Opinion No. 20. The Company's subsidiary, Bauer NIKE Hockey, recognized a one-time restructuring charge in fiscal year 1997 of \$18.1 million for a plan which entailed, among other things, moving certain products to offshore production and closing certain facilities.

NOTE 12 - COMMITMENTS AND CONTINGENCIES:

The Company leases space for its offices, warehouses and retail stores under leases expiring from one to eighteen years after May 31, 1999. Rent expense aggregated \$129.5 million, \$129.6 million and \$84.1 million for the years ended May 31, 1999, 1998 and 1997, respectively. Amounts of minimum future annual rental commitments under non-cancelable operating leases in each of the five fiscal years 2000 through 2004 are \$96.1 million, \$86.9 million, \$75.9 million, \$69.3 million, \$58.8 million, respectively, and \$368.2 million in later years.

Lawsuits arise during the normal course of business. In the opinion of management, none of the pending lawsuits will result in a significant impact on the consolidated results of operations or financial position.

NOTE 13 - RESTRUCTURING CHARGE:

1999 Charge. During fiscal 1999, a \$60.1 million charge was incurred as a result of certain actions taken to better align the Company's cost structure with expected revenue growth rates. The charge (shown below in tabular format) was primarily for costs of severing employees, including severance packages, lease abandonments and the write down of assets no longer in use. Employees were terminated in

1999

43

Europe, Asia Pacific, and in the United States, and included employees affected by the Company's shift to outsourcing certain of its information technology functions. The total number of employees terminated was 1,291, with 630 having left the Company as of May 31, 1999.

Also included was a write-off of \$20.2 million of certain equipment, hardware and software development costs that are no longer in use at one of the Company's U.S. distribution centers due to a change in strategy around how the Company flows product for a specific type of business.

The accrual balance at May 31, 1999 will be relieved throughout fiscal 2000 and early 2001, as leases expire and severance payments are completed.

Detail of the 1999 restructuring charge is as follows:

(in millions)

DESCRIPTION	CASH/NO CASH	1999 RESTRUCTURING CHARGE	ACTIVITY	RESERVE BALANCE AT 5/31/99
Elimination of Job Responsibilities Company-Wide		\$ (39.9)	\$ 21.9	\$ (18.0)
Severance packages	cash	(28.0)	11.7	(16.3)
Lease cancellations & commitments	cash	(2.4)	1.6	(0.8)
Write-down of assets	non-cash	(7.8)	7.8	—
Other	cash/non-cash	(1.7)	0.8	(0.9)
Change in warehouse distribution strategy		(20.2)	20.2	—
Write-down of assets	non-cash	(20.2)	20.2	—
Effect of foreign currency translation		—	0.1	0.1
Total		\$ (60.1)	\$ 42.2	\$ (17.9)

1998 Charge. During the fourth quarter of fiscal 1998 the Company recorded a restructuring charge of \$129.9 million as a result of certain of the Company's actions to better align its cost structure with expected revenue growth rates. The restructuring activities (shown below in tabular format) primarily relate to: 1) the elimination of job responsibilities company-wide, resulting in costs to sever employees and related asset write-downs and lease abandonments related to the affected employees; 2) the relocation of, and elimination of, certain job responsibilities of the Asia Pacific headquarters in Hong Kong, resulting in reduction in workforce, lease abandonments and other costs of downsizing the Hong Kong headquarters; 3) the downsizing of the Company's Japan distribution center, resulting in the write-down of assets no longer in use; 4) the cancellation of certain non-strategic long-term endorsement contracts, resulting in one-time termination fees; and 5) the decision to exit certain manufacturing operations of the Bauer NIKE Hockey subsidiary, resulting in the reduction in manufacturing related jobs, the write-down of assets no longer in use, and the estimated loss on divestiture of certain manufacturing plants.

Employees were terminated from almost all areas of the Company, including marketing, sales and administrative areas. The total number of employees terminated was 1,208, with 1,203 having left the Company as of May 31, 1999.

During fiscal year 1999, it was determined that a total of \$15.0 million of the restructuring accrual was not required due to changes in estimates related to severance payments of \$4.0 million, a \$3.6 million change in estimated vendor software costs related to Japan's software development, lease commitments of \$3.2 million due to changes in sub-leasing arrangements, and other changes of \$4.2 million. The \$15.0 million is included in "Activity" in the table below and as an offset in the restructuring charge on the income statement.

The remaining accrual will be relieved throughout fiscal year 2000, as leases expire and severance payments, some of which are paid on a monthly basis, are completed.

44

Detail of the restructuring charge is as follows:

DESCRIPTION	CASH/NO-CASH	PPPS RESTRUCTURING CHARGE	ACTIVITY	RESERVE BALANCE AT 5/31/99
Elimination of Job Responsibilities Company-Wide		\$ (49.8)	\$ 46.5	\$ (3.3)
Severance packages	cash	(29.1)	28.2	(0.9)
Lease cancellations & commitments	cash	(10.8)	8.4	(2.4)
Write-down of assets	non-cash	(9.6)	9.6	—
Other	cash	(0.3)	0.3	—
Downsizing the Asia Pacific Headquarters In Hong Kong		(13.1)	13.0	(0.1)
Severance packages	cash	(4.6)	4.6	—
Lease cancellations & commitments	cash	(5.5)	5.4	(0.1)
Write-down of assets	non-cash	(3.0)	3.0	—
Downsizing the Japan Distribution Center		(31.6)	30.5	(1.1)
Write-off of assets	non-cash	(12.5)	12.5	—
Software development costs	cash/non-cash	(19.1)	18.0	(1.1)
Cancellation of Endorsement Contracts	cash	(5.6)	5.3	(0.3)
Exiting Certain Manufacturing Operations at				
Bauer NIKE Hockey		(22.7)	21.7	(1.0)
Write-down of assets	non-cash	(14.7)	14.7	—
Divestiture of manufacturing facilities	non-cash	(5.2)	5.2	—
Lease cancellations & commitments	cash	(1.6)	0.9	(0.7)
Severance packages	cash	(1.2)	0.9	(0.3)
Other		(7.1)	6.4	(0.7)
Cash	cash	(0.6)	0.6	—
Non-cash	non-cash	(6.5)	5.8	(0.7)
Effect of foreign currency translation		—	0.2	0.2
Total		\$(129.9)	\$123.6	\$(6.3)

NOTE 14 - FAIR VALUE OF FINANCIAL INSTRUMENTS: The carrying amounts reflected in the consolidated balance sheet for cash and equivalents and notes payable approximate fair value as reported in the balance sheet due to the short maturities. The fair value of long-term debt is estimated using discounted cash flow analyses, based on the Company's incremental borrowing rates for similar types of borrowing arrangements. The fair value of the Company's long-term debt, including current portion, is approximately \$384.8 million, compared to a carrying value of \$387.1 million at May 31, 1999 and \$384.4 million, compared to a carrying value of \$381.0 million at May 31, 1998. See Note 15 for fair value of derivatives.

NOTE 15 - FINANCIAL RISK MANAGEMENT AND DERIVATIVES:

The purpose of the Company's foreign currency hedging activities is to protect the Company from the risk that the eventual dollar cash flows resulting from the sale and purchase of products in foreign currencies will be adversely affected by changes in exchange rates. In addition, the Company seeks to manage the impact of foreign currency fluctuations related to the repayment of intercompany transactions, including

[illegible]

intercompany borrowings. The Company does not hold or issue financial instruments for trading purposes. It is the Company's policy to utilize derivative financial instruments to reduce foreign exchange risks where internal netting strategies cannot be effectively employed. Fluctuations in the value of hedging instruments are offset by fluctuations in the value of the underlying exposures being hedged.

The Company uses forward exchange contracts and purchased options to hedge certain firm purchases and sales commitments and the related receivables and payables including other third party or intercompany foreign currency transactions. Purchased currency options are used to hedge certain anticipated but not yet firmly committed transactions expected to be recognized within one year. Cross-currency swaps are used to hedge foreign currency denominated payments related to intercompany loan agreements. Hedged transactions are denominated primarily in European currencies, Japanese yen and Canadian dollars. Premiums paid on purchased options and any realized gains are included in prepaid expenses or accrued liabilities and recognized in earnings when the underlying transaction is recognized. Deferred option premiums paid, net of realized gains, were \$4.0 million and \$21.7 million at May 31, 1999 and 1998, respectively. Gains and losses related to hedges of firmly committed transactions and the related receivables and payables are deferred and are recognized in income or as adjustments of carrying amounts when the offsetting gains and losses are recognized on the underlying transaction. Net realized and unrealized gains on forward contracts deferred at May 31, 1999 and 1998 were \$31.5 million and \$12.0 million, respectively.

The estimated fair values of derivatives used to hedge the Company's risks will fluctuate over time. The fair value of the forward exchange contracts and cross-currency swaps are estimated by obtaining quoted market prices. The fair value of option contracts is estimated using option pricing models widely used in the financial markets. These fair value amounts should not be viewed in isolation, but rather in relation to the fair values of the underlying hedged transactions and the overall reduction in the Company's exposure to adverse fluctuations in foreign exchange rates. The notional amounts of derivatives summarized below do not necessarily represent amounts exchanged by the parties and, therefore, are not a direct measure of the exposure to the Company through its use of derivatives. The amounts exchanged are calculated on the basis of the notional amounts and the other terms of the derivatives, which relate to interest rates, exchange rates or other financial indices.

The following table presents the aggregate notional principal amounts, carrying values and fair values of the Company's derivative financial instruments outstanding at May 31, 1999 and 1998.

© 2000 Blackwell Science Ltd

MAY 31,	1999			1998		
	NOTIONAL PRINCIPAL AMOUNTS	CARRYING VALUES	FAIR VALUES	NOTIONAL PRINCIPAL AMOUNTS	CARRYING VALUES	FAIR VALUES
Currency Swaps	\$ 300.0	\$44.3	\$ 32.1	\$ 300.0	\$30.8	\$30.3
Forward Contracts	2,206.8	29.1	73.2	2,453.1	3.0	62.3
Purchased Options	220.0	7.2	3.8	232.4	7.7	1.9
Total	\$2,726.8	\$80.6	\$109.1	\$2,985.5	\$41.5	\$94.5

At May 31, 1999 and May 31, 1998, the Company had no contracts outstanding with maturities beyond one year except the currency swaps which have maturity dates consistent with the maturity dates of the related debt. All realized gains/losses deferred at May 31, 1999 will be recognized within one year.

The counterparties to derivative transactions are major financial institutions with high investment grade credit ratings and, additionally, counterparties to derivatives three years or greater are all AAA rated. However, this does not eliminate the Company's exposure to credit risk with these institutions. This credit risk is generally limited to the unrealized gains in such contracts should any of these counterparties fail to perform as contracted and is immaterial to any one institution at May 31, 1999 and 1998. To manage this risk, the Company has established strict counterparty credit guidelines which are continually monitored and reported to Senior Management according to prescribed guidelines. The Company utilizes a portfolio of financial institutions either headquartered or operating in the same countries the Company conducts its business. As a result, the Company considers the risk of counterparty default to be minimal.

46

NOTE 16 - OPERATING SEGMENTS AND RELATED INFORMATION:

Operating Segments. Effective June 1, 1998, the Company adopted SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information". SFAS No. 131 establishes new standards for the way public business enterprises report information about operating segments, and also requires certain disclosures about products and services, geographic areas of business and major customers. The adoption of SFAS No. 131 did not affect the Company's consolidated financial position or results of operations, but did change business segment information previously disclosed.

The Company's major operating segments are defined by geographic regions for subsidiaries participating in NIKE brand sales activity. Other brands as shown below represent activity for non-NIKE brand subsidiaries (Cole Haan Holdings Inc., Bauer NIKE Hockey Inc., NIKE Team Sports, Inc., and NIKE IHM, Inc.) and are considered immaterial for individual disclosure. Where applicable, "Corporate" represents items necessary to reconcile to the consolidated financial statements which generally include corporate activity and corporate eliminations. The segments are evidence of the structure of the enterprise's internal organization. Each NIKE brand geographic segment operates predominantly in one industry: the design, production, marketing and selling of sports and fitness footwear, apparel, and equipment.

Net revenues as shown below represent sales to external customers for each segment. Intercompany revenues have been eliminated and are immaterial for separate disclosure. The Company centrally manages substantially all interest expense activity. Operating segment interest activity is primarily the result of intercompany lending, which is eliminated for consolidated purposes. The Company evaluates performance of individual operating segments based on Contribution Profit before Corporate Allocations, Interest Expense and Income Taxes. On a consolidated basis, this amount represents Income Before Taxes less Interest Expense as shown in the Consolidated Statement of Income. Other reconciling items related to Contribution Profit represent corporate costs that are not allocated to the operating segments for management reporting and intercompany eliminations for specific income statement items.

Additions to long-lived assets predominantly represent capital expenditures, which are shown below by operating segment. At the start of fiscal year 1999, certain corporate costs, assets and liabilities were segregated from the U.S. region. Therefore, breakout of capital expenditures and depreciation activity between United States and Corporate is not available for years prior to fiscal year 1999.

Other additions to long-lived assets represent additions to identifiable intangibles and goodwill, which are managed as a corporate expense and are not attributable to any specific operating segment. See Note 1 for further discussion on identifiable intangible assets and goodwill.

1999

47

Accounts receivable, inventory, and fixed assets for operating segments are regularly reviewed by management and are therefore provided below.

YEAR ENDED MAY 31,	1999	1998	1997
NET REVENUE			
United States	\$4,723.7	\$5,139.4	\$5,201.6
Europe	2,255.8	2,096.1	1,789.8
Asia Pacific	844.5	1,253.9	1,241.9
Americas	507.1	599.0	449.2
Other brands	445.8	464.7	504.0
	\$8,776.9	\$9,553.1	\$9,186.5
CONTRIBUTION PROFIT			
United States	\$ 882.3	\$ 978.8	\$1,411.7
Europe	338.4	281.2	254.5
Asia Pacific	78.8	(26.8)	227.4
Americas	57.6	110.6	74.3
Other brands	22.4	(13.1)	34.7
Corporate	(589.3)	(617.7)	(655.1)
	\$ 790.2	\$ 713.0	\$1,347.5
CAPITAL EXPENDITURES			
United States	\$ 48.5		
Corporate	161.7		
United States and Corporate	\$ 210.2	\$ 246.8	\$ 266.4
Europe	87.7	121.0	90.0
Asia Pacific	43.7	103.5	69.7
Americas	12.5	12.6	6.4
Other brands	30.0	22.0	33.4
	\$ 384.1	\$ 505.9	\$ 465.9
DEPRECIATION			
United States	\$ 22.0		
Corporate	73.3		
United States and Corporate	\$ 95.3	\$ 96.8	\$ 75.9
Europe	40.6	37.8	27.0
Asia Pacific	20.8	23.4	13.8
Americas	6.8	4.7	2.6
Other brands	34.7	21.8	18.7
	\$ 198.2	\$ 184.5	\$ 138.0

48

A grid-in response area consisting of four rows of bubbles. Each row contains ten bubbles labeled 0 through 9. In the fourth row, the bubble for the digit 9 is filled in.

CORPORATE RESPONSIBILITY

50

Nike's mission for corporate responsibility is "to lead in corporate citizenship through programs that reflect caring for the world family of NIKE, our teammates, our consumers, and those who provide services to NIKE."

We took a few pages of last year's annual report to talk about efforts to fulfill that mission, and will do so again here. For the calendar year 1999, we will also be producing NIKE's first-ever, stand-alone Corporate Responsibility Annual Report. Expect to read a lot more detail about the breadth and depth of the challenges that lie before us in labor practices, diversity, community affairs and the environment soon after the first of the year.

For now, we'd like to give you an idea of where we are heading in corporate responsibility. By looking at it from the perspective of one factory, you will get a sense that our commitments to labor practices, the environment and communities go hand in hand.

FIRST, A LITTLE CONTEXT: NIKE has more than 500 contract factories around the world in about 45 countries. In May 1998, we set out six new corporate responsibility goals for these factories. Rather than address the goals and progress across all 500 factories, which we will try to do for you in the complete report, here's a snapshot of how those six initiatives have changed one factory, Tae Kwang Vina, a Korean-owned and operated footwear manufacturer in Vietnam.

To begin, Tae Kwang Vina is referred to as "VT" by our contract manufacturing group. VT just celebrated its fourth birthday. It has 10 production assembly lines and 10,000 people, who together produce 500,000 pairs of our best running shoes each month.

Since it was established in the summer of 1995, VT has been run by a Tae Kwang vice president, C.T. Park, who has worked closely with us on corporate responsibility implementation — and done some things on his own, like donating almost \$300,000 to local community projects like housing for war widows. C.T., like hundreds of other factory directors, was consulted about the proposed steps, and then briefed on the May 1998 initiatives just before Phil Knight announced them. He has been an enthusiastic partner in making these things happen. Here is how the six initiatives have played out, so far, at VT:

AGE LIMITS. We raised our minimum age limits from the International Labor Organization standards (15 in most countries and 14 in developing countries)



to 18 in all footwear manufacturing and 16 in all other types of manufacturing (apparel, accessories and equipment.) Footwear factory managers, including C.T., pledged not to hire anyone under the age of 18. In Vietnam, that is the minimum age anyway, so the factory did not have to alter hiring practices. (According to the labor law, Vietnamese under that age are allowed to work with parental permission. Not at our factories.)

At VT and all other NIKE factories, workers legally employed according to previous standards or local standards were grandfathered into the new system. No one lost a job. But no one under the age of 18 is making a NIKE shoe today, to the best of our knowledge. To ensure that is the case, NIKE also embarked on a comprehensive, global independent auditing of all contract manufacturers. To our knowledge, we are the only company of our size and scope that requires independent labor audits of all factories around the world. Our global labor practices auditors are PricewaterhouseCoopers (PwC). A local team of PwC's Vietnamese employees visited VT in May 1999, to ensure our age and other labor practices standards are being met. They found one worker, age 17, employed at a stitching subcontractor. Because that factory does only stitching, its manager assumed our 16 age limit applied. While the worker remains, no one will be hired under the age of 18 in that facility going forward.

INDEPENDENT MONITORING. The May 1998 initiatives included a pledge to involve non-governmental organizations (NGOs) and in our independent monitoring efforts.

Since 1997, VT has participated in an independent monitoring-focus group program for all NIKE factories under auspices of CESAIS, a social and market research branch of the University of Economics, Ho Chi Minh City. On a rotating basis, workers randomly selected by CESAIS from VT and all other factories

are invited to the University, without NIKE or VT management present, to participate in focus group discussions about the workplace. Results are forwarded to NIKE's labor department for follow-up.

In September 1998, we began to exchange information and health and safety concepts with an independent monitor who had been highly critical of NIKE, and VT itself, in the past. In December 1998, he visited the factory and spent a day there with C.T. Park, J.M. Lee and others on the VT staff, reviewing test information, touring all the factory spaces, and talking to VT's health clinic professionals and workers. A follow-up report to NIKE, which was made public and discussed in The New York Times, noted progress the factory has made, and areas for further improvement, on which NIKE and VT — as well as all other factories — are working today. The monitors have been invited to look at other NIKE footwear factories to confirm that parallel progress is being made in these facilities as well.

In April 1999, NIKE embarked on a far more ambitious independent monitoring program as a charter member of the Global Alliance for Workers and Communities. The Global Alliance, operated by the International Youth Foundation, with partners including the World Bank, the John D. and Catherine T. MacArthur Foundation, and Mattel, Inc., will let workers themselves, through local NGOs and other assessment agents, identify workplace issues and life aspirations, which NIKE and our factory partners will then work to address. Assessment and worker feedback began at factories in Thailand in June, and were scheduled to begin in Vietnam, including at VT, in August, with Indonesia and China to follow.

52

By fall 1999, the Fair Labor Association, the White House-sponsored initiative to eliminate sweatshop practices in the apparel and footwear industries, was expected to begin oversight of members' monitoring efforts. It is behind schedule, but progress has been made with many universities, colleges and companies signing on. NIKE is a charter member of the FLA. Its monitoring efforts at VT will be shared with the FLA, whose members include consumer rights, human rights and labor rights groups.

ENVIRONMENTAL HEALTH AND SAFETY/SUSTAINABLE DESIGN. The May 12, 1998 agenda included a three-part commitment to environment, safety and health.

The first of these was adoption of the goal of sustainable business practices. That means we will conduct our business today conscious of the impact on future generations. We believe it's our responsibility to do our part in protecting the environment. In 1998, NIKE engaged McDonough Braungart Design Chemistry on the first element of that concept, sustainable product design.

A number of sustainable design projects are underway and one goal is that, ultimately, NIKE will produce footwear that creates almost no waste in the manufacturing process, can be taken back and even remanufactured. We expect that V.T., as our most advanced running shoe manufacturer, will be a key player.

The second of the environmental initiatives was to accelerate our conversion of footwear factories from petroleum-based solvents to water- and detergent-based substitutes that do not emit potentially harmful vapors. Today, VT uses 100% water-based adhesives. In three years, VT has cut its use of solvents by 67% — which is pretty good, but actually a little below the three-year average of 80% for all NIKE shoe factories. Our goal is 100% elimination of these solvents.

A third major environmental health and safety goal set out was to ensure no workers are exposed to harmful fumes from those solvents not yet eliminated. Our target was the permissible exposure limit (PELs) for chemicals prescribed in the OSHA indoor air quality standards. Eliminating many of the solvents certainly made that process easier, but VT also embarked on an extensive re-engineering of ventilation systems. At the cost of about \$500,000, the factory installed new equipment and ducting. The screen printing facility, for example, was re-engineered no less than three times in six months, until testing by American health professionals and NIKE's Vietnam-based labor practices manager, Dr. Tien Nguyen, showed the worker protection was at or better than U.S. standards. The same process happened at 37 footwear factories across Asia.

Finally, all footwear factories are required to adopt a Management-Environment-Safety-Health (MESH) system to ensure the management of all corporate responsibility issues is to international standards. VT has since completed all nine of the required workshops, and has been granted ISO 14001 certification, the International Standards Organization program for environmental management.

FORUMS AND RESEARCH. The water-base conversion and air quality results are encouraging, but the most important aspect of that work is to pinpoint areas in factories where improvements should be made. Following up on the pledge to sponsor open dialog on issues of corporate responsibility, NIKE shared air quality test results and water-base conversion concepts with the rest of the athletic footwear industry at an open forum in Bangkok in



November 1998. Two of VT's major chemical suppliers were represented at that forum, and VT itself was highlighted as one example of the successes and challenges.

NIKE also committed to fund university studies of corporate responsibility issues. To date, the Tuck School of Business at Dartmouth College has undertaken wage and spending surveys of workers in factories in Vietnam and Indonesia, and will continue that work in other countries for us. Workers from a factory near VT, operated by the Dae Shin company, were surveyed by Tuck students. In addition, The University of North Carolina's School of Public Health is working with us to develop a long-term study of health standards and training in footwear factories, and we expect VT will be very much involved with that program.

EDUCATION. We also committed to work with manufacturers who take a leading interest in their worker welfare. A key component of that commitment is that every NIKE contract footwear factory must have a supplemental worker education program. To date, such programs are up and operating in about half of the footwear factory base, or 22 factories, in four countries (China, Thailand, Vietnam and Indonesia). VT has had worker education since its opening, and in the first three years concentrated on Vietnamese language training for Korean expatriates, and Korean language training for Vietnamese workers and managers. In 1998, the factory expanded its education program by offering academic classes to workers. More than 400 of the factory's workers are now enrolled in some form of free education classes.

MICRO-LOANS AND COMMUNITY AFFAIRS. In May 1998 we committed to providing small business loans to women in Vietnam and three other Asian countries. In the intervening year, the Vietnam program — the largest share of which is centered in the poorest areas of Dong Nai Province where VT is located — has through the Vietnam Women's Union and

the Colorado-based NGO Friendship Bridge been continually expanded. To date, more than 3,200 rural women and former workers have created small businesses in Vietnam, and the success rate has been absolutely amazing. Thus far there have been no defaults on loans, and business borrowers have come back to expand businesses with second and third loans. The typical business involves raising of pigs, ducks or chickens, the production of rice paper for spring rolls, or the production of incense sticks and other basic manufactured goods.

Meanwhile, VT itself has been an active partner in local development. Since its opening in July 1995, VT has contributed funding and support to 26 different projects in Dong Nai Province, ranging from a \$77,000 contribution to a kindergarten for workers' children, to flood relief donations, housing for war widows and temple decoration projects.

THERE IS NO FINISH LINE. By no means exhaustive, these are among dozens of steps VT and factories like it around the world have taken since the May 1998 initiatives were established. C.T. Park would cite the all-new kitchen facilities, a clinic that has expanded to three times its original size (a factory clinic the U.S. Surgeon General, on a recent visit, compared favorably with local hospitals), the fleet of buses imported from Korea to provide night-time transportation for shift workers, and the new aerobics team and the factory band. But C.T. Park sees no finish line. There is much more work to do. Stay tuned.

CHAPTER

12

EXPANDED ANALYSIS

THIS CHAPTER REVIEWS SPECIAL AREAS related to the usefulness of ratios and financial statement analyzes.

FINANCIAL RATIOS AS PERCEIVED BY COMMERCIAL LOAN DEPARTMENTS

Financial ratios can be used by a commercial loan department to aid the loan officers in deciding whether to grant a commercial loan and in maintaining control of a loan once it is granted.¹ In order to gain insights into how commercial loan departments view financial ratios, a questionnaire was sent to the commercial loan departments of the 100 largest banks in the United States. Usable responses were received from 44% of them.

A list of 59 financial ratios was drawn from financial literature, textbooks, and published industry data for this study. The study set three objectives: (1) the significance of each ratio, in the opinion of commercial loan officers, (2) how frequently each ratio is included in loan agreements, and (3) what a specific financial ratio primarily measures, in the opinion of commercial loan officers. For the primary measure, the choices were liquidity, long-term debt-paying ability, profitability, or other. Exhibit 11-1 lists the ratios included in this study.

EXHIBIT 11-1

RATIOS RATED BY COMMERCIAL LOAN OFFICERS

Ratio	Ratio
Cash ratio	Sales/fixed assets
Accounts receivable turnover in days	Sales/working capital
Accounts receivable turnover—times per year	Sales/net worth
Days' sales in receivables	Cash/sales
Quick ratio	Quick assets/sales
Inventory turnover in days	Current assets/sales
Inventory turnover—times per year	Return on assets:
Days' sales in inventory	before interest and tax
Current debt/inventory	before tax
Inventory/current assets	after tax
Inventory/working capital	Return on operating assets
Current ratio	Return on total invested:
Inventory/current assets	before tax
Inventory/working capital	after tax
Current ratio	Return on equity:
Net fixed assets/tangible net worth	before tax
Cash/total assets	after tax
Quick assets/total assets	Net profit margin:
Current assets/total assets	before tax
Retained earnings/total assets	after tax
Debt/equity ratio	Retained earnings/net income
Total debt as a % of net working capital	Cash flow/current maturities of
	long-term debt
Total debt/total assets	Cash flow/total debt
Short-term debt as a % of total invested capital	Times interest earned
Long-term debt as a % of total invested capital	Fixed charge coverage
Funded debt/working capital	Degree of operating leverage
Total equity/total assets	Degree of financial leverage
Fixed assets/equity	Earnings per share
Common equity as a % of total invested capital	Book value per share
Current debt/net worth	Dividend payout ratio
Net worth at market value/total liabilities	Dividend yield
Total asset turnover	Price/earnings ratio
Sales/operating assets	Stock price as a % of book value

Most Significant Ratios and Their Primary Measure

Exhibit 11-2 displays the ten financial ratios given the highest significance rating by the commercial loan officers, as well as the primary measure of these ratios. The highest rating is a 9, and the lowest rating is a 0.

Most of the ratios given a high significance rating were regarded primarily as measures of liquidity or debt. Only two of the top ten ratios measure profitability, five measure debt, and three measure liquidity. The two profitability ratios were two different computations of the net profit margin: (1) net profit margin after tax and (2) net profit margin before tax. Two of the top three ratios were measures of debt, and the other was a measure of liquidity. The debt/equity ratio was given the highest significance rating, with the current ratio second highest. We can assume that the financial ratios rated most significant by commercial loan officers would have the greatest influence on a loan decision.

Ratios Appearing Most Frequently in Loan Agreements

A commercial bank may elect to include a ratio as part of a loan agreement. This would be a way of using ratios to control an outstanding loan. Exhibit 11-3 contains a list of the ten financial ratios that appear most frequently in loan agreements, along with an indication of what each ratio primarily measures. For the two ratios that do not have a primary measure indicated, there was no majority opinion as to what the ratio primarily measured. Six of the ratios that appear most frequently in loan agreements primarily measure debt, two primarily measure liquidity, and none primarily measure profitability.

The two top ratios, debt/equity and current ratio, were given the highest significance rating. The dividend payout ratio was the third most likely ratio to appear in loan agreements, but it was not rated as a highly significant ratio. Logically, this ratio appears in loan agreements as a means of controlling outflow of cash for dividends.

EXHIBIT 11-2

COMMERCIAL LOAN DEPARTMENTS Most Significant Ratios and Their Primary Measures

Ratio	Significance Rating	Primary Measure
Debt/equity	8.71	Debt
Current ratio	8.25	Liquidity
Cash flow/current maturities of long-term debt	8.08	Debt
Fixed charge coverage	7.58	Debt
Net profit margin after tax	7.56	Profitability
Times interest earned	7.50	Debt
Net profit margin before tax	7.43	Profitability
Degree of financial leverage	7.33	Debt
Inventory turnover in days	7.25	Liquidity
Accounts receivable turnover in days	7.08	Liquidity

EXHIBIT 11-3**COMMERCIAL LOAN DEPARTMENTS**
Ratios Appearing Most Frequently in Loan Agreements

Ratio	Percentage of Banks Including Ratio in 26% or More of Their Loan Agreements	Primary Measure
Debt/equity	92.5	Debt
Current ratio	90.0	Liquidity
Dividend payout ratio	70.0	*
Cash flow/current maturities of long-term debt	60.3	Debt
Fixed charge coverage	55.2	Debt
Times interest earned	52.6	Debt
Degree of financial leverage	44.7	Debt
Equity/assets	41.0	*
Cash flow/total debt	36.1	Debt
Quick ratio	33.3	Liquidity

*No majority primary measure indicated in this survey.

FINANCIAL RATIOS AS PERCEIVED BY CORPORATE CONTROLLERS

To get the views of corporate controllers on important issues relating to financial ratios, a questionnaire was sent to the controllers of the companies included in the *Fortune 500* list of the largest industrials.² The study excluded companies 100% owned or controlled by another firm. The survey received a usable response rate of 19.42%. The questionnaire used the same ratios used for the commercial loan department survey. Three objectives of this study were the determination of: (1) the significance of a specific ratio as perceived by controllers, (2) which financial ratios are included as corporate objectives, and (3) the primary measure of each ratio.

Most Significant Ratios and Their Primary Measure

Exhibit 11-4 displays the ten financial ratios given the highest significance rating by the corporate controllers, along with the primary measure of these ratios. The highest rating is a 9 and the lowest is a 0.

The financial executives gave the profitability ratios the highest significance ratings. The highest rated debt ratio was debt/equity, while the highest rated liquidity ratio was the current ratio. In comparing the responses of the commercial loan officers and the controllers, the controllers rate the profitability ratios as having the highest significance, while the commercial loan officers rate the debt and liquidity ratios highest.

Key Financial Ratios Included as Corporate Objectives

Many firms have selected key financial ratios to be included as part of their corporate objectives. The next section of the survey was designed to determine what ratios the firms used in their corporate objectives. Exhibit 11-5 lists the ten ratios most likely to be included in corporate objectives according to the controllers. Nine of the ratios included in Exhibit

EXHIBIT 11-4**CORPORATE CONTROLLERS**
Most Significant Ratios and Their Primary Measures

Ratio	Significance Rating	Primary Measure
Earnings per share	8.19	Profitability
Return on equity after tax	7.83	Profitability
Net profit margin after tax	7.47	Profitability
Debt/equity ratio	7.46	Debt
Net profit margin before tax	7.41	Profitability
Return on total invested capital after tax	7.20	Profitability
Return on assets after tax	6.97	Profitability
Dividend payout ratio	6.83	Other*
Price/earnings ratio	6.81	Other*
Current ratio	6.71	Liquidity

*Primary measure indicated to be other than liquidity, debt, or profitability. The ratios rated this way tend to be related to stock analysis.

EXHIBIT 11-5**Ratios Appearing in Corporate Objectives and Their Primary Measures**

Ratio	Percentage of Firms Indicating That the Ratio Was Included in Corporate Objectives	Primary Measure
Earnings per share	80.6	Profitability
Debt/equity ratio	68.8	Debt
Return on equity after tax	68.5	Profitability
Current ratio	62.0	Liquidity
Net profit margin after tax	60.9	Profitability
Dividend payout ratio	54.3	Other
Return on total invested capital after tax	53.3	Profitability
Net profit margin before tax	52.2	Profitability
Accounts receivable turnover in days	47.3	Liquidity
Return on assets after tax	47.3	Profitability

11-5 were also included in Exhibit 11-4. One ratio, accounts receivable turnover in days, appears in the top ten ratios in relation to corporate objectives but not in the top ten significant ratios. One ratio, the price/earnings ratio, appears in the top ten ratios in relation to significance but not in the top ten ratios used for corporate objectives.

Logically, there would be a high correlation between the ratios rated as highly significant and those included in corporate objectives. The debt/equity ratio and the current ratio are rated higher on the objectives list than on the significance list. This makes sense since a firm has to have some balance in its objectives between liquidity, debt, and profitability.

FINANCIAL RATIOS AS PERCEIVED BY CERTIFIED PUBLIC ACCOUNTANTS

A research study performed in 1984 dealt with financial ratios as perceived by certified public accountants (CPAs).³ A questionnaire was sent to one-third of the members of The Ohio Society of Certified Public Accountants who were registered as a partner in a CPA firm. A total of 495 questionnaires were sent and the usable response rate was 18.8%.

This questionnaire used the same ratios as were used for the commercial loan department and corporate controllers. The specific objectives of this study were to determine the following from the viewpoint of the CPA:

1. The specific financial ratios that CPAs view primarily as a measure of liquidity, debt, and profitability.
2. The relative importance of the financial ratios viewed as a measure of liquidity, debt, or profitability.

Exhibit 11-6 displays the ten financial ratios given the highest significance rating by the CPAs and the primary measure of these ratios. The highest rating is a 9 and the lowest is a 0.

The CPAs gave the highest significance rating to two liquidity ratios—the current ratio and the accounts receivable turnover in days. The highest rated profitability ratio was after-tax return on equity, and the highest rated debt ratio was debt/equity.

EXHIBIT 11-6

CPAs

Most Significant Ratios and Their Primary Measures

Ratio	Significance Rating	Primary Measure
Current ratio	7.10	Liquidity
Accounts receivable turnover in days	6.94	Liquidity
After-tax return on equity	6.79	Profitability
Debt/equity ratio	6.78	Debt
Quick ratio (acid test)	6.77	Liquidity
Net profit margin after tax	6.67	Profitability
Net profit margin before tax	6.63	Profitability
Return on assets after tax	6.39	Profitability
Return on total invested capital after tax	6.30	Profitability
Inventory turnover in days	6.09	Liquidity

FINANCIAL RATIOS AS PERCEIVED BY CHARTERED FINANCIAL ANALYSTS⁴

Exhibit 11-7 displays the ten financial ratios given the highest significance rating by chartered financial analysts (CFAs) and the primary measure of these ratios. Again, the highest rating is a 9 and the lowest rating is a 0.

The surveyed CFAs gave the highest significance ratings to profitability ratios, with the exception of the price/earnings ratio. Return on equity after tax received the highest significance by a wide margin. Four of the next five most significant ratios were also profitability ratios—earnings per share, net profit margin after tax, return on equity before tax, and net profit margin before tax.

The price/earnings ratio—categorized by the analysts as an “other” measure—received the second highest significance rating. CFAs apparently view profitability and what is being paid for those profits before turning to liquidity and debt.

EXHIBIT 11-7**CHARTERED FINANCIAL ANALYSTS**
Most Significant Ratios and Their Primary Measures

Ratio	Significance Rating	Primary Measure
Return on equity after tax	8.21	Profitability
Price/earnings ratio	7.65	*
Earnings per share	7.58	Profitability
Net profit margin after tax	7.52	Profitability
Return on equity before tax	7.41	Profitability
Net profit margin before tax	7.32	Profitability
Fixed charge coverage	7.22	Debt
Quick ratio (acid test)	7.10	Liquidity
Return on assets after tax	7.06	Profitability
Times interest earned	7.06	Debt

*Primary measure indicated to be other than liquidity, debt, or profitability. The ratios rated this way tend to be related to stock analysis.

The two highest rated debt ratios were fixed charge coverage and times interest earned, rated seventh and tenth, respectively. Both of these ratios indicate a firm's ability to carry debt. The highest rated debt ratio relating to the balance sheet was the debt/equity ratio, rated as the eleventh most significant. Surprisingly, more significance was placed on debt ratios relating to the ability to carry debt than on those relating to the ability to meet debt obligations.

The highest rated liquidity ratio was the acid-test ratio, rated eighth. The second highest liquidity ratio was the current ratio, rated twentieth.⁵

**FINANCIAL
RATIOS USED
IN ANNUAL
REPORTS**

Financial ratios are used to interpret and explain financial statements.⁶ Used properly, they can be effective tools in evaluating a company's liquidity, debt position, and profitability. Probably no tool is as effective in evaluating where a company has been financially and projecting its financial future as the proper use of financial ratios.

A firm can use its annual report effectively to relate financial data by the use of financial ratios. To determine how effectively firms use ratios to communicate financial data, the annual reports of 100 firms identified in the *Fortune 500* industrial companies were reviewed. The 100 firms represented the first 20 of each 100 in the *Fortune 500* list. The objective of this research project was to determine: (1) which financial ratios were frequently reported in annual reports, (2) where the ratios were disclosed in the annual reports, and (3) what computational methodology was used to compute these ratios.

Exhibit 11-8 indicates the ratios disclosed most frequently in the annual reports reviewed and the section of the annual report where the ratios were located. The locations were the president's letter, management discussion, management highlights, financial review, and financial summary. In many cases, the same ratio was located in several sections, so the numbers under the sections in Exhibit 11-8 do not add up to the total number of annual reports where the ratio was included.

Seven ratios appeared more than 50% of the time in one section or another. These ratios and the number of times found were earnings per share (100), dividends per share (98), book value per share (84), working capital (81), return on equity (62), profit margin

EXHIBIT 11-8**Ratios Disclosed Most Frequently in Annual Reports***

	Number Included	President's Letter	Management Discussion	Management Highlights	Financial Review	Financial Summary
Earnings per share	100	66	5	98	45	93
Dividends per share	98	53	10	85	49	88
Book value per share	84	10	3	53	18	63
Working capital	81	1	1	50	23	67
Return on equity	62	28	3	21	23	37
Profit margin	58	10	3	21	23	35
Effective tax rate	50	2	1	2	46	6
Current ratio	47	3	1	16	12	34
Debt/capital	23	9	0	4	14	23
Return on capital	21	6	2	8	8	5
Debt/equity	19	5	0	3	8	8
Return on assets	13	4	1	2	5	10
Dividend payout	13	3	0	0	6	6
Gross profit	12	0	1	0	11	3
Pretax margin	10	2	0	3	6	6
Total asset turnover	7	1	0	0	4	4
Price/earnings ratio	7	0	0	0	1	6
Operating margin	7	1	0	2	6	1
Labor per hour	5	0	2	2	2	2

*Numbers represent both absolute numbers and percentages, since a review was made of the financial statements of 100 firms.

