

Understanding Income

REVIEW

Chapter 3 discussed the importance of cash flows for financial decision making and the type of accounting information presented with respect to cash flows. Chapter 4 examined the basic concepts that underlie the accrual accounting approach to measuring income and financial position under generally accepted accounting principles.

WHERE THIS CHAPTER FITS

This chapter builds on Chapters 3 and 4 by discussing how reported income is used for estimating future cash flows and making decisions. The chapter discusses the elements of income, the measurement of income using the accrual method, and the relationship between income and cash flows. The chapter concludes with a more detailed look at the elements of the income statement.

LOOKING AHEAD

Chapter 6 concentrates on another financial statement, the balance sheet, and discusses the importance of financial position.

THE PERSONAL VIEW

Boy! I saw in the paper this morning that Bonanza Motors had income of more than a billion dollars last year. What I couldn't do with all that money! I wonder what they do with all that cash—or is it really cash? I get my paycheck every Friday and cash it on the way home. I wonder how Bonanza gets its income. Who cashes Bonanza's paycheck?

THE BUSINESS VIEW

"Reading a statement of income is a lot like looking at a barometer to get a weather forecast. These reports can help [readers] determine if the [companies] are in the center of a financial storm, such as decreasing revenue, or are caught up in an industrywide tsunami."¹

¹ Thomas Hoffman, "Statement of Income," *Computerworld* (June 14, 1999), p. 65.

Every day the financial press carries hundreds of stories about American businesses, what they are doing, and what is happening to them. While these stories may all deal with different aspects of business, the common thread tying them together is an emphasis on income. Whatever the subject of the story, readers want to know what the effect is on income. If an employee layoff is announced, the anticipated future cost savings are discussed. If the story reports the development of a new drug by a pharmaceutical company, invariably an estimate of the anticipated impact on company revenues and earnings is included.

Why is such an emphasis placed on income? Because reported income provides a measure of financial success and reflects the creation of wealth. Many of us value other things in life more highly than financial success and wealth, but no one can deny that having the money we need, or perhaps want, is important. A steady income allows us to reach our goals and to achieve a certain type of security and stability.

Whether good or bad, society focuses on the net income measure so much that the phrase "the bottom line," referring to the bottom line of the income statement, net income, has now come to mean *the key point* in a discussion. Health-care experts state that the bottom line is that

health-care costs will rise 10 percent per year for the next five years. Sociologists tell us the bottom line is that we are losing the war on drugs. These statements emphasize the single most important aspect of the discussion. In financial reporting, the aspect usually considered most important is net income.

Determining business income is complex, and many accounting decisions are made before arriving at the "bottom line." This chapter will help you develop an understanding of business income and improve your ability to use reported income to make financial decisions. When you have completed the chapter you should be able to:

1. Discuss what income is and explain its importance for forecasting.
2. Understand how income recognition is accomplished in accrual accounting through revenue realization and expense matching.
3. Explain the difference between cash flow and accrual-basis income, and analyze the relationship between the two measures of business activity.
4. Describe the elements normally included in income and reported in the income statement, and discuss who uses the information and how.

THE NATURE OF INCOME

Information for Decisions

The income statement provides summary measures of the results of a company's activities for a given period of time. Understanding a company's reported income helps financial statement users

answer questions such as these: Has this company been successful in its operations? Which income items are most relevant for my projections of future income and cash flows?

Net income represents