(58), and effective tax rate (50). The current ratio was found 47 times, and the next ratio in order of disclosure, the debt/capital ratio, appeared 23 times. From this listing, we can conclude that profitability ratios and ratios related to investing were the most popular. Exhibit 11-8 excludes ratios not disclosed at least five times.

Logically, profitability ratios and ratios related to investing were the most popular for inclusion in the annual report. Including ratios related to investing in the annual report makes sense because one of the annual report's major objectives is to inform stockholders.

A review of the methodology used indicated that wide differences of opinion exist on how some of the ratios should be computed. This is especially true of the debt ratios. The two debt ratios most frequently disclosed were the debt/capital ratio and the debt/equity ratio. This book does not cover the debt/capital ratio. It is similar to the debt/equity ratio, except that the denominator includes sources of capital, in addition to stockholders' equity.

The annual reports disclosed the debt/capital ratio 23 times and used 11 different formulas. One firm used average balance sheet amounts between the beginning and the end of the year, while 22 firms used ending balance sheet figures. The debt/equity ratio was disclosed 19 times, and 6 different formulas were used. All firms used the ending balance sheet accounts to compute the debt/equity ratio.

In general, no major effort is being made to explain financial results by the disclosure of financial ratios in annual reports. Several financial ratios that could be interpreted as important were not disclosed or were disclosed very infrequently. This is particularly important for ratios that cannot be reasonably computed by outsiders because of a lack of data such as accounts receivable turnover.

At present, no regulatory agency such as the SEC or the FASB accepts responsibility for determining either the content of financial ratios or the format of presentation for

annual reports, except for the ratio earnings per share. Many practical and theoretical issues relate to the computation of financial ratios. As long as each firm can exercise its opinion as to the practical and theoretical issues, there will be a great divergence of opinion on how a particular ratio should be computed.

**DEGREE OF
CONSERVATISM
AND QUALITY
OF EARNINGS**

A review of financial statements, including the footnotes, indicates their conservatism in regard to accounting policies. Accounting policies that result in the slowest reporting of income are the most conservative. When a firm has conservative accounting policies, it is said that its earnings are of high quality. This section reviews a number of areas that often indicate a firm's degree of conservatism in reporting income.

Inventory

Under inflationary conditions, the matching of current cost against the current revenue results in the lowest income for a period of time. The LIFO inventory method follows this procedure. FIFO, the least conservative method, uses the oldest costs and matches them against revenue. Other inventory methods fall somewhere between the results of LIFO and FIFO.

For a construction firm that has long-term contracts, the two principal accounting methods that relate to inventory are the completed-contract method and the percentage-of-completion method. The conservative completed-contract method recognizes all of the income when the contract is completed; the percentage-of-completion method recognizes income as work progresses on the contract.

Fixed Assets

Two accounting decisions related to fixed assets can have a significant influence on income: the method of depreciation and the period of time selected to depreciate an asset.

The conservative methods, sum-of-the-years'-digits and declining-balance, recognize a large amount of depreciation in the early years of the asset's life. The straight-line method, the least conservative method, recognizes depreciation in equal amounts over each year of the asset's life.

Sometimes a material difference in the asset's life used for depreciation occurs between firms. Comparing the lives used for depreciation for similar firms can be a clue as to how conservative the firms are in computing depreciation. The shorter the period of time used, the lower the income.

Intangible Assets

Intangible assets include goodwill, patents, and copyrights. Research and development (R&D) costs are a type of intangible asset, but they are expensed as incurred. The shorter the period of time used to recognize the cost of the intangible asset, the more conservative the accounting.

Some firms spend very large sums on R&D, and others spend little or nothing. Because of the requirement that R&D costs be expensed in the period incurred, the income of a firm that does considerable research is reduced substantially in the period that the cost is incurred. This results in more conservative earnings.

Intangible assets must be amortized over 40 years or fewer, unless they were acquired prior to 1970. Intangibles that have a legal or economic life shorter than 40 years should be amortized over the shorter period.

The intangible asset, goodwill, results when a firm buys another firm and pays a price greater than the value of the identifiable assets. Conservative firms expense goodwill over a relatively short period of time such as five years. Other firms use the maximum time allowed of 40 years (which the FASB has proposed changing to 20 years).

Pensions

Two points relating to pensions should be examined when the firm has a defined benefit plan. One is the assumed discount rate used to compute the actuarial present value of the accumulated benefit obligation and the projected benefit obligation. The higher the interest rate used, the lower the present value of the liability and the lower the immediate pension cost. The other item is the rate of compensation increase used in computing the projected benefit obligations. If the rate is too low, the projected benefit obligation is too low. If the rate is too high, the projected benefit obligation is too high.

FORECASTING FINANCIAL FAILURE

There have been many academic studies on the use of financial ratios to forecast financial failure. Basically, these studies try to isolate individual ratios or combinations of ratios that can be observed as trends that may forecast failure.

A reliable model that can be used to forecast financial failure can also be used by management to take preventive measures. Such a model can aid investors in selecting and disposing of stocks. Banks can use it to aid in lending decisions and in monitoring loans. Firms can use it in making credit decisions and in monitoring accounts receivable. In general, many sources can use such a model to improve the allocation and control of resources. A model that forecasts financial failure can also be valuable to an auditor. It can aid in the determination of audit procedures and in making a decision as to whether the firm will remain as a going concern.

Financial failure can be described in many ways. It can mean liquidation, deferment of payments to short-term creditors, deferment of payments of interest on bonds, deferment of payments of principal on bonds, or the omission of a preferred dividend. One of the problems in examining the literature on forecasting financial failure is that different authors use different criteria to indicate failure. When reviewing the literature, always determine the criteria used to define financial failure.

This book reviews two of the studies that deal with predicting financial failure. Based on the number of references to these two studies in the literature, they appear to be particularly significant on the subject of forecasting financial failure.

Univariate Model

William Beaver reported his univariate model in a study published in *The Accounting Review* in October 1968.⁷ A univariate model uses a single variable. Such a model would use individual financial ratios to forecast financial failure. The Beaver study classified a firm as failed when any one of the following events occurred in the 1954–1964 period: bankruptcy, bond default, an overdrawn bank account, or nonpayment of a preferred stock dividend.

Beaver paired 79 failed firms with a similar number of successful firms drawn from *Moody's Industrial Manuals*. For each failed firm in the sample, a successful one was selected from the same industry. The Beaver study indicated that the following ratios were the best for forecasting financial failure (in the order of their predictive power):

1. Cash flow/total debt
2. Net income/total assets (return on assets)
3. Total debt/total assets (debt ratio)

Beaver speculated as to the reason for these results:

My interpretation of the finding is that the cash flow, net income, and debt positions cannot be altered and represent permanent aspects of the firm. Because failure is too costly to all involved, the permanent, rather than the short-term, factors largely determine whether or not a firm will declare bankruptcy or default on a bond payment.⁸

Assuming that the ratios identified by Beaver are valid in forecasting financial failure, it would be wise to pay particular attention to trends in these ratios when following a firm. Beaver's reasoning for seeing these ratios as valid in forecasting financial failure appears to be very sound.

These three ratios for Nike for 1999 have been computed earlier. Cash flow/total debt was 50.23%, which appears to be very good. Net income/total assets (return on assets) was 8.48%, which appears to be good. The debt ratio was 36.46%, which is very good. Thus, Nike appears to have minimal risk of financial failure.

The Beaver study also computed the mean values of 13 financial statement items for each year before failure. Several important relationships were indicated among the liquid asset items.⁹

1. Failed firms have less cash but more accounts receivable.
2. When cash and receivables are added together, as they are in quick assets and current assets, the differences between failed and successful firms is obscured because the cash and receivables differences are working in opposite directions.
3. Failed firms tend to have less inventory.

These results indicate that particular attention should be paid to three current assets when forecasting financial failure: cash, accounts receivable, and inventory. The analyst should be alert for low cash and inventory and high accounts receivable.

Multivariate Model

Edward I. Altman developed a multivariate model to predict bankruptcy.¹⁰ His model uses five financial ratios weighted in order to maximize the predictive power of the model. The model produces an overall discriminant score, called a **Z score**. The Altman model is as follows:

$$Z = .012 X_1 + .014 X_2 + .033 X_3 + .006 X_4 + .010 X_5$$

X_1 = Working Capital/Total Assets

This computation is a measure of the net liquid assets of the firm relative to the total capitalization.

X_2 = Retained Earnings (balance sheet)/Total Assets

This variable measures cumulative profitability over time.

X_3 = Earnings Before Interest and Taxes/Total Assets

This variable measures the productivity of the firm's assets, abstracting any tax or leverage factors.

X_4 = Market Value of Equity/Book Value of Total Debt

This variable measures how much the firm's assets can decline in value before the liabilities exceed the assets and the firm becomes insolvent. Equity is measured by the combined market value of all shares of stock, preferred and common, while debt includes both current and long-term debts.

 X_5 = Sales/Total Assets

This variable measures the sales-generating ability of the firm's assets.

When computing the Z score, the ratios are expressed in absolute percentage terms. Thus, X_1 (working capital/total assets) of 25% is noted as 25.

The Altman model was developed using manufacturing companies whose asset size was between \$1 million and \$25 million. The original sample by Altman and the test samples used the period 1946–1965. The model's accuracy in predicting bankruptcies in more recent years (1970–1973) was reported in a 1974 article.¹¹ Not all of the companies included in the test were manufacturing companies, although the model was initially developed by using only manufacturing companies.

With the Altman model, the lower the Z score, the more likely that the firm will go bankrupt. By computing the Z score for a firm over several years, it can be determined if the firm is moving toward a more likely or less likely position in regard to bankruptcy. In a later study that covered the period 1970–1973, a Z score of 2.675 was established as a practical cutoff point. Firms that scored below 2.675 are assumed to have characteristics similar to those of past failures.¹² Current GAAP recognizes more liabilities than the GAAP used at the time of this study. Thus, we would expect firms to score somewhat less than in the time period 1970–1973. The Altman model is substantially less significant if there is no firm market value for the stock (preferred and common), because variable X_4 in the model requires that the market value of the stock be determined.

The Z score for Nike for 1999 follows:

$$\begin{aligned}
 Z &= .012 \text{ (working capital/total assets)} \\
 &+ .014 \text{ (retained earnings [balance sheet]/total assets)} \\
 &+ .033 \text{ (earnings before interest and taxes/total assets)} \\
 &+ .006 \text{ (market value of equity/book value of total debt)} \\
 &+ .010 \text{ (sales/total assets)} \\
 Z &= .012 \text{ } ([\$3,264,900,000 - \$1,446,900,000]/\$5,247,700,000) \\
 &+ .014 \text{ } (\$3,066,500,000/\$5,247,700,000) \\
 &+ .033 \text{ } ([\$746,100,000 + \$44,100,000]/\$5,247,700,000) \\
 &+ .066 \text{ } ([\$282,300,000 \times \$60.938]/\$1,913,100,000) \\
 &+ .010 \text{ } (\$8,776,900,000/\$5,247,700,000) \\
 Z &= .012 \text{ (34.64)} \\
 &+ .014 \text{ (58.44)} \\
 &+ .033 \text{ (15.06)} \\
 &+ .006 \text{ (899.21)} \\
 &+ .010 \text{ (167.25)} \\
 Z &= .42 + .82 + .50 + 5.40 + 1.67 \\
 Z &= 8.81
 \end{aligned}$$

The Z score for Nike for 1999 was 8.81. Considering that higher scores are better and that companies with scores below 2.675 are assumed to have characteristics similar to those of past failures, Nike is a very healthy company.

There are many academic studies on the use of ratios to forecast financial failure. These studies help substantiate that firms with weak ratios are more likely to go bankrupt than firms with strong ratios. Since no conclusive model has yet been developed, the best

approach is probably an integrated one. As a supplemental measure, it may also be helpful to compute some of the ratios that appear useful in forecasting financial failure.

ANALYTICAL REVIEW PROCEDURES

Statement of Auditing Standards No. 23, “Analytical Review Procedures,” provides guidance for the use of such procedures in audits. The objective of analytical review procedures is to isolate significant fluctuations and unusual items in operating statistics.

Analytical review procedures may be performed at various times, including the planning stage, during the audit itself, and near the completion of the audit. Some examples of analytical review procedures that may lead to special audit procedures follow:

1. Horizontal common-size analysis of the income statement may indicate that an item, such as selling expenses, is abnormally high for the period. This could lead to a close examination of the selling expenses.
2. Vertical common-size analysis of the income statement may indicate that cost of goods sold is out of line in relation to sales, in comparison with prior periods.
3. A comparison of accounts receivable turnover with the industry data may indicate that receivables are turning over much slower than is typical for the industry. This may indicate that receivables should be analyzed closely.
4. Cash flow in relation to debt may have declined significantly, indicating a materially reduced ability to cover debt from internal cash flow.
5. The acid-test ratio may have declined significantly, indicating a materially reduced ability to pay current liabilities with current assets less inventories.

When the auditor spots a significant trend in a statement or ratio, follow-up procedures should be performed to determine the reason. Such an investigation can lead to significant findings.

MANAGEMENT'S USE OF ANALYSIS

Management can use financial ratios and common-size analysis as aids in many ways. Analysis can indicate the relative liquidity, debt, and profitability of a firm. Analysis can also indicate how investors perceive the firm and can help detect emerging problems and strengths in a firm. As indicated previously, financial ratios can also be used as part of the firm's corporate objectives. Using financial ratios in conjunction with the budgeting process can be particularly helpful. An objective of the budgeting process is the determination of the firm's game plan. The budget can consist of an overall comprehensive budget and many separate budgets, such as a production budget.

The comprehensive budget relating to financial statements indicates how a firm plans to get from one financial position (balance sheet) to another. The income statement details how the firm changed internally from one balance sheet position to another in terms of revenue and expenses. The statement of cash flows indicates how the firm's cash changed from one balance sheet to another.

A proposed comprehensive budget should be compared with financial ratios that have been agreed upon as part of the firm's corporate objectives. For example, if corporate objectives include a current ratio of 2:1, a debt equity of 40%, and a return on equity of 15%, then the proposed comprehensive budget should be compared with these corporate objectives before accepting the budget as the firm's overall game plan. If the proposed comprehensive budget will not result in the firm achieving its objectives, management

should attempt to change the game plan in order to achieve its objectives. If management cannot change the proposed comprehensive budget satisfactorily to achieve the corporate objectives, they should know this when the comprehensive budget is accepted.

USE OF LIFO RESERVES

A firm that uses LIFO usually discloses a LIFO reserve account in a footnote or on the face of the balance sheet. If a LIFO reserve account is not disclosed, there is usually some indication of an amount that approximates current cost. Nike did not have the LIFO reserve for its 1999 financial statement. Therefore, the Union Carbide Corporation was selected to illustrate LIFO reserve analysis.

In its 1998 annual report, Union Carbide disclosed in a footnote that "It is estimated that if inventories had been valued at current costs they would have been approximately \$224 million and \$348 million higher than reported at December 31, 1998 and 1997, respectively."

This information can be used to improve the analysis of inventory and (in general) the analysis of liquidity, debt, and profitability. Supplemental analysis using this additional inventory information can be particularly significant when there is a substantial LIFO reserve and/or a substantial change in the reserve.

For Union Carbide, an approximation of the increase or decrease in income if inventory is at approximate current costs could be computed by comparing the change in inventory, net of any tax effect. For 1998, compute the approximation of the income if the inventory were at approximate current costs as follows:

1998 net income		\$403,000,000
Net decrease in inventory reserve:		
1998	\$224,000,000	
1997	<u>348,000,000</u>	
(a)	\$124,000,000	
(b) Effective tax rate	31.5%	
(c) Change in taxes $[a \times b] =$	\$39,060,000	
(d) Net decrease in income $[a - c] (\$124,000,000 - \$39,060,000)$		<u>84,940,000</u>
Approximate income for 1998 if inventory had been valued at approximate current cost for 1998 and 1997		<u>\$318,060,000</u>

This type of computation can be made for each year. The approximate new income figures can then be considered and reviewed over a series of years to obtain an idea of what net income would have been if inventory had been computed using a method that approximated inventory costs closer to current costs. Some analysts would consider this adjusted income amount to be more realistic than the unadjusted amount.

Specific liquidity and debt ratios can be recomputed, taking into consideration the adjusted inventory figure. To make these computations, add the gross inventory reserve to the inventory disclosed in current assets. Add the approximate additional taxes to the current liabilities.

Estimate the additional tax figure by multiplying the gross LIFO reserve by the effective tax rate. This tax figure relates to the additional income that would have been reported in the current year and all prior years if the higher inventory amounts had been reported. The additional tax amount is a deferred tax amount that is added to current liabilities, to be conservative. The difference between the additional inventory amount and the additional tax amount is added to retained earnings because it represents the total prior influence on net income. The adjusted figures for Union Carbide at the end of 1998 follow:

Inventory:	
As disclosed on the balance sheet	\$ 667,000,000
Increase in inventory	<u>224,000,000</u>
	<u>\$ 891,000,000</u>
Deferred current tax liability:	
Effective tax rate (31.5%) × increase in inventory	
(\$224,000,000)	<u>\$ 70,560,000</u>
Retained earnings:	
As disclosed on the balance sheet	\$3,357,000,000
Increase in retained earnings	
(\$224,000,000 – \$70,560,000)	<u>153,440,000</u>
	<u>\$3,510,440,000</u>

An adjusted cost of goods sold can also be estimated, using the change in the inventory reserve. A net increase in the inventory reserve would reduce the cost of goods sold. A net decrease in inventory reserve would increase the cost of goods sold.

Union Carbide reported cost of goods sold of \$4,294,000,000 and a decrease in inventory reserve of \$124,000,000 in 1998. The decrease in inventory reserve is added to the cost of goods sold, resulting in an adjusted cost of goods sold of \$4,418,000,000. The adjusted cost of goods sold could be used when computing several ratios, such as days' sales in inventory. This refinement of the cost of goods sold usually has an immaterial influence on the ratios because the change in inventory reserve is usually immaterial in relation to the cost of goods sold figure. Therefore, this refinement to the cost of goods sold is not used in the illustrations and problems in this book.

Exhibit 11-9 displays selected liquidity, debt, and profitability ratios for Union Carbide, comparing the adjusted ratio with the prior computation. For some of these ratios, there is a material difference. The ratios that relate to inventory are not as favorable when considering the LIFO disclosure as when not considering the LIFO disclosure. Working capital is more favorable, and the current ratio is more favorable. The acid-test and cash ratios are less favorable. The balance sheet-related debt ratios (debt ratio and debt/equity) are slightly more favorable when considering the LIFO disclosure. The income statement-related debt ratio of times interest earned is less favorable. The profitability ratios are less favorable when considering the LIFO disclosure.

The adjusted liquidity, debt, and profitability ratios could possibly be considered to be more realistic than the prior computations because of the use of a realistic inventory amount. For many of the ratios, we cannot generalize about whether the ratio will improve or decline when the LIFO reserve is used. For example, if the current ratio is above 2.00, then it may not improve when the LIFO reserve is considered, especially if the firm has a high tax rate. When the current ratio is low and/or the tax rate is low, then the current ratio will likely improve.

GRAPHING FINANCIAL INFORMATION

It has become very popular to use graphs in annual reports to present financial information. Graphs make it easier to grasp key financial information. Graphs can be a better communicative device than a written report or a tabular presentation because they communicate by means of pictures and, thus, create more immediate mental images.

There are many forms of graphs. Some popular forms used by accountants are line, column, and pie graphs. These forms will be briefly described here, but a detailed description of these and other forms can be found in reference books and articles.¹³

EXHIBIT 11-9

UNION CARBIDE
Selected Liquidity, Debt, and Profitability Considering LIFO
Disclosure for the Year Ended December 31, 1998

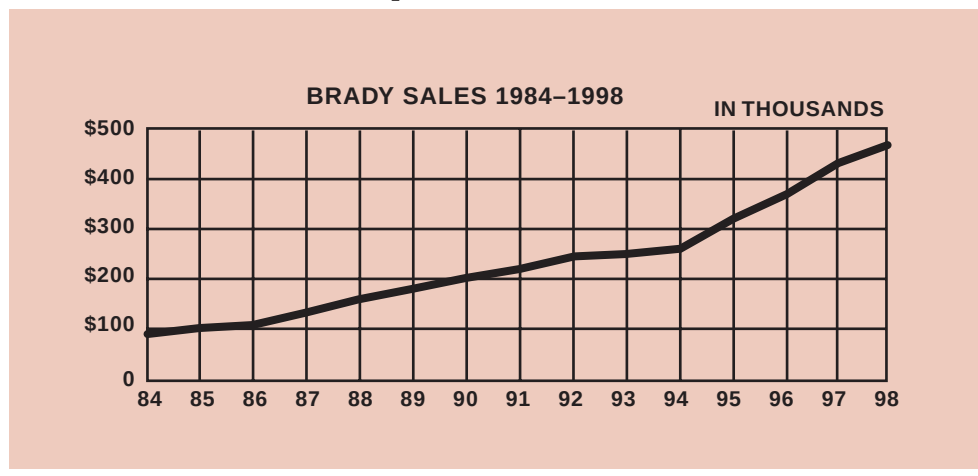
	1998 Considering LIFO Disclosure	1998 Normal Computations
Liquidity:		
Days' sales in inventory	73.61 days	56.70 days
Inventory turnover	4.79 times per year	6.76 times per year
Inventory turnover in days	76.13 days	54.02 days
Operating cycle	129.08 days	106.97 days
Working capital	\$589,440,000	\$436,000,000
Current ratio	1.38	1.30
Acid-test ratio	.64	.67
Cash ratio	0.32	.033
Debt:		
Debt ratio	65.37%	66.41%
Debt/equity	188.77%	197.71%
Times interest earned*	5.96	7.04
Profitability:		
Net profit margin	6.84%	8.34%
Total asset turnover	.76 times per year	.79 times per year
Return on assets	4.33%	5.70%
Return on total equity	12.24%	16.80%

*Capitalized interest not determined. Capitalized interest would lower the coverage.

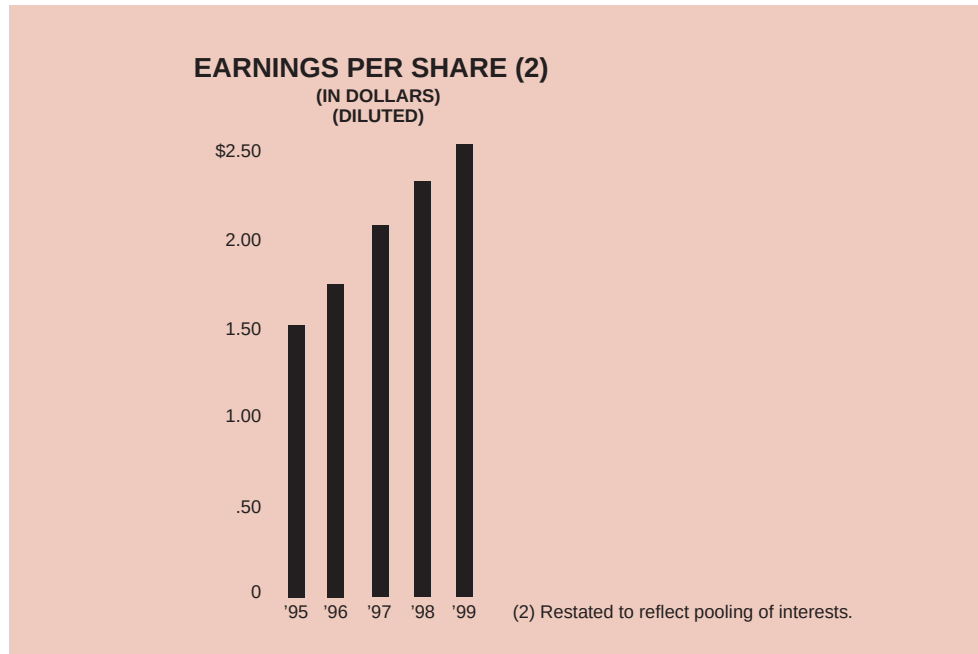
The **line graph** uses a set of points connected by a line to show change over time. It is important for the vertical axis to start at zero and that it not be broken. Not starting the vertical axis at zero and/or breaking the vertical axis can result in a very misleading presentation. Exhibit 11-10 illustrates a line graph.

EXHIBIT 11-10

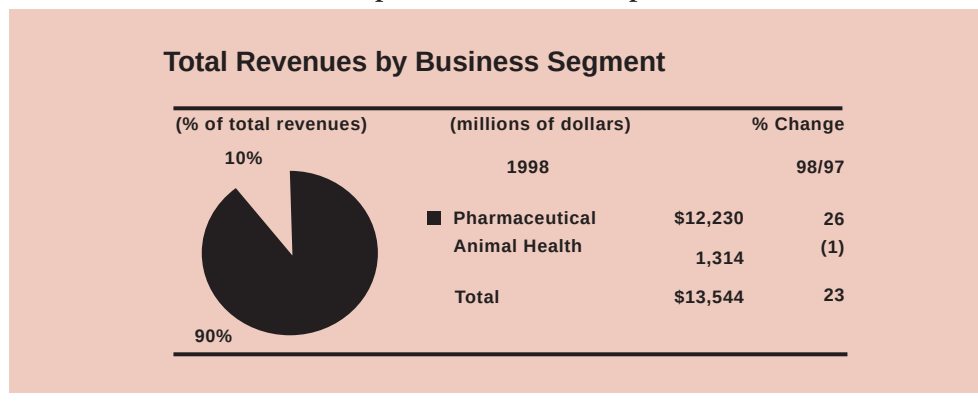
BRADY
Line Graph



A **column graph** has vertical columns. As in a line graph, it is important that the vertical axis start at zero and that it not be broken. A column graph is often the best form of graph for presenting accounting data. Exhibit 11-11 presents a column graph.

EXHIBIT 11-11**HUGHES SUPPLY, INC.****Column Graph—1998 Annual Report**

A **pie graph** is divided into segments. This type of graph makes a comparison of the segments, which must add up to a total or to 100%. A pie graph can mislead if it creates an optical illusion. Also, some accounting data do not fit on a pie graph. Exhibit 11-12 illustrates a pie graph.

EXHIBIT 11-12**PFIZER INC.****Pie Graph—1998 Annual Report**

SUMMARY

This chapter reviewed special areas related to financial statements. It was noted that commercial loan departments give a high significance rating to selected ratios that primarily measure liquidity or debt. The debt/equity ratio received the highest significance rating, and the current ratio was the second highest rated by the commercial loan officers. A commercial bank may elect to include a ratio as part of a loan agreement. The two ratios most likely to be included in a loan agreement are the debt/equity and the current ratio.

Financial executives give the profitability ratios the highest significance ratings. They rate earnings per share and return on investment the highest. Many firms have selected key financial ratios, such as profitability ratios, to be included as part of their corporate objectives.

Certified public accountants give the highest significance rating to two liquidity ratios: the current ratio and the accounts receivable turnover in days. The highest rated profitability ratio was the after-tax net profit margin, while the highest rated debt ratio was debt/equity.

A firm could use its annual report to relate financial data effectively by the use of financial ratios. In general, no major effort is being made to explain financial results by the disclosure of financial ratios in annual reports. A review of the methodology used to compute the ratios disclosed in annual reports indicated that wide differences of opinion exist on how many of the ratios should be computed.

A review of the financial statements, including the footnotes, indicates the conservatism of the statements in terms of accounting policies. When a firm has conservative accounting policies, it is said that its earnings are of high quality.

There have been many academic studies on the use of financial ratios to forecast financial failure. No conclusive model has yet been developed to forecast financial failure.

Auditors use financial analysis as part of their analytical review procedures. By using financial analysis, they can detect significant fluctuations and unusual items in operating statistics. This can result in a more efficient and effective audit.

Management can use financial analysis in many ways to manage a firm more effectively. A particularly effective use of financial analysis is to integrate ratios that have been accepted as corporate objectives into comprehensive budgeting.

It has become very popular to use graphs in annual reports to present financial information. Graphs make it easier to grasp key financial information. Graphs can communicate better than a written report or a tabular presentation.

QUESTIONS

- Q 11-1.** Commercial loan officers regard profitability financial ratios as very significant. Comment.
- Q 11-2.** Which two financial ratios do commercial loan officers regard as the most significant? Which two financial ratios appear most frequently in loan agreements?
- Q 11-3.** The commercial loan officers did not list the dividend payout ratio as a highly significant ratio, but they indicated that the dividend payout ratio was a ratio that appeared frequently in loan agreements. Speculate on the reason for this apparent inconsistency.
- Q 11-4.** Corporate controllers regard profitability financial ratios as very significant. Comment.
- Q 11-5.** List the top five financial ratios included in corporate objectives according to the study reviewed in this book. Indicate what each of these ratios primarily measures.
- Q 11-6.** CPAs regard which two financial ratios as the most significant? The highest rated profitability ratio? The highest debt ratio?

- Q 11-7.** Financial ratios are used extensively in annual reports to interpret and explain financial statements. Comment.
- Q 11-8.** List the sections of annual reports where ratios are most frequently located, in order of use.
- Q 11-9.** According to a study of annual reports reviewed in this chapter, what type or types of financial ratios are most likely to be included in annual reports? Speculate on the probable reason for these ratios appearing in annual reports.
- Q 11-10.** The study of annual reports reviewed in this chapter showed that earnings per share was disclosed in every annual report. Why?
- Q 11-11.** The study of annual reports reviewed in this chapter indicated that wide differences of opinion exist on how many ratios should be computed. Comment.
- Q 11-12.** What type of accounting policies are described as conservative?
- Q 11-13.** Indicate which of the following accounting policies are conservative by placing an *X* under *Yes* or *No*. Assume inflationary conditions exist.

	Conservative	
	Yes	No
a. LIFO inventory	_____	_____
b. FIFO inventory	_____	_____
c. Completed-contract method	_____	_____
d. Percentage-of-completion method	_____	_____
e. Accelerated depreciation method	_____	_____
f. Straight-line depreciation method	_____	_____
g. A relatively short estimated life for a fixed asset	_____	_____
h. Short period for expensing intangibles	_____	_____
i. Amortization of goodwill over 5 years	_____	_____
j. High interest rate used to compute the present value of accumulated benefit obligation	_____	_____
k. High rate of compensation increase used in computing the projected benefit obligation	_____	_____

- Q 11-14.** All firms are required to expense R&D costs incurred each period. Some firms spend very large sums on R&D, while others spend little or nothing on this area. Why is it important to observe whether a firm has substantial or immaterial R&D expenses?
- Q 11-15.** Indicate some possible uses of a reliable model that can be used to forecast financial failure.
- Q 11-16.** Describe what is meant by a firm's *financial failure*.
- Q 11-17.** According to the Beaver study, which ratios should be watched most closely, in order of their predictive power?
- Q 11-18.** According to the Beaver study, three current asset accounts should be paid particular attention in order to forecast financial failure. List each of these accounts and indicate whether they should be abnormally high or low.
- Q 11-19.** What does a Z score below 2.675 indicate, according to the Altman model?
- Q 11-20.** Indicate a practical problem with computing a Z score for a closely held firm.

- Q 11-21.** No conclusive model has been developed to forecast financial failure. This indicates that financial ratios are not helpful in forecasting financial failure. Comment.
- Q 11-22.** You are the auditor of Piedmore Corporation. You determine that the accounts receivable turnover has been much slower this period than in prior periods and that it is also materially lower than the industry average. How might this situation affect your audit plan?
- Q 11-23.** You are in charge of preparing a comprehensive budget for your firm. Indicate how financial ratios can help determine an acceptable, comprehensive budget.
- Q 11-24.** List three popular forms of graphs used by accountants.
- Q 11-25.** List two things that can make a line graph misleading.
- Q 11-26.** Indicate two possible problems with a pie graph for accounting data.
- Q 11-27.** The surveyed CFAs gave the highest significance rating to which type of financial ratio?
- Q 11-28.** CFAs gave liquidity ratios a high significance rating. Comment.

To the Net



1. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Kroger. Select the 10-K that was filed on March 26, 1999.
 - a. Determine the standard industrial classification.
 - b. What is the total current assets for January 2, 1999, and December 27, 1997?
 - c. What is the major current asset?
 - d. What is the total current liabilities for January 2, 1999, and December 27, 1997?
 - e. What is the major current liabilities?
 - f. From the notes to the financial statements, determine the description of inventories.
 - g. Compute the current ratio for January 2, 1999, and December 27, 1997.
 - h. Compute the current ratio for January 2, 1999, and December 27, 1997, after adding back the LIFO reserve. (Make no adjustments other than adding back the LIFO reserve.) Do you consider this adjusted current ratio to be more realistic than the unadjusted? Explain.
 - i. In your opinion, is the current ratio of Kroger adequate at January 2, 1999? Explain.
2. Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Cooper Tire & Rubber. Select the 10-K405 that was filed on March 19, 1999.
 - a. Determine the standard industrial classification.
 - b. Using the 1998 financial statements, determine the following:
 1. 1998 net income
 2. a. Inventory reserve at December 31, 1997
b. Inventory reserve at December 31, 1998
 3. 1998 effective tax rate
 - c. Compute the approximate income for 1998 if inventory had been valued at approximate current cost.

PROBLEMS

P 11-1.

Required

Answer the following multiple-choice questions:

- a. Footnotes to financial statements are beneficial in meeting the disclosure requirements of financial reporting. The footnotes should not be used to
 1. Describe significant accounting policies.
 2. Describe depreciation methods employed by the company.
 3. Describe principles and methods peculiar to the industry in which the company operates when these principles and methods are predominately followed in that industry.
 4. Disclose the basis of consolidation for consolidated statements.
 5. Correct an improper presentation in the financial statements.
- b. Which one of the following would be a source of funds under a cash concept of funds, but would not be listed as a source under the working capital concept?
 1. Sale of stock
 2. Sale of machinery
 3. Sale of treasury stock
 4. Collection of accounts receivable
 5. Proceeds from long-term bank borrowing
- c. The concept of conservatism is often considered important in accounting. The application of this concept means that in the event some doubt occurs as to how a transaction should be recorded, it should be recorded so as to
 1. Understate income and overstate assets
 2. Overstate income and overstate assets
 3. Understate income and understate assets
 4. Overstate income and understate assets
 5. Overstate cash and overstate assets
- d. Early in a period in which sales were increasing at a modest rate and plant expansion and start-up costs were occurring at a rapid rate, a successful business would likely experience
 1. Increased profits and increased financing requirements because of an increasing cash shortage
 2. Increased profits and decreased financing requirements because of an increasing cash surplus
 3. Increased profits and no change in financing requirements
 4. Decreased profits and increased financing requirements because of an increasing cash shortage
 5. Decreased profits and decreased financing requirements because of an increasing cash surplus
- e. Which of the following ratios would best disclose effective management of working capital by a given firm relative to other firms in the same industry?

1. A high rate of financial leverage relative to the industry average
2. A high number of days' sales uncollected relative to the industry average
3. A high turnover of net working capital relative to the industry average
4. A high number of days' sales in inventory relative to the industry average
5. A high proportion of fixed assets relative to the industry average
- f. Stock options are frequently provided to officers of companies. Exercised stock options would
 1. Improve the debt/equity ratio
 2. Improve earnings per share
 3. Improve the ownership interest of existing stockholders
 4. Improve the total asset turnover
 5. Improve the net profit margin

P 11-2.**Required**

Answer the following multiple-choice questions:

- a. If business conditions are stable, a decline in the number of days' sales outstanding from one year to the next (based on a company's accounts receivable at year-end) might indicate
 1. A stiffening of the company's credit policies
 2. That the second year's sales were made at lower prices than the first year's sales
 3. That a longer discount period and a more distant due date were extended to customers in the second year
 4. A significant decrease in the volume of sales of the second year
- b. Trading on the equity (financial leverage) is likely to be a good financial strategy for stockholders of companies having
 1. Cyclical high and low amounts of reported earnings
 2. Steady amounts of reported earnings
 3. Volatile fluctuation in reported earnings over short periods of time
 4. Steadily declining amounts of reported earnings
- c. The ratio of total cash, trade receivables, and marketable securities to current liabilities is
 1. The acid-test ratio
 2. The current ratio
 3. Significant if the result is 2 to 1 or below
 4. Meaningless
- d. The times interest earned ratio is a primary measure of

1. Liquidity	3. Activity
2. Long-term debt-paying ability	4. Profitability
- e. The calculation of the number of times bond interest is earned involves dividing
 1. Net income by annual bond interest expense.
 2. Net income plus income taxes by annual bond interest expense.
 3. Net income plus income taxes and bond interest expense by annual bond interest expense.
 4. Sinking fund earnings by annual bond interest expense.

P 11-3. The Thorpe Company is a wholesale distributor of professional equipment and supplies. The company's sales have averaged about \$900,000 annually for the three-year period 1999–2001. The firm's total assets at the end of 2001 amounted to \$850,000.

The president of the Thorpe Company has asked the controller to prepare a report that summarizes the financial aspects of the company's operations for the past three years. This report will be presented to the board of directors at its next meeting.

In addition to comparative financial statements, the controller has decided to present a number of relevant financial ratios that can assist in the identification and interpretation of trends. At the request of the controller, the accounting staff has calculated the following ratios for the three-year period 1999–2001:

Ratio	1999	2000	2001
Current ratio	2.00	2.13	2.18
Acid-test (quick) ratio	1.20	1.10	0.97
Accounts receivable turnover	9.72	8.57	7.13
Inventory turnover	5.25	4.80	3.80
Percent of total debt to total assets	44.00%	41.00%	38.00%
Percent of long-term debt to total assets	25.00%	22.00%	19.00%
Sales to fixed assets (fixed asset turnover)	1.75	1.88	1.99
Sales as a percent of 1999 sales	100.00%	103.00%	106.00%
Gross profit percentage	40.0%	33.6%	38.5%
Net income to sales	7.8%	7.8%	8.0%
Return on total assets	8.5%	8.6%	8.7%
Return on stockholders' equity	15.1%	14.6%	14.1%

In preparing his report, the controller has decided first to examine the financial ratios independently of any other data to determine if the ratios themselves reveal any significant trends over the three-year period.

- Required**
- The current ratio is increasing, while the acid-test (quick) ratio is decreasing. Using the ratios provided, identify and explain the contributing factor(s) for this apparently divergent trend.
 - In terms of the ratios provided, what conclusion(s) can be drawn regarding the company's use of financial leverage during the 1999–2001 period?
 - Using the ratios provided, what conclusion(s) can be drawn regarding the company's net investment in plant and equipment?

CMA Adapted

P 11-4. L. Konrath Company is considering extending credit to D. Hawk Company. Konrath estimated that sales to D. Hawk Company would amount to \$2,000,000 each year. L. Konrath Company, a wholesaler, sells throughout the Midwest. D. Hawk Company, a retail chain operation, has a number of stores in the Midwest. L. Konrath Company has had a gross profit of approximately 60% in recent years and expects to have a similar gross profit on the D. Hawk Company order. The D. Hawk Company order is approximately 15% of L. Konrath Company's present sales. Data from recent statements of D. Hawk Company are shown on the next page.

(In millions)	1999	2000	2001
Assets			
Current assets:			
Cash	\$ 2.6	\$ 1.8	\$ 1.6
Government securities (cost)	.4	.2	—
Accounts and notes receivable (net)	8.0	8.5	8.5
Inventories	2.8	3.2	2.8
Prepaid assets	.7	.6	.6
Total current assets	14.5	14.3	13.5
Property, plant, and equipment (net)	4.3	5.4	5.9
Total assets	<u>\$18.8</u>	<u>\$19.7</u>	<u>\$19.4</u>
Liabilities and Equities			
Current liabilities	\$ 6.9	\$ 8.5	\$ 9.3
Long-term debt, 6%	3.0	2.0	1.0
Total liabilities	9.9	10.5	10.3
Shareholders' equity	8.9	9.2	9.1
Total liabilities and equities	<u>\$18.8</u>	<u>\$19.7</u>	<u>\$19.4</u>
Income			
Net sales	\$24.2	\$24.5	\$24.9
Cost of goods sold	16.9	17.2	18.0
Gross margin	7.3	7.3	6.9
Selling and administrative expenses	6.6	6.8	7.3
Earnings (loss) before taxes	.7	.5	(.4)
Income taxes	.3	.2	(.2)
Net income	<u>\$.4</u>	<u>\$.3</u>	<u>\$ (.2)</u>

- Required**
- Calculate the following for D. Hawk Company for 2001:
 - Rate of return on total assets
 - Acid-test ratio
 - Return on sales
 - Current ratio
 - Inventory turnover
 - As part of the analysis to determine whether or not Konrath should extend credit to Hawk, assume the ratios were calculated from Hawk Company statements. For each ratio, indicate whether it is a favorable, unfavorable, or neutral statistic in the decision to grant Hawk credit. Briefly explain your choice in each case.

Ratio	1999	2000	2001
Rate of return on total assets	1.96%	1.12%	(.87)%
Return on sales	1.69%	.99%	(.69)%
Acid-test ratio	1.73	1.36	1.19
Current ratio	2.39	1.92	1.67
Inventory turnover (times per year)	4.41	4.32	4.52
Equity relationships:			
Current liabilities	36.0%	43.0%	48.0%
Long-term liabilities	16.0	10.5	5.0
Shareholders	48.0	46.5	47.0
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
Asset relationships:			
Current assets	77.0%	72.5%	69.5%
Property, plant, and equipment	23.0	27.5	30.5
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

- c. Would you grant credit to D. Hawk Company? Support your answer with facts given in the problem.
- d. What additional information, if any, would you want before making a final decision?

CMA Adapted

P 11-5. Your company is considering the possible acquisition of Growth Inc. Financial statements of Growth Inc. are shown below and on the following page.

GROWTH INC.		
Balance Sheet		
December 31, 2001 and 2000		
	2001	2000
Assets		
Current assets:		
Cash	\$ 64,346	\$ 11,964
Accounts receivable, less allowance of \$750 for doubtful accounts	99,021	83,575
Inventories, FIFO	63,414	74,890
Prepaid expenses	834	1,170
Total current assets	<u>227,615</u>	<u>171,599</u>
Investments and other assets	<u>379</u>	<u>175</u>
Property, plant, and equipment:		
Land and land improvements	6,990	6,400
Buildings	63,280	59,259
Machinery and equipment	182,000	156,000
	<u>252,270</u>	<u>221,659</u>
Less: Accumulated depreciation	<u>110,000</u>	<u>98,000</u>
Net property, plant, and equipment	<u>142,270</u>	<u>123,659</u>
Total assets	<u>\$370,264</u>	<u>\$295,433</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 32,730	\$ 26,850
Federal income taxes	5,300	4,800
Accrued liabilities	30,200	24,500
Current portion of long-term debt	<u>5,500</u>	<u>5,500</u>
Total current liabilities	<u>73,730</u>	<u>61,650</u>
Long-term debt	76,750	41,900
Other long-term liabilities	5,700	4,300
Deferred federal income taxes	<u>16,000</u>	<u>12,000</u>
Total liabilities	<u>172,180</u>	<u>119,850</u>
Stockholders' equity:		
Capital stock	44,000	43,500
Retained earnings	<u>154,084</u>	<u>132,083</u>
Total stockholders' equity	<u>198,084</u>	<u>175,583</u>
Total liabilities and stockholders' equity	<u>\$ 370,264</u>	<u>\$ 295,433</u>

GROWTH INC.
Statement of Income
Years Ended December 31, 2001, 2000, and 1999

	2001	2000	1999
Revenues	\$578,530	\$523,249	\$556,549
Costs and expenses:			
Cost of products sold	495,651	457,527	482,358
Selling, general, and administrative	35,433	30,619	29,582
Interest and debt expense	4,308	3,951	2,630
	<u>535,392</u>	<u>492,097</u>	<u>514,570</u>
Income before income taxes	43,138	31,152	41,979
Provision for income taxes	20,120	12,680	17,400
Net income	<u>\$ 23,018</u>	<u>\$ 18,472</u>	<u>\$ 24,579</u>
Net income per share	<u>\$ 2.27</u>	<u>\$ 1.85</u>	<u>\$ 2.43</u>

Partial footnotes: Under the LIFO method, inventories have been reduced by approximately \$35,300 and \$41,100 at December 31, 2001 and 2000, respectively, from current cost, which would be reported under the first-in, first-out method.

The effective tax rates were 36.6%, 30.7%, and 31.4%, respectively, for the years ended December 31, 2001, 2000, and 1999.

- Required**
- a. Compute the following for 2001, without considering the LIFO reserve:
 - Liquidity
 1. Days' sales in inventory
 2. Merchandise inventory turnover
 3. Inventory turnover in days
 4. Operating cycle
 5. Working capital
 6. Current ratio
 7. Acid-test ratio
 8. Cash ratio
 - Debt
 1. Debt ratio
 2. Debt/equity ratio
 3. Times interest earned
 - Profitability
 1. Net profit margin
 2. Total asset turnover
 3. Return on assets
 4. Return on total equity
 - b. Compute the ratios in part (a), considering the LIFO reserve.
 - c. Comment on the apparent liquidity, debt, and profitability, considering both sets of ratios.

P 11-6.

- Required** For each of the following numbered items, you are to select the lettered item(s) that indicate(s) its effect(s) on the corporation's statements. If more than one effect is applicable to a particular item, be sure to indicate *all* applicable letters. (Assume that the state statutes do not permit declaration of nonliquidating dividends except from earnings.)

Item	Effect
1. Declaration of a cash dividend due in one month on noncumulative preferred stock.	a. Reduces working capital b. Increases working capital c. Reduces current ratio d. Increases current ratio
2. Declaration and payment of an ordinary stock dividend.	e. Reduces the dollar amount of total capital stock f. Increases the dollar amount of total capital stock
3. Receipt of a cash dividend, not previously recorded, on stock of another corporation.	g. Reduces total retained earnings h. Increases total retained earnings
4. Passing of a dividend on cumulative preferred stocks.	i. Reduces equity per share of common stock
5. Receipt of preferred shares as a dividend on stock held as a temporary investment. This was not a regularly recurring dividend.	j. Reduces equity of each common stockholder
6. Payment of dividend mentioned in 1.	
7. Issue of new common shares in a 5-for-1 stock split.	

P 11-7. Argo Sales Corporation has in recent prior years maintained the following relationships among the data on its financial statements:

Gross profit rate on net sales	40%
Net profit rate on net sales	10%
Rate of selling expenses to net sales	20%
Accounts receivable turnover	8 per year
Inventory turnover	6 per year
Acid-test ratio	2 to 1
Current ratio	3 to 1
Quick-asset composition: 8% cash, 32% marketable securities, 60% accounts receivable	
Asset turnover	2 per year
Ratio of total assets to intangible assets	20 to 1
Ratio of accumulated depreciation to cost of fixed assets	1 to 3
Ratio of accounts receivable to accounts payable	1.5 to 1
Ratio of working capital to stockholders' equity	1 to 1.6
Ratio of total debt to stockholders' equity	1 to 2

The corporation had a net income of \$120,000 for 2001, which resulted in earnings of \$5.20 per share of common stock. Additional information includes the following:

Capital stock authorized, issued (all in 1970), and outstanding:
 Common, \$10 per share par value, issued at 10% premium.
 Preferred, 6% nonparticipating, \$100 per share par value, issued at a 10% premium.
 Market value per share of common at December 31, 2001: \$78.
 Preferred dividends paid in 2001: \$3,000.
 Times interest earned in 2001: 33.
 The amounts of the following were the same at December 31, 2001, as at January 1, 2001: inventory, accounts receivable, 5% bonds payable—due 2010, and total stockholders' equity.
 All purchases and sales were on account.

- Required**
- Prepare in good form the condensed balance sheet and income statement for the year ending December 31, 2001, presenting the amounts you would expect to appear on Argo's financial statements (ignoring income taxes). Major captions appearing on Argo's balance sheet are current assets, fixed assets, intangible assets, current liabilities, long-term liabilities, and stockholders' equity. In addition to the accounts divulged in the problem, you should include accounts for prepaid expenses, accrued expenses, and administrative expenses. Supporting computations should be in good form.
 - Compute the following for 2001. (Show your computations.):
 - Rate of return on stockholders' equity
 - Price/earnings ratio for common stock
 - Dividends paid per share of common stock
 - Dividends paid per share of preferred stock
 - Yield on common stock

CMA Adapted

P 11-8. Warford Corporation was formed five years ago through a public subscription of common stock. Lucinda Street, who owns 15% of the common stock, was one of the organizers of Warford and is its current president. The company has been successful but currently is experiencing a shortage of funds. On June 10, Street approached Bell National Bank, asking for a 24-month extension on two \$30,000 notes, which are due on June 30, 2001, and September 30, 2001. Another note of \$7,000 is due on December 31, 2001, but Street expects no difficulty in paying this note on its due date. Street explained that Warford's cash flow problems are due primarily to the company's desire to finance a \$300,000 plant expansion over the next two fiscal years through internally generated funds.

The commercial loan officer of Bell National Bank requested financial reports for the last two fiscal years. These reports are reproduced below and on the following page.

WARFORD CORPORATION
Statement of Financial Position
March 31

	2000	2001
Assets:		
Cash	\$ 12,500	\$ 16,400
Notes receivable	104,000	112,000
Accounts receivable (net)	68,500	81,600
Inventories (at cost)	50,000	80,000
Plant and equipment (net of depreciation)	646,000	680,000
Total assets	<u>\$881,000</u>	<u>\$970,000</u>

	2000	2001
Liabilities and Owners' Equity:		
Accounts payable	\$ 72,000	\$ 69,000
Notes payable	54,500	67,000
Accrued liabilities	6,000	9,000
Common stock (60,000 shares, \$10 par)	600,000	600,000
Retained earnings**	148,500	225,000
Total liabilities and owners' equity	<u>\$881,000</u>	<u>\$970,000</u>

**Cash dividends were paid at the rate of \$1.00 per share in fiscal year 2000 and \$1.25 per share in fiscal year 2001.

WARFORD CORPORATION
Income Statement
For the Fiscal Years Ended March 31, 2000 and 2001

	2000	2001
Sales	\$2,700,000	\$3,000,000
Cost of goods sold*	1,720,000	1,902,500
Gross profit	980,000	1,097,500
Operating expenses	780,000	845,000
Net income before taxes	200,000	252,500
Income taxes (40%)	80,000	101,000
Income after taxes	<u>\$ 120,000</u>	<u>\$ 151,500</u>

*Depreciation charges on the plant and equipment of \$100,000 and \$102,500 for fiscal years ended March 31, 2000 and 2001, respectively, are included in cost of goods sold.

- Required**
- Calculate the following items for Warford Corporation:
 - Current ratio for fiscal years 2000 and 2001
 - Acid-test (quick) ratio for fiscal years 2000 and 2001
 - Inventory turnover for fiscal year 2001
 - Return on assets for fiscal years 2000 and 2001
 - Percentage change in sales, cost of goods sold, gross profit, and net income after taxes from fiscal year 2000 to 2001
 - Identify and explain what other financial reports and/or financial analyses might be helpful to the commercial loan officer of Bell National Bank in evaluating Street's request for a time extension on Warford's notes.
 - Assume that the percentage changes experienced in fiscal year 2001, as compared with fiscal year 2000 for sales, cost of goods sold, gross profit, and net income after taxes, will be repeated in each of the next two years. Is Warford's desire to finance the plant expansion from internally generated funds realistic? Explain.
 - Should Bell National Bank grant the extension on Warford's notes, considering Street's statement about financing the plant expansion through internally generated funds? Explain.

CMA Adapted

P 11-9. The following data apply to items (a) through (g):

JOHANSON COMPANY
Statement of Financial Position
December 31, 2000 and 2001

(In thousands)	2000	2001
Assets		
Current assets:		
Cash and temporary investments	\$ 380	\$ 400
Accounts receivable (net)	1,500	1,700
Inventories	2,120	2,200
Total current assets	<u>4,000</u>	<u>4,300</u>
Long-term assets:		
Land	500	500
Building and equipment (net)	4,000	4,700
Total long-term assets	<u>4,500</u>	<u>5,200</u>
Total assets	<u><u>\$8,500</u></u>	<u><u>\$9,500</u></u>
Liabilities and Equities		
Current liabilities:		
Accounts payable	\$ 700	\$1,400
Current portion of long-term debt	500	1,000
Total current liabilities	<u>1,200</u>	<u>2,400</u>
Long-term debt	4,000	3,000
Total liabilities	<u>5,200</u>	<u>5,400</u>
Stockholders' equity:		
Common stock	3,000	3,000
Retained earnings	300	1,100
Total stockholders' equity	<u>3,300</u>	<u>4,100</u>
Total liabilities and equities	<u><u>\$8,500</u></u>	<u><u>\$9,500</u></u>

JOHANSON COMPANY
Statement of Income and Retained Earnings
For the Year Ended December 31, 2001

(In thousands)		
Net sales		\$28,800
Less: Cost of goods sold	\$15,120	
Selling expenses	7,180	
Administrative expenses	4,100	
Interest	400	
Income taxes	800	
Net income		<u>1,200</u>
Retained earnings, January 1		300
Subtotal		1,500
Cash dividends declared and paid		400
Retained earnings, December 31		<u><u>\$ 1,100</u></u>

Required

Answer the following multiple-choice questions:

- a. The acid-test ratio for 2001 is
 1. 1.1 to 1
 2. .9 to 1
 3. 1.8 to 1
 4. .2 to 1
 5. .17 to 1
- b. The average number of days' sales outstanding in 2001 is
 1. 18 days
 2. 360 days
 3. 20 days
 4. 4.4 days
 5. 80 days
- c. The times interest earned ratio for 2001 is
 1. 3.0 times
 2. 1.0 times
 3. 72.0 times
 4. 2.0 times
 5. 6.0 times
- d. The asset turnover in 2001 is
 1. 3.2 times
 2. 1.7 times
 3. .4 times
 4. 1.1 times
 5. .13 times
- e. The inventory turnover in 2001 is
 1. 13.6 times
 2. 12.5 times
 3. .9 times
 4. 7.0 times
 5. 51.4 times
- f. The operating income margin in 2001 is
 1. 2.7%
 2. 91.7%
 3. 52.5%
 4. 95.8%
 5. 8.3%
- g. The dividend payout ratio in 2001 is
 1. 100%
 2. 36%
 3. 20%
 4. 8.8%
 5. 33.3%

CMA Adapted

- P 11-10.** The statement of financial position for Paragon Corporation at November 30, 2001, the end of its current fiscal year, is presented below. The market price of the company's common stock was \$4 per share on November 30, 2001.

Assets		(In thousands)
Current assets:		
Cash		\$ 6,000
Accounts receivable	\$ 7,000	
Less: Allowance for doubtful accounts	400	6,600
Merchandise inventory		16,000
Supplies on hand		400
Prepaid expenses		1,000
Total current assets		\$30,000
Property, plant, and equipment:		
Land		27,500
Building	36,000	
Less: Accumulated depreciation	13,500	22,500
Total property, plant, and equipment		50,000
Total assets		<u>\$80,000</u>

Liabilities and Stockholders' Equity

Current liabilities:

Accounts payable	\$ 6,400	
Accrued interest payable	800	
Accrued income taxes payable	2,200	
Accrued wages payable	600	
Deposits received from customers	2,000	
Total current liabilities		\$12,000

Long-term debt:

Bonds payable—20-year, 8% convertible debentures due December 1, 2007 (Note 7)	20,000	
Less: Unamortized discount	200	19,800
Total liabilities		31,800

Stockholders' equity:

Common stock—authorized 40,000,000 shares of \$1 par value; 20,000,000 shares issued and outstanding	20,000	
Paid-in capital in excess of par value	12,200	
Total paid-in capital	32,200	
Retained earnings	16,000	
Total stockholders' equity		48,200
Total liabilities and stockholders' equity		\$80,000

All items are to be considered independent of one another, and any transactions given in the items are to be considered the only transactions to affect Paragon Corporation during the just-completed current or coming fiscal year. Average balance sheet account balances are used in computing ratios involving income statement accounts. Ending balance sheet account balances are used in computing ratios involving only balance sheet items.

Required

Answer the following multiple-choice questions:

- If Paragon paid back all of the deposits received from customers, its current ratio would be
 - 2.50 to 1.00
 - 2.80 to 1.00
 - 2.33 to 1.00
 - 3.00 to 1.00
 - 2.29 to 1.00
- If Paragon paid back all of the deposits received from customers, its quick (acid- test) ratio would be
 - 1.06 to 1.00
 - 1.00 to 1.00
 - 0.88 to 1.00
 - 1.26 to 1.00
 - 1.20 to 1.00
- A 2-for-1 common stock split by Paragon would
 - Result in each \$1,000 bond being convertible into 600 new shares of Paragon common stock
 - Decrease the retained earnings due to the capitalization of retained earnings
 - Not affect the number of common shares outstanding
 - Increase the total paid-in capital
 - Increase the total stockholders' equity
- Paragon Corporation's building is being depreciated using the straight-line method, salvage value of \$6,000,000, and life of 20 years.

- The number of years the building has been depreciated by Paragon as of November 30, 2001, is
1. 7.5 years
 2. 12.5 years
 3. 9.0 years
 4. 15.0 years
 5. None of these
- e. Paragon's book value per share of common stock as of November 30, 2001, is
1. \$4.00
 2. \$1.61
 3. \$1.00
 4. \$2.41
 5. None of these
- f. If, during the current fiscal year ending November 30, 2001, Paragon had sales of \$90,000,000 with a gross profit of 20% and an inventory turnover of five times per year, the merchandise inventory balance on December 1, 2000, was
1. \$14,400,000
 2. \$12,800,000
 3. \$18,000,000
 4. \$20,000,000
 5. \$16,000,000
- g. If Paragon has a payout ratio of 80% and declared and paid \$4,000,000 of cash dividends during the current fiscal year ended November 30, 2001, the retained earnings balance on December 1, 2000, was
1. \$20,000,000
 2. \$17,000,000
 3. \$15,000,000
 4. \$11,000,000
 5. None of these

CMA Adapted

P 11-11. The Calcor Company has been a wholesale distributor of automobile parts for domestic automakers for 20 years. Calcor has suffered through the recent slump in the domestic auto industry, and its performance has not rebounded to the levels of the industry as a whole.

Calcor's single-step income statement for the year ended November 30, 2001, is presented below:

CALCOR COMPANY Income Statement For the Year Ended November 30, 2001 (Thousands omitted)	
Net sales	\$8,400
Expenses:	
Cost of goods sold	6,300
Selling expense	780
Administrative expense	900
Interest expense	140
Total	<u>8,120</u>
Income before income taxes	280
Income taxes	112
Net income	<u><u>\$ 168</u></u>

Calcor's return on sales before interest and taxes was 5% in fiscal 2001 compared to the industry average of 9%. Calcor's turnover of average assets of four times per year and return on average assets before interest and taxes of 20% are both well below the industry average.

Joe Kuhn, president of Calcor, wishes to improve these ratios and raise them nearer to the industry averages. He established the following goals for Calcor Company for fiscal 2002:

Return on sales before interest and taxes	8%
Turnover of average assets	5 times per year
Return on average assets before interest and taxes	30%

For fiscal 2002, Kuhn and the rest of Calcor's management team are considering the following actions, which they expect will improve profitability and result in a 5% increase in unit sales:

1. Increase selling prices 10%.
2. Increase advertising by \$420,000 and hold all other selling and administrative expenses at fiscal 2001 levels.
3. Improve customer service by increasing average current assets (inventory and accounts receivable) by a total of \$300,000, and hold all other assets at fiscal 2001 levels.
4. Finance the additional assets at an annual interest rate of 10% and hold all other interest expense at fiscal 2001 levels.
5. Improve the quality of products carried; this will increase the units of goods sold by 4%.
6. Calcor's 2002 effective income tax rate is expected to be 40%—the same as in fiscal 2001.

- Required**
- a. Prepare a single-step pro forma income statement for Calcor Company for the year ended November 30, 2002, assuming that Calcor's planned actions would be carried out, and that the 5% increase in unit sales would be realized.
 - b. Calculate the following ratios for Calcor Company for the 2001–2002 fiscal year and state whether Kuhn's goal would be achieved:
 1. Return on sales before interest and taxes
 2. Turnover of average assets
 3. Return on average assets before interest and taxes
 - c. Would it be possible for Calcor Company to achieve the first two of Kuhn's goals without achieving his third goal of a 30% return on average assets before interest and taxes? Explain your answer.

CMA Adapted

P 11-12. The following data are for the A, B, and C Companies.

Variables	Company		
	A	B	C
Current assets	\$150,000	\$170,000	\$180,000
Current liabilities	\$ 60,000	\$ 50,000	\$ 30,000
Total assets	\$300,000	\$280,000	\$250,000
Retained earnings	\$ 80,000	\$ 90,000	\$ 60,000
Earnings before interest and taxes	\$ 70,000	\$ 60,000	\$ 50,000
Market price per share	\$ 20.00	\$ 18.75	\$ 16.50
Number of shares outstanding	9,000	9,000	9,000
Book value of total debt	\$ 30,000	\$ 50,000	\$ 80,000
Sales	\$430,000	\$400,000	\$200,000

- Required**
- a. Compute the Z score for each company.
 - b. According to the Altman model, which of these firms is most likely to experience financial failure?

P 11-13. The General Company financial statements for 2001 follow:

GENERAL COMPANY
Statement of Income
Years Ended December 31

	2001	2000	1999
Net sales	\$860,000	\$770,000	\$690,000
Cost and expenses:			
Cost of products sold	730,000	630,000	580,000
Selling, general, and administrative	46,000	40,000	38,000
Interest and debt expense	4,000	3,900	6,500
	<u>780,000</u>	<u>673,900</u>	<u>624,500</u>
Income before income taxes	80,000	96,100	65,500
Provision for income taxes	33,000	24,000	21,000
Net income	<u>\$ 47,000</u>	<u>\$ 72,100</u>	<u>\$ 44,500</u>
Net income per share	<u>\$ 2.67</u>	<u>\$ 4.10</u>	<u>\$ 2.54</u>

GENERAL COMPANY
Statement of Cash Flows
Years Ended December 31

	2001	2000	1999
Operating activities:			
Net income	\$47,000	\$72,100	\$44,500
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	21,000	20,000	19,000
Deferred taxes	3,800	2,500	2,000
Increase in accounts receivable	(4,000)	(3,000)	(3,000)
Decrease (increase) in inventories	(3,000)	(2,500)	1,000
Decrease (increase) in prepaid expenses	(300)	(200)	100
Increase (decrease) in accounts payable	6,000	5,000	(1,000)
Increase (decrease) in income taxes	100	300	(100)
Increase (decrease) in accrued liabilities	6,000	3,000	(1,000)
Net cash provided by operating activities	<u>76,600</u>	<u>97,200</u>	<u>61,500</u>
Investing activities:			
Additions to property, plant, and equipment	<u>(66,500)</u>	<u>(84,400)</u>	<u>(52,500)</u>
Financing activities:			
Payment on long-term debt	(1,000)	(2,000)	(1,500)
Issuance of other long-term liabilities	9,200	1,000	(1,000)
Issuance of capital stock	1,000	—	—
Dividend paid	<u>(10,300)</u>	<u>(9,800)</u>	<u>(9,500)</u>
Net cash used in financing activities	<u>(1,100)</u>	<u>(10,800)</u>	<u>(12,000)</u>
Increase (decrease) in cash	9,000	2,000	(3,000)
Cash at beginning of year	<u>39,000</u>	<u>37,000</u>	<u>40,000</u>
Cash at end of year	<u><u>\$48,000</u></u>	<u><u>\$39,000</u></u>	<u><u>\$37,000</u></u>

GENERAL COMPANY
Balance Sheet
December 31, 2001

	2001	2000
Assets		
Current assets:		
Cash	\$ 48,000	\$ 39,000
Accounts receivable, less allowance for doubtful accounts of \$2,000 in 2001 and \$1,400 in 2000	125,000	121,000
Inventories	71,000	68,000
Prepaid expenses	2,500	2,200
Total current assets	<u>246,500</u>	<u>230,200</u>
Property, plant, and equipment:		
Land and land improvements	12,000	10,500
Buildings	98,000	89,000
Machinery and equipment	303,000	247,000
	<u>413,000</u>	<u>346,500</u>
Less: Accumulated depreciation	165,000	144,000
Net property, plant and equipment	<u>248,000</u>	<u>202,500</u>
Total assets	<u><u>\$494,500</u></u>	<u><u>\$432,700</u></u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 56,000	\$ 50,000
Income taxes	3,700	3,600
Accrued liabilities	34,000	28,000
Total current liabilities	<u>93,700</u>	<u>81,600</u>
Long-term debt	63,000	64,000
Other long-term liabilities	16,000	6,800
Deferred federal income taxes	27,800	24,000
Total liabilities	<u>200,500</u>	<u>176,400</u>
Stockholders' equity:		
Capital stock	46,000	45,000
Retained earnings	248,000	211,300
Total stockholders' equity	<u>294,000</u>	<u>256,300</u>
Total liabilities and stockholders' equity	<u><u>\$494,500</u></u>	<u><u>\$432,700</u></u>

Note: The market price of the stock at the end of 2001 was \$30.00 per share. There were 23,000 common shares outstanding at December 31, 2001.

- Required**
- Compute the Z score of the General Company at the end of 2001.
 - According to the Altman model, does the Z score of the General Company indicate a high probability of financial failure?

P 11-14.

LIFO reserves: Rhodes Company
Reported year for analysis, 2001

2001 net income as reported	\$90,200,000
2001 inventory reserve	50,000,000
2000 inventory reserve	46,000,000
2001 income taxes	55,000,000
2001 income before income taxes	145,200,000

Required Compute the approximate income if inventory had been valued at approximate current cost.

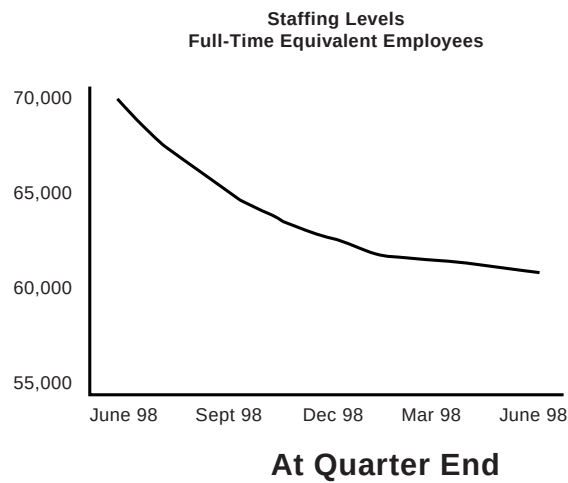
P 11-15.

LIFO reserves: Lion Company
Reported year for analysis, 2000

2000 net income as reported	\$45,000,000
2000 inventory reserve	20,000,000
1999 inventory reserve	28,000,000
2000 income taxes	14,000,000
2000 income before income taxes	59,000,000

Required Compute the approximate income if inventory had been valued at approximate current cost.

P 11-16. An airline presented this graph with its annual report:



Required Indicate the misleading feature in this graph.

Case 11-1

What Position?

Seaway Food Town, Inc. presented this data in its 1995 annual report:

SEAWAY FOOD TOWN, INC.
CONSOLIDATED STATEMENTS OF INCOME
Years Ended August 26, 1995, August 27, 1994, and August 28, 1993
(Dollars in thousands, except per share data)

	1995	1994	1993
Net sales	\$559,244	\$546,193	\$566,883
Cost of merchandise sold	418,128	409,305	428,478
Gross profit	141,116	136,888	138,405
Selling, general and administrative expenses	131,267	129,921	133,175
Operating profit	9,849	6,967	5,230
Interest expense	(4,469)	(4,410)	(4,660)
Other income—net	1,815	1,169	1,133
Income before income taxes, extraordinary item and cumulative effect	7,195	3,726	1,703
Provision for income taxes	2,715	1,288	580
Income before extraordinary item and cumulative effect	4,480	2,438	1,123
Extraordinary item—losses from early extinguishment of debt, less applicable income taxes of \$63 (Note 2)	—	(123)	—
Cumulative effect of change in accounting for income taxes (Note 3)	—	(256)	—
Net income	<u>\$ 4,480</u>	<u>\$ 2,059</u>	<u>\$ 1,123</u>
Per common share:			
Income before extraordinary item and cumulative effect	\$ 2.04	\$ 1.06	\$.48
Extraordinary item	—	(.06)	—
Cumulative effect of change in accounting for income taxes	—	(.11)	—
Net income	<u>\$ 2.04</u>	<u>\$.89</u>	<u>\$.48</u>

SEAWAY FOOD TOWN, INC.
CONSOLIDATED BALANCE SHEETS
August 26, 1995 and August 27, 1994
(Dollars in thousands, except per share data)

Assets	1995	1994
Current assets		
Cash and cash equivalents	\$ 7,402	\$ 7,137
Income tax recoverable	—	600
Notes and accounts receivable, less allowance of \$450 for doubtful accounts	6,587	5,627
Merchandise inventories	44,064	44,749
Prepaid expenses	1,371	1,272
Deferred income taxes	4,211	4,036
Total current assets	63,635	63,421
Other assets	6,366	6,436
Property and equipment, at cost		
Land	4,160	4,202
Buildings and improvements	65,983	62,453
Leasehold improvements	28,921	26,005
Equipment	89,356	92,165
	188,420	184,825
Less accumulated depreciation and amortization	104,420	99,479
Net property and equipment	84,000	85,346
	<u>\$154,001</u>	<u>\$155,203</u>
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable—trade	\$ 38,889	\$ 36,318
Income taxes	1,027	407
Accrued liabilities:		
Insurance	5,521	5,027
Payroll	2,994	2,766
Taxes, other than income	2,352	2,434
Other	3,213	4,191
	14,080	14,418
Long-term debt due within one year	3,553	3,341
Total current liabilities	57,549	54,484
Long-term debt	48,399	55,060
Deferred income taxes	5,276	5,495
Deferred other	2,046	2,579
Total liabilities	113,270	117,618
Shareholders' equity		
Serial preferred stock, without par value:		
300,000 shares authorized, none issued	—	—
Common stock, without par value (stated value \$2 per share): 6,000,000 shares authorized		
2,193,352 shares outstanding (2,242,373 in 1994)	4,387	4,485
Capital in excess of stated value	680	434
Retained earnings	35,664	32,666
Total shareholders' equity	40,731	37,585
Total liabilities and shareholders' equity	<u>\$154,001</u>	<u>\$155,203</u>

1. Significant Accounting Policies (In Part)

Inventories—Meat, produce, and drug inventories are valued at the lower of cost, using the first-in, first-out (FIFO) method, or market. All other merchandise inventories are valued at the lower of cost, using the last-in, first-out (LIFO) method, or market. Inventories have been reduced by \$18,157,000 and \$17,576,000 at August 26, 1995 and August 27, 1994, respectively, from amounts which would have been reported under the FIFO method (which approximates current cost).

During 1995 and 1994, merchandise inventory quantities were reduced. These reductions resulted in liquidations of the LIFO inventory quantities carried at lower costs prevailing in prior years as compared with costs of 1995 and 1994 purchases, the effect of which increased consolidated net income by approximately \$89,000 (\$.04 per share) in 1995 and \$75,000 (\$.03 per share) in 1994.

Other data:

- a. Net cash provided by operating activities, \$19,829,000, \$16,183,000, and \$16,534,000 for 1995, 1994, and 1993, respectively.
- b. Market price of common stock:
 1. August 26, 1995, \$16.25
 2. August 27, 1994, \$10.50

Required

- a. LIFO inventory liquidation increased income in 1995 and 1994. Determine the amount by which income was increased in 1995 and 1994 because of LIFO inventory.
- b. Determine the change in net income, in comparison with the reported net income, if FIFO had been used for all inventory.
- c. Compute the following for 1995, with no adjustment for LIFO reserve:
 1. Days' sales in inventory
 2. Working capital
 3. Current ratio
 4. Acid-test
 5. Debt ratio
- d. Compute the measures in (c), considering the LIFO reserve. (Eliminate the LIFO reserve.)
 1. Days' sales in inventory
 2. Working capital
 3. Current ratio
 4. Acid-test
 5. Debt ratio
- e. Comment on the different results of the ratios computed in (c) and (d).
- f. Compute the following for 1995 (use the financial statements as published):
 1. Cash flow/total debt
 2. Net income/total assets
 3. Debt ratio

Assuming that these ratios are valid in forecasting financial failure, give your opinion as to the financial position of this company.
- g. Compute the Z score for 1995. Comment.

Endnotes

- 1 C.H. Gibson, "Financial Ratios as Perceived by Commercial Loan Officers," *Akron Business and Economic Review* (Summer 1983), pp. 23–27.
- 2 The basis of the comments in this section is a study by Dr. Charles Gibson in 1981. The research was done under a grant from the Deloitte Haskins & Sells Foundation.
- 3 C.H. Gibson, "Ohio CPA's Perceptions of Financial Ratios," *The Ohio CPA Journal* (Autumn 1985), pp. 25–30. © 1985. Reprinted with permission of *The Ohio CPA Journal*.
- 4 C.H. Gibson, "How Chartered Financial Analysts View Financial Ratios," *Financial Analysts Journal* (May–June 1987), pp. 74–76.
- 5 Gibson, pp. 74, 76.
- 6 C.H. Gibson, "Financial Ratios in Annual Reports," *The CPA Journal* (September 1982), pp. 18–29.
- 7 W.H. Beaver, "Alternative Accounting Measures as Predictors of Failure," *The Accounting Review* (January 1968), pp. 113–122.
- 8 Beaver, p. 117.
- 9 Beaver, p. 119.
- 10 E.I. Altman, "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy," *Journal of Finance* (September 1968), pp. 589–609.
- 11 Edward I. Altman and Thomas P. McGough, "Evaluation of a Company as a Going Concern," *The Journal of Accountancy* (December 1974), pp. 50–57.
- 12 Altman and McGough, p. 52.
- 13 Suggested reference sources:
 Anker V. Andersen, "Graphing Financial Information: How Accountants Can Use Graphs to Communicate," National Association of Accountants (1983), p. 50.
 Edward Bloches, Robert P. Moffie, and Robert W. Smud, "How Best to Communicate Numerical Data," *The Internal Auditor* (February 1985), pp. 38–42.
 Charles H. Gibson and Nicholas Schroeder, "Improving Your Practice—Graphically," *The CPA Journal* (August 1990), pp. 28–37.
 Johnny R. Johnson, Richard R. Rice, and Roger A. Roemmich, "Pictures That Lie: The Abuse of Graphs in Annual Reports," *Management Accounting* (October 1980), pp. 50–56.
 Calvin F. Schmid and Stanton E. Schmid, *Handbook of Graphic Presentation*, 2nd ed. (New York: Ronald Press, 1979), p. 308.

CHAPTER

13

SPECIAL INDUSTRIES: BANKS, UTILITIES, OIL AND GAS, TRANSPORTATION, INSURANCE, REAL ESTATE COMPANIES

THE PRECEDING CHAPTERS COVERED material most applicable to manufacturing, retailing, wholesaling, and service industries. This chapter covers six specialized industries: banks, electric utilities, oil and gas, transporta-

tion, insurance, and real estate companies. The chapter notes the differences in statements and suggests changes or additions to analysis.

BANKS

Banks operate under either a federal or state charter. National banks are required to submit uniform accounting statements to the Comptroller of the Currency. State banks are controlled by their state banking departments. In addition, the Federal Deposit Insurance Corporation and the Board of Governors of the Federal Reserve System receive financial and operating statements from all members of the Federal Reserve System. Member banks are required to keep reserves with their district Federal Reserve bank. State banking laws also dictate the geographical area within which a bank may function. The range runs from within one county to interstate.

Banking systems usually involve two types of structures: individual banks and bank holding companies. **Bank holding companies** consist of a parent that owns one or many banks. Additionally, the holding company may own bank-related financial services and nonfinancial subsidiaries. In financial report analysis, we must determine the extent of the business generated by banking services. In order for the specific industry ratios to be meaningful, a large proportion of the services should be bank related.

Exhibit 12-1 presents part of the 1998 annual report of National City. Located in Cleveland, Ohio, National City owns and operates seven commercial banks with offices in Ohio, Kentucky, Illinois, Indiana, Michigan, and Pennsylvania.

Balance Sheet

The balance sheet of a commercial bank is sometimes termed the *report of condition*. Two significant differences exist between the traditional balance sheet and that of a bank. First, the accounts of banks may seem the opposite of those of other types of firms. Checking accounts or demand deposits are liabilities to a bank, since it owes the customers money in these cases. Similarly, loans to customers are assets—receivables. Further, the balance sheet accounts are not subdivided into current and noncurrent accounts.

Some banks provide a very detailed disclosure of their assets and liabilities. Other banks provide only general disclosure. The quality of review that can be performed can be no better than the disclosure.

Representative assets of a bank may include cash on hand or due from other banks, investment securities, loans, bank premises, and equipment. Closely review the disclosure of a bank's assets. This review may indicate risk or opportunity. For example, a review of the assets may indicate that the bank has a substantial risk if interest rates increase. The general rule is that for 20-year fixed obligations, a gain or loss of 8% of principal arises when interest rates change by 1%. Thus, an investment of \$100,000,000 in 20-year bonds would lose approximately \$32,000,000 in principal if interest rates increased by 4%. A similar example would be a bank that holds long-term fixed-rate mortgages. The value of these mortgages could decline substantially if interest rates increased. Many bank annual reports do not disclose the amount of fixed-rate mortgages.

Review the stockholders' equity section of the balance sheet to determine if significant accumulated comprehensive income (losses) exist. For National City, accumulated comprehensive income was \$345,787,000 and \$272,078,000 at the end of 1997 and 1998, respectively. The decline came from selling securities and realizing the gain.

In recent years, Less Developed Country (LDC) loans have become a national issue. In general, LDC loans are perceived as being more risky than domestic loans. National City had \$40 million in international loans at the end of both 1998 and 1997. It is not disclosed if there were LDC loans. These loans represent a small percentage of the loan portfolio.

As part of the review of assets, review the disclosure that describes related-party loans. Observe the materiality and the trend of these loans. National City apparently did not have related party loans at the end of 1998 or 1997.

EXHIBIT 12-1**NATIONAL CITY****Selected Data from 1998 Annual Report****CONSOLIDATED BALANCE SHEETS**

(Dollars in Thousands)	December 31,	
	1998	1997
Assets		
Loans:		
Commercial	\$22,243,114	\$18,218,837
Real estate – commercial	6,251,879	6,410,531
Real estate – residential	9,664,115	9,987,066
Consumer	14,822,759	12,357,229
Credit card	1,852,635	2,047,769
Home equity	3,176,664	2,972,987
Total loans	58,011,166	51,994,419
Allowance for loan losses	(970,243)	(941,874)
Net loans	57,040,923	51,052,545
Mortgage loans held for sale	3,507,487	1,249,708
Securities available for sale, at market	16,119,370	13,797,566
Federal funds sold and security resale agreements	930,492	542,156
Other short-term investments	218,149	84,204
Cash and demand balances due from banks	4,783,491	4,319,309
Properties and equipment	1,150,210	1,031,912
Accrued income and other assets	4,495,510	3,701,681
Total Assets	\$88,245,632	\$75,779,081
Liabilities and Stockholders' Equity		
Liabilities:		
Demand deposits (noninterest bearing)	\$10,911,926	\$10,287,007
NOW and money market accounts	18,610,832	16,106,637
Savings accounts	4,021,113	4,222,729
Time deposits of individuals	17,450,904	18,631,280
Other time deposits	2,280,973	1,633,282
Deposits in overseas offices	4,971,161	1,736,419
Total deposits	58,246,909	52,617,354
Federal funds borrowed and security repurchase agreements	9,427,309	4,810,953
Borrowed funds	2,117,916	4,264,556
Long-term debt	9,009,448	5,647,302
Corporation obligated mandatorily redeemable capital securities of subsidiary trusts holding solely debentures of the Corporation	679,894	649,892
Accrued expenses and other liabilities	1,751,248	1,630,764
Total Liabilities	81,232,724	69,620,821
Stockholders' Equity:		
Preferred Stock, stated value \$50 per share, authorized 5,000,000 shares, outstanding 721,954 shares in 1998	36,098	—
Common stock, par value \$4 per share, authorized 700,000,000 shares, outstanding 326,327,360 shares in 1998 and 315,697,488 shares in 1997	1,305,309	1,262,790
Capital surplus	1,968,751	1,108,920
Retained earnings	3,430,671	3,440,763
Accumulated other comprehensive income	272,078	345,787
Total Stockholders' Equity	7,012,908	6,158,260
Total Liabilities and Stockholders' Equity	\$88,245,632	\$75,779,081

EXHIBIT 12-1

continued

CONSOLIDATED STATEMENTS OF INCOME

(Dollars in Thousands Except Per-Share Amounts)	For the Calendar Year		
	1998	1997	1996
Interest Income			
Loans	\$4,811,735	\$4,486,529	\$4,425,124
Securities:			
Taxable	836,430	795,229	813,653
Exempt from Federal income taxes	48,831	45,043	40,548
Federal funds sold and security resale agreements	43,793	20,225	23,498
Other short-term investments	15,888	15,486	16,066
Total interest income	5,756,677	5,362,512	5,318,889
Interest Expense			
Deposits	1,846,276	1,813,251	1,862,084
Federal funds borrowed and security repurchase agreements	353,882	235,882	248,512
Borrowed funds	168,507	180,082	130,811
Long-term debt	476,364	322,959	232,418
Total interest expense	2,845,029	2,552,174	2,473,825
Net Interest Income	2,911,648	2,810,338	2,845,064
Provision for Loan Losses	201,400	225,367	239,936
Net interest income after provision for loan losses	2,710,284	2,584,971	2,605,128
Noninterest Income			
Item processing revenue	484,503	393,115	364,512
Service charges on deposit accounts	384,938	359,268	323,636
Trust and investment management fees	311,050	278,793	255,598
Card-related fees	201,168	205,631	191,272
Mortgage banking revenue	327,247	158,544	109,670
Brokerage revenue	90,477	75,374	65,053
Other	380,300	295,668	218,746
Total fees and other income	2,179,683	1,766,393	1,528,487
Securities gains	134,459	81,239	108,650
Total noninterest income	2,314,142	1,847,632	1,637,137
Noninterest Expense			
Salaries, benefits and other personnel	1,594,757	1,449,445	1,379,790
Equipment	212,871	204,862	193,601
Net occupancy	202,664	193,555	197,014
Assessments and taxes	52,502	57,269	82,953
Merger and restructuring	379,376	65,902	74,745
Other	934,943	821,537	872,375
Total noninterest expense	3,377,113	2,792,570	2,800,478
Income before income taxes	1,647,277	1,640,033	1,441,787
Income tax expense	576,596	517,839	448,271
Net Income	\$ 1,070,681	\$ 1,122,194	\$ 993,516
Net Income Applicable to Common Stock	\$ 1,068,499	\$ 1,122,194	\$ 989,488
Net Income Per Common Share			
Basic	\$ 3.28	\$ 3.48	\$3.00
Diluted	3.22	3.42	2.95
Average Common Shares Outstanding			
Basic	326,005,752	322,223,892	329,548,231
Diluted	332,860,165	327,732,584	336,549,137

EXHIBIT 12-1

concluded

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (IN PART)

(Dollars in Thousands Except Per-Share Amounts)	Preferred Stock	Common Stock	Capital Surplus	Retained Earnings	Unallocated Shares Held by ESOP Trust	Accumulated Other Comprehensive Income	Total
Balance December 31, 1997	\$ —	\$1,262,790	\$1,108,920	\$3,440,763	\$ —	\$345,787	\$6,158,260
Comprehensive Income:							
Net income				1,070,681			1,070,681
Other comprehensive income, net of tax:							
Unrealized gain on securities of \$13,689 net of reclassification adjustment for gains included in net income of \$87,398						(73,709)	(73,709)
Total comprehensive income							996,972
Common dividends declared, National City, \$1.88 per share				(637,099)			(637,099)
Preferred dividends declared				(2,182)			(2,182)
Issuance of 4,792,495 common shares under corporate stock and dividend reinvestment plans		19,170	185,835				205,005
Purchase of 5,000,000 common shares		(20,000)	(17,041)	(310,667)			(347,708)
Net issuance of 10,810,084 common shares and 739,976 preferred shares pursuant to acquisition	36,999	43,240	690,245	(130,824)			639,660
Conversion of 18,022 shares of preferred stock to 27,295 common shares	(901)	109	792				—
Balance December 31, 1998	\$36,098	\$1,305,309	\$1,968,751	\$3,430,672	\$ —	\$272,078	\$7,012,908

Review the disclosure of allowance for loan losses. It may indicate a significant change and/or significant losses charged. National City disclosed net charge-offs of \$200.5 million in 1998 and \$222.7 million in 1997, respectively.

Review the footnotes and Management's Discussion and Analysis for disclosure of nonperforming assets. In general, **nonperforming assets** are those for which the bank is not receiving income or is receiving reduced income. The categories of nonperforming assets are nonaccrual loans, renegotiated loans, and other real estate. *Nonaccrual loans* are loans for which payments have fallen significantly behind, so that the bank has stopped accruing interest income on these loans. *Renegotiated loans* are loans that the bank has renegotiated with a customer because the customer has had trouble meeting the terms of the original loan. For example, a loan in the amount of \$10,000,000 and 10% interest may come due. The customer who cannot pay may be allowed to renegotiate the loan with the bank, reducing the principal to \$8,000,000 and the interest rate to 6% and gaining a five-year extension. Under current GAAP, no immediate loss will be taken by the bank on the renegotiated loan if the projected cash flow under the rene-

gotiated loan will cover the current book value of the loan. In the example, the projected cash flow comes to \$10,400,000 (\$8,000,000 in principal and \$480,000 in interest each year for five years). Since this covers the current book figure of \$10,000,000, no immediate loss will be recognized. In addition to other factors, banks should consider renegotiated loans when they adjust the loan loss reserve.

Other real estate usually consists of real estate the bank has taken when it foreclosed on a loan. For example, the bank may have made a loan to a company for a hotel and accepted a mortgage on the hotel as collateral. If the bank must foreclose on the loan, it may take possession of the hotel. The bank would want to sell the hotel, but it may be necessary to hold and operate the hotel for a relatively long period of time before a buyer can be found.

The amount and trend of nonperforming assets should be observed closely. This can be an early indication of troubles to come. For example, a significant increase in nonperforming assets late in the year may have had an insignificant effect on the past year's profits, but it could indicate a significant negative influence on the future year's profits.

National City discloses nonperforming assets at the end of 1998 and 1997 of \$248.5 million and \$273.3 million, respectively. This is a positive trend.

Typical liabilities of a bank include savings, time and demand deposits, loan obligations, and long-term debt. Closely review the disclosure of liabilities for favorable or unfavorable trends. For example, a decreasing amount in savings deposits would indicate that the bank is losing one of its cheapest sources of funds. There was not a significant change in core deposits at National City between 1997 and 1998.

As part of the review of liabilities, look for a footnote that describes commitments and contingent liabilities. This footnote may reveal significant additional commitments and contingent liabilities. National City discloses significant commitments at the end of 1998 and 1997. There apparently were not significant changes except for the commitment to sell mortgages and mortgage-backed securities totaling \$5.2 billion and \$1.9 billion, respectively, at the end of 1998 and 1997.

The stockholders' equity of a bank resembles that of other types of firms, except that the total stockholders' equity is usually very low in relation to total assets. A general guide for many years was that a bank's stockholders' equity should be approximately 10% of total assets, but very few banks in recent years have had that much stockholders' equity. Currently, stockholders' equity of 6%–7%, would probably be considered favorable. National City had approximately 8% stockholders' equity at the end of 1998. In general, the lower the proportion of stockholders' equity in relation to total assets, the greater the risk of failure. A higher stockholders' equity in relation to total assets would probably improve safety, but the bank would perhaps be less profitable because of the additional capital requirement.

As part of the analysis of stockholders' equity, review the statement of stockholders' equity and the related footnotes for any significant changes. National City had significant changes from a purchase of common shares and an issuance of shares pursuant to an acquisition.

The current approach by bank regulators is not only to view the adequacy of stockholders' equity in relation to total assets, but also to view capital in relation to risk-adjusted assets. National City discloses that it has consistently maintained regulatory capital rates at or above the "well capitalized" standards.

Income Statement

A bank's principal revenue source is usually interest income from loans and investment securities. The principal expense is usually interest expense on deposits and other debt. The difference between interest income and interest expense is termed *net interest income* or *net interest margin*.

The net interest margin is important to the profitability of a bank. Usually, falling interest rates are positive for a bank's interest margin because the bank will be able to reduce the interest rate that it pays for deposits before the average rate of return earned on loans and investments declines. Increasing interest rates are usually negative for a bank's interest margin because the bank will need to increase the interest rate on deposits, which is usually done before rates on loans and investments are adjusted.

Bank income statements include a separate section for other income. Typical other income includes trust department fees, service charges on deposit accounts, trading account profits (losses), and securities transactions.

The importance of other income has substantially increased for banks. For example, service charges have increased in importance in recent years since many banks have set service charges at a level to make the service profitable. This has frequently been the result of improved cost analysis. In addition, banks have been adding nontraditional sources of income, such as mortgage banking, sales of mutual funds, sales of annuities, and computer services for other banks and financial institutions.

National City had net interest income after provision for loan losses of \$2,710,248,000 and \$2,584,971,000, respectively, for 1998 and 1997. Total noninterest income increased from \$1,847,632,000 to \$2,314,142,000, respectively. Total noninterest expense increased from \$2,792,570,000 to \$3,377,113,000. A substantial part of this increase in expense came from merger and restructuring expense.

Ratios for Banks

Because of the vastly different accounts and statement formats, few of the traditional ratios are appropriate for banks. Exceptions include return on assets, return on equity, and most of the investment-related ratios. The following sections present meaningful ratios for bank analysis, but this is not a comprehensive treatment. The Bank Administration Institute, in its annual *Index of Bank Performance*, includes 43 ratios and growth statistics. The investment firm of Keefe, Bruyette & Woods, Inc., in its *Bankbook Report on Performance*, lists 21 financial ratios. Both are excellent sources of industry averages for banks.

Earning Assets to Total Assets

Earning assets includes loans, leases, investment securities, and money market assets. It excludes cash and nonearning deposits plus fixed assets. This ratio shows how well bank management puts bank assets to work. High-performance banks have a high ratio.

Banks typically present asset data on an average annual basis. National City provides a schedule of average balances in its annual report. This schedule is used for the average total assets in computing earning assets to total assets. Exhibit 12-2 presents National City's earning assets to total assets ratio, which has decreased slightly between 1997 and 1998.

EXHIBIT 12-2

NATIONAL CITY Earning Assets to Total Assets 1998 and 1997

(in millions of dollars)	1998	1997
Average Earning Assets (A)	\$71,747	\$65,259
Average Total Assets (B)	\$80,053	\$71,942
Earnings Assets to Total Assets (A+B)	89.62%	90.71%

Interest Margin to Average Earning Assets

This is a key determinant of bank profitability, for it provides an indication of management's ability to control the spread between interest income and interest expense. Exhibit 12-3 presents this ratio for National City and indicates a decline in profitability.

EXHIBIT 12-3

NATIONAL CITY Interest Margin to Average Earning Assets For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Interest margin (A)	\$ 2,911,648	\$ 2,810,338
Average earning assets (B)	\$71,747,000	\$65,259,000
Interest margin to average earning assets (A÷B)	4.10%*	4.31%*
*Annual report discloses 4.11% and 4.37% respectively. The annual report uses a tax-equivalent net interest income to compute the interest margin.		

Loan Loss Coverage Ratio

The loan loss coverage ratio, computed by dividing pretax income plus provision for loan losses by net charge-offs, helps determine the asset quality and the level of protection of loans. Exhibit 12-4 presents this ratio for National City. This ratio increased moderately in 1998.

EXHIBIT 12-4

NATIONAL CITY Loan Loss Coverage Ratio For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Pretax income	\$1,647,277	\$1,640,033
Provision for loan losses (A)	201,400	225,367
	\$1,848,677	\$1,865,400
Net charge-offs (B)	\$ 200,532	\$ 222,710
Loan loss coverage ratio (A÷B)	9.22 times	8.38 times

Equity Capital to Total Assets

This ratio, also called funds to total assets, measures the extent of equity ownership in the bank. This ownership provides the cushion against the risk of using debt and leverage. Exhibit 12-5 presents this ratio, computed by using average figures, for National City. This ratio increased in 1998 to 8.70% from 8.57% in 1997. Both of these ratios appear to be very good.

Deposits Times Capital

The ratio of deposits times capital concerns both depositors and stockholders. To some extent, it is a type of debt/equity ratio, indicating a bank's debt position. More capital implies a greater margin of safety, while a larger deposit base gives a prospect of higher

EXHIBIT 12-5

NATIONAL CITY
Equity Capital to Total Assets
For the Years Ended December 31, 1998 and 1997

(in millions of dollars)	1998	1997
Average equity (A)	\$ 6,965	\$ 6,166
Average total assets (B)	\$80,053	\$71,942
Equity capital to total assets (A÷B)	8.70%	8.57%

return to stockholders, since more money is available for investment purposes. Exhibit 12-6 presents this ratio for National City, based on average figures. Deposits times capital decreased in 1998 to 7.15 from 7.96 in 1997.

EXHIBIT 12-6

NATIONAL CITY
Deposits Times Capital
For the Years Ended December 31, 1998 and 1997

(in millions of dollars)	1998	1997
Average deposits (A)*	\$49,800	\$49,100
Average stockholders' equity (B)	\$ 6,965	\$ 6,166
Deposits times capital (A÷B)	7.15 times	7.96 times
*Used average core deposits		

Loans to Deposits

Average total loans to average deposits is a type of asset to liability ratio. Loans make up a large portion of the bank's assets, and its principal obligations are the deposits that can be withdrawn on request—within time limitations. This is a type of debt coverage ratio, and it measures the position of the bank with regard to taking risks. Exhibit 12-7 shows this ratio for National City. Loans to deposits increased moderately in 1998, indicating an increase in risk from a debt standpoint.

EXHIBIT 12-7

NATIONAL CITY
Loans to Deposits
For the Years Ended December 31, 1998 and 1997

(in millions of dollars)	1998	1997
Average total loans (A)	\$56,849	\$51,623
Average deposits (B)*	\$49,800	\$49,100
Loans to deposits (A÷B)	114.15%	105.14%
*Used average core deposits		

**ELECTRIC
UTILITIES**

Electric utilities render a unique service on which the public depends. Electric utilities are basically monopolies subject to government regulation, including strict rate regulation. In recent years, laws have been enacted that greatly reduce the monopoly aspect. In general,

the comments in this book that relate to electric utilities also apply to other utilities, such as gas utilities.

Services of electric utilities are consumed in the home or at the business premises. In general, substitute services are not available, rates have been determined primarily by regulatory agencies rather than by competition, and service areas have been small and localized. However, competition in rates and the size of service areas have increased substantially.

Uniformity of accounting is prescribed by the Federal Energy Regulatory Commission for interstate electric and gas companies and by the Federal Communications Commission for telephone and telegraph companies, as well as by state regulatory agencies.

Financial Statements

Balance sheets for utilities differ from business balance sheets mainly in the order that accounts for utilities are presented. Plant and equipment are the first assets listed, followed by investments and other assets, current assets, and deferred charges. Under liabilities and equity, the first section is capitalization. The capitalization section usually includes all sources of long-term capital, such as common stock, preferred stock, and long-term debt. The capitalization section is followed by current liabilities, and then deferred credits and other.

The income statement for utilities is set up by operating revenues, less operating expenses to arrive at net operating income. Net operating income is adjusted by other income (deductions) to arrive at income before interest charges. Interest charges are then deducted to arrive at net income.

Exhibit 12-8 presents a part of the 1998 annual report of Central Hudson Gas & Electric Corporation (Central Hudson). Review Exhibit 12-8 to become familiar with the form of electric utility financial statements.

Inventories are not a problem for electric utilities. Traditionally, receivables have not been a problem because the services are essential and could be cut off for nonpayment and because often a prepayment is required of the customer. In recent years, receivables have been a problem for some electric utilities because some utility commissions have ruled that services could not be cut off during the winter.

A few accounts on the financial statements of an electric utility are particularly important to the understanding of the statements. On the balance sheet, many utilities have a construction work in progress account. Exhibit 12-8 discloses that Central Hudson had construction work in progress of \$43,512,000 and \$52,413,000 in 1998 and 1997, respectively.

Electric utilities that have substantial construction work in progress are usually viewed as being more risky investments than electric utilities that do not. Most utility commissions allow no construction work in progress or only a small amount in the rate base. Therefore, the utility rates essentially do not reflect the construction work in progress.

The utility intends to have the additional property and plant considered in the rate base when the construction work is completed. However, the utility commission may not allow all of this property and plant in the rate base. If the commission rules that inefficiency caused part of the cost, it may disallow the cost. The commission may also disallow part of the cost on the grounds that the utility used bad judgment and provided for excess capacity. Costs disallowed are in effect charged to the stockholders, as future income will not include a return on disallowed cost. In the long run, everybody pays for inefficiency and excess capacity because disallowed costs are a risk that can drive the stock price down and interest rates up for the utility. This increases the cost of capital for the utility, which in turn may force utility rates up.

For the costs allowed, the risk exists that the utility commission will not allow a reasonable rate of return. It is important to observe what proportion of total property and plant is

EXHIBIT 12-8

**CENTRAL HUDSON
Electric Utility Company
Selected Financial Data**

CONSOLIDATED BALANCE SHEETS			
At December 31, (In Thousands)		1998	1997
ASSETS			
Utility Plant			
Electric		\$1,222,743	\$1,193,735
Gas		158,165	151,222
Common		94,271	91,522
Nuclear fuel		42,317	37,262
		<u>1,517,496</u>	<u>1,473,741</u>
Less: Accumulated depreciation		597,383	560,304
Nuclear fuel amortization		35,381	33,059
		<u>884,732</u>	<u>880,378</u>
Construction work in progress		43,512	52,413
Net Utility Plant		<u>928,244</u>	<u>932,791</u>
Other Property and Plant		<u>19,059</u>	<u>1,089</u>
Investments and Other Assets			
Prefunded pension costs		40,218	23,536
Other		18,209	13,869
Total Investments and Other Assets		<u>58,427</u>	<u>37,405</u>
Current Assets			
Cash and cash equivalents		10,499	9,054
Accounts receivable from customers—net of allowance for doubtful accounts; \$2.4 million in 1998 and \$2.8 million in 1997		45,564	49,643
Accrued unbilled utility revenues		15,233	16,229
Other receivables		4,555	2,073
Materials and supplies, at average cost:			
Fuel		11,797	11,920
Construction and operating		11,790	12,180
Special deposits and prepayments		34,823	14,210
Total Current Assets		<u>134,261</u>	<u>115,309</u>
Deferred Charges			
Regulatory assets (Note 2)		149,261	139,236
Unamortized debt expense		5,062	5,002
Other		21,724	21,258
Total Deferred Charges		<u>176,047</u>	<u>165,496</u>
TOTAL ASSETS		<u>\$1,316,038</u>	<u>\$1,252,090</u>

represented by construction work in progress. Also, be familiar with the political climate of the utility commission that will be ruling on the construction work in progress costs.

The income statement accounts—allowance for equity funds and allowance for borrowed funds used during construction—relate to construction work in progress costs on the balance sheet. Both of these accounts, sometimes jointly referred to as the allowance for funds used during construction, have been added to construction work in progress costs.

The account allowance for equity funds used during construction represents an assumed rate of return on equity funds used for construction. The account allowance for borrowed funds used during construction represents the cost of borrowed funds that are used for construction.

EXHIBIT 12-8

continued

CAPITALIZATION AND LIABILITIES		
Capitalization		
Common Stock Equity		
Common stock, \$5 par value (Note 6)	\$ 87,775	\$ 87,775
Paid-in capital (Note 6)	284,465	284,465
Retained earnings	133,287	120,540
Reacquired capital stock (Note 6)	(27,143)	(9,398)
Capital stock expense	(6,204)	(6,278)
Total Common Stock Equity	<u>472,180</u>	<u>477,104</u>
Cumulative Preferred Stock (Note 6)		
Not subject to mandatory redemption	21,030	21,030
Subject to mandatory redemption	35,000	35,000
Total Cumulative Preferred Stock	<u>56,030</u>	<u>56,030</u>
Long-term Debt (Note 7)	<u>356,918</u>	<u>361,829</u>
Total Capitalization	<u>885,128</u>	<u>894,963</u>
Current Liabilities		
Current maturities of long-term debt	39,507	1,317
Notes payable	18,000	—
Accounts payable	23,591	24,368
Dividends payable	9,913	10,052
Accrued taxes and interest	6,334	3,240
Accrued vacation	4,400	4,339
Customer deposits	4,248	4,001
Other	7,932	6,545
Total Current Liabilities	<u>113,925</u>	<u>53,862</u>
Deferred Credits and Other Liabilities		
Regulatory liabilities (Note 2)	81,065	81,271
Operating reserves	5,995	6,582
Other	27,251	10,019
Total Deferred Credits and Other Liabilities	<u>114,311</u>	<u>97,872</u>
Deferred Income Tax (Note 4)	<u>202,674</u>	<u>205,393</u>
Commitments and Contingencies (2,3 and 9)		
TOTAL CAPITALIZATION AND LIABILITIES	<u>\$1,316,038</u>	<u>\$1,252,090</u>

By increasing the balance sheet account, construction work in progress, for an assumed rate of return on equity funds, the utility builds into the cost base an amount for an assumed rate of return on equity funds. As explained previously, the utility commission may not accept this cost base. The costs that have been added into the cost base have also been added to income, through the allowance for equity funds. Sometimes the account allowance for equity funds used during construction represents a significant portion of the utility's net income.

The income statement account, allowance for borrowed funds used during construction, charges to the balance sheet account, construction in progress, the interest on borrowed funds used for construction in progress. Thus, this interest is added to the cost base.

Utilities with substantial construction work in progress can have significant cash flow problems. Their reported net income can be substantially higher than the cash flow related to the income statement. Sometimes these utilities issue additional bonds and stocks to obtain funds to pay interest and dividends.

Exhibit 12-8 discloses that Central Hudson had relatively immaterial construction work in progress at the end of 1998. Exhibit 12-8 also shows a relatively immaterial allowance for

EXHIBIT 12-8**concluded****CONSOLIDATED STATEMENTS OF INCOME**

Year Ended December 31 (In Thousands)	1998	1997	1996
Operating Revenues			
Electric	\$418,507	\$416,429	\$418,761
Gas	84,962	103,848	95,210
Total Operating Revenues	<u>503,469</u>	<u>520,277</u>	<u>513,971</u>
Operating Expenses			
Operations:			
Fuel used in electric generation	84,688	66,117	58,874
Purchased electricity	40,573	55,864	55,523
Purchased natural gas	44,964	61,514	50,636
Other expenses of operation	96,247	101,219	102,746
Maintenance	26,904	27,574	28,938
Depreciation and amortization (Note 1)	45,560	43,864	42,580
Taxes, other than income tax	63,458	64,879	66,145
Federal income tax (Note 4)	29,775	29,190	32,700
Total Operating Expenses	<u>432,169</u>	<u>450,221</u>	<u>438,142</u>
Operating Income	<u>71,300</u>	<u>70,056</u>	<u>75,829</u>
Other Income			
Allowance for equity funds used during construction (Note 1)	585	387	466
Federal income tax (Note 4)	1,148	2,953	1,632
Other—net	6,865	8,079	4,815
Total Other Income	<u>8,598</u>	<u>11,419</u>	<u>6,913</u>
Income before Interest Charges	<u>79,898</u>	<u>81,475</u>	<u>82,742</u>
Interest Charges			
Interest on long-term debt	23,115	23,097	23,617
Other interest	3,639	2,647	2,626
Allowance for borrowed funds used during construction (Note 1)	(324)	(261)	(523)
Amortization of expense on debt	924	906	940
Total Interest Charges	<u>27,354</u>	<u>26,389</u>	<u>26,660</u>
Net Income	<u>52,544</u>	<u>55,086</u>	<u>56,082</u>
Premium on Preferred Stock Redemptions—Net	<u>—</u>	<u>—</u>	<u>378</u>
Dividends Declared on Cumulative Preferred Stock	<u>3,320</u>	<u>3,230</u>	<u>3,230</u>
Income Available for Common Stock	<u>\$ 49,314</u>	<u>\$ 51,856</u>	<u>\$ 52,474</u>
Common Stock:			
Average shares outstanding (000s)	17,034	17,435	17,549
Earnings per share on average shares outstanding	\$2.90	\$2.97	\$2.99

Selected Partial Footnote 1**Allowance For Funds Used During Construction (In Part)**

The Company's regulated utility plant includes AFDC, which is defined in applicable regulatory systems as the net cost of borrowed funds used for construction purposes and a reasonable rate on other funds when so used. The concurrent credit for the amount so capitalized is reported in the Consolidated Statement of Income as follows: the portion applicable to borrowed funds is reported as a reduction of interest charges, while the portion applicable to other funds (the equity component, a noncash item) is reported as other income. The AFDC rate was 8.5% in 1998 and 8.0% in 1997 and 7.5% in 1996.

equity funds used during construction and allowance for borrowed funds used during construction throughout 1998. This indicates that the company's quality of earnings have not been substantially impacted by construction work in progress.

Ratios for Electric Utilities

Because of the vastly different accounts and statement formats, few of the traditional ratios are appropriate for electric utilities. Exceptions are the return on assets, return on equity, debt/equity, and times interest earned. Investor-related ratios are also of value in analyzing utilities. For example, the cash flow per-share ratio can be a particularly important indicator of the utility's ability to maintain and increase dividends. Standard & Poor's *Industry Survey* is a good source for composite industry data on utilities.

Operating Ratio

The operating ratio measures efficiency by comparing operating expenses to operating revenues. A profitable utility holds this ratio low. A vertical common-size analysis of the income statement will aid in conclusions regarding this ratio. Exhibit 12-9 presents the operating ratio for Central Hudson. This ratio decreased slightly in 1998, thus having a positive influence on profitability.

EXHIBIT 12-9

CENTRAL HUDSON

Operating Ratio

For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Operating expenses (A)	\$432,169	\$450,221
Operating revenue (B)	\$503,469	\$520,277
Operating ratio (A÷B)	85.84%	86.53%

Funded Debt to Operating Property

A key ratio, the comparison of funded debt to net fixed operating property, is sometimes termed LTD (long-term debt) to *net property* because funded debt is long-term debt. Operating property consists of property and plant less the allowance for depreciation and any allowance for nuclear fuel amortization. Construction in progress is included since it has probably been substantially funded by debt. This ratio measures debt coverage and indicates how funds are supplied. It resembles debt to total assets, with only specialized debt and the specific assets that generate the profits to cover the debt charges. Exhibit 12-10 presents funded debt to operating property for Central Hudson. This ratio decreased slightly in 1998, indicating a less risky debt position.

EXHIBIT 12-10

CENTRAL HUDSON

Funded Debt to Operating Property

For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Funded debt (A)	\$356,918	\$361,829
Operating property (B)	\$928,244	\$932,791
Funded debt to operating property (A÷B)	38.45%	38.79%

Percent Earned on Operating Property

This ratio, sometimes termed *earnings on net property*, relates net earnings to the assets primarily intended to generate earnings—net property and plant. Exhibit 12-11 presents this ratio for Central Hudson. Note that this ratio decreased in 1998, which is an unfavorable trend.

EXHIBIT 12-11

CENTRAL HUDSON Percent Earned on Operating Property For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Net income (A)	\$ 52,544	\$ 55,086
Operating property (B)	\$928,244	\$932,791
Percent earned on operating property (A÷B)	5.66%	5.91%

Operating Revenue to Operating Property

This ratio is basically an operating asset turnover ratio. In public utilities, the fixed plant is often much larger than the expected annual revenue, and this ratio will be less than 1. Exhibit 12-12 presents this ratio for Central Hudson, which indicates a slight decrease in the operating revenue to operating property and represents an unfavorable trend.

EXHIBIT 12-12

CENTRAL HUDSON Operating Revenue to Operating Property For the Years Ended December 31, 1998 and 1997

(in thousands of dollars)	1998	1997
Operating revenues (A)	\$503,469	\$520,277
Operating property (B)	\$928,244	\$932,791
Operating revenue to operating property (A÷B)	54.24%	55.78%

OIL AND GAS

Oil and gas companies' financial statements are affected significantly by the method they choose to account for costs associated with exploration and production. The method chosen is some variation of the successful-efforts or full-costing methods, which will be explained along with their effects on the financial statements. The financial statements of oil and gas companies are also unique because they are required to disclose, in a footnote, supplementary information on oil and gas exploration, development, and production activities. This requirement will be explained in this section.

Cash flow is important to all companies, but particularly to oil and gas companies. Therefore, cash flow must be part of the analysis of an oil or a gas company. In addition, most of the traditional financial ratios apply to oil and gas companies. This section will not cover special ratios that relate to oil and gas companies.

The 1998 financial statements of Texaco will be used to illustrate oil and gas financial statements. Texaco's major business is energy, principally petroleum.

Successful Efforts Versus Full Cost

A variation of one of two costing methods is used by an oil or a gas company to account for exploration and production costs: the successful-efforts method and the full-costing method.

The **successful-efforts method** places only exploration and production costs of successful wells on the balance sheet under property, plant, and equipment. Exploration and production costs of unsuccessful (or dry) wells are expensed when it is determined that there is a dry hole. With the **full-costing method**, exploration and production costs of all the wells (successful and unsuccessful) are placed on the balance sheet under property, plant, and equipment.

Under both methods, exploration and production costs placed on the balance sheet are subsequently amortized as expense to the income statement. Amortization costs that relate to natural resources are called *depletion expense*.

The costing method used for exploration and production can have a very significant influence on the balance sheet and the income statement. Under both methods, exploration and production costs are eventually expensed, but a significant difference exists in the timing of the expense.

In theory, the successful-efforts method takes the position that a direct relationship exists between costs incurred and specific reserves discovered. These costs should be placed on the balance sheet. Costs associated with unsuccessful efforts are a period expense and should be charged to expense. In theory, the full-costing method takes the position that the drilling of all wells, successful and unsuccessful, is part of the process of finding successful wells. Therefore, all of the cost should be placed on the balance sheet.

In practice, the decision to use the successful-efforts method or the full-costing method is probably not significantly influenced by theory, but by practicalities. Most relatively small oil and gas companies select a variation of the full-costing method. This results in a much larger balance sheet. In the short run, it also usually results in higher reported profits. Small oil companies speculate that the larger balance sheet and the increased reported profits can be used to influence some banks and limited partners, which the small companies tend to use as sources of funds.

Large oil and gas companies tend to select a variation of the successful-efforts method. This results in a lower balance sheet amount and lower reported income in the short run. The large companies usually depend on bonds and stock as their primary sources of outside capital. Investors in bonds and stock are not likely to be influenced by the larger balance sheet and higher income that results from capitalizing dry wells.

The method used can have a significant influence on the balance sheet and the income statement. The successful-efforts method is more conservative. Review Exhibit 12-13 for a description of Texaco's method of accounting for exploration and production costs.

Supplementary Information on Oil and Gas Exploration, Development, and Production Activities

As part of your review of an oil or a gas company, note the supplemental oil and gas information. Review Exhibit 12-14 for a brief summary of the supplementary information presented by Texaco.

Cash Flow

Monitoring cash flow can be particularly important when following an oil or a gas company. The potential for a significant difference exists between the reported income and cash flow from operations. One reason is that large sums can be spent for exploration and

EXHIBIT 12-13**TEXACO****Properties, Plant and Equipment and Depreciation,
Depletion and Amortization (In Part)
1998 Annual Report**

We follow the “successful efforts” method of accounting for our oil and gas exploration and producing operations.

We capitalize as incurred the lease acquisition costs of properties held for oil, gas and mineral production. We expense as incurred exploratory costs other than wells. We initially capitalize exploratory wells, including stratigraphic test wells, pending further evaluation of whether economically recoverable proved reserves have been found. If such reserves are not found, we charge the well costs to exploratory expenses. For locations not requiring major capital expenditures, we record the charge within one year of well completion. We capitalize intangible drilling costs of productive wells and of development dry holes, and tangible equipment costs. Also capitalized are costs of injected carbon dioxide related to development of oil and gas reserves.

EXHIBIT 12-14**TEXACO****Supplemental Oil and Gas Information (In Part)
1998 Annual Report**

Note: This exhibit only includes a small part of the supplemental oil and gas information.

Table I—Net Proved Reserves (In Part)

The reserve quantities include only those quantities that are recoverable based upon reasonable estimates from sound geological and engineering principles. As additional information becomes available, these estimates may be revised. Also, we have a large inventory of potential hydrocarbon resources that we expect will increase our reserve base as future investments are made in exploration and development programs.

Table II—Standardized Measure (In Part)

The standardized measure provides a common benchmark among those companies that have exploration and producing activities. This measure may not necessarily match our view of the future cash flows from our proved reserves.

The standardized measure is calculated at a 10% discount. Future revenues are based on year-end prices for liquids and gas. Future production and development costs are based on current year costs. Extensive judgment is used to estimate the timing of production and future costs over the remaining life of the reserves. Future income taxes are calculated using each country's statutory tax rate.

Our inventory of potential hydrocarbon resources, which may become proved in the future, are excluded. This could significantly impact our standardized measure in the future.

Table III—Changes in the Standardized Measure (In Part)

The annual change in the standardized measure is explained in this table by the major sources of change, discounted at 10%.

Table IV—Capitalized Costs (In Part)

Costs of the following assets are capitalized under the “successful efforts” method of accounting. These costs include the activities of Texaco's upstream operations but exclude the crude oil marketing activities, geothermal and other non-producing activities. As a result, this table will not correlate to information in Note 7 to the financial statements.

Table V—Costs Incurred (In Part)

This table summarizes how much we spent to explore and develop our existing reserve base, and how much we spent to acquire mineral rights from others (classified as proved or unproved).

Table VI—United Prices (In Part)

Average sales are calculated using the gross revenues in Table VII. Average production costs equal producing (lifting) costs, other taxes and the depreciation, depletion and amortization of support equipment and facilities.

Table VII—Results of Operations (In Part)

Results of operations for exploration and production activities consist of all the activities within our upstream operations, except for crude oil marketing activities, geothermal and other non-producing activities. As a result, this table will not correlate to the Analysis of Income by Operating Segments.

development, years in advance of revenue from the found reserves. The other reason is that there can be significant differences between when expenses are deducted on the financial statements and when they are deducted on the tax return. Therefore, observe the operating cash flow.

Cash from operating activities for a three-year period will be disclosed on the statement of cash flows. For Texaco, net cash provided by operating activities was \$2,544,000,000, \$3,915,000,000, and \$3,762,000,000 for 1998, 1997, and 1996, respectively. Net income for Texaco was \$578,000,000, \$2,664,000,000, and \$2,018,000,000 for 1998, 1997, and 1996, respectively.

TRANSPORTATION

Three components of the transportation industry will be discussed: air carriers, railroads, and the motor carrier industry. The Civil Aeronautics Board, which requires the use of a uniform system of accounts and reporting, regulates interstate commercial aviation. The Interstate Commerce Commission, which also has control over a uniform system of accounts and reporting, regulates interstate railroads. The Interstate Commerce Commission also regulates interstate motor carriers whose principal business is transportation services.

Financial Statements

The balance sheet format for air carriers, railroads, and motor carriers resembles that for manufacturing or retailing firms. As in a heavy manufacturing firm, property and equipment make up a large portion of assets. Also, supplies and parts comprise the basic inventory items. The income statement format resembles that of a utility. The system of accounts provides for the grouping of all revenues and expenses in terms of both major natural objectives and functional activities. There is no cost of goods sold calculation; rather, there is operating income: revenue (categorized) minus operating expenses. In essence, the statements are a prescribed, categorized form of single-step income statement. They cannot be converted to multiple-step format.

Ratios

Most of the traditional ratios also apply in the transportation field. Exceptions are inventory turnovers (because there is no cost of goods sold) and gross profit margin. The ratios discussed in the subsections that follow are especially suited to transportation. They are derived from the 1998 statement of income and balance sheet for Delta Air Lines, Inc., presented in Exhibit 12-15.

The traditional sources of industry averages cover transportation. The federal government accumulates numerous statistics for regulated industries, including transportation. An example is the Interstate Commerce Commission's *Annual Report* on transport statistics in the United States.

For the motor carrier industry, a particularly good source of industry data is the annual publication *Financial Analysis of the Motor Carrier Industry*, published by the American Trucking Association, Inc., 1616 P Street, NW, Washington, DC 20036. This publication includes an economic and industry overview, distribution of revenue by carrier type, and industry issues. It also includes definitions of terminology that relate to the motor carrier industry.

There are hundreds of motor carrier firms, most of which are relatively small. The American Trucking Association compiles data by composite carrier groups. For example,

EXHIBIT 12-15**DELTA AIR LINES, INC.****Air Transportation****Selected Financial Data****CONSOLIDATED BALANCE SHEETS
JUNE 30, 1998 AND 1997**

Assets	(In Millions, Except Share Data)	1998	1997
Current Assets:			
Cash and cash equivalents		\$ 1,077	\$ 662
Short-term investments		557	508
Accounts receivable, net of allowance for uncollectible accounts of \$36 at June 30, 1998, and \$48 at June 30, 1997		938	943
Deferred income taxes		464	413
Prepaid expenses and others		326	341
Total current assets		<u>3,362</u>	<u>2,867</u>
Property and Equipment:			
Flight equipment		11,180	9,619
Less: Accumulated depreciation		3,895	3,510
		<u>7,285</u>	<u>6,109</u>
Flight equipment under capital leases		515	523
Less: Accumulated amortization		216	176
		<u>299</u>	<u>347</u>
Ground property and equipment		3,285	3,032
Less: Accumulated depreciation		1,854	1,758
		<u>1,431</u>	<u>1,274</u>
Advance payment for equipment		306	312
Total property and equipment		<u>9,321</u>	<u>8,042</u>
Other Assets:			
Marketable equity securities		424	432
Deferred income taxes		—	103
Investments in associated companies		326	299
Cost in excess of net assets acquired, net of accumulated amortization of \$112 at June 30, 1998, and \$102 at June 30, 1997		265	275
Leasehold and operating rights, net of accumulated amortization of \$209 at June 30, 1998, and \$199 at June 30, 1997		124	134
Other		781	589
Total other assets		<u>1,920</u>	<u>1,832</u>
Total assets		<u>\$14,603</u>	<u>\$12,741</u>

Group A includes composite data for several hundred general freight carriers with annual revenues of less than \$5 million. One of the groups includes composite data for the publicly held carriers of general freight.

The very extensive composite data in the American Trucking Association publication include industry total dollars for the income statement and balance sheet. It also includes vertical common-size analyses for the income statement and the balance sheet. This publication also includes approximately 36 ratios and other analytical data, such as total tons.

Operating Ratio

The operating ratio is computed by comparing operating expense to operating revenue. It measures cost and should be kept low, but external conditions, such as the level

EXHIBIT 12-15 continued

Current Liabilities:		
Current maturities of long-term debt	\$ 67	\$ 236
Current obligations under capital leases	63	62
Accounts payable and miscellaneous accrued liabilities	2,025	1,691
Air traffic liability	1,667	1,418
Accrued rent	202	213
Accrued salaries and vacation pay	553	463
Total current liabilities	<u>4,577</u>	<u>4,083</u>
Noncurrent Liabilities:		
Long-term debt	1,533	1,475
Postretirement benefits	1,873	1,839
Accrued rent	651	602
Capital leases	249	322
Deferred income taxes	262	—
Other	511	406
Total noncurrent liabilities	<u>5,079</u>	<u>4,644</u>
Deferred Credits:		
Deferred gain on sale and leaseback transactions	694	746
Manufacturers and other credits	55	105
	<u>749</u>	<u>851</u>
Commitments and Contingencies (Notes 6, 7, 8, and 9)		
Employee Stock Ownership Plan Preferred Stock:		
Series B ESOP Convertible Preferred Stock, \$1.00 par value, \$72.00 stated and liquidation value; issued and outstanding 6,603,429 shares at June 30, 1998, and 6,668,248 shares at June 30, 1997	475	480
Unearned compensation under employee stock ownership plan	(300)	(324)
	<u>175</u>	<u>156</u>
Shareowners' Equity:		
Common stock, \$3.00 par value; authorized 150,000,000 shares; issued 88,283,089 shares at June 30, 1998 and 83,645,047 shares at June 30, 1997	265	251
Additional paid-in capital	3,034	2,645
Retained earnings	1,687	711
Net unrealized gain on marketable equity securities	89	101
Treasury stock at cost, 13,057,892 shares at June 30, 1998 and 9,949,060 shares at June 30, 1997	(1,052)	(701)
Total shareowners' equity	<u>4,023</u>	<u>3,007</u>
Total liabilities and shareowners' equity	<u>\$14,603</u>	<u>\$12,741</u>

of business activity, may affect this ratio. Operating revenues vary from year to year because of differences in rates, classification of traffic, volume of traffic carried, and the distance traffic is transported. Operating expenses change because of variations in the price level, traffic carried, the type of service performed, and the effectiveness of operating and maintaining the properties. Common-size analysis of revenues and expenses is needed to explain changes in the operating ratio.

Exhibit 12-16 presents the operating ratio for Delta Air Lines, Inc. The operating ratio for Delta improved from 88.74% in 1997 to 88.03% in 1998. The operating ratio can dramatically affect the profitability of a carrier. In fact, Delta went from an operating income in 1997 of \$1,531,000,000 to an operating income in 1998 of \$1,693,000,000.

EXHIBIT 12-15 concluded**CONSOLIDATED STATEMENTS OF OPERATIONS**

For the Years Ended June 30, 1998, 1997 and 1996

Delta Air Lines, Inc.

(In Millions, Except Per Share Data)

	1998	1997	1996
Operating Revenues			
Passenger	\$12,976	\$12,505	\$11,616
Cargo	582	554	521
Other, net	580	535	318
Total operating revenues	<u>14,138</u>	<u>13,594</u>	<u>12,455</u>
Operating Expenses			
Salaries and related costs	4,850	4,534	4,206
Aircraft fuel	1,507	1,722	1,464
Passenger commissions	980	1,017	1,042
Depreciation and amortization	861	710	634
Contracted services	694	630	704
Other selling expenses	681	677	594
Landing fees and other rents	649	649	627
Aircraft rent	552	547	555
Aircraft maintenance materials and outside repairs	495	434	376
Passenger service	450	389	368
Restructuring and other non-recurring charges	—	52	829
Other	726	702	593
Total operating expenses	<u>12,445</u>	<u>12,063</u>	<u>11,992</u>
Operating Income	<u>1,693</u>	<u>1,531</u>	<u>463</u>
Other Income (Expense):			
Interest expense	(186)	(207)	(269)
Interest capitalized	38	33	26
Interest income	79	63	86
Miscellaneous income (expense), net	24	(5)	(30)
	<u>(45)</u>	<u>(116)</u>	<u>(187)</u>
Income Before Income Taxes	<u>1,648</u>	<u>1,415</u>	<u>276</u>
Income Taxes Provided	<u>(647)</u>	<u>(561)</u>	<u>(120)</u>
Net Income	<u>1,001</u>	<u>854</u>	<u>156</u>
Preferred Stock Dividends	<u>(11)</u>	<u>(9)</u>	<u>(82)</u>
Net Income Available to Common Shareowners	<u>\$ 990</u>	<u>\$ 845</u>	<u>\$ 74</u>
Basic Income Per Common Share	<u>\$ 13.28</u>	<u>\$ 11.39</u>	<u>\$ 1.43</u>
Diluted Income Per Common Share	<u>\$ 12.68</u>	<u>\$ 11.03</u>	<u>\$ 1.43</u>

EXHIBIT 12-16**DELTA AIR LINES, INC.****Operating Ratio**

For the Years Ended June 30, 1998 and 1997

(in millions of dollars)	1998	1997
Operating expenses (A)	\$ 12,445	\$ 12,063
Operating revenues (B)	\$ 14,138	\$ 13,594
Operating ratio (A÷B)	88.03%	88.74%

Long-Term Debt to Operating Property

Because of the transportation companies' heavy investment in operating assets, such as equipment, the long-term ratios increase in importance. Long-term borrowing capacity is also a key consideration. The ratio of long-term debt to operating property ratio gives a measure of the sources of funds with which property is obtained. It also measures borrowing capacity. Operating property is defined as long-term property and equipment. Exhibit 12-17 presents this ratio for Delta Air Lines. For Delta, the long-term debt to operating property ratio decreased in 1998 to 19.12% from 22.35%. These are good numbers in relation to recent prior years.

EXHIBIT 12-17

DELTA AIR LINES, INC.

Long-Term Debt to Operating Property

For the years Ended June 30, 1998 and 1997

(in millions of dollars)	1998	1997
Long-term debt	\$ 1,533	\$ 1,475
Capital leases	249	322
(A)	<u>\$ 1,782</u>	<u>\$ 1,797</u>
Operating property (B)	<u>\$ 9,321</u>	<u>\$ 8,042</u>
Long-term debt to operating property (A÷B)	19.12%	22.35%

Operating Revenue to Operating Property

This ratio measures turnover of operating assets. The objective is to generate as many dollars in revenue per dollar of property as possible. Exhibit 12-18 presents this ratio for Delta Air Lines. The operating revenue to operating property decreased moderately between 1997 and 1998.

EXHIBIT 12-18

DELTA AIR LINES, INC.

Operating Revenue to Operating Property

For the years Ended June 30, 1998 and 1997

(in millions of dollars)	1998	1997
Operating revenue (A)	\$ 14,138	\$ 13,594
Operating property (B)	\$ 9,321	\$ 8,042
Operating revenue to operating property (A÷B)	1.52 times per year	1.69 times per year

Per-Mile, Per-Person, and Per-Ton Passenger Load Factors

For transportation companies, additional insight can be gained by looking at revenues and expenses on a per unit of usage basis. Examples would be per mile of line or per ten miles for railroads, or a per passenger mile for air carriers. Although this type of disclosure is not required, it is often presented in highlights.

This type of disclosure is illustrated in Exhibit 12-19, which shows statistics for Delta Air Lines. Statistics in Exhibit 12-19 are available for revenue passengers enplaned, available seat miles, revenue passenger miles, operating revenue per available seat mile, passenger

EXHIBIT 12-19

DELTA AIR LINES, INC.
Other Financial and Statistical Data
For the Years Ended June 30

(This represents four years from an eleven-year summary)

(Dollar amounts in millions, except per-share figures)	For the Years Ended June 30			
	1998	1997 ¹	1996 ²	1995 ³
Total assets	\$14,603	\$12,741	\$12,226	\$12,143
Long-term debt and capital leases (excluding current maturities)	\$ 1,783	\$ 1,797	\$ 2,175	\$ 3,121
Shareowners' equity	\$ 4,023	\$ 3,007	\$ 2,540	\$ 1,827
Shares of common stock outstanding at year-end	75,225,197	73,695,987	67,778,106	50,816,010
Revenue passengers enplaned (thousands)	104,148	101,147	91,341	88,893
Available seat miles (millions)	140,149	136,821	130,751	130,645
Revenue passenger miles (millions)	101,136	97,758	88,673	86,417
Operating revenue per available seat mile	10.09¢	9.94¢	9.53¢	9.33¢
Passenger mile yield	12.83¢	12.79¢	13.10¢	13.10¢
Operating cost per available seat mile	8.88¢	8.82¢	9.17¢	8.83¢
Passenger load factor	72.2%	71.4%	67.8%	66.2%
Breakeven passenger load factor	62.7%	62.7%	65.1%	62.3%
Available ton miles (millions)	19,890	18,984	18,084	18,150
Revenue ton miles (millions)	11,859	11,308	10,635	10,142
Operating cost per available ton mile	63.57¢	63.54¢	66.31¢	63.55¢

¹Summary of operations and other financial and statistical data include \$52 million in pretax restructuring and other non-recurring charges (\$0.43 basic and \$0.42 diluted after-tax income per common share).

²Summary of operations and other financial and statistical data include \$829 million pretax restructuring charges and other non-recurring charges (\$9.77 after-tax per common share).

³Summary of operations and other financial and statistical data exclude \$114 million after-tax cumulative effect of change in accounting standards (\$2.25 basic and \$1.43 diluted income per common share).

mile yield, operating cost per available seat mile, passenger load factor, breakeven passenger load factor, available ton miles, revenue ton miles, and cost per available ton mile.

INSURANCE

Insurance companies provide two types of services. One is an identified contract service—mortality protection or loss protection. The second is investment management service. There are basically four types of insurance organizations:

1. **Stock companies.** A stock company is a corporation organized to earn profits for its stockholders. The comments in this insurance section relate specifically to stock companies. Many of the comments are also valid for the other types of insurance organizations.
2. **Mutual companies.** A mutual company is an incorporated entity, without private ownership interest, operating for the benefit of its policyholders and their beneficiaries.
3. **Fraternal benefit societies.** A fraternal benefit society resembles a mutual insurance company in that, although incorporated, it does not have capital stock, and it operates for the benefit of its members and beneficiaries. Policyholders participate in the earnings of the society and the policies stipulate that the society has the power to assess them in case the legal reserves become impaired.
4. **Assessment companies.** An assessment company is an organized group with similar interests, such as a religious denomination.

The regulation of insurance companies started at the state level. Beginning in 1828, the state of New York required that annual reports be filed with the state controller. Subsequently, other states followed this precedent, and all 50 states have insurance departments that require annual statements of insurance companies. The reports are filed with the state insurance departments in accordance with statutory accounting practices (SAP). The National Association of Insurance Commissioners (NAIC), a voluntary association, has succeeded in achieving near uniformity among the states, so there are no significant differences in SAP among the states.¹

Statutory accounting emphasizes the balance sheet. In its concern for protecting policyholders, statutory accounting focuses on the financial solvency of the insurance corporation. After the annual reports are filed with the individual state insurance departments, a testing process is conducted by the NAIC. This process is based on ratio calculations concerning the financial position of a company. If a company's ratio is outside the prescribed limit, the NAIC brings that to the attention of the state insurance department.

A.M. Best Company publishes *Best's Insurance Reports*, which are issued separately for life-health companies and property-casualty companies. *Best's Insurance Reports* evaluate the financial condition of more than 3,000 insurance companies. The majority of companies are assigned a Best's Rating, ranging from A+ (Superior) to C- (Fair). The other companies are classified as "Not Assigned." The "Not Assigned" category has ten classifications to identify why a company has not been assigned a Best's Rating.

Some of the items included in Best's data include a balance sheet, summary of operations, operating ratios, profitability ratios, leverage ratios, and liquidity ratios. Most of the ratios are industry-specific. It is not practical to describe and explain them in this book. It should be noted that the financial data, including the ratios, are based on the data submitted to the state insurance departments and are thus based on SAP. Generally accepted accounting principles (GAAP) for insurance companies developed much later than SAP. The annual reports of insurance companies are based on GAAP.

The 1934 Securities and Exchange Act established national government regulation, in addition to the state regulation of insurance companies. Stock insurance companies with assets of \$1 million and at least 500 stockholders must register with the SEC and file the required forms, such as the annual Form 10-K. Reports filed with the SEC must conform with GAAP.

Exhibit 12-20 contains the income statement and balance sheet from the 1998 annual report of The Chubb Corporation. These statements were prepared using GAAP. Review them to observe the unique nature of insurance company financial statements.

Balance Sheet Under GAAP

The balance sheet for an insurance company is not classified by current assets and current liabilities (nonclassified balance sheet). Instead, its basic sections are assets, liabilities, and shareholders' equity.

Assets

The asset section starts with investments, a classification where most insurance companies maintain the majority of their assets. Many of the investments have a high degree of liquidity, so that prompt payment can be assured in the event of a catastrophic loss. The majority of the investments are typically in bonds, with stock investments being much lower. Real estate investments are usually present for both property-casualty insurance companies and for life insurance companies. Because liabilities are relatively short term for property-casualty companies, the investment in real estate for these companies is usually immaterial.

EXHIBIT 12-20**THE CHUBB CORPORATION****Consolidated Statement of Income and Balance Sheets****1998 Annual Report****CONSOLIDATED STATEMENTS OF INCOME**

(Millions, except share and per-share data)

For the years ended December 31

	1998	1997	1996
Revenue:			
Premiums Earned (Note 13)	\$5,303.8	\$5,157.4	\$4,569.3
Investment Income (Note 4)	821.9	785.3	711.6
Real Estate	82.2	616.1	319.8
Realized Investment Gains (Note 4)	141.9	105.2	79.8
Total Revenue	<u>6,349.8</u>	<u>6,664.0</u>	<u>5,680.5</u>
Claims and Expenses:			
Insurance Claims (Notes 13 and 15)	3,493.7	3,307.0	3,010.8
Amortization of Deferred Policy Acquisition Costs (Note 6)	1,464.3	1,402.6	1,238.0
Other Insurance Operating Costs and Expenses	369.8	330.8	290.2
Real Estate Cost of Sales and Expenses (Note 5)	85.7	624.7	555.7
Investment Expenses	13.2	12.0	12.3
Corporate Expenses	33.4	12.8	26.6
Restructuring Charge (Note 12)	40.0	—	—
TOTAL CLAIMS AND EXPENSES	<u>5,500.1</u>	<u>5,689.9</u>	<u>5,133.6</u>
INCOME FROM CONTINUING OPERATIONS			
BEFORE FEDERAL AND FOREIGN INCOME TAX	849.7	974.1	546.9
Federal and Foreign Income Tax (Note 9)	<u>142.7</u>	<u>204.6</u>	<u>60.7</u>
INCOME FROM CONTINUING OPERATIONS	707.0	769.5	486.2
Discontinued Operations, Net of Tax (Note 3)			
Income from Operations	—	—	48.5
Loss on Disposal	—	—	(22.0)
INCOME FROM DISCONTINUED OPERATIONS	<u>—</u>	<u>—</u>	<u>26.5</u>
NET INCOME	<u>\$ 707.0</u>	<u>\$ 769.5</u>	<u>\$ 512.7</u>
Basic Earnings Per Share (Note 17)			
Income from Continuing Operations	\$ 4.27	\$ 4.48	\$ 2.79
Income from Discontinued Operations	—	—	.15
Net Income	<u>\$ 4.27</u>	<u>\$ 4.48</u>	<u>\$ 2.94</u>
Diluted Earnings Per Share (Note 17)			
Income from Continuing Operations	\$ 4.19	\$ 4.39	\$ 2.73
Income from Discontinued Operations	—	—	.15
Net Income	<u>\$ 4.19</u>	<u>\$ 4.39</u>	<u>\$ 2.88</u>

For life insurance companies, the investment in real estate may be much greater than for property-casualty companies because of the generally longer-term nature and predictability of their liabilities.

For debt and equity investments, review the disclosure to determine if there are significant differences between the fair value and the cost or amortized cost. Also review the stockholders' equity section of the balance sheet to determine if there is significant unrealized appreciation of investments (gains or losses).

Assets—Other than Investments

A number of asset accounts other than investments may be on an insurance company's balance sheet. Some of the typical accounts are described in the paragraphs that follow.

EXHIBIT 12-20 continued

CONSOLIDATED BALANCE SHEETS		
(Millions, except share and per-share data)	1998	1997
As of December 31		
Assets:		
Invested Assets (Note 4)		
Short-Term Investments	\$ 344.2	\$ 725.1
Fixed Maturities		
Held-to-Maturity—Tax Exempt (market \$2,140.2 and \$2,347.2)	2,002.2	2,200.6
Available-for-Sale		
Tax Exempt (cost \$6,509.3 and \$5,408.4)	6,935.1	5,766.9
Taxable cost (\$4,259.0 and \$4,366.0)	4,381.6	4,485.9
Equity Securities (cost \$1,002.6 and \$733.9)	1,092.2	871.1
TOTAL INVESTED ASSETS	14,755.3	14,049.6
Cash	8.3	11.5
Accrued Investment Income	221.0	203.8
Premiums Receivable	1,199.3	1,144.4
Reinsurance Recoverable on Unpaid Claims	1,306.6	1,207.9
Prepaid Reinsurance Premiums	134.6	115.2
Funds Held for Asbestos-Related Settlement (Note 15)	607.4	599.5
Deferred Policy Acquisition Costs (Note 6)	728.7	676.9
Real Estate Assets (Notes 5 and 8)	746.0	790.0
Deferred Income Tax (Note 9)	320.8	317.0
Other Assets	718.0	499.8
TOTAL ASSETS	<u>\$20,746.0</u>	<u>\$19,615.6</u>
Liabilities:		
Unpaid Claims (Note 15)	\$10,356.5	\$ 9,772.5
Unearned Premiums	2,915.7	2,696.6
Long-Term Debt (Note 8)	607.5	398.6
Dividend Payable to Shareholders	50.3	49.0
Accrued Expenses and Other Liabilities	1,171.9	1,041.8
TOTAL LIABILITIES	<u>15,101.9</u>	<u>13,958.5</u>
Commitments and Contingent Liabilities (Notes 14, 15 and 21)		
Shareholders' Equity (Notes 10 and 20)		
Preferred Stock—Authorized 4,000,000 Shares; \$1 Par Value; Issued – None	—	—
Common Stock—Authorized 600,000,000 Shares; \$1 Par Value; Issued		
175,989,202 and 176,037,850 Shares	176.0	176.0
Paid-In Surplus	546.7	593.0
Retained Earnings	5,604.0	5,101.7
Accumulated Other Comprehensive Income		
Unrealized Appreciation of Investments, Net of Tax (Note 4)	414.7	400.1
Foreign Currency Translation Losses, Net of Tax	(36.0)	(25.7)
Receivable from Employee Stock Ownership Plan	(86.3)	(96.7)
Treasury Stock, at Cost—13,722,376 and 7,320,410 Shares	(975.0)	(491.3)
TOTAL SHAREHOLDERS' EQUITY	<u>5,644.1</u>	<u>5,657.1</u>
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	<u>\$20,746.0</u>	<u>\$19,615.6</u>

Real estate used in operations is reported at cost, less accumulated depreciation. Under SAP, real estate used in operations is expensed.

Deferred policy acquisition costs represent the cost of obtaining policies. Under GAAP, these costs are deferred and charged to expense over the premium-paying period. This is

one of the major differences between GAAP reporting and SAP reporting. Under SAP reporting, these costs are charged to expense as they are incurred.

Goodwill is an intangible account resulting from acquiring other companies. The same account can be found on the balance sheet of companies other than insurance companies. Under GAAP, the goodwill account is accounted for as an asset and subsequently amortized to expense. Under SAP, neither the goodwill account nor other intangibles are recognized.

Liabilities

Generally, the largest liability is for loss reserves. Reserving for losses involves estimating the ultimate value, considering the present value of the commitments. The quantification process is subject to a number of subjective estimates, including inflation, interest rates, and judicial interpretations. Mortality estimates are also important for life insurance companies. These reserve accounts should be adequate to pay policy claims under the terms of the insurance policies.

Another liability account found on an insurance company's balance sheet is policy and contract claims. This account represents claims that have accrued as of the balance sheet date. These claims are reported net of any portion that can be recovered.

Many other liability accounts, such as notes payable and income taxes payable, are found on an insurance company's balance sheet. These are typically reported in the same manner as other industries report them, except there is no current liability classification.

Stockholders' Equity

The stockholders' equity section usually resembles the stockholders' equity section for companies in other industries. The account net unrealized gains (losses) on securities can be particularly large for insurance companies because of the expanded use of this account as a result of standards for insurance companies and the material amount of investments that an insurance company may have. Pay close attention to changes in this account, since these unrealized gains or losses have not been recognized on the income statement.

Income Statement Under GAAP

The manner of recognizing revenue on insurance contracts is unique for the insurance industry. In general, the duration of the contract governs the revenue recognition.

For contracts of short duration, revenue is ordinarily recognized over the period of the contract in proportion to the amount of insurance protection provided. When the risk differs significantly from the contract period, revenue is recognized over the period of risk in proportion to the amount of insurance protection.²

Policies relating to loss protection typically fall under the short-duration contract. An example would be casualty insurance in which the insurance company retains the right to cancel the contract at the end of the policy term.

For long-duration contracts, revenue is recognized when the premium is due from the policyholder. Examples would be whole-life contracts and single-premium life contracts.³ Likewise, acquisition costs are capitalized and expensed in proportion to premium revenue.

Long-duration contracts that do not subject the insurance enterprise to significant risks arising from policyholder mortality or morbidity are referred to as *investment contracts*. Amounts received on these contracts are not to be reported as revenues but rather as liabilities and accounted for in the same way as interest-bearing instruments.⁴ The contracts are regarded as investment contracts since they do not incorporate significant insurance risk. Interestingly, many of the life insurance policies currently being written are of this type.

With the investment contracts, premium payments are credited to the policyholder balance. The insurance company assesses charges against this balance for contract services

and credits the balance for income earned. The insurer can adjust the schedule for contract services and the rate at which income is credited.

Investment contracts generally include an assessment against the policyholder on inception of the contract and an assessment when the contract is terminated. The inception fees are booked as recoveries of capitalized acquisition costs, and the termination fees are booked as revenue at the time of termination.

In addition to their insurance activities, insurance companies are substantially involved with investments. Realized gains and losses from investments are reported in operations in the period incurred.

Ratios

As previously indicated, many of the ratios relating to insurance companies are industry-specific. An explanation of industry-specific ratios is beyond the scope of this book. The industry-specific ratios are frequently based on SAP financial reporting to the states, rather than the GAAP financial reporting that is used for the annual report and SEC requirements.

Ratios computed from the GAAP-based financial statements are often profitability- and investor-related. Examples of such ratios are return on common equity, price/earnings ratio, dividend payout, and dividend yield. These ratios are explained in other sections of this book.

Insurance companies tend to have a stock market price at a discount to the average market price (price/earnings ratio). This discount is typically 10% to 20%, but at times it is much more. There are likely many reasons for this relatively low market value. Insurance is a highly regulated industry that some perceive as having low growth prospects. It is also an industry with substantial competition. The regulation and the competition put pressure on the premiums that can be charged. The accounting environment likely also contributes to the relatively low market price for insurance company stocks. The existence of two sets of accounting principles, SAP and GAAP, contributes to the lack of understanding of insurance companies' financial statements. Also, many of the accounting standards are complex and industry-specific.

The nature of the insurance industry leads to standards that allow much subjectivity and possible manipulation of reported profit. For example, insurance companies are perceived to underreserve during tough years and overreserve during good years.

REAL ESTATE COMPANIES

Real estate companies typically construct and operate income-producing real properties. Examples of such properties are shopping centers, hotels, and office buildings. A typical project would involve selecting a site, arranging financing, arranging for long-term leases, construction, and subsequently operating and maintaining the property.

Real estate companies contend that conventional accounting—recognizing depreciation but not the underlying value of the property—misleads investors. In some cases, these companies have taken the drastic step of selling major parts or all of the companies' assets to realize greater benefits for stockholders. Some real estate companies have attempted to reflect value by disclosing current value in addition to the conventional accounting. Such a company is The Rouse Company. The Rouse Company arrives at current value using future income potential, assuming that the property is held for the long-term development and sales programs. This is an attempt to indicate annual progress and reflect how investors perceive real estate values.

In The Rouse Company 1998 annual report, the conventional balance sheet has net stockholders' equity of \$628,926,000, which is \$8.71 per common share. In the letter to stockholders, it discloses the current value stockholders' equity of \$2,400,000,000, which is \$33.15 per share.

SUMMARY

Financial statements vary among industries, and they are especially different for banks, utilities, transportation companies, and insurance companies. In each case, the accounting for these firms is subject to a uniform accounting system. Changes in analysis are necessitated by the differences in accounting presentation.

Oil and gas companies' financial statements are affected significantly by the method that they choose to account for costs associated with exploration and production. Another important aspect of the financial statements of oil and gas companies is the footnote requirement that relates to supplementary information on oil and gas exploration, development, and production activities. Cash flow is also particularly significant to oil and gas companies.

Real estate companies emphasize the underlying value of the property and earnings before depreciation and deferred taxes from operations.

Special industry ratios were reviewed in this chapter. The following ratios are helpful when analyzing a bank:

$$\text{Earning Assets to Total Assets} = \frac{\text{Average Earning Assets}}{\text{Average Total Assets}}$$

$$\text{Interest Margin to Average Earning Assets} = \frac{\text{Interest Margin}}{\text{Average Earning Assets}}$$

$$\text{Loan Loss Coverage Ratio} = \frac{\text{Pretax Income} + \text{Provision for Loan Losses}}{\text{Net Charge-Offs}}$$

$$\text{Equity Capital to Total Assets} = \frac{\text{Average Equity}}{\text{Average Total Assets}}$$

$$\text{Deposits Times Capital} = \frac{\text{Average Deposits}}{\text{Average Stockholders' Equity}}$$

$$\text{Loans to Deposit} = \frac{\text{Average Net Loans}}{\text{Average Deposits}}$$

The following ratios are helpful in analyzing utility performance:

$$\text{Operating Ratio} = \frac{\text{Operating Expense}}{\text{Operating Revenue}}$$

$$\text{Funded Debt to Operating Property} = \frac{\text{Funded Debt}}{\text{Operating Property}}$$

$$\text{Percent Earned on Operating Property} = \frac{\text{Net Income}}{\text{Operating Property}}$$

$$\text{Operating Revenue to Operating Property} = \frac{\text{Operating Revenue}}{\text{Operating Property}}$$

The ratios that follow are especially suited to transportation. Additional insight can be gained by looking at revenues and expenses on a per unit of usage basis.

$$\text{Operating Ratio} = \frac{\text{Operating Expense}}{\text{Operating Revenue}}$$

$$\text{Long-Term Debt to Operating Property} = \frac{\text{Long-Term Debt}}{\text{Operating Property}}$$

$$\text{Operating Revenue to Operating Property} = \frac{\text{Operating Revenue}}{\text{Operating Property}}$$

QUESTIONS

- Q 12-1.** What are the main sources of revenue for banks?
- Q 12-2.** Why are loans, which are usually liabilities, treated as assets for banks?
- Q 12-3.** Why are savings accounts liabilities for banks?
- Q 12-4.** Why are banks concerned with their loans/deposits ratios?
- Q 12-5.** To what agencies and other users of financial statements must banks report?
- Q 12-6.** Why must the user be cautious in analyzing bank holding companies?
- Q 12-7.** What is usually the biggest expense item for a bank?
- Q 12-8.** What does the ratio total deposits times capital measure?
- Q 12-9.** What ratios are used to indicate profitability for banks?
- Q 12-10.** Why are banks concerned about the percentage of earning assets to total assets?
- Q 12-11.** What does the loan loss coverage ratio measure?
- Q 12-12.** What type of ratio is deposits times capital?
- Q 12-13.** Give an example of why a review of bank assets may indicate risk or opportunity you were not aware of.
- Q 12-14.** Why review the disclosure of the market value of investments versus the book amount of investments for banks?
- Q 12-15.** Why review the disclosure of foreign loans for banks?
- Q 12-16.** Why review the disclosure of allowance for loan losses for a bank?
- Q 12-17.** Why review the disclosure of nonperforming assets for banks?
- Q 12-18.** Why could a review of savings deposit balances be important when reviewing a bank's financial statements?
- Q 12-19.** Why review the footnote that describes commitments and contingent liabilities for a bank?
- Q 12-20.** Utilities are very highly leveraged. How is it that they are able to carry such high levels of debt?
- Q 12-21.** How does demand for utilities differ from demand for other products or services?
- Q 12-22.** Why are plant and equipment listed first for utilities?
- Q 12-23.** Are inventory ratios meaningful for utilities? Why?
- Q 12-24.** What does the funded debt to operating property ratio measure for a utility?

- Q 12-25.** Is times interest earned meaningful for utilities? Why or why not?
- Q 12-26.** Are current liabilities presented first in utility reporting? Comment.
- Q 12-27.** For a utility, why review the account construction work in progress?
- Q 12-28.** For a utility, describe the income statement accounts, allowance for equity funds used during construction, and allowance for borrowed funds used during construction.
- Q 12-29.** Differentiate between successful-efforts and full-costing accounting as applied to the oil and gas industry.
- Q 12-30.** Some industries described in this chapter are controlled by federal regulatory agencies. How does this affect their accounting systems?
- Q 12-31.** When reviewing the financial statements of oil and gas companies, why is it important to note the method of costing (expensing) exploration and production costs?
- Q 12-32.** Oil and gas companies must disclose quantity estimates for proved oil and gas reserves and the major factors causing changes in these resource estimates. Briefly indicate why this disclosure can be significant.
- Q 12-33.** For oil and gas companies, there is the potential for a significant difference between the reported income and cash flows from operations. Comment.
- Q 12-34.** Is it more desirable to have the operating ratios increasing or decreasing for utilities and transportation companies?
- Q 12-35.** What type of ratio is operating revenue to operating property? Will it exceed 1:1 for a utility?
- Q 12-36.** What is the most important category of assets for transportation firms?
- Q 12-37.** Briefly describe the revenue section of the income statement for a transportation firm.
- Q 12-38.** In a transportation firm, what types of things will change operating revenues? Operating expenses?
- Q 12-39.** If a transportation firm shows a rise in revenue per passenger mile, what does this rise imply?
- Q 12-40.** How is the passenger load factor of a bus company related to profitability?
- Q 12-41.** Explain how the publication *Financial Analysis of the Motor Carrier Industry* could be used to determine the percentage of total revenue a firm has in relation to similar trucking firms.
- Q 12-42.** Annual reports filed with state insurance departments are in accordance with what accounting standards?
- Q 12-43.** Annual reports that insurance companies issue to the public are in accordance with what accounting standards?
- Q 12-44.** Why could an insurance company with substantial investments in real estate represent a risk?
- Q 12-45.** For an insurance company, describe the difference between GAAP reporting and SAP reporting of deferred policy acquisition costs.
- Q 12-46.** Briefly describe the difference between accounting for intangibles for an insurance company under GAAP and under SAP.
- Q 12-47.** Briefly describe the unique aspects of revenue recognition for an insurance company.

- Q 12-48.** Insurance industry-specific financial ratios are usually prepared from financial statements prepared under what standards?
- Q 12-49.** Insurance companies tend to have a stock market price at a discount to the average market price (price/earnings ratio). Indicate some perceived reasons for this relatively low price/earnings ratio.
- Q 12-50.** Real estate companies contend that conventional accounting does not recognize the underlying value of the property and that this misleads investors. Discuss.

To the Net



- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter Texaco. Select the form 10-K that was filed on March 26, 1999.
 - Determine the standard industrial classification.
 - Using the supplemental oil and gas information, determine the net proved reserves of crude oil and natural gas liquids. (millions of barrels).

	Worldwide
Developed reserves	
Undeveloped reserves	
As of December 31, 1995	
Developed reserves	
Undeveloped reserves	
As of December 31, 1996	
Developed reserves	
Undeveloped reserves	
As of December 31, 1997	
Developed reserves	
Undeveloped reserves	
As of December 31, 1998	
 - Using December 31, 1995, as the base, compute a horizontal common-size analysis for the data in (b).
 - Comment on trends for proved reserves of crude oil and natural gas liquids.
- Go to the SEC site (www.sec.gov). Click on the Edgar database. Click on Search the Edgar Database, and then click on Quick Forms Lookup. Select a form (10-K). Enter New Century Energies. Select the Form 10-K that was filed on March 29, 1999.
 - Determine the standard industrial classification.
 - For December 31, 1998, determine the construction in progress.
 - For the year ended December 31, 1998, determine the allowance for borrowed funds used during construction.
 - Explain how the interest on borrowed funds used during construction impacts the balance sheet, statement of income, and statements of cash flows.

PROBLEMS

P 12-1. The following are statistics from the annual report of McEttrick National Bank:

	2001	2000
Average loans	\$16,000,000	\$13,200,000
Average total assets	26,000,000	22,000,000
Average total deposits	24,000,000	20,000,000
Average total capital	1,850,000	1,600,000
Interest expenses	1,615,000	1,512,250
Interest income	1,750,000	1,650,000

- Required**
- Calculate the total deposits times capital for each year.
 - Calculate the loans to total deposits for each year.
 - Calculate the capital funds to total assets for each year.
 - Calculate the interest margin to average total assets for each year.
 - Comment on any trends found in the calculations of (a) through (d).

P 12-2. The following are statistics from the annual report of Dover Bank:

	2001	2000	1999
Average earning assets	\$50,000,000	\$45,000,000	\$43,000,000
Average total assets	58,823,529	54,216,867	52,000,000
Income before securities transactions	530,000	453,000	420,000
Interest margin	2,550,000	2,200,000	2,020,000
Pretax income before securities transactions	562,000	480,500	440,000
Provision for loan losses	190,000	160,000	142,000
Net charge-offs	180,000	162,000	160,000
Average equity	4,117,600	3,524,000	3,120,000
Average net loans	32,500,000	26,000,000	22,500,000
Average deposits	52,500,000	42,500,000	37,857,000

- Required**
- Calculate the following for 2001, 2000, and 1999:
 - Earning assets to total assets
 - Interest margin to average earning assets
 - Loan loss coverage ratio
 - Equity to total assets
 - Deposits times capital
 - Loans to deposits
 - Comment on trends found in the ratios computed in (a).

P 12-3. Super Power Company reported the statistics in its statements of income shown at the top of the next page.

- Required**
- Calculate the operating ratio and comment on the results.
 - Calculate the times interest earned and comment on the results.
 - Perform a vertical common-size analysis of revenues, using total revenue as the base, and comment on the relative size of the component parts.

	2001	2000
Electric revenues:		
Residential	\$11,800,000	\$10,000,000
Commercial and industrial	10,430,000	10,000,000
Other	600,000	500,000
	22,830,000	20,500,000
Operating expenses and taxes*	20,340,000	18,125,000
Operating income	2,490,000	2,375,000
Other income	200,000	195,000
Income before interest deductions	2,690,000	2,570,000
Interest deductions	1,200,000	1,000,000
Net income	\$ 1,490,000	\$ 1,570,000

*Includes taxes of \$3,200,000 in 2001 and \$3,000,000 in 2000.

P 12-4. The following statistics relate to Michgate, an electric utility:

	2001	2000	1999
	(In thousands of dollars, except per share)		
Operating expenses	\$ 850,600	\$ 820,200	\$ 780,000
Operating revenues	1,080,500	1,037,200	974,000
Earnings per share	3.00	2.90	2.60
Cash flow per share	3.40	3.25	2.30
Operating property	3,900,000	3,750,000	3,600,000
Funded debt (long-term)	1,500,000	1,480,000	1,470,000
Net income	280,000	260,000	230,000

- Required**
- Calculate the following for 2001, 2000, and 1999:
 - Operating ratio
 - Funded debt to operating property
 - Percent earned on operating property
 - Operating revenue to operating property
 - Comment on trends found in the ratios computed in (a).
 - Comment on the trend between earnings per share and cash flow per share.

P 12-5. Local Airways had the following results in the last two years:

	2001	2000
Operating revenues	\$ 624,000	\$ 618,000
Operating expenses	625,000	617,000
Operating property	365,000	360,000
Long-term debt	280,000	270,000
Estimated passenger miles	7,340,000	7,600,000

- Required**
- Calculate the following for 2001 and 2000:
 - Calculate the operating ratio and comment on the trend.
 - Calculate the long-term debt to operating property ratio. What does this tell about debt use?
 - Calculate the operating revenue to operating property and comment on the trend.
 - Calculate the revenue per passenger mile. What has caused this trend?

P 12-6. Chihi Airways had the following results for the last three years:

	2001	2000	1999
	(In thousands of dollars)		
Operating expenses	\$1,550,000	\$1,520,000	\$1,480,000
Operating revenues	1,840,000	1,670,400	1,620,700
Long-term debt	910,000	900,500	895,000
Operating property	995,000	990,000	985,000
Passenger load factor	66.5%	59.0%	57.8%

- Required**
- Calculate the following for 2001, 2000, and 1999:
 - Operating ratio
 - Long-term debt to operating property
 - Operating revenue to operating property
 - Comment on trends found in the ratios computed in (a).
 - Comment on the passenger load factor.

P 12-7.

- Required** Answer the following multiple-choice questions related to insurance financial reporting.
- Which of the following does not represent a basic type of insurance organization?
 - Stock companies
 - Bond companies
 - Mutual companies
 - Fraternal benefit societies
 - Assessment companies
 - Which of these statements is not correct?
 - The balance sheet is a classified balance sheet.
 - The asset section starts with investments.
 - The majority of the investments are typically in bonds.
 - For life insurance companies, the investment in real estate may be much greater than that for property-casualty companies.
 - Real estate investments are reported at cost less accumulated depreciation and an allowance for impairment in value.
 - Generally, the largest liability is for loss reserves. The quantification process is subject to a number of estimates. Which of the following would not be one of the estimates?
 - Investment gains/losses
 - Inflation rate
 - Interest rates
 - Judicial interpretations
 - Mortality estimates
 - The manner of recognizing revenue on insurance contracts is unique for the insurance industry. Which of the following statements is not true?
 - In general, the duration of the contract governs the revenue recognition.
 - When the risk differs significantly from the contract period, revenue is recognized over the period of risk in proportion to the amount of insurance protection.
 - For long-duration contracts, revenue is recognized when the premium is due from policyholders.
 - Realized gains and losses from investments are reported in operations in the period incurred.
 - For investment contracts, termination fees are booked as revenue over the period of the contract.

- e. Which of the following statements is not true?
1. Statutory accounting has emphasized the balance sheet in its concern for protecting the policyholders by focusing on the financial solvency of the insurance corporation.
 2. All 50 states have insurance departments that require annual statements of insurance companies. These annual reports are filed with the state insurance departments in accordance with Statutory Accounting Practices (SAP).
 3. After the annual reports are filed with the individual state insurance departments, a testing process is conducted by the NAIC. If a company's ratio is outside the prescribed limit, the NAIC brings that to the attention of the company.
 4. The A.M. Best Company publishes *Best's Insurance Reports*, which are published separately for life-health companies and property-casualty companies. The financial data, including the ratios, are based on the data submitted to the state insurance departments and are thus based on SAP.
 5. Many stock insurance companies must register with the Securities and Exchange Commission and file the required forms, such as the annual Form 10-K. Reports filed with the SEC must conform with GAAP.

Case 12-1**Allowance for Funds**

The following financial information is from the New England Electric System and Subsidiaries 1994 annual report:

NEW ENGLAND ELECTRIC SYSTEM AND SUBSIDIARIES
Consolidated Statement of Income
Year ended December 31

	1994	1993	1992
	(Dollars in thousands, except per-share amounts)		
Operating Revenue	\$2,243,029	\$2,233,978	\$2,181,676
Operating Expenses:			
Fuel for generation	220,956	227,182	237,161
Purchased electric energy	514,143	527,307	525,655
Other operation	494,741	492,079	423,330
Maintenance	161,473	146,219	162,974
Depreciation and amortization	301,123	296,631	302,217
Taxes, other than income taxes	125,840	120,493	114,027
Income taxes	128,257	121,124	110,761
Total operating expenses	1,946,533	1,931,035	1,876,125
Operating Income	296,496	302,943	305,551
Other Income:			
Allowance for equity funds used during construction	10,169	3,795	2,732
Equity in income of generating companies	9,758	11,016	13,052
Other income (expense) net	(3,856)	(1,154)	936
Operating and other income	312,567	316,600	322,271
Interest:			
Interest on long-term debt	93,500	100,777	114,182
Other interest	11,298	9,809	5,420
Allowance for borrowing funds used during construction	(7,793)	(2,816)	(2,204)
Total Interest	97,005	107,770	117,398
Income after interest	215,562	208,830	204,873
Preferred dividends of subsidiaries	8,697	10,585	10,572
Minority interests	7,439	8,022	9,264
Net Income	\$ 199,426	\$190,223	\$185,037
Common shares outstanding	64,969,652	64,969,652	64,969,652
Per-share data:			
Net income	\$3.07	\$2.93	\$2.85
Dividends declared	\$2.285	\$2.22	\$2.14

NEW ENGLAND ELECTRIC SYSTEM AND SUBSIDIARIES
Consolidated Balance Sheet
Year ended December 31

	1994	1993
	(Dollars in thousands)	
Assets		
Utility plant, at original cost	\$4,914,807	\$4,661,612
Less accumulated provisions for depreciation and amortization	1,610,378	1,511,271
	<u>3,304,429</u>	<u>3,150,341</u>
Net investment in Seabrook 1 under rate settlement (Note C)	38,283	103,344
Construction work in progress	374,009	228,816
Net utility plant	<u>3,716,721</u>	<u>3,482,501</u>
Oil and gas properties, at cost (Note A)	1,248,343	1,220,110
Less accumulated provision for amortization	964,069	884,837
Net oil and gas properties	<u>284,274</u>	<u>335,273</u>
Investments:		
Nuclear power companies, at equity (Note D)	46,349	46,342
Other subsidiaries, at equity	42,195	44,676
Other investments	50,895	28,836
Total investments	<u>139,439</u>	<u>119,854</u>
Current assets:		
Cash	3,047	2,876
Accounts receivable, less reserves of \$15,095 and \$14,551	295,627	275,020
Unbilled revenues (Note A)	55,900	43,400
Fuel, materials, and supplies, at average cost	94,431	74,314
Prepaid and other current assets	76,718	69,004
Total current assets	<u>525,723</u>	<u>464,614</u>
Accrued Yankee Atomic cost (Note D)	<u>122,452</u>	<u>103,501</u>
Deferred charges and other assets (Note A)	<u>296,232</u>	<u>290,135</u>
	<u>\$5,084,841</u>	<u>\$4,795,878</u>
Capitalization and Liabilities		
Capitalization (see accompanying statements):		
Common share equity	\$1,580,838	\$1,529,868
Minority interests in consolidated subsidiaries	55,066	55,855
Cumulative preferred stock of subsidiaries	147,016	147,528
Long-term debt	<u>1,520,488</u>	<u>1,511,589</u>
Total capitalization	<u>3,303,408</u>	<u>3,244,840</u>
Current liabilities:		
Long-term debt due within one year	65,920	12,920
Short-term debt	233,970	71,775
Accounts payable	168,937	128,342
Accrued taxes	11,002	10,332
Accrued interest	25,193	23,278
Dividends payable	37,154	36,950
Other current liabilities (Note A)	<u>93,251</u>	<u>153,812</u>
Total current liabilities	<u>635,427</u>	<u>437,409</u>
Deferred federal and state income taxes	751,855	705,026
Unamortized investment tax credits	94,930	99,355
Accrued Yankee Atomic cost (Note D)	122,452	103,501
Other reserves and deferred credits	176,769	205,747
Commitments and contingencies (Note E)		
	<u>\$5,084,841</u>	<u>\$4,795,878</u>

Selected note to consolidated financial statements**3. Allowance for funds used during construction (AFDC)**

The utility subsidiaries capitalized AFDC as part of construction costs. AFDC represents the composite interest and equity costs of capital funds used to finance that portion of construction cost not eligible for inclusion in the rate base. In 1994, an average of \$30 million of construction work in progress was included in the rate base, all of which was attributable to the Manchester Street Station repowering project. AFDC is capitalized in "Utility plant," with offsetting noncash credits to "Other income" and "Interest." This method is in accordance with an established rate-making practice, under which a utility is permitted a return on, and the recovery of, prudently incurred capital costs through their ultimate inclusion in the rate base and in the provision for depreciation. The composite AFDC rates were 7.6 percent, 7.4 percent, and 8.6 percent, in 1994, 1993 and 1992, respectively.

Required

- a. Describe the allowance for equity funds used during construction.
- b. Describe the allowance for borrowing funds used during construction.
- c. How does capitalizing interest on borrowed funds affect income in the year of capitalization versus not capitalizing this interest? Explain.
- d. Would net income tend to be higher than cash flow if there is substantial capitalization of interest on the borrowed funds during the current period? Explain.
- e. How does capitalizing the allowance for equity funds used during construction affect income in the year of capitalization versus not capitalizing these charges?
- f. Would net income tend to be higher than cash flow if there is substantial capitalization of the allowance for equity funds used during construction for the current year?
- g. Describe how a utility that has substantial construction work in progress could have a material cash flow problem in relation to the reported income.
- h. Compute the following for 1994 and 1993. Comment on each.
 1. Operating ratio
 2. Funded debt to operating property
 3. Percent earned on operating property
 4. Operating revenue to operating property
 5. Times interest earned
- i. Using the balances at December 31, 1994, compute the percentage relationship between construction work in progress and net utility plant. Comment.

Case 12-2

In Progress

The following financial information is from the Southern Indiana Gas and Electric Company 1994 annual report:

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
Consolidated Statement of Income
Year ended December 31

	1994	1993	1992
	(Dollars in thousands, except per-share amounts)		
Operating Revenues			
Electric	\$260,939	\$258,405	\$243,077
Gas	69,099	71,084	63,828
Total Operating Revenues	<u>330,035</u>	<u>329,489</u>	<u>306,905</u>
Operating Expenses			
Operation:			
Fuel for electric generation	83,382	81,080	81,239
Purchased electric energy	5,489	9,348	2,914
Cost of gas sold	42,319	51,269	46,653
Other	48,911	40,718	36,103
Total operation	<u>180,101</u>	<u>182,415</u>	<u>166,909</u>
Maintenance	30,355	26,775	22,146
Depreciation and amortization	37,705	36,960	36,233
Federal and state income taxes	19,302	18,306	16,490
Property and other taxes	10,205	13,468	14,232
Total operating expenses	<u>277,668</u>	<u>277,924</u>	<u>256,010</u>
Operating Income	<u>52,367</u>	<u>51,565</u>	<u>50,895</u>
Other Income:			
Allowance for other funds used during construction	3,972	3,092	988
Interest	988	930	1,015
Other, net	2,685	2,533	2,101
	<u>7,645</u>	<u>6,555</u>	<u>4,104</u>
Income before Interest Charges	<u>60,012</u>	<u>58,120</u>	<u>54,999</u>
Interest Charges:			
Interest on long-term debt	18,604	18,437	17,768
Amortization of premium, discount and expense on debt	852	773	446
Other interest	1,589	747	461
Allowance for borrowing funds used during construction	(2,058)	(1,425)	(434)
	<u>18,987</u>	<u>18,532</u>	<u>18,241</u>
Net Income	<u>41,025</u>	<u>39,588</u>	<u>36,758</u>
Preferred Stock Dividends	1,105	1,105	1,267
Net Income Applicable to Common Stock	<u>\$ 39,920</u>	<u>\$ 38,483</u>	<u>\$ 35,491</u>
Average Common Shares Outstanding	15,755	15,755	15,755
Earnings Per Share of Common Stock	\$2.53	\$2.44	\$2.25

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
Consolidated Balance Sheet

	December 31	
	1994	1993
	(In thousands of dollars)	
Assets		
Utility plant, at original cost:		
Electric	\$ 907,591	\$879,476
Gas	114,951	107,864
	<u>1,022,542</u>	<u>987,340</u>
Less: Accumulated provision for depreciation	456,922	424,086
	<u>565,620</u>	<u>563,254</u>
Construction work in progress	112,316	72,615
Net utility plant	<u>677,936</u>	<u>635,869</u>
Other Investments and Property:		
Investment in leveraged leases	34,746	34,924
Investments in partnerships	23,411	25,023
Environmental improvement funds held by Trustee	10,526	22,613
Nonutility property and other	12,783	9,861
	<u>81,466</u>	<u>92,421</u>
Current Assets:		
Cash and cash equivalent	6,042	5,983
Restricted cash	22,018	8,749
Temporary investments, at market	5,444	4,676
Receivable, less allowance of \$231 and \$166, respectively	25,582	28,541
Inventories	46,441	38,190
Coal contract settlement	7,685	5,610
Other current assets	2,355	3,048
	<u>115,567</u>	<u>94,797</u>
Deferred Charges:		
Coal contract settlement	—	7,685
Unamortized premium on reacquired debt	6,621	7,100
Postretirement benefits other than pensions	8,011	4,125
Demand side management program	11,530	7,411
Other deferred charges	16,109	11,433
	<u>42,271</u>	<u>37,754</u>
	<u>\$917,240</u>	<u>\$860,841</u>

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated Balance Sheet (concluded)

	December 31	
	1994	1993
	(In thousands of dollars)	
Shareholders' Equity and Liabilities		
Common Stock	\$102,798	\$102,798
Retained Earnings	218,424	204,449
Less: Unrealized loss on debt and equity securities	106	—
	321,116	307,247
Less: Treasury stock, at cost	24,540	24,540
Common Shareholders' Equity	296,576	282,707
Cumulative Nonredeemable Preferred Stock	11,090	11,090
Cumulative Redeemable Preferred Stock	7,500	7,500
Cumulative Special Preferred Stock	1,015	1,015
Long-Term Debt, net of current maturities	264,110	261,100
Long-term Partnership Obligations, net of current maturities	9,507	12,881
Total capitalization, excluding bonds subject to tender (see Consolidated Statements of Capitalization)	589,798	576,293
Current Liabilities:		
Current portion of adjustable rate bonds subject to tender	31,500	41,475
Current maturities of long-term debt, interim financing and long-term partnership obligations:		
Maturing long-term debt	7,803	763
Notes payable	22,060	11,040
Partnership obligations	3,374	3,849
Total current maturities of long-term debt, interim financing and long-term partnership obligations	33,237	15,652
Other Current Liabilities:		
Accounts payable	35,183	33,939
Dividends payable	125	135
Accrued taxes	6,849	7,941
Accrued interest	4,599	4,517
Refunds to customers	14,844	3,398
Accrued coal liabilities	22,018	8,749
Other accrued liabilities	16,339	10,125
Total other current liabilities	99,957	68,804
Total current liabilities	164,694	125,931
Deferred Credits and Other:		
Accumulated deferred income taxes	120,576	117,267
Accumulated deferred investment tax credits, being amortized over lives of property	24,702	26,549
Regulatory income tax liability	4,052	7,197
Postretirement benefits other than pensions	8,384	4,125
Other	5,034	3,479
	162,748	158,617
	<u>\$917,240</u>	<u>\$860,841</u>

Selected note to consolidated financial statements**(d) Utility plant**

Utility plant is stated at historical original cost of construction. Such cost includes payroll-related costs, such as taxes, pensions and other fringe benefits, general and administrative costs, and an allowance for the cost of funds capitalized as a cost of construction. While capitalized AFUDC does not represent a current source of cash, it does represent a basis for future cash revenue through depreciation and return allowance. The weighted average AFUDC rate (before income taxes) used by the Company was 9.5% in 1994, 10.5% in 1993, and 11.5% in 1992.

Required

- a. Describe the allowance for other funds used during construction.
- b. How does capitalizing interest on borrowed funds affect income in the year of capitalization versus not capitalizing this interest? Explain.
- c. Would net income tend to be higher than cash flow if there is substantial capitalization of the allowance for equity funds used during construction for the current year?
- d. Compute the following for 1994 and 1993. Comment on each.
 1. Operating ratio
 2. Funded debt to operating property
 3. Percent earned on operating property
 4. Operating revenue to operating property
 5. Times interest earned
- e. Using the balance at December 31, 1994, compute the percentage relationship between construction work in progress and net utility plant.
- f. Comment on trends, considering only net income, earnings per share of common stock, allowance for other funds used during construction, and allowance for borrowing funds used during construction.

Case 12-3**Loans and Provision for Loans**

Sylvania Savings Bank included the following footnote in its 1984 annual report:

Loans

Net loans at December 31, 1984, were \$175,617,000, an increase of 23% over \$142,264,000 at December 31, 1983. During the year, commercial loans increased by 25%, real estate loans increased by 3%, and consumer loans increased by 74%. Net loans represented 68% of total earning assets at December 31, 1984, compared to 64% at December 31, 1983. The average yield on the loan portfolio for 1984 was 13.2% compared to 12.7% for 1983. Non-earning loans at December 31, 1984 were \$2,469,000, as compared to \$4,528,000 at December 31, 1983. During 1984, net loan charge-offs amounted to \$1,239,000, compared to \$1,414,000 in 1983. To offset these charge-offs, the 1984 provision for possible loan losses was \$1,430,000, compared to \$1,425,000 in 1983. As a result of these provisions, the Reserve for Possible Loan Losses totaled \$1,786,000 at December 31, 1984, and \$1,595,000 at December 31, 1983. As a percent of loans less unearned discount, the reserve was 1.01% in 1984 and 1.11% in 1983.

Required

Give your opinion as to significant information in this footnote.

Case 12-4

You Can Bank on It

The financial data included in this case are from selected parts of the 1998 annual report of Wells Fargo & Company and subsidiaries.

Wells Fargo & Company and Subsidiaries
Consolidated Statement of Income

(in millions, except per share amounts)		Year ended December 31,		
		1998	1997	1996
INTEREST INCOME				
Securities available for sale	\$ 1,844	\$ 2,063	\$ 1,950	
Mortgages held for sale	898	490	529	
Loans held for sale	371	312	328	
Loans	10,685	10,539	9,854	
Other interest income	257	198	180	
Total interest income	14,055	13,602	12,841	
INTEREST EXPENSE				
Deposits	3,111	3,150	2,911	
Short-term borrowings	777	610	562	
Long-term debt	1,097	1,093	1,140	
Guaranteed preferred beneficial interests in Company's subordinated debentures	80	101	6	
Total interest expense	5,065	4,954	4,619	
NET INTEREST INCOME				
Provision for loan losses	8,990	8,648	8,222	
Net interest income after provision for loan losses	1,545	1,140	500	
	7,445	7,508	7,722	
NONINTEREST INCOME				
Service charges on deposit accounts	1,357	1,244	1,198	
Trust and investment fees and commissions	1,068	954	775	
Credit card fee revenue	520	448	350	
Other fees and commissions	946	826	689	
Mortgage banking	1,106	927	844	
Insurance	348	336	280	
Net venture capital gains	113	191	256	
Net gains on securities available for sale	169	99	12	
Other	800	650	365	
Total noninterest income	6,427	5,675	4,769	
NONINTEREST EXPENSE				
Salaries and benefits	4,416	3,811	3,624	
Equipment	900	739	724	
Net occupancy	764	719	688	
Goodwill	421	433	339	
Core deposit intangible	243	273	265	
Net losses on dispositions of premises and equipment	325	76	45	
Operating losses	152	374	189	
Other	3,358	2,565	2,850	
Total noninterest expense	10,579	8,990	8,724	
INCOME BEFORE INCOME TAX EXPENSE				
Income tax expense	1,343	1,694	1,539	
NET INCOME	\$ 1,950	\$ 2,499	\$ 2,228	

(in millions, except per share amounts)	Year ended December 31,		
	1998	1997	1996
NET INCOME APPLICABLE TO COMMON STOCK	<u>\$ 1,915</u>	<u>\$ 2,456</u>	<u>\$ 2,143</u>
EARNINGS PER COMMON SHARE	<u>\$ 1.18</u>	<u>\$ 1.50</u>	<u>\$ 1.38</u>
DILUTED EARNINGS PER COMMON SHARE	<u>\$ 1.17</u>	<u>\$ 1.48</u>	<u>\$ 1.36</u>
DIVIDENDS DECLARED PER COMMON SHARE	<u>\$.70</u>	<u>\$.615</u>	<u>\$.525</u>

Selected data related to changes in the allowance for loan losses were as follows:

(in millions)	Year ended December 31	
	1998	1997
Provision for loan losses	\$1,545	\$1,140
Total net loan charge-offs	\$1,617	\$1,305

Wells Fargo & Company and Subsidiaries
Consolidated Balance Sheet

(in millions, except shares)	December 31	
	1998	1997
ASSETS		
Cash and due from banks	\$ 12,731	\$ 13,081
Federal funds sold and securities purchased under resale agreements	1,517	1,049
Securities available for sale	31,997	27,872
Mortgages held for sale	19,770	9,706
Loans held for sale	5,322	4,494
Loans	107,994	106,311
Allowance for loan losses	3,134	3,062
Net loans	<u>104,860</u>	<u>103,249</u>
Mortgage servicing rights	3,080	3,048
Premises and equipment, net	3,130	3,311
Core deposit intangible	1,510	1,737
Goodwill	7,664	8,062
Interest receivable and other assets	10,894	10,076
Total assets	<u>\$202,475</u>	<u>\$185,685</u>

(in millions, except shares)	December 31	
	1998	1997
LIABILITIES		
Noninterest-bearing deposits	\$ 46,732	\$ 40,206
Interest-bearing deposits	<u>90,056</u>	<u>87,450</u>
Total deposits	136,788	127,656
Short-term borrowings	15,897	13,381
Accrued expenses and other liabilities	8,537	6,236
Long-term debt	19,709	17,335
Guaranteed preferred beneficial interests in Company's subordinated debentures	785	1,299
STOCKHOLDERS' EQUITY		
Preferred stock	547	543
Unearned ESOP shares	<u>(84)</u>	<u>(80)</u>
Total preferred stock	463	463
Common stock—\$1 2/3 par value, authorized 4,000,000,000 shares; issued 1,661,392,590 shares and 1,630,640,939 shares	2,769	2,718
Additional paid-in capital	8,673	8,126
Retained earnings	9,045	8,292
Cumulative other comprehensive income	463	464
Notes receivable from ESOP	(3)	(10)
Treasury stock—17,334,787 shares and 10,493,685 shares	<u>(651)</u>	<u>(275)</u>
Total stockholders' equity	<u>20,759</u>	<u>19,778</u>
Total liabilities and stockholders' equity	<u>\$202,475</u>	<u>\$185,685</u>

- Required**
- Prepare a horizontal common-size analysis for 1996, 1997, and 1998 for the following items from the statement of income. (Use 1996 as the base.):
 - Net interest income
 - Provision for loan losses
 - Net interest income after provision for loan losses
 - Total noninterest income
 - Total noninterest expense
 - Comment on the trends indicated in part (a).
 - Compute the following for 1998 and 1997 (use ending balance sheet accounts):
 - Earning assets to total assets
 - Interest margin to average earning assets (use year-end total earning assets)
 - Loan loss coverage ratio
 - Equity capital to total assets (use year-end numbers)
 - Deposits times capital (use year-end numbers.)
 - Loans to deposits (for loans, use loans held for sale and net loans: use year-end numbers)
 - Comment on the trends indicated by the ratios computed in (c).

Case 12-5

Proved Reserves

Amerada Hess Corporation included the information in this case as part of the Supplementary Oil and Gas Data with its 1995 annual report.

The Corporation's net oil and gas reserves have been estimated by DeGolyer and MacNaughton, independent consultants. The Corporation is offering for sale its Canadian operations and approximately 15% of its December 31, 1995 United States reserves on a barrel of oil equivalent basis. Reserves in Abu Dhabi, which the Corporation anticipates selling in the first half of 1996, represent approximately 60% of crude oil reserves in other areas. The reserves in the tabulation below include proved undeveloped crude oil and natural gas reserves that will require substantial future development expenditures. The estimates of the Corporation's proved reserves of crude oil and natural gas (after deducting royalties and operating interests owned by others) follow:

Oil and Gas Reserves	Total	United States	Canada	Europe	Other Areas
Net Proved Developed and Undeveloped Reserves:					
Crude Oil, Including Condensate and Natural Gas Liquids (Millions of Barrels)					
At January 1, 1993	652	203	40	371	38
Revisions of previous estimates	66	16	—	43	7
Extensions, discoveries, and other additions	28	5	3	20	—
Purchases of minerals in-place	3	—	1	2	—
Production	(79)	(26)	(5)	(41)	(7)
At December 31, 1993	670	198	39	395	38
Revisions of previous estimates	49	13	(2)	35	3
Extensions, discoveries, and other additions	12	8	2	2	—
Purchases of minerals in-place	8	4	—	—	4
Sales of minerals in-place	(3)	—	—	(3)	—
Production	(92)	(25)	(5)	(56)	(6)
At December 31, 1994	644	198	34	373	39
Revisions of previous estimates	68	11	—	44	13
Extensions, discoveries, and other additions	95	30	3	61	1
Sales of minerals in-place	(17)	(11)	(2)	(4)	—
Production	(95)	(23)	(4)	(62)	(6)
At December 31, 1995	695	205	31	412	47

	Total	United States	Canada	Europe	Other Areas
Natural Gas (Millions of Mcf)					
At January 1, 1993	2,640	1,009	597	1,034	—
Revisions of previous estimates	127	30	(5)	102	—
Extensions, discoveries, and other additions	189	82	65	42	—
Purchases of minerals in-place	20	11	4	5	—
Production	(323)	(183)	(61)	(79)	—
At December 31, 1993	2,653	949*	600	1,104	—
Revisions of previous estimates	142	105	(1)	38	—
Extensions, discoveries, and other additions	167	101	50	16	—
Purchases of minerals in-place	4	3	—	1	—
Sales of minerals in-place	(76)	—	—	(76)	—
Production	(309)	(156)	(68)	(85)	—
At December 31, 1994	2,581	1,002	581	998	—
Revisions of previous estimates	53	6	(10)	57	—
Extensions, discoveries, and other additions	270	200	10	7	53
Sales of minerals in-place	(100)	(23)	(39)	(38)	—
Production	(323)	(147)	(79)	(97)	—
At December 31, 1995	2,481	1,038*	463	927	53
Net Proved Developed Reserves:					
Crude Oil, Including Condensate and Natural Gas Liquids (Millions of Barrels)					
At January 1, 1993	436	173	40	191	32
At December 31, 1993	514	169	38	271	36
At December 31, 1994	505	171	33	263	38
At December 31, 1995	540	157	31	310	42
Natural Gas (Millions of Mcf)					
At January 1, 1993	2,002	851	576	575	—
At December 31, 1993	2,260	794	579	887	—
At December 31, 1994	2,210	838	558	814	—
At December 31, 1995	2,036	755	458	823	—

*Excludes 527 million Mcf of carbon dioxide gas for sale or use in company operations.

- Required**
- Prepare a vertical common-size analysis of Net Proved Developed and Undeveloped Reserves: Crude Oil, Including Condensate and Natural Gas Liquids (millions of barrels). Only use balances at December 31. Use December 31, 1993, as the base. Do a similar common-size analysis for natural gas (millions of Mcf).
 - Prepare a vertical common-size analysis of Net Proved Developed Reserves: Crude Oil, Including Condensate and Natural Gas Liquids (millions of barrels). Only use balances at December 31. Use December 31, 1993, as the base. Do a similar common-size analysis for natural gas (millions of Mcf).
 - Comment on the common-size analysis in (a) and (b).

Case 12-6**Heavenly Flying**

Exhibit 12-16 includes consolidated statements of income for Delta Air Lines, Inc.

- Required**
- a. Prepare a vertical common-size analysis of this statement, through operating income for 1998, 1997, and 1996. Use total operating revenues as the base.
 - b. Comment on trends found in (a).

Endnotes

- 1 Arthur Anderson & Co., *Insurance* (Essex, England: Saffren Press Ltd., 1983), p. 87.
- 2 *Statement of Financial Accounting Standards No. 60*, "Accounting and Reporting by Insurance Enterprises" (Stamford, CT: Financial Accounting Standards Board, 1982), paragraph 13.
- 3 *Statement of Financial Accounting Standards No. 60*, paragraph 15.
- 4 *Statement of Financial Accounting Standards No. 97*, "Accounting and Reporting by Insurance Enterprises for Certain Long-Duration Contracts and for Realized Gains and Losses from the Sale of Investments" (Stamford, CT: Financial Accounting Standards Board, 1987), paragraph 15.

CHAPTER

14

PERSONAL FINANCIAL STATEMENTS AND ACCOUNTING FOR GOVERNMENTS AND NOT-FOR-PROFIT ORGANIZATIONS

THIS CHAPTER BRIEFLY COVERS THREE types of financial reporting that have not been discussed in previous chapters: (1) personal

financial statements, (2) governments, and (3) not-for-profit organizations other than governments.

PERSONAL FINANCIAL STATEMENTS

Personal financial statements of individuals, husband and wife, or a larger family group are prepared for obtaining credit, income tax planning, retirement planning, and estate planning. *Statement of Position 82-1* (SOP 82-1) covers guidelines for the preparation of personal financial statements.¹ SOP 82-1 concludes that:

*The primary users of personal financial statements normally consider estimated current value information to be more relevant for their decisions than historical cost information. Lenders require estimated current value information to assess collateral, and most personal loan applications require estimated current value information. Estimated current values are required for estate, gift, and income tax planning, and estimated current value information about assets is often required in federal and state filings of candidates for public office.*²

SOP 82-1 concludes that personal financial statements should present assets at their estimated current values and liabilities at their estimated current amounts at the date of the financial statements. This contrasts with commercial financial statements, which predominantly use historical cost information. SOP 82-1 provides guidelines for determining the estimated current value of an asset and the estimated current amount of a liability. Exhibit 13-1 presents these guidelines.³

EXHIBIT 13-1

Guidelines for Determining the Estimated Current Values of Assets and the Estimated Current Amounts of Liabilities

General

12. Personal financial statements should present assets at their estimated current values and liabilities at their estimated current amounts. The estimated current value of an asset in personal financial statements is the amount at which the item could be exchanged between a buyer and seller, each of whom is well informed and willing, and neither of whom is compelled to buy or sell. Costs of disposal, such as commissions, if material, should be considered in determining estimated current values.^A The division recognizes that the estimated current values of some assets may be difficult to determine and the cost of obtaining estimated current values of some assets directly may exceed the benefits of doing so; therefore, the division recommends that judgment be exercised in determining estimated current values.

13. Recent transactions involving similar assets and liabilities in similar circumstances ordinarily provide a satisfactory basis for determining the estimated current value of an asset and the estimated current amount of a liability. If recent sales information is unavailable, other methods that may be used include the capitalization of past or prospective earnings, the use of liquidation values, the adjustment of historical cost based on changes in a specific price index, the use of appraisals, or the use of the discounted amounts of projected cash receipts and payments.

14. In determining the estimated current values of some assets (for example, works of art, jewelry, restricted

securities, investments in closely held businesses, and real estate), the person may need to consult a specialist.

15. The methods used to determine the estimated current values of assets and the estimated current amounts of liabilities should be followed consistently from period to period unless the facts and circumstances dictate and change to different methods.

Receivables

16. Personal financial statements should present receivables at the discounted amounts of cash the person estimates will be collected, using appropriate interest rates at the date of the financial statements.

Marketable Securities

17. Marketable securities include both debt and equity securities for which market quotations are available. The estimated current values of such securities are their quoted market prices. The estimated current values of securities traded on securities exchanges are the closing prices of the securities on the date of the financial statements (valuation date) if the securities were traded on that date. If the securities were not traded on that date but published bid and asked prices are available, the estimated current values of the securities should be within the range of those prices.

18. For securities traded in the over-the-counter market, quotations of bid and asked prices are available from

^A Paragraph 27 defines the estimated current amount of a liability.

EXHIBIT 13-1**continued**

several sources, including the financial press, various quotation publications and financial reporting services, and individual broker-dealers. For those securities, the mean of the bid prices, of the bid and asked prices, or of the prices of a representative selection of broker-dealers quoting the securities may be used as the estimated current values.

19. An investor may hold a large block of the equity securities of a company. A large block of stock might not be salable at the price at which a small number of shares were recently sold or quoted. Further, a large minority interest may be difficult to sell despite isolated sales of a small number of shares. However, a controlling interest may be proportionately more valuable than minority interests that were sold. Consideration of those factors may require adjustments to the price at which the security recently sold. Moreover, restrictions on the transfer of a security may also suggest the need to adjust the recent market price in determining the estimated current value.^B

Options

20. If published prices of options are unavailable, their estimated current values should be determined on the basis of the values of the assets subject to option, considering such factors as the exercise prices and length of the option periods.

Investment in Life Insurance

21. The estimated current value of an investment in life insurance is the cash value of the policy less the amount of any loans against it. The face amount of life insurance the individuals own should be disclosed.

Investments in Closely Held Businesses

22. The division recognizes that the estimated current values of investments in closely held businesses usually are difficult to determine. The problems relate to investments in closely held businesses in any form, including sole proprietorships, general and limited partnerships, and corporations. As previously stated, only the net investment in a business enterprise (not its assets and liabilities) should be presented in the statement of financial condition. The net investment should be presented at its estimated current value at the date of the financial statement. Since there is usually no established ready market for such an investment, judgment should be exercised in determining the estimated current value of the investment.

23. There is no one generally accepted procedure for determining the estimated current value of an investment in a closely held business. Several procedures or combinations of procedures may be used to determine the estimated current value of a closely held business, including a multiple

of earnings, liquidation value, reproduction value, appraisals, discounted amounts of projected cash receipts and payments, or adjustments of book value or cost of the person's share of the equity of the business.^C The owner of an interest in a closely held business may have entered into a buy-sell agreement that specifies the amount (or the basis of determining the amount) to be received in the event of withdrawal, retirement, or sale. If such an agreement exists, it should be considered, but it does not necessarily determine estimated current value. Whatever procedure is used, the objective should be to approximate the amount at which the investment could be exchanged between a buyer and a seller, each of whom is well informed and willing, and neither of whom is compelled to buy or sell.

Real Estate (Including Leaseholds)

24. Investments in real estate (including leaseholds) should be presented in personal financial statements at their estimated current values. Information that may be used in determining their estimated current values includes:

- a. Sales of similar property in similar circumstances.
- b. The discounted amounts of projected cash receipts and payments relating to the property or the net realizable value of the property, based on planned courses of action, including leaseholds whose current rental value exceeds the rent in the lease.
- c. Appraisals based on estimates of selling prices and selling costs obtained from independent real estate agents or brokers familiar with similar properties in similar locations.
- d. Appraisals used to obtain financing.
- e. Assessed value for property taxes, including consideration of the basis for such assessments and their relationship to market values in the area.

Intangible Assets

25. Intangible assets should be presented at the discounted amounts of projected cash receipts and payments arising from the planned use or sale of the assets if both the amounts and timing can be reasonably estimated. For example, a record of receipts under a royalty agreement may provide sufficient information to determine its estimated current value. The cost of a purchased intangible should be used if no other information is available.

Future Interests and Similar Assets

26. Nonforfeitable rights to receive future sums that have all the following characteristics should be presented as assets at their discounted amounts:

^B For further discussion on valuing marketable securities, see the AICPA Industry Audit Guide, *Audits of Investment Companies* (New York: AICPA, 1973), pp. 15–17.

^C The book value or costs of a person's share of the equity of a business adjusted for appraisals of specific assets, such as real estate or equipment, is sometimes used as the estimated current value.

EXHIBIT 13-1**concluded**

- The rights are for fixed or determinable amounts.
- The rights are not contingent on the holder's life expectancy or the occurrence of a particular event, such as disability or death.
- The rights do not require future performance or service by the holder.

Nonforfeitable rights that may have those characteristics include:

- Guaranteed minimum portions of pensions.
- Vested interest in pensions or profit-sharing plans.
- Deferred compensation contracts.
- Beneficial interests in trusts.
- Remainder interests in property subject to life estates.
- Annuities.
- Fixed amounts of alimony for a definite future period.

Payables and Other Liabilities

27. Personal financial statements should present payables and other liabilities at the discounted amounts of cash to be paid. The discount rate should be the rate implicit in the transaction in which the debt was incurred. If, however, the debtor is able to discharge the debt currently at a lower amount, the debt should be presented at the lower amount.^D

Noncancellable Commitments

28. Noncancellable commitments to pay future sums that have all the following characteristics should be presented as liabilities at their discounted amounts:

- The commitments are for fixed or determinable amounts.
- The commitments are not contingent on others' life expectancies or the occurrence of a particular event, such as disability or death.
- The commitments do not require future performance

of service by others.

Noncancellable commitments that may have those characteristics include fixed amounts of alimony for a definite future period and charitable pledges.

Income Taxes Payable

29. The liability for income taxes payable should include unpaid income taxes for completed tax years and an estimated amount for income taxes accrued for the elapsed portion of the current tax year to the date of the financial statements. That estimate should be based on the relationship of taxable income earned to date to total estimated taxable income for the year, net of taxes withheld or paid with estimated income tax returns.

Estimated Income Taxes on the Differences Between the Estimated Current Values of Assets and the Estimated Current Amounts of Liabilities and Their Tax Bases

30. A provision should be made for estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases, including consideration of negative tax bases of tax shelters, if any. The provision should be computed as if the estimated current values of all assets had been realized and the estimated current amounts of all liabilities had been liquidated on the statement date, using applicable income tax laws and regulations, considering recapture provisions and available carryovers. The estimated income taxes should be presented between liabilities and net worth in the statement of financial condition. The methods and assumptions used to compute the estimated income taxes should be fully disclosed. Appendix B to this statement of position illustrates how to compute the provision.

^D For a further discussion of the setting of a discount rate for payables and other liabilities, see APB Opinion 21, *Interest on Receivables and Payables*, paragraph 13.

Form of the Statements

The basic statement prepared for personal financial statements, a statement of financial condition, resembles a balance sheet. It states assets at estimated current values and liabilities at estimated current amounts. A tax liability is estimated on the difference between the stated amounts of the assets and liabilities and the tax basis of these assets and liabilities. For example, land may cost \$10,000, which would be the tax basis, but may have an estimated current value of \$25,000. The estimated tax liability on the difference between the \$10,000 and the \$25,000 would be estimated.

The difference between the total assets and total liabilities, designated net worth, is equivalent to the equity section in a commercial balance sheet. The statement of financial condition is prepared on the accrual basis. Assets and liabilities are presented in order of liquidity and maturity, without classification as current and noncurrent.

The optional statement of changes in net worth presents the major changes (sources of increases and decreases) in net worth. This statement combines income and other changes

because of the mix of business and personal items. Examples of changes in net worth would be income, increases in the estimated current value of assets, and decreases in estimated income taxes. The statement of changes in net worth presents changes in terms of realized increases (decreases) and unrealized increases (decreases). Examples of realized increases (decreases) are salary, dividends, income taxes, and personal expenditures. Examples of unrealized increases (decreases) are an increase in the value of securities, an increase in the value of a residence, a decrease in the value of a boat, and estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases. Comparative financial statements may be more informative than statements of only one period.

For personal financial statements, the statement of changes in net worth replaces the income statement. SOP 82-1 includes guidelines on disclosure (Exhibit 13-1). These guidelines are not all-inclusive. Examples of disclosure include the methods used in determining current values of major assets, descriptions of intangible assets, and assumptions used to compute the estimated income taxes.

Most individuals do not maintain a complete set of records, so the necessary data must be gathered from various sources. These sources include brokers' statements, income tax returns, safe deposit boxes, insurance policies, real estate tax returns, checkbooks, and bank statements.

Suggestions for Reviewing the Statement of Financial Condition

1. Usually the most important figure, the net worth amount, indicates the level of wealth.
2. Determine the amount of the assets that you consider to be very liquid (cash, savings accounts, marketable securities, and so on). These assets are readily available.
3. Observe the due date of the liabilities. In general, we would prefer the liabilities to be relatively long-term. Long-term liabilities do not represent an immediate pressing problem.
4. When possible, compare specific assets with their related liabilities. This will indicate the net investment in the asset. For example, a residence with a current value of \$90,000 and a \$40,000 mortgage represents a net investment of \$50,000.

Suggestions for Reviewing the Statement of Changes in Net Worth

1. Review realized increases in net worth. Determine the principal sources of realized net worth.
2. Review realized decreases in net worth. Determine the principal items in realized decreases in net worth.
3. Observe whether the net realized amount increased or decreased and by how much.
4. Review unrealized increases in net worth. Determine the principal sources of the increases.
5. Review unrealized decreases in net worth. Determine the principal sources of the decreases.
6. Observe whether the net unrealized amount increased or decreased and the amount.
7. Observe whether the net change increased or decreased and the amount.
8. Observe the net worth at the end of the year.

Illustration of Preparation of the Statement of Financial Condition

For Bill and Mary, assume that assets and liabilities, effective income tax rates, and the amount of estimated income taxes are as follows at December 31, 2001:

Account	Tax Bases	Estimated Current Value	Excess of Estimated Current Values over Tax Bases	Effective Income Tax Rates	Amount of Estimated Income Taxes
Cash	\$ 8,000	\$ 8,000	—	—	—
Savings accounts	20,000	20,000	—	—	—
Marketable securities	50,000	60,000	\$10,000	28%	\$ 2,800
Options	-0-	20,000	20,000	28%	5,600
Royalties	-0-	10,000	10,000	28%	2,800
Auto	15,000	10,000	(5,000)	—	—
Boat	12,000	8,000	(4,000)	—	—
Residence	110,000	130,000	20,000	28%	5,600
Furnishings	30,000	25,000	(5,000)	—	—
Mortgage payable	(60,000)	(60,000)	—	—	—
Auto loan	(5,000)	(5,000)	—	—	—
Credit cards	(5,000)	(4,000)	—	—	—
Total estimated income tax					<u>\$16,800</u>

Bill and Mary
Statement of Financial Condition
December 31, 2001

Assets:

Cash	\$ 8,000
Savings accounts	20,000
Marketable securities	60,000
Options	20,000
Royalties	10,000
Auto	10,000
Boat	8,000
Residence	130,000
Furnishings	25,000
Total assets	<u>\$291,000</u>

Liabilities:

Credit cards	\$ 4,000
Auto loan	5,000
Mortgage payable	60,000
Total liabilities	<u>69,000</u>

Estimated income taxes on the difference
between the estimated current values of
assets and the estimated current amounts
of liabilities and their tax bases

16,800

Net worth

205,200

Total liabilities and net worth

\$291,000

Comments

1. Many would consider the net worth, \$205,200, a relatively high amount.
2. Liquid assets total \$88,000 (cash, \$8,000; savings accounts, \$20,000; and marketable securities, \$60,000).
3. Most of the liabilities appear to be long-term (mortgage payable, \$60,000).
4. Compare specific assets with related liabilities:

Auto:		Residence:	
Current value	\$10,000	Current value	\$130,000
Auto loan	5,000	Mortgage payable	60,000
Net investment	<u>\$ 5,000</u>	Net investment	<u>\$ 70,000</u>

Illustration of Preparation of the Statement of Changes in Net Worth

For Bill and Mary, the data relating to changes in net worth for the year ended December 31, 2001, follow:

Realized increases in net worth:	
Salary	\$ 70,000
Dividend income	5,000
Interest income	6,000
Gain on sale of marketable securities	2,000
Realized decreases in net worth:	
Income taxes	20,000
Real estate taxes	2,000
Personal expenditures	28,000
Unrealized increases in net worth:	
Marketable securities	11,000
Residence	3,000
Unrealized decreases in net worth:	
Boat	2,000
Furnishings	4,000
Estimated income taxes on the differences between the estimated current values of assets and current amounts of liabilities and their tax bases	12,000
Net worth at the beginning of year	<u>\$176,200</u>

Bill and Mary
Statement of Changes in Net Worth
For the Year Ended December 31, 2001

Realized increases in net worth:	
Salary	\$ 70,000
Dividend income	5,000
Interest income	6,000
Gain on sale of marketable securities	2,000
	<u>83,000</u>
Realized decreases in net worth:	
Income taxes	20,000
Real estate taxes	2,000
Personal expenditures	28,000
	<u>50,000</u>
Net realized increase in net worth	<u>33,000</u>
Unrealized increases in net worth:	
Marketable securities	11,000
Residence	3,000
	<u>14,000</u>
Unrealized decreases in net worth:	
Boat	2,000
Furnishings	4,000
Estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax base	<u>12,000</u>
	<u>18,000</u>
Net unrealized decreases in net worth	<u>4,000</u>
Net increase in net worth	29,000
Net worth at the beginning of year	176,200
Net worth at the end of the year	<u><u>\$205,200</u></u>

Comments

1. Most of the realized increase in net worth is salary (\$70,000).
2. The major decreases in realized net worth are income taxes (\$20,000) and personal expenditures (\$28,000).
3. The net realized increase in net worth totaled \$33,000.
4. The principal unrealized increase in net worth is marketable securities (\$11,000).
5. The principal unrealized decreases in net worth are estimated income taxes on the differences between the estimated current value of assets and the estimated current amounts of liabilities and their tax bases (\$12,000).
6. The net unrealized decreases in net worth totaled \$4,000.
7. The net increase in net worth totaled \$29,000.
8. The net worth at the end of the year totaled \$205,200.

**ACCOUNTING
FOR
GOVERNMENTS**

The accounting terminology utilized by governments differs greatly from that used by profit-oriented enterprises. Governments use such terms as *appropriations* and *general fund*. Definitions of some of the terms that will be encountered follow:

- **Appropriations.** Provision for necessary resources and the authority for their disbursement.
- **Debt service.** Cash receipts and disbursements related to the payment of interest and principal on long-term debt.
- **Capital projects.** Cash receipts and disbursements related to the acquisition of long-lived assets.
- **Special assessments.** Cash receipts and disbursements related to improvements or services for which special property assessments have been levied.
- **Enterprises.** Operations that are similar to private businesses in which service users are charged fees.
- **Internal services.** Service centers that supply goods or services to other governmental units on a cost reimbursement basis.
- **General fund.** All cash receipts and disbursements not required to be accounted for in another fund.
- **Proprietary funds.** Funds whose purpose is to maintain the assets through cost reimbursement by users or partial cost recovery from users and periodic infusion of additional assets.
- **Fiduciary funds (nonexpendable funds).** Funds whose principal must remain intact (revenues earned may be distributed).
- **Encumbrances.** Future commitments for expenditures.

Thousands of state and local governments in the United States account for a large segment of the gross national product. State and local governments have a major impact on the citizens. No organization has had a clear responsibility for providing accounting principles for state and local governments. The American Institute of Certified Public Accountants (AICPA), the National Council on Governmental Accounting, and the Municipal Finance Officers Association have provided significant leadership in establishing accounting principles for state and local governments.

During the early 1980s, many thought that governmental accounting could benefit from the establishment of a board similar to the Financial Accounting Standards Board (FASB). A group of government accountants and CPAs organized a committee known as the Governmental Accounting Standards Board Organizing Committee. The Committee recommended the establishment of a separate standard-setting body for governmental accounting.

In April 1984, the Financial Accounting Foundation amended its articles of incorporation to accommodate a Governmental Accounting Standards Board (GASB). Thus, GASB became a branch of the Financial Accounting Foundation.

Governmental Accounting Standards Board Statement No. 1, Appendix B, addresses the jurisdictional hierarchy of the GASB and the FASB. It establishes the following priorities for governmental units:

1. Pronouncements of the Governmental Accounting Standards Board.
2. Pronouncements of the Financial Accounting Standards Board.
3. Pronouncements of bodies composed of expert accountants that follow a due process procedure, including broad distribution of proposed accounting principles for public comment, for the intended purpose of establishing accounting principles or describing existing practices that are generally accepted.
4. Practices or pronouncements that are widely recognized as being generally accepted because they represent prevalent practice in a particular industry or the knowledgeable application to specific circumstances of pronouncements that are generally accepted.
5. Other accounting literature.⁴

Governmental Accounting Standards Board Statement No. 1 also adopts the National Council on Governmental Accounting pronouncements and the American Institute of Certified Public Accountants audit guide entitled *Audits of State and Local Governmental Units* as the basis for currently existing GAAP for state and local governmental units.

State and local governments serve as stewards over public funds. This stewardship responsibility dominates state and local government accounting.

State and local government accounting revolves around fund accounting. A **fund** is defined as an:

Independent fiscal and accounting entity with a self-balancing set of accounts recording cash and/or other resources together with all related liabilities, obligations, reserves, and equities which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions, or limitations.⁵

Government transactions are recorded in one or more funds designed to emphasize control and budgetary limitations. Examples of funds, established for a specific purpose, are highway maintenance, parks, debt repayment, endowment, and welfare. The number of funds utilized depends on the responsibilities of the particular state or local government and the grouping of these responsibilities. For example, highway maintenance and bridge maintenance may be grouped together.

Some governments do their accounting using a method that resembles a cash basis, others use a modified accrual basis, and some use an accrual basis. A single government unit may use more than one basis, depending on the fund. For example, the City of Toledo, Ohio, uses a modified accrual basis for the governmental and expendable trust funds and uses an accrual basis of accounting for the proprietary and nonexpendable trust funds. The trend is away from the cash basis and toward the modified accrual basis. Some states have passed a law requiring governments to use a modified accrual basis.

The manner of handling depreciation can be much different than it is for a commercial business. Review the notes to the financial statements to determine how the state or local government unit handles depreciation. The City of Toledo, Ohio, describes its handling of depreciation in a footnote to its 1997 annual report, as follows: "Depreciation expense relating to Proprietary Fund Fixed assets is charged to operations. Accumulated depreciation on general fixed assets of the City is recorded on a memorandum basis in the General Fixed Assets Account Group."

The 1997 annual report of Lucas County, Ohio, describes the handling of depreciation as follows: "Depreciation is not provided for the General Fixed Assets Account Group. Depreciation for the Proprietary Funds is determined by allocating the cost of fixed assets over their estimated useful lives on a straight-line basis."

State and local governments prepare a **budget**, a detailed plan of operations for each period. This includes an item-by-item estimate of expenditures. When the representatives of the citizens (city council, town meeting, and so on) approve the budget, then the individual expenditures become limits. An increase in an approved expenditure will require approval by the same representatives who set up a *legal* control over expenditures. This differs from the budget for a commercial business, which is merely a plan of future revenues and expenses.

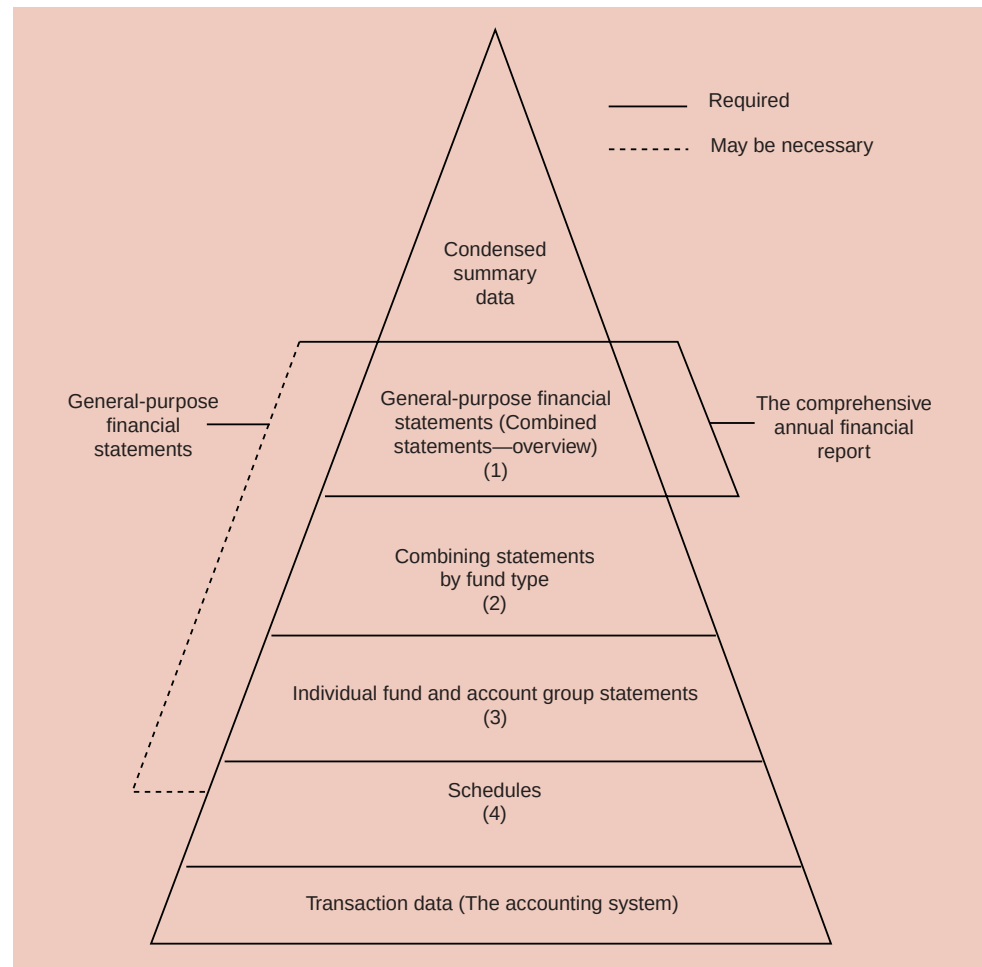
A great variance exists in the quality of disclosure in the financial reporting of state and local governments. Some poorly reported items have been pension liabilities, marketable securities, inventories, fixed assets, and lease obligations.

The Government Finance Officers Association of the United States and Canada presents a Certificate of Achievement for Excellence in Financial Reporting to governmental

units and public employee retirement systems whose comprehensive annual financial reports are judged to conform substantially to program standards. These standards are considered to be very rigorous.

The municipal bond rating of the governmental unit should also be determined. Standard & Poor's and Moody's evaluate and grade the quality of a bond relative to the probability of default. One rating is assigned to all general obligation bonds (backed by the full faith and credit of the governmental unit). Bonds not backed by the full faith and credit of the governmental unit, such as industrial revenue bonds, are rated individually. These ratings do not represent the probability of default by the governmental unit.

When reviewing the financial reporting of governmental units, visualize the reporting in a pyramid fashion. The funds are typically grouped into major categories, which are supported by individual funds that serve to account for each of the separate governmental activities. Exhibit 13-2 illustrates the pyramid concept of financial reporting for a governmental unit.

EXHIBIT 13-2**THE FINANCIAL REPORTING "PYRAMID"**

Daniel L. Koulak, "Understanding Your Town's Financial Report," *Management Accounting* (December 1984), p. 54.

When reviewing a governmental unit, the following suggestions are helpful:

1. Determine if a Certificate of Achievement has been received.
2. Determine the municipal bond rating of the governmental unit.
3. Review the combined balance sheet.
4. Review the combined statement of revenues, expenditures, and changes in fund balances.
5. Review the disclosure of debt.
6. Review footnotes and other disclosures.
7. In addition to reviewing the absolute numbers, prepare selected common-size analyzes.

The City of Toledo, Ohio, presents detailed financial statements and in recent years has been awarded Certificates of Achievement for Excellence in Financial Reporting. The total financial report consists of more than 100 pages. Selected parts follow:

1. Combined Balance Sheet—All Fund Types and Account Groups (Exhibit 13-3).
2. Combined Statement of Revenues, Expenditures, and Changes in Fund Balances—All Government Fund Types and Expendable Trust Funds (Exhibit 13-4). (Notice that proceeds from debt are recorded on this statement as revenue. Principal retirement, interest, and fiscal charges are recorded as expenditures.)
3. Partial Footnote 1—Organization and Summary of Significant Accounting Policies (Exhibit 13-5). (Notice that a modified accrual basis of accounting is utilized by the Governmental and Expendable Trust Funds, whereas an accrual basis of accounting is utilized by the Proprietary and Nonexpendable Trust Funds. Agency Fund assets and liabilities are recognized on the modified accrual basis of accounting.)
4. Income Tax Revenues (Exhibit 13-6).
5. Ratio of Net General Bonded Debt to Assessed Value and Net Bonded Debt per Capita—Last Ten Years (Exhibit 13-7).

ACCOUNTING FOR NOT-FOR- PROFIT ORGANIZATIONS OTHER THAN GOVERNMENTS

Not-for-profit organizations account for a substantial portion of economic activity in the United States. There are over 20,000 not-for-profit organizations in the United States.⁶ Examples of not-for-profit organizations include hospitals, religious institutions, professional organizations, universities, and museums.

Not-for-profit accounting principles were derived from numerous not-for-profit industry accounting manuals and audit guides. Examples were AICPA audit guides for Colleges and Universities, Audits of Voluntary Health and Welfare Organizations, and audits of providers of Health Care Services.

The FASB was concerned about the lack of uniformity in the accounting for not-for-profit organizations and the lack of overall quality of not-for-profit organizations' financial reporting. To address this concern, four accounting standards relating to not-for-profits were issued by the FASB. These standards are: (1) SFAS No. 93, "Recognition of Depreciation by Not-for-Profit Organizations," (2) SFAS No. 116, "Accounting for Contributions Received and Contributions Made," (3) SFAS No. 117, "Financial Statements of Not-for-Profit Organizations," and (4) SFAS No. 124, "Accounting for Certain Investments Held by Not-for-Profit Organizations." A brief description of these accounting standards and how they impact financial reports follows:

1. SFAS No. 93, "Recognition of Depreciation by Not-for-Profit Organizations"⁷

Prior to SFAS No. 93, most not-for-profit organizations did not recognize depreciation. SFAS No. 93 requires not-for-profit organizations to recognize depreciation on long-lived tangible assets. SFAS No. 93 includes these requirements relating to depreciation:

1. Disclose the amount of depreciation expense for each period.
2. Disclose depreciable assets by major classes as of the balance sheet date.
3. Disclose accumulated depreciation for each asset class or in total as of the balance sheet date.
4. Disclose the methods used to calculate depreciation.

SFAS No. 93 exempts individual works of art or historical treasures from the depreciation requirements. For this exemption, two requirements must be met:

1. The asset must have "cultural, aesthetic, or historical value that is worth preserving perpetually."
2. The organization that owns the artwork or historical treasure must be able to preserve the asset so that its potentially unlimited service potential will remain intact.

2. SFAS No. 116, "Accounting for Contributions Received and Contributions Made"⁸

SFAS No. 116 applies to *all not-for-profit organizations as well as to any entity that receives or makes contributions*. Some key aspects of SFAS No. 116 will be summarized.

Contributions Received

Contributions received are to be recognized as revenues or gains in the period received. In addition, these contributions are to be recognized as assets, decreases in liabilities, or as expenses in the same period. Contributions received are to be measured at their fair values and reported as restricted support or unrestricted support.

Contributed services received are to be recognized if one of the following conditions holds:

1. The service creates or enhances nonfinancial assets; or
2. These services involve specialized skills that would most likely be paid for if they were not donated (i.e., electrical services, plumbing services, accounting services, etc.).

Contributed services recognized should be disclosed by nature and amount for the period. Service contributions are to be valued at the fair value of the services or the resulting increase in assets.

Under SFAS No. 116, donated works of art, historical treasures, or similar assets can be excluded if the following conditions are met:

1. Contributed items are held for public service purposes rather than for financial gain.
2. Contributed items must be protected, kept unencumbered, cared for, and preserved.
3. The organization must have a policy of using funds from the sales of collected items to purchase additional collection pieces.

Contributions received are to be segregated into permanent restrictions, temporary restrictions, and unrestricted support imposed by donors. Restricted contributions shall be reported as an increase in either permanently restricted net assets or temporarily restricted net assets. Unrestricted contributions received are to be reported as unrestricted support and increases in unrestricted net assets. Contributions received are to be measured at fair value.

EXHIBIT 13-3**CITY OF TOLEDO****Combined Balance Sheet, All Fund Types and Account Groups****December 31, 1997 (Amounts in thousands)**

	GOVERNMENTAL FUND TYPES			
	GENERAL	SPECIAL REVENUE	DEBT SERVICE	CAPITAL PROJECTS
ASSETS AND OTHER DEBITS				
Equity in Pooled Cash	\$ —	\$11,753	\$ 278	\$ 582
Other Cash	37	1	—	—
Investments at Cost	—	2,870	—	—
Funds on Deposit—Employees	—	—	—	—
Deferred Compensation Program	—	—	—	—
Receivables (Net of Allowance for Uncollectible Accounts);				
Taxes	30,129	—	—	—
Accounts	1,850	6,040	—	676
Special Assessments	—	41,412	1,705	887
Notes	—	2,000	—	—
Due from Other Funds	—	232	—	13,645
Due From Other Governments	—	—	—	—
Prepaid Expenditures and Expenses	—	101	—	33
Inventory of Supplies	901	1,691	—	857
Restricted Assets:				
Equity in Pooled Cash	—	—	—	—
Other Cash	—	—	78	—
Investments at Cost	210	6,353	545	26,522
Accounts Receivable	—	—	—	—
Due From Other Funds	—	—	—	—
Due From Other Governments	—	—	—	—
Property, Plant and Equipment (Net of Accumulated Depreciation)	—	—	—	—
Deferred Debt Issuance Cost	—	—	—	—
Amount Available in Debt				
Service Funds	—	—	—	—
Amount to be Provided for:				
Retirement of General Long-				
Term Obligations	—	—	—	—
Compensated Absences	—	—	—	—
Total Assets and Other Debits	<u>\$33,127</u>	<u>\$72,453</u>	<u>\$2,606</u>	<u>\$43,202</u>

Conditional promises are to be recognized in the financial statements when the condition(s) has been substantially met. If the nature of the conditional promise is ambiguous, it should be interpreted as conditional.

Contributions Made

Contributions made are to be recognized as expenses in the period in which they are made. These contributions are to be reported as decreases in assets or increases in liabilities. Contributions made are to be measured at the fair value of the asset contributed or the liability discharged. Conditional promises to give are recognized when the conditions are substantially met.

EXHIBIT 13-3

continued

PROPRIETARY FUND TYPES		FIDUCIARY FUND TYPES	ACCOUNT GROUPS		TOTAL (MEMORANDUM ONLY)
ENTERPRISE	INTERNAL SERVICE	TRUST AND AGENCY	GENERAL FIXED ASSETS	GENERAL LONG-TERM OBLIGATIONS	
\$ 3,982	\$ 7,981	\$ 2,969		—	\$ 27,545
3	—	—	—	—	41
52,840	—	1,573	—	—	57,283
—	—	44,861	—	—	44,861
—	—	—	—	—	30,129
7,271	17	3	—	—	15,857
—	—	—	—	—	44,004
11,634	—	969	—	—	14,603
2,883	26,353	28,558	—	—	71,671
202	—	—	—	—	202
44	—	—	—	—	178
2,599	609	—	—	—	6,657
23,456	—	—	—	—	23,456
8	—	—	—	—	86
24,482	218	—	—	—	58,330
1,499	—	—	—	—	1,499
29,959	—	—	—	—	29,959
125	—	—	—	—	125
324,915	11,425	—	102,298	—	438,638
1,081	—	—	—	—	1,081
—	—	—	—	864	864
—	—	—	—	153,580	153,580
—	—	—	—	30,930	30,930
<u>\$487,033</u>	<u>\$46,603</u>	<u>\$78,933</u>	<u>\$102,298</u>	<u>\$185,374</u>	<u>\$1,051,579</u>

3. SFAS No. 117, “Financial Statements of Not-for-Profit Organizations”⁹

Prior to SFAS No. 117, there were significant differences in the financial reports of not-for-profit organizations. The intent of SFAS No. 117 is to provide consistency in the financial statements of not-for-profit organizations. SFAS No. 117 addresses financial statements, the content of financial statements, and the classification of financial statement information.

Not-for-profit organizations are to present three aggregated financial statements. These include a statement of financial position, a statement of activities, and a statement of cash flows. SFAS No. 117 specifies the content of each of these required financial statements.

Concerning the statement of financial position, SFAS No. 117 directs that it is to include aggregated information about the assets, liabilities, and net assets. SFAS No. 117

EXHIBIT 13-3

continued

	GOVERNMENTAL FUND TYPES			
	GENERAL	SPECIAL REVENUE	DEBT SERVICE	CAPITAL PROJECTS
LIABILITIES				
Accounts Payable	\$ 1,374	\$ 1,855	\$ 4	\$ 1,992
Escrow	—	136	—	457
Retainages	1	3	—	1,094
Due to Other Funds	6,851	21,204	8	303
Due to Other Governments	—	1	—	1
Deferred Revenue	14,425	41,412	1,705	4,825
Other Current Liabilities	1,237	—	25	—
Accrued Compensated Absences	—	—	—	—
Payable From Restricted Assets:				
Accounts Payable	—	—	—	—
Escrow	46	—	—	—
Retainages	—	—	—	—
Due to Other Funds	—	—	—	—
Other Current Liabilities	—	—	—	—
Debt:				
Notes Payable	144	32,200	—	1,060
General Obligation Bonds Payable	—	—	—	1,000
Police and Fire Pension General Obligation Bonds	—	—	—	—
Special Assessment Bonds Payable With Governmental Commitment	—	—	—	—
Revenue Bonds Payable	—	—	—	—
Capital Lease Obligation	—	—	—	—
Other Long-Term Debt	—	—	—	—
Deferred Compensation	—	—	—	—
Landfill Closure and Post-Closure Care	—	—	—	—
Total Liabilities	<u>\$24,078</u>	<u>\$96,813</u>	<u>\$1,742</u>	<u>\$10,732</u>
FUND EQUITY AND OTHER CREDITS				
Contributed Capital	—	—	—	—
Investment in General Fixed Assets	—	—	—	—
Retained Earnings (Deficit):				
Reserved for Debt Service	—	—	—	—
Reserved for Replacement	—	—	—	—
Reserved for Improvement	—	—	—	—
Unreserved	—	—	—	—
Funds Balances (Deficit):				
Reserved for Encumbrances	752	9,784	—	11,043
Reserved for Inventory of Supplies	901	1,691	—	857
Reserved for Capital Improvements	—	—	—	18,557
Reserved for Long-Term Notes Receivable	—	768	—	—
Reserved for Debt Service	—	—	864	—
Reserved for Prepaid Expenditures	—	—	—	—
Reserved for Subsequent Years	—	88	—	34
Expenditure	250	772	—	—
Reserved for Budget Stabilization	5,848	—	—	—
Unreserved	1,298	(37,461)	—	1,979
Total Fund Equity (Deficit) and other Credits	<u>9,049</u>	<u>(24,358)</u>	<u>864</u>	<u>32,470</u>
Total Liabilities and Fund Equity (Deficit) and Other Credits	<u>\$33,127</u>	<u>\$72,453</u>	<u>\$2,606</u>	<u>\$43,202</u>

EXHIBIT 13-3**concluded**

PROPRIETARY FUND TYPES		FIDUCIARY FUND TYPES	ACCOUNT GROUPS		TOTAL (MEMORANDUM ONLY)
ENTERPRISE	INTERNAL SERVICE	TRUST AND AGENCY	GENERAL FIXED ASSETS	GENERAL LONG-TERM OBLIGATIONS	
\$ 1,293	\$ 614	\$ 370	\$ —	\$ —	\$ 7,502
29	—	1,021	—	—	1,643
52	—	—	—	—	1,150
52,161	2,353	10,988	—	—	93,868
—	—	6,897	—	—	6,899
—	—	—	—	—	62,367
528	20,583	5,322	—	—	27,695
—	—	6,072	—	30,930	37,002
851	—	—	—	—	851
3,418	—	—	—	—	3,464
700	—	—	—	—	700
7,762	—	—	—	—	7,762
954	—	—	—	—	954
22,031	4,500	—	—	4,565	64,500
17,301	13	—	—	105,213	123,527
—	—	—	—	17,100	17,100
—	—	—	—	1,064	1,064
69,430	—	—	—	—	69,430
4,538	—	—	—	16,789	21,327
—	—	—	—	2,680	2,680
—	—	44,861	—	—	44,861
—	—	—	—	7,033	7,033
<u>\$181,048</u>	<u>\$28,063</u>	<u>\$75,531</u>	<u>—</u>	<u>\$185,374</u>	<u>\$ 603,377</u>
23,869	66,286	—	—	—	90,155
—	—	—	102,298	—	102,298
11,863	—	—	—	—	11,863
44,081	2,000	—	—	—	46,081
24,860	—	—	—	—	24,860
201,262	(49,746)	—	—	—	151,516
—	—	156	—	—	21,735
—	—	—	—	—	3,449
—	—	—	—	—	18,557
—	—	969	—	—	1,737
—	—	—	—	—	864
—	—	—	—	—	122
—	—	—	—	—	1,022
—	—	—	—	—	5,848
—	—	2,277	—	—	(31,907)
305,935	18,540	3,402	102,298	—	448,200
<u>\$486,983</u>	<u>\$46,603</u>	<u>\$78,933</u>	<u>\$102,298</u>	<u>\$185,374</u>	<u>\$1,051,579</u>

EXHIBIT 13-4**CITY OF TOLEDO, OHIO****Combined Statement of Revenues, Expenditures, and Changes in Fund Balances—All Governmental Fund Types and Expendable Trust Funds
For the Year Ended December 31, 1997 (Amounts in thousands)**

	GOVERNMENTAL FUND TYPES				FIDUCIARY FUND TYPES EXPENDABLE TRUSTS	TOTAL (MEMORANDUM ONLY)
	GENERAL	SPECIAL REVENUE	DEBT SERVICE	CAPITAL PROJECTS		
REVENUES:						
Income Taxes	\$142,701	\$ —	\$ —	\$ —	\$ —	\$142,701
Property Taxes	14,233	—	—	—	—	14,233
Special Assessments	—	18,848	712	160	—	19,720
Licenses and Permits	2,499	10	—	—	—	2,509
Intergovernmental Services	21,997	34,904	853	2,146	—	59,900
Charges for Service	10,014	1,070	—	96	257	11,437
Investment Earnings	4,090	1,056	40	1,939	213	7,338
Fines and Forfeitures	3,687	755	—	—	—	4,442
All Other Revenue	1,257	21	—	284	916	2,478
Total Revenues	<u>200,478</u>	<u>56,664</u>	<u>1,605</u>	<u>4,625</u>	<u>1,386</u>	<u>264,758</u>
EXPENDITURES:						
Current:						
General Government	17,436	263	—	—	276	17,975
Public Service	1,700	23,219	—	—	—	24,919
Public Safety	117,960	2,223	—	—	390	120,573
Public Utilities	192	2,693	—	—	—	2,885
Community Environment	4,628	15,713	—	—	—	20,341
Health	15,492	2,851	—	—	—	18,343
Parks and Recreation	4,540	156	—	—	208	4,904
Capital Outlay	1,127	3,264	—	37,493	—	41,884
Debt Service:						
Principal Retirement	2,136	185	9,458	1,733	—	13,512
Interest and Fiscal Charges	2,224	2,244	8,519	893	—	13,880
Total Expenditures	<u>167,435</u>	<u>52,811</u>	<u>17,977</u>	<u>40,119</u>	<u>874</u>	<u>279,216</u>
Excess (Deficiency) of Revenues over Expenditures	<u>33,043</u>	<u>3,853</u>	<u>(16,372)</u>	<u>(35,494)</u>	<u>512</u>	<u>(14,458)</u>
Other Financing Sources (Uses):						
Operating Transfers In	881	988	14,579	31,343	2,952	50,743
Operating Transfers (Out)	(31,161)	(3,658)	(6)	(14,855)	(975)	(50,655)
Bond Proceeds	—	—	—	12,445	—	12,445
Note Proceeds	53	—	—	168	—	221
Proceeds of Refunding Bonds	—	—	23,860	—	—	23,860
Payment to Refunded Bond Escrow Agent	—	—	(23,860)	—	—	(23,860)
Premiums on Bond	—	—	1,998	176	—	2,174
Sale of Fixed Assets	76	75	—	—	—	151
Bad Debt Expenditures	(267)	(2)	—	(58)	(2,502)	(2,829)
Total Other Financing Sources and (Uses)	<u>(30,418)</u>	<u>(2,597)</u>	<u>16,571</u>	<u>29,219</u>	<u>(525)</u>	<u>12,250</u>
Excess (Deficiency) of Revenues and Other Financing Sources Over Expenditures and Other Financing Uses	<u>2,625</u>	<u>1,256</u>	<u>199</u>	<u>(6,275)</u>	<u>(13)</u>	<u>(2,208)</u>
Fund Balances (Deficit) at Beginning of Year	6,600	(25,625)	665	39,178	2,631	23,449
Residual Equity Transfers	(131)	67	—	(361)	—	(425)
Increase in Reserve for Inventory	(45)	(56)	—	(72)	—	(173)
Fund Balance (Deficit) at Year End	<u>\$ 9,049</u>	<u>\$24,358</u>	<u>\$ 864</u>	<u>\$32,470</u>	<u>\$2,618</u>	<u>\$ 20,643</u>

EXHIBIT 13-5**Partial Footnote 1—Organization and Summary of Significant Accounting Policies (In Part)****C. BASIS OF ACCOUNTING**

The modified accrual basis of accounting is utilized by the Governmental and Expendable Trust Funds. Under this method of accounting, the City recognizes revenue when it becomes both measurable and available to finance current City operations. Assistance awards made on the basis of entitlement are recorded as intergovernmental receivables and revenues when entitlement occurs. Revenues accrued at the end of the year include: individual income taxes during the fourth quarter that are received within 60 days after year-end, net of estimated refunds; property taxes for the budget year to which they apply where taxpayer liability has been established and such taxes are received during the year or within 60 days after year-end; property taxes levied in the current year to be collected in 1997, which are measurable, have been offset by a credit to deferred revenue since they are not available for appropriation and use until 1998; and intergovernmental revenues for the year which are received

within 60 days after year-end or based on expenditures recognized where agreements stipulate funds must be expended for a specific purpose or project before any reimbursements will be made to the City. Expenditures are recorded when the related fund liability is incurred. Principal and interest on general long-term debt are recorded as fund liabilities when due or when amounts have been accumulated in the debt service fund for payments to be made early in the following year.

The accrual basis of accounting is utilized by the Proprietary and Nonexpendable Trust Funds. Revenues are recognized when earned, and expenses are recognized when incurred. Unbilled Water and Sewer Funds' utility service receivables are recorded at year-end.

Agency Fund assets and liabilities are recognized on the modified accrual basis of accounting, since these Funds are custodial in nature and do not involve measurement of results of operations.

EXHIBIT 13-6
CITY OF TOLEDO, OHIO
Income Tax Revenues Last Ten Years
(amounts in thousands)

FISCAL YEAR	TAX REVENUES	TAX RATE
1988	\$109,542	2 1/4%
1989	106,702	2 1/4%
1990	109,980	2 1/4%
1991	104,870	2 1/4%
1992	110,423	2 1/4%
1993	115,755	2 1/4%
1994	124,975	2 1/4%
1995	129,789	2 1/4%
1996	138,487	2 1/4%
1997	142,701	2 1/4%

Source: City of Toledo Income Tax Department

requires the statement of activity to provide information concerning the effects of transactions on the amount and nature of net assets, the interrelationships between those transactions and other events, and how resources are used by the organization to provide services. The statement of activity is also to disclose the changes in the amounts of permanently restricted net assets, temporarily restricted net assets, and unrestricted net assets.

In regards to the content of the statement of cash flows, SFAS No. 117 requires that not-for-profit organizations comply with SFAS No. 95, "Statement of Cash Flows." In addition, SFAS No. 117 amends SFAS No. 95 concerning its description of financing activities.

EXHIBIT 13-7

CITY OF TOLEDO, OHIO
Ratio of Net General Bonded Debt to Assessed Value and
Net Bonded Debt Per Capita—Last Ten Years

FISCAL YEAR	POPULATION (1)	ASSESSED VALUE (2)	GROSS GENERAL BONDED DEBT (2)	LESS BALANCE IN DEBT SERVICE FUND (2) & (3)	NET GENERAL BONDED DEBT (2)	RATIO OF NET BONDED DEBT TO ASSESSED VALUE	NET BONDED DEBT PER CAPITA
1988	354,635	\$3,091,093	\$68,820	\$26	\$68,794	2.2%	\$193.99
1989	354,635	3,111,062	52,640(4)	113	52,527(4)	1.7%	148.12
1990	332,943	3,106,052	63,260	180	63,080	2.0%	189.46
1991	332,943	3,227,440	57,110	208	56,902	1.8%	170.91
1992	332,943	3,196,025	68,995	251	68,744	2.2%	206.75
1993	332,943	3,162,416	62,550	312	62,238	2.0%	186.93
1994	332,943	3,277,973	74,450	373	74,077	2.3%	222.50
1995	332,943	3,257,498	91,079	658	90,421	2.8%	271.58
1996	332,943	3,253,639	101,555	666	100,389	3.1%	301.52
1997	332,943	3,450,882	106,213	864	105,349	3.0%	312.51

(1) *Source:* U.S. Bureau of the Census.

(2) Amounts shown in thousands of dollars. *Source:* Lucas County Auditor.

(3) The City has paid its general bonded debt service for the tax years shown from current income tax revenues. The amount required is transferred to the debt service funds from the capital improvement fund.

(4) Gross general bonded debt was adjusted downward in 1989 to reflect reductions for bonded debt supported by special revenue sources.

Financing activities now include receipts of donations restricted for acquiring, constructing, or improving long-lived assets or establishing or increasing permanent or term endowments.

For the statement of financial position, SFAS No. 117 requires that assets and liabilities should be reported in relatively homogenous groups. They should also be classified to provide information about their interrelationships, liquidity, and financial flexibility. New assets are to be classified as either permanently restricted, temporarily restricted, or unrestricted. Revenues, expenses, gains, and losses are to be separated into reasonably homogeneous groups for the statement of activities. They also are to be classified as affecting permanently restricted, temporarily restricted, or unrestricted net assets.

4. SFAS No. 124, "Accounting for Certain Investments Held by Not-for-Profit Organizations"¹⁰

This statement applies to investments in equity securities that have a readily determinable fair value and to all investments in debt securities. These investments are to be shown at their fair values in the statement of financial position. This statement does not apply to investments in equity securities that are accounted for under the equity method or to investments in consolidated subsidiaries. Disclosure requirements in the statement of financial position include the aggregate carrying value of investments by major categories and the basis for determining the carrying values of equity securities without readily determinable fair market values. Any shortfall in the fair value of donor-restricted endowment funds below the amount required by donor stipulations or by law must also be disclosed.

For the statement of activities, any realized or unrealized gains and losses are to be shown. Some of the disclosure requirements for the statement of activities include the composition of the investment return, which consists of investment income, realized gains and losses on investments not reported at fair value, and net gains and losses on investments that are reported at fair value.

Applicability of GAAP to Not-for-Profit Organizations

Some individuals were of the opinion that the applicability of GAAP to not-for-profit organizations was unclear. SOP 94-2 was issued to address the applicability of GAAP to not-for-profit organizations.¹¹

SOP 94-2 concludes that not-for-profit organizations should follow the guidance in effective provisions of ARBs, APB Opinions, and FASB Statements and Interpretations unless the specific pronouncement explicitly exempts not-for-profit organizations or their subject matter precludes such applicability (SOP 94-2, paragraph .09).

Exhibit 13-8 contains major portions of the 1998 and 1997 financial statements of the Institute of Management Accountants. These statements are for the years ended June 30, 1998 and 1997.

Budgeting by Objectives and/or Measures of Productivity

Accounting for nonprofit institutions differs greatly from accounting for a profit-oriented enterprise. The accounting for a profit-oriented business centers on the entity concept and the efficiency of the entity. The accounting for a nonprofit institution does not include an entity concept or efficiency. The accounting for a profit-oriented business has a bottom-line net income. The accounting for a nonprofit institution does not have a bottom line.

Some nonprofit institutions have added budgeting by objectives and/or measures of productivity to their financial reporting to incorporate measures of efficiency. The article, "Budgeting by Objectives: Charlotte's Experience," reported several objectives incorporated in the budget of Charlotte, North Carolina. Four primary objectives guided the budget: (1) the property tax rate should not increase, (2) continued emphasis should be placed on making the best use of city employees and the present computer capability, (3) any budget increase should be held to a minimum, and (4) a balanced program of services should be presented.¹²

This article also reports measures of productivity that Charlotte has used. These measures of productivity include: (1) customers served per \$1,000 of sanitation expense, (2) number of tons of refuse per \$1,000 expense, and (3) street miles flushed per \$1,000 expense.¹³

Budgeting by objectives and/or measures of productivity could be added to the financial reporting of any nonprofit institution. The objectives and measures of productivity should be applicable to the particular nonprofit institution.

SUMMARY

This chapter reviewed financial reporting for personal financial statements and accounting for governments and other not-for-profit organizations. Accounting for these areas differs greatly from accounting for profit-oriented businesses. This difference has been narrowed substantially for not-for-profit organizations other than governments.

Statement of Position 82-1 presents guidelines for the preparation of personal financial statements. SOP 82-1 concludes that personal financial statements should present assets at their estimated current values and liabilities at their estimated current amounts at the

EXHIBIT 13-8**THE INSTITUTE OF MANAGEMENT ACCOUNTANTS, INC.
1998 Financial Report (In Part)**

Institute of Management Accountants, Inc. and Affiliates Combined Statement of Financial Position June 30, 1998 and 1997 (Dollars in thousands)		
	1998	1997
ASSETS		
Cash and cash equivalents	\$ 1,766	\$ 1,470
Marketable securities	20,199	19,000
Receivables, net allowance for doubtful accounts	685	814
Property, equipment and software, net	4,400	4,399
Other assets	1,226	1,208
Total assets	<u>\$28,276</u>	<u>\$26,891</u>
LIABILITIES, DEFERRED REVENUES AND NET ASSETS		
Accounts payable and accrued expenses	\$ 2,686	\$ 3,007
Bonds payable, net of discount	3,575	3,752
Total liabilities	<u>6,261</u>	<u>6,759</u>
Deferred revenues		
Membership dues	3,530	3,407
Other	510	964
Total deferred revenues	<u>4,040</u>	<u>4,371</u>
Net assets		
Unrestricted		
IMA		
Current Operating Fund	5,986	4,476
Reserve Fund	8,658	8,001
ICMA	201	867
IMAMEF		
Board Designated	100	100
Undesignated	3,030	2,367
IMAFAR	—	(50)
Total net assets	<u>17,975</u>	<u>15,761</u>
Total liabilities, deferred revenues and net assets	<u>\$28,276</u>	<u>\$26,891</u>

date of the financial statements. This differs from commercial financial statements that predominantly use historical information.

The accounting for governments (state and local) revolves around fund accounting. Government transactions are recorded in one or more funds designed to emphasize control and budgetary limitations. Some governments do their accounting using a method that resembles a cash basis, others use a modified accrual basis, and some use an accrual basis.

Not-for-profit accounting for organizations, other than governments, has changed substantially. It now resembles accounting for profit organizations. A major difference is that not-for-profit organizations issue a statement of activities instead of an income statement.

Some nonprofit institutions have added budgeting by objectives and/or measures of productivity to their financial reporting to incorporate measures of efficiency.

EXHIBIT 13-8

continued

Institute of Management Accountants, Inc. and Affiliates Combined Statement of Activities Years Ended June 30, 1998 and 1997 (Dollars in thousands)		
	1998	1997
REVENUES AND SUPPORT		
Membership dues and fees	\$ 7,799	\$ 8,114
Education programs	1,549	1,484
Annual conference	670	702
Advertising and sales of publications	2,399	2,310
CMA/CFM examination fees	1,205	1,516
Investment income	4,689	4,120
Other	785	1,046
Total revenues and support	<u>19,096</u>	<u>19,292</u>
EXPENSES		
Payments to chapters	1,020	1,044
Chapter and member services	1,959	2,056
Education programs	1,918	1,853
Marketing	509	492
Annual conference	588	543
Publications and information center	2,626	2,387
CMA/CFM program	1,564	1,935
Research expenditures	151	123
Administration and occupancy costs	5,788	6,413
Asset valuation charge	—	676
Other	759	1,044
Total expenses	<u>16,882</u>	<u>18,566</u>
Changes in net assets before cumulative effect of change in accounting principle	2,214	726
Cumulative effect of change in accounting principle: Marketable securities	<u>—</u>	<u>4,750</u>
Changes in net assets	2,214	5,476
Net assets, beginning of year	<u>15,761</u>	<u>10,285</u>
Net assets, end of year	<u><u>\$17,975</u></u>	<u><u>\$15,761</u></u>

QUESTIONS

- Q 13-1.** May personal financial statements be prepared only for an individual? Comment.
- Q 13-2.** What is the basic personal financial statement?
- Q 13-3.** Is a statement of changes in net worth required when presenting personal financial statements?
- Q 13-4.** Are comparative financial statements required when presenting personal financial statements?
- Q 13-5.** When preparing a personal statement of financial condition, should assets and liabilities be presented on the basis of historical cost or estimated current value?
- Q 13-6.** In a personal statement of financial condition, what is the equity section called?

EXHIBIT 13-8**concluded**

Institute of Management Accountants, Inc. and Affiliates
Combined Statement of Cash Flows
Years Ended June 30, 1998 and 1997
(Dollars in thousands)

	1998	1997
CASH FLOWS FROM OPERATING ACTIVITIES		
Changes in net assets	\$2,214	\$5,476
Adjustments to reconcile changes in net assets to net cash (used for) operating activities		
Depreciation, amortization and valuation allowances	567	711
Asset valuation charge	—	676
Realized gains on sales of marketable securities	(2,588)	(912)
Appreciation of marketable securities	(1,669)	(2,753)
Cumulative effect of change in accounting principle	—	(4,750)
Donated materials	(5)	(24)
Changes in assets and liabilities		
Decrease (increase) in receivables	98	(41)
(Increase) in other assets	(34)	(34)
(Decrease) increase in accounts payable and accrued expenses	(321)	1,030
(Decrease) in deferred revenues	(331)	(189)
Net cash (used for) operating activities	<u>(2,069)</u>	<u>(810)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Capital expenditures	(513)	(512)
Purchases of marketable securities	(3,083)	(4,783)
Proceeds from sales of marketable securities	6,141	6,206
Net cash provided by investing activities	<u>2,545</u>	<u>911</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayment of current portion of bonds payable	(180)	(170)
Cash (used for) financing activities	<u>(180)</u>	<u>(170)</u>
Net increase (decrease) in cash and cash equivalents	296	(69)
Cash and cash equivalents		
Beginning of year	1,470	1,539
End of year	<u>\$1,766</u>	<u>\$1,470</u>

- Q 13-7.** What personal financial statement should be prepared when an explanation of changes in net worth is desired?
- Q 13-8.** Is the presentation of a personal income statement appropriate?
- Q 13-9.** GAAP as they apply to personal financial statements use the cash basis. Comment.
- Q 13-10.** Is the concept of working capital used with personal financial statements? Comment.
- Q 13-11.** List some sources of information that may be available when preparing personal financial statements.
- Q 13-12.** Give examples of disclosure in footnotes with personal financial statements.
- Q 13-13.** If quoted market prices are not available, a personal financial statement cannot be prepared. Comment.

- Q 13-14.** List some objectives that could be incorporated into the financial reporting of a professional accounting organization.
- Q 13-15.** Do not-for-profit organizations, other than governments, use fund accounting? Comment.
- Q 13-16.** The accounting for governments is centered on the entity concept and the efficiency of the entity. Comment.
- Q 13-17.** For governmental accounting, define the following types of funds:
1. General fund
 2. Proprietary fund
 3. Fiduciary fund
- Q 13-18.** How many funds will be used by a state or local government?
- Q 13-19.** The budget for a state or local government is not as binding as a budget for a commercial business. Comment.
- Q 13-20.** Which organization provides a service whereby it issues a certificate of conformance to governmental units with financial reports that meet its standards?
- Q 13-21.** The rating on an industrial revenue bond is representative of the probability of default of bonds issued with the full faith and credit of a governmental unit. Comment.
- Q 13-22.** The accounting for not-for-profit institutions does not typically include the concept of efficiency. Indicate how the concept of efficiency can be incorporated in the financial reporting of a not-for-profit institution.
- Q 13-23.** Could a profit-oriented enterprise use fund accounting practices? Comment.

To the Net



1. Go to the Governmental Accounting Standards Board site (www.rutgers.edu/Accounting/raw/gasb). What is the mission of the Governmental Accounting Standards Board?
2. Go to the FASB site (www.fasb.org). Select Performance Measurement for Government. Select What you can find at this site. Select Performance Measures. Select Introduction to Performance Measurement. Print Introduction to Performance Measurement. Be prepared to discuss.

PROBLEMS

- P 13-1.** For each of these situations, indicate the amount to be placed on a statement of financial condition at December 31, 2001.
- a. Bill and Pat Konner purchased their home at 2829 Willow Road in Stow, Ohio, in August 1980 for \$80,000. The unpaid mortgage is \$20,000. Immediately after purchasing the home, Bill and Pat added several improvements totaling \$10,000. Real estate prices in Stow have increased 40% since the time of purchase.
From the facts given, determine the estimated current value of the home.

- b. Joe Best drives a Toyota, for which he paid \$20,000 when it was new. Joe believes that since he maintains the car in good condition, he could sell it for \$12,000. The average selling price for this model of Toyota is \$9,000.

From the facts given, determine the estimated current value of Joe's car.

- c. Sue Bell is 40 years old and has an IRA with a balance of \$20,000. The IRS penalty for early withdrawal is 10%. The marginal tax rate for Sue Bell is 30% (tax on gross amount).

What is the estimated current value of the IRA and the estimated income taxes on the difference between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases?

- d. Bill Kell guaranteed a loan of \$8,000 for his girlfriend to buy a car. She is behind in payments on the car.

What liability should be shown on Bill Kell's statement of financial condition?

- e. Dick Better bought a home in 1976 for \$70,000. Currently the mortgage on the home is \$45,000. Because of the current high interest rates, the bank has offered to retire the mortgage for \$40,000.

What is the estimated current value of this liability?

P 13-2. For each of these situations, indicate the amount to be placed on a statement of financial condition at December 31, 2001.

- a. Raj Reel owns the following securities:

1,000 shares of Ree's

2,000 shares of Bell's

Ree's is traded on the New York Stock Exchange. The prices from the most recent trade day follow:

Open 19

High 20 ½

Low 19

Close 20

Bell's is a local company whose stock is sold by brokers on a workout basis. (The broker tries to find a buyer.) The most recent selling price was \$8.

What is the estimated current value of these securities? (Assume that the commission on Ree's would be \$148 and the commission on Bell's would be \$170.)

- b. Charlie has a certificate of deposit with a \$10,000 balance. Accrued interest is \$500. The penalty for early withdrawal would be \$300.

What is the estimated current value of the certificate of deposit?

- c. Jones has an option to buy 500 shares of ABC Construction at a price of \$20 per share. The option expires in one year. ABC Construction shares are presently selling for \$25.

What is the estimated current value of these options?

- d. Carl Jones has a whole-life insurance policy with the face amount of \$100,000, cash value of \$50,000, and a loan outstanding against the policy of \$20,000. Susan Jones is the beneficiary.

What is the estimated current value of the insurance policy?

- e. Larry Solomon paid \$60,000 for a home ten years ago. The unpaid mortgage on the home is \$30,000. Larry estimates the current value of the home to be \$90,000. This estimate is partially based on the selling price of homes recently sold in the neighborhood. Larry's home is assessed for tax purposes at \$50,000. Assessments in the area average one-half of market value. The house has not been inspected for assessment during the past two years. Larry would sell through a broker, who would charge 5% of the selling price.

What is the estimated current value of the home?

- P 13-3.** For Bob and Carl, the assets and liabilities and the effective income tax rates at December 31, 2001, follow:

Accounts	Tax Bases	Estimated Current Value	Excess of Estimated Current Values over Tax Bases	Effective Income Tax Rates	Amount of Estimated Income Taxes
Cash	\$ 20,000	\$ 20,000	—	—	—
Marketable securities	45,000	50,000	5,000	28%	—
Life insurance	50,000	50,000	—	—	—
Residence	100,000	125,000	25,000	28%	—
Furnishings	40,000	25,000	(15,000)	—	—
Jewelry	20,000	20,000	—	—	—
Autos	20,000	12,000	(8,000)	—	—
Mortgage payable	(90,000)	(90,000)	—	—	—
Note payable	(30,000)	(30,000)	—	—	—
Credit cards	(10,000)	(10,000)	—	—	—

- Required**
- Compute the estimated tax liability on the differences between the estimated current value of the assets and liabilities and their tax bases.
 - Present a statement of financial condition for Bob and Carl at December 31, 2001.
 - Comment on the statement of financial condition.

- P 13-4.** For Mary Lou and Ernie, the assets and liabilities and the effective income tax rates at December 31, 2001, follow:

Accounts	Tax Bases	Estimated Current Value	Excess of Estimated Current Values over Tax Bases	Effective Income Tax Rates	Amount of Estimated Income Taxes
Cash	\$ 20,000	\$ 20,000	—	—	—
Marketable securities	80,000	100,000	20,000	28%	—
Options	-0-	30,000	30,000	28%	—
Residence	100,000	150,000	50,000	28%	—
Royalties	-0-	20,000	20,000	28%	—
Furnishings	40,000	20,000	(20,000)	—	—
Auto	20,000	15,000	(5,000)	—	—
Mortgage	(70,000)	(70,000)	—	—	—
Auto loan	(10,000)	(10,000)	—	—	—

- Required**
- Compute the estimated tax liability on the differences between the estimated current value of the assets and liabilities and their tax bases.
 - Present a statement of financial condition for Mary Lou and Ernie at December 31, 2001.
 - Comment on the statement of financial condition.

P 13-5. For Bob and Sue, the changes in net worth for the year ended December 31, 2001, follow:

Realized increases in net worth:	
Salary	\$ 60,000
Dividend income	2,500
Interest income	2,000
Gain on sale of marketable securities	500
Realized decreases in net worth:	
Income taxes	20,000
Interest expense	6,000
Personal expenditures	29,000
Unrealized increases in net worth:	
Stock options	3,000
Land	7,000
Residence	5,000
Unrealized decreases in net worth:	
Boat	3,000
Jewelry	1,000
Furnishings	4,000
Estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases	15,000
Net worth at the beginning of year	150,000

- Required**
- Prepare a statement of changes in net worth for the year ended December 31, 2001.
 - Comment on the statement of changes in net worth.

P 13-6. For Jim and Carl, the changes in net worth for the year ended December 31, 2001, follow:

Realized increases in net worth:	
Salary	\$ 50,000
Interest income	6,000
Realized decreases in net worth:	
Income taxes	15,000
Interest expense	3,000
Personal property taxes	1,000
Real estate taxes	1,500
Personal expenditures	25,000
Unrealized increases in net worth:	
Marketable securities	2,000
Land	5,000
Residence	3,000
Stock options	4,000
Unrealized decreases in net worth:	
Furnishings	3,000
Estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases	12,000
Net worth at the beginning of year	130,000

- Required**
- Prepare a statement of changes in net worth for the year ended December 31, 2001.
 - Comment on the statement of changes in net worth.
- P 13-7.** Use Exhibit 13-4, City of Toledo, Ohio, Combined Statement of Revenues, Expenditures, and Changes in Fund Balances—All Governmental Fund Types and Expendable Trust Funds.
- Required**
- Prepare a vertical common-size statement for Exhibit 13-4, using only total revenues and expenditures (memorandum only). Use total expenditures as the base.
 - Comment on significant items in the vertical common-size analysis.
- P 13-8.** Use Exhibit 13-6, City of Toledo, Ohio, Income Tax Revenues.
- Required**
- Prepare a horizontal common-size analysis of taxes collected. Use 1988 as the base.
 - Comment on significant trends indicated in the horizontal common-size analysis prepared for (a).
- P 13-9.** Use Exhibit 13-7, City of Toledo, Ohio, Ratio of Net General Bonded Debt to Assessed Value and Net Bonded Debt Per Capita.
- Required**
- How much has assessed value increased from 1988 to 1997?
 - How much has net general bonded debt increased from 1988 to 1997?
 - Give your opinion of the significance of the change in debt between 1988 and 1997.
- P 13-10.** Use Exhibit 13-8, The Institute of Management Accountants financial report.
- Required**
- How much was the combined change in net assets between 1997 and 1998?
 - Prepare a horizontal common-size analysis for total revenue and expenses for 1997 and 1998. (Use 1997 as the base.)
 - Prepare a vertical common-size analysis for the combined revenues and expenses for 1997 and 1998. (Use total revenues as the base.)
 - Comment on significant items in the horizontal and vertical common-size analyses.

Case 13-1**Governor Lucas—This is Your County**

The 1997 Lucas County, Ohio, financial report contains approximately two hundred pages, and has consistently received the Certificate of Achievement for Excellence in Financial Reporting. This case includes selected parts.

**LUCAS COUNTY, OHIO
COMBINED BALANCE SHEET
ALL FUND TYPES AND ACCOUNT GROUPS
DECEMBER 31, 1997
(AMOUNTS IN 000s)**

	GOVERNMENTAL FUND TYPES			
	General Fund	Special Revenue	Debt Service	Capital Projects
Assets and other debits:				
Pooled cash and cash equivalents (Note C)	\$ 1,878	\$ 7,696	\$ 837	\$ 1,004
Investments (Note C)	14,410	58,734	6,387	7,659
Segregated cash accounts (Note C)	—	3,105	—	—
Receivables (net of allowances for uncollectables)				
Taxes	23,058	58,859	—	5,830
Accounts	163	1,090	—	1
Special assessments	1	—	17,134	—
Accrued interest	1,523	35	—	—
Loans	—	643	—	—
Due from other funds (Note D)	—	—	—	—
Due from other governments	944	8,282	86	—
Inventory: Materials and supplies	—	731	—	—
Property, plant and equipment (Note E)				
Land	—	—	—	—
Land improvements	—	—	—	—
Buildings, structures, and improvements	—	—	—	—
Furniture, fixtures and equipment	—	—	—	—
Less: accumulated depreciation	—	—	—	—
Construction-in-progress (Note E)	—	—	—	—
Amount available in debt service fund	—	—	—	—
Amount to be provided for retirement of general long-term obligations	—	—	—	—
Total assets and other debits	<u>\$41,977</u>	<u>\$139,175</u>	<u>\$24,444</u>	<u>\$14,494</u>

LUCAS COUNTY, OHIO
COMBINED BALANCE SHEET (continued)
ALL FUND TYPES AND ACCOUNT GROUPS
DECEMBER 31, 1997
(AMOUNTS IN 000s)

PROPRIETARY FUND TYPES		FIDUCIARY FUND TYPES	ACCOUNT GROUPS		1997 Totals (Memorandum Only)	Discretely Presented Component Unit
Enterprise	Internal Service	Trust and Agency	General Fixed Assets	General Long-Term Obligations		
\$ 555	\$ 2,751	\$26,067	\$ —	\$ —	\$ 40,788	\$ 119
4,239	20,998	4,613	—	—	117,040	953
—	—	28,466	—	—	31,571	—
—	—	—	—	—	87,747	—
3,224	60	—	—	—	4,538	80
—	—	—	—	—	17,135	—
—	—	—	—	—	1,558	—
—	—	—	—	—	643	—
—	450	—	—	—	450	—
2,343	—	—	—	—	11,655	—
16	42	—	—	—	789	89
412	89	—	15,427	—	15,928	—
88,852	—	—	—	—	88,852	—
4,783	30	—	128,908	—	133,721	—
12,636	1,283	—	28,998	—	42,917	392
(44,008)	(985)	—	—	—	(44,993)	(254)
17,430	—	—	1,042	—	18,472	—
—	—	—	—	7,372	7,372	—
—	—	—	—	124,445	124,445	—
<u>\$90,482</u>	<u>\$24,718</u>	<u>\$59,146</u>	<u>\$174,375</u>	<u>\$131,817</u>	<u>\$700,628</u>	<u>\$1,379</u>

LUCAS COUNTY, OHIO
COMBINED BALANCE SHEET (continued)
ALL FUND TYPES AND ACCOUNT GROUPS
DECEMBER 31, 1997
(AMOUNTS IN 000s)

	GOVERNMENTAL FUND TYPES			
	General Fund	Special Revenue	Debt Service	Capital Projects
Liabilities:				
Accounts Payable	\$1,350	\$7,748	\$ —	\$1,676
Accrued wages and benefits	2,988	4,587	—	—
Due to other funds (Note D)	144	48	—	—
Due to other governments	1,696	906	—	—
Claims payable—current (Note S)	—	—	—	—
Deferred revenue (Note J)	12,682	57,358	17,059	5,675
Matured bonds payable	—	—	3	—
Matured interest payable	—	—	10	—
Accrued interest payable	—	—	—	—
Unapportioned monies	—	—	—	—
Deposits	—	—	—	—
Payroll withholdings	—	—	—	—
Deferred compensation payable—employees	—	—	—	—
Notes payable (Note F)	—	—	—	5,755
Bonds payable (Note G)	—	—	—	—
OWDA loans payable (Note G)	—	—	—	—
OPWC loans payable (Note G)	—	—	—	—
Claims payable—noncurrent (Note S)	—	—	—	—
Landfill obligation—noncurrent (Note Q)	—	—	—	—
Obligations under capital leases (Note G)	—	—	—	—
Total liabilities	<u>18,860</u>	<u>70,647</u>	<u>17,072</u>	<u>13,106</u>
Equity and other credits:				
Contributed capital (Note M)	—	—	—	—
Investment in general fixed assets	—	—	—	—
Retained earnings: Unreserved	—	—	—	—
Fund balances (deficit)				
Reserved—				
Reserved for encumbrances	1,870	13,024	—	3,778
Reserved for inventory	—	731	—	—
Reserved for loans receivable	—	643	—	—
Unreserved—				
Designated for debt service	—	—	7,372	—
Designated for charity	—	15	—	—
Undesignated	21,247	54,115	—	(2,390)
Total equity and other credits	<u>23,117</u>	<u>68,528</u>	<u>7,372</u>	<u>1,388</u>
Total liabilities, equity, and other credits	<u>\$41,977</u>	<u>\$139,175</u>	<u>\$24,444</u>	<u>\$14,494</u>

LUCAS COUNTY, OHIO
COMBINED BALANCE SHEET (concluded)
ALL FUND TYPES AND ACCOUNT GROUPS
DECEMBER 31 1995
(AMOUNTS IN 000S)

<u>PROPRIETARY FUND TYPES</u>		<u>FIDUCIARY FUND TYPES</u>	<u>ACCOUNT GROUPS</u>		1997 Totals (Memorandum Only)	Discretely Presented Component Unit
Enterprise	Internal Service	Trust and Agency	General Fixed Assets	General Long-Term Obligations		
\$ 901	\$ 161	\$ 110	\$ —	\$ —	\$ 11,946	\$ 84
551	141	2	—	13,576	21,845	57
8	250	—	—	—	450	—
—	—	—	—	—	2,602	—
—	2,212	—	—	—	2,212	—
—	—	—	—	—	92,774	93
20	—	—	—	—	23	—
6	—	—	—	—	16	—
2	—	—	—	—	2	—
—	—	22,030	—	—	22,030	—
—	—	5,480	—	—	5,480	—
—	—	3,299	—	—	3,299	—
—	—	23,119	—	—	23,119	—
—	—	—	—	—	5,755	—
370	—	—	—	86,915	87,285	—
24,578	—	—	—	3,740	28,318	—
471	—	—	—	1,284	1,755	—
—	6,400	—	—	—	6,400	—
—	—	—	—	12,000	12,000	—
42	—	—	—	14,302	14,344	—
<u>26,949</u>	<u>9,164</u>	<u>54,040</u>	<u>—</u>	<u>131,817</u>	<u>341,655</u>	<u>234</u>
59,461	—	—	—	—	59,461	—
—	—	—	174,375	—	174,375	—
4,072	15,554	—	—	—	19,626	1,145
—	—	—	—	—	18,672	—
—	—	—	—	—	731	—
—	—	—	—	—	643	—
—	—	—	—	—	7,372	—
—	—	—	—	—	15	—
—	—	5,106	—	—	78,078	—
<u>63,533</u>	<u>15,554</u>	<u>5,106</u>	<u>174,375</u>	<u>—</u>	<u>358,973</u>	<u>1,145</u>
<u>\$90,482</u>	<u>\$24,718</u>	<u>\$59,146</u>	<u>\$174,375</u>	<u>\$131,817</u>	<u>\$700,628</u>	<u>\$1,379</u>

LUCAS COUNTY, OHIO
NOTES TO THE FINANCIAL STATEMENTS (In Part)
DECEMBER 31, 1997

Note A - Description of Lucas County and Basis of Presentation

The County: Lucas County is a political subdivision of the State of Ohio. The County was formed by an act of the Ohio General Assembly in 1835. The three-member **Board of County Commissioners** is the legislative and executive body of the County. The **County Auditor** is the chief fiscal officer. In addition, there are seven other elected administrative officials, each of whom are independent as set forth by Ohio law. These officials are: **Clerk of Courts, Coroner, Engineer, Prosecutor, Recorder, Sheriff, and Treasurer.** There are also ten **Common Pleas Court Judges**, two **Domestic Relations Court Judges**, two **Juvenile Court Judges**, one **Probate Court Judge** and five **Court of Appeals Judges** elected on a County-wide basis to oversee the County's justice system.

As defined by generally accepted accounting principles established by the Government Accounting Standards Board (GASB), the financial reporting entity consists of the primary government, as well as its component units, which are legally separate organizations to which the elected officials of the primary government are financially accountable. Financial accountability is defined as appointment of a voting majority of the component unit's board, and either (a) the ability to impose will by the primary government, or (b) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the primary government.

The accompanying financial statements present the County (Primary Government) and its component units. The financial data of the component units are included in the County's reporting entity because of the significance of their operational or financial relationships with the County.

A blended component unit is a legally separate entity from the County, but is so intertwined with the County that it is, in substance, the same as the County. It is reported as part of the County and blended into the appropriate funds.

A discretely presented component unit is an entity that is legally separate from the County but for which the County is financially accountable, or its relationship with the County is such that exclusion would cause the County's financial statements to be misleading or incomplete.

The component unit column in the combined Financial Statements include the financial data of the Lucas County Recreation Inc., and Toledo Mud Hens Baseball Club, Inc. as of and for the year ended October 31, 1997. They are reported in a separate column to emphasize that they are legally separate from the County. The board of this component unit is appointed by the Board of Commissioners.

Through a lease agreement, Ned Skeldon Stadium, which is owned by the County, is managed and operated by the Lucas County Recreation Inc., and Toledo Mud Hens Baseball Club, Inc. These two interrelated not-for-profit corporations were organized to carry on entertainment and recreational functions for the benefit and general welfare of the County. Upon dissolution of the corporations, their assets become the property of the County.

Complete financial statements of the component unit can be obtained from its administrative office as follows:

**TOLEDO MUD HENS
 BASEBALL CLUB, INC.
 2901 KEY STREET
 MAUMEE, OHIO 43537**

The County receives rent equal to those revenues in excess of expenditures that are not required for future operation of the Lucas County Recreation Inc. and Toledo Mud Hens Baseball Club, Inc., with a minimum annual rent of \$1. Because the rent charged is below the market rate for use of this type of facility, the Lucas County Recreation Inc., and Toledo Mud Hens Baseball Club, Inc., impose a financial burden on the County. The operations of the Lucas County Recreation Inc., and Toledo Mud Hens Baseball Club, Inc. are presented as a single proprietary fund type.

LUCAS COUNTY, OHIO
NOTES TO THE FINANCIAL STATEMENTS (continued)
DECEMBER 31, 1997

Note A - Description of Lucas County and Basis of Presentation

In determining its reporting entity and component units, the County considered all potential component units, including the Lucas County Board of Health Metropolitan Park District, Lucas County Soil and Water Conservation District, Lucas County Port Authority, Lucas County Improvement Corporation, Toledo Zoological Society, Toledo Area Sanitary District, Toledo Lucas County Public Library, Lucas County Board of Education and Toledo-Lucas County Convention and Visitors Bureau and concluded that such were neither component units nor related organizations of the county and that it would not be misleading to exclude their activities from the County's reporting entity.

Basis of Presentation: The accounts of the County are organized on the basis of funds or account groups, each of which are considered separate accounting entities. The accounting of the operations of each fund is maintained by a set of self-balancing accounts that comprise the assets, liabilities, fund equity, revenues, expenditures/expenses and statement of cash flows as appropriate. The various funds are summarized by type in the general purpose financial statements.

Total columns on the Combined Statements are captioned "Memorandum Only" to indicate they are presented only to facilitate financial analysis. Data in these columns do not present financial position, results of operations or cash flows in conformity with generally accepted accounting principles, nor are such data comparable to a consolidation.

The County uses the following fund types and account groups:

Governmental Fund Types:

- **General Fund:** This fund accounts for the general operating revenues and expenditures of the County not recorded elsewhere. The primary revenue sources are sales and use taxes, property taxes, state and local government fund receipts, investment earnings, and charges for services.
- **Special Revenue Funds:** These funds are used to account for specific governmental revenues (other than major capital projects) requiring separate accounting because of legal or regulatory provisions or administrative action. These funds include:

Public Assistance, the Board of Mental Retardation, and the Motor Vehicle and Gas Tax funds, which are major funds of the County.

- **Debt Service Fund:** The Debt Service fund is used to account for revenues received and used to pay principal and interest on debt reported in the County's general long-term obligations account group.
- **Capital Projects Funds:** These funds are used to account for the acquisition or construction of capital assets. Revenues and financing sources are derived from the issuance of debt or receipts from the General Fund and Special-Revenue funds.

Proprietary Fund Types:

- **Enterprise Funds:** These funds are used to account for operations that provide services which are financed primarily by user charges, or activities where periodic measurement of income is appropriate for capital maintenance, public policy, management control, or other purposes.
- **Internal Service Funds:** These funds are used to account for the goods or services provided by certain County departments to other County funds, departments, and other governmental units, on a cost reimbursement basis.

Fiduciary Fund Types:

- **Trust and Agency Funds:** These funds are used to account for and maintain assets held by the County in a trustee capacity or as an agent for individuals, private organizations, other governmental units, and other funds. These assets include: property and other taxes, as well as other inter-governmental resources which have been collected and which will be distributed to other taxing districts located in Lucas County.

Account Groups:

- **General Fixed Assets Account Group:** This account group is used to present fixed assets of the County utilized in its general operations, exclusive of those used in Enterprise and Internal Service funds. General fixed assets of Lucas County include land, buildings, structures and improvements, furniture, fixtures and equipment, assets acquired by capital leases, and construction in progress.

LUCAS COUNTY, OHIO
NOTES TO THE FINANCIAL STATEMENTS (continued)
DECEMBER 31, 1997

Note B - Summary of Significant Accounting Policies (In Part)

The accompanying financial statements of the County are prepared in conformity with generally accepted accounting principles (GAAP) for local government units as prescribed in statements and interpretations issued by the GASB and other recognized authoritative sources. The County has elected not to apply FASB Statements and interpretations issued after November 30, 1989, to its proprietary activities.

Measurement Focus: Governmental and Expendable Trust Funds are accounted for on a spending, or "financial flow," measurement focus. Governmental and Expendable Trust Fund operating statements represent increases and decreases in net current assets. Their reported fund balance is considered a measure of available spendable resources.

Proprietary Fund Types are used to account for the County's ongoing organizations and activities which are similar to the private sector. Proprietary Fund Types are accounted for on a cost of services, or "capital maintenance," measurement focus. Proprietary Fund Type income statements represent increases and decreases in net total assets.

Basis of Accounting: All financial transactions for Governmental and Fiduciary Funds are reported on the modified accrual basis of accounting. Under this accounting method, revenues are recognized when measurable and available to finance county operations. Revenues accrued at the end of the year consist of reimbursements from other governments for grant expenditures, amounts receivable from charges for services, licenses and permits, fines, special assessments, and property taxes. Governmental Fund expenditures are accrued when the related fund liability is incurred, except interest on long-term debt, which is recorded when due. Proprietary Fund financial transactions are recorded on the accrual basis of accounting: revenues are recognized when earned and measurable; expenses are recognized as incurred.

Budgetary Accounting and Control: Under Ohio law, the Board of County Commissioners must adopt an appropriations budget by January 1st of a given year, or adopt a temporary appropriation measure with final passage of a permanent budget by April 1st, for all funds except Agency Funds. Budgets are legally required for each organizational unit by object

(personal services, materials and supplies, charges for services, and capital outlays and equipment).

Each county department prepares a budget which is approved by the Board of County Commissioners. Modifications to the original budget within expenditure objects can be made by the budget manager in the Auditor's Office. The County maintains budgetary control within an organizational unit and fund by not permitting expenditures and encumbrances to exceed appropriations at the object level (the legal level of control). Unencumbered and unexpended appropriations (reserved for encumbrances) are carried forward to the next year as authority for expenditures.

The County's budgetary process accounts for certain transactions on a basis other than GAAP. The major difference between the budget basis and the GAAP basis are:

(1) Revenues are recorded when received in cash (budget) as opposed to when susceptible to accrual (GAAP).

(2) Expenditures are recorded when encumbered, or paid in cash (budget), as opposed to when susceptible to accrual (GAA).

The actual results of operations, compared to the final appropriation, which include amendments to the original appropriation, for each fund type by expenditure function and revenue source are presented in the *Combined Statement of Revenues, Expenditures and Changes in Fund Balances—Budget and Actual (non-GAAP Budgetary Basis) - All Governmental Fund Types*. The Budget and Actual information for the Board of Mental Retardation Special Revenue fund includes the accounts of Lott Industries, a sheltered workshop supported by the Board of Mental Retardation, which has been prepared on an accrual basis. The difference between the accrual and cash basis statements was not significant. The reserve for encumbrances is carried forward as part of the budgetary authority for the next year and is included in the revised budget amounts shown in the budget to actual comparisons.

Cash Equivalents: For purposes of the combined statement of cash flows and for presentation of the combined balance sheet, investments with original maturities of three months or less at the time they are purchased by the County are considered to be cash equivalents. Investments with an initial maturity of more than three months are considered to be investments.

LUCAS COUNTY, OHIO
NOTES TO THE FINANCIAL STATEMENTS (continued)
DECEMBER 31, 1997

Inventory of Supplies: Inventory is valued at cost using the first-in, first-out method. Inventory is recorded as an expenditure/expense when consumed.

Fixed Assets and Depreciation: All fixed assets that are acquired or constructed for general governmental purposes are reported as expenditures in the fund that finances the asset acquisition and are capitalized in the General Fixed Assets Account Group, if they meet the County's capitalization criteria. Real property (except for infrastructure assets) is recorded at cost or estimated historical cost based on appraisal. Donated and contributed fixed assets are recorded at their fair market value on the date donated to the County. Infrastructure assets (public domain general fixed assets such as roads, bridges, streets, sidewalks, curbs and gutters, drainage systems, lighting systems and the like) are not included in the financial statements as general fixed assets of the County. However, water supply and sanitary sewer lines are capitalized in the Water Supply and Sanitary Sewer funds, respectively, and are included as part of the Enterprise funds. These assets are classified as land improvements when the sanitary engineer has accepted them.

Depreciation is not provided for the General Fixed Assets Account Group. Depreciation for the Proprietary Funds is determined by allocating the cost of fixed assets over their estimated useful lives on a straight-line basis. A full year of depreciation expense is taken in the year of acquisition, and none in the year of disposal.

The estimated useful lives are as follows:

- Furniture, fixtures and equipment—5 to 20 years
- Buildings, structures and improvements—20 to 40 years
- Land improvements (water and sewer lines)—40 years

Capitalization of Interest: The County's policy is to capitalize interest on debt related to Proprietary fund construction projects until there has been substantial completion of the project. The County does not capitalize interest on Governmental fund construction projects. Capitalized interest on Proprietary fund construction is amortized on a straight-line basis over the estimated useful life of the asset. For 1997, no interest was capitalized.

Contributed Capital: Contributed capital represents resources from other governments, special assessments, developers and grants provided to Proprietary funds, and are not subject to repayment. These assets are recorded at cost on the date the asset is purchased. Depreciation on those assets acquired through capital grants externally restricted for capital acquisitions is expended and closed to the contributed capital fund equity account.

Use of Estimates: The preparation of the general purpose financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

TABLE 3
LUCAS COUNTY, OHIO
GENERAL GOVERNMENTAL EXPENDITURES AND REVENUES
ADJUSTED FOR INFLATION¹
LAST TEN FISCAL YEARS
(Amounts in 000s)

Fiscal Year	Total Nominal Expenditures	Total Nominal Revenues	Average² CPI-U	Total Real Expenditures	Total Real Revenues	Fiscal Year
1988	\$187,964	\$185,417	361.5	\$ 94,372	\$ 93,093	1988
1989	203,026	200,414	270.7	99,404	98,126	1989
1990	215,693	210,308	391.4	100,021	97,524	1990
1991	231,925	226,828	408.0	103,173	100,905	1991
1992	226,783	234,525	420.3	97,933	101,276	1992
1993	240,914	249,025	432.9	101,007	104,408	1993
1994	269,100	278,478	444.0	110,004	113,837	1994
1995	276,567	286,270	456.5	109,960	113,818	1995
1996	317,940	312,745	469.9	122,805	120,799	1996
1997	341,414	334,807	480.8	128,882	126,388	1997

¹ Between 1988 and 1997, real expenditures increased by 36.5% or \$34.4 million, while real revenues increased by 35.8% or \$33.3 million over the same period.

² Average Consumer Price Index for all Urban Consumers. 1977 is the base year when the Average CPI-U was 181.5.

Source: Lucas County Auditor

TABLE 4
LUCAS COUNTY, OHIO
TAX REVENUES BY SOURCE
LAST TEN FISCAL YEARS
(Amounts in 000s)

Fiscal Year	General Property Tax	Tangible¹ Personal Tax	Property Transfer Tax	County² Sales Tax	Total	Fiscal Year
1988	\$36,763	\$10,300	\$ 773	\$34,662	\$ 82,498	1988
1989	41,227	10,549	734	35,351	87,861	1989
1990	44,077	10,820	647	33,942	89,486	1990
1991	44,894	10,310	1,411	34,485	91,100	1991
1992	47,729	10,115	1,930	46,250	106,024	1992
1993	52,926	9,915	2,272	45,137	110,250	1993
1994	53,491	10,308	2,341	60,546	126,686	1994
1995	54,563	10,523	2,562	56,161	123,809	1995
1996	62,206	12,034	2,785	58,181	135,206	1996
1997	63,821	12,289	3,006	61,935	141,051	1997

¹ Tangible Personal Tax includes: personal property tax, mobile home tax, and grain tax.

² Includes county sales tax and hotel lodging tax. 1994 sales tax increase includes sales tax accrual attributed to implementation of GASB #22.

Source: Lucas County Auditor

- Required:**
- a. Prepare a vertical common-size analysis of the combined balance sheet. Use only the total assets and other debits side of the balance sheet. Use the 1997 totals (memorandum only).
 - b.
 1. Of the governmental fund types, which fund has the most total assets?
 2. What is the total for pooled cash and cash equivalents for 1997?
 3. What is the total for accrued wages and benefits for 1997?
 - c. Describe the following:
 1. General fund
 2. Special revenue funds
 3. Capital projects funds
 - d. Briefly describe the basis of accounting.
 - e. The County's budgetary process accounts for certain transactions on a basis other than GAAP. What are the major differences between the budget basis and the GAAP basis?
 - f.
 1. Describe the depreciation for the General Fixed Assets Account Group.
 2. Describe the depreciation for the Proprietary Funds.
 - g. From Table 3:
 1. Total Nominal Expenditures: Prepare a horizontal common-size analysis. Use 1988 as the base.
 2. Total Real Expenditures: Prepare a horizontal common-size analysis. Use 1988 as the base.
 3. Compare the trend in (2) with the trend in (1). Total Real Expenditures, 1997, is stated in terms of what year? Show the computation for the 1997 Total Real Expenditures (\$126,388,000).
 - h. From Table 4:
 1. Convert Table 4 to a horizontal common-size analysis. Use 1988 as the base.
 2. Convert Table 4 to a vertical common-size analysis. Use total revenue as the base.
 3. Comment on major trends in (1) and (2).

Endnotes

- 1 Statement of Position 82-1, "Accounting and Financial Reporting for Personal Financial Statements," (New York, NY: American Institute of Certified Public Accountants, October 1982).
- 2 *Statement of Position 82-1*, p. 6.
- 3 A good article on this subject is "Personal Financial Statements: Valuation Challenges and Solutions," by Michael D. Kinsman and Bruce Samuelson, *Journal of Accountancy* (September 1987), p. 138.
- 4 *Government Accounting Standards Board Statement No. 1* (July 1984), Appendix B, paragraph 4.
- 5 *Governmental Accounting, Auditing, and Financial Reporting* (Chicago, IL: Municipal Finance Officers Association of the United States and Canada, 1968), p. 6.
- 6 Walter Robbins and Paul Polinski, "Financial Reporting by Nonprofits," *National Public Accountant* (October 1995), p. 29.

- 7 *Statement of Financial Accounting Standards No. 93*, "Recognition of Depreciation by Not-for-Profit Organizations" (Stamford, CT: Financial Accounting Standards Board, 1987).
- 8 *Statement of Financial Accounting Standards No. 116*, "Accounting for Contributions Received and Contributions Made" (Norwalk, CT: Financial Accounting Standards Board, 1993).
- 9 *Statement of Financial Accounting Standards No. 117*, "Financial Statements of Not-for-Profit Organizations" (Norwalk, CT: Financial Accounting Standards Board, 1993).
- 10 *Statement of Financial Accounting Standards No. 124*, "Accounting for Certain Investments Held by Not-for-Profit Organizations" (Norwalk, CT: Financial Accounting Standards Board, 1995).
- 11 *Statement of Position 94-2*, "The Application of the Requirements of Accounting Research Bulletins, Opinions of the Accounting Principles Board and Statements of Interpretations of the Financial Accounting Standards Board to Not-for-Profit Organizations" (New York, NY: American Institute of Certified Public Accountants), September 1994.
- 12 Charles H. Gibson, "Budgeting by Objectives: Charlotte's Experience," *Management Accounting* (January 1978), p. 39.
- 13 Gibson, p. 39, 48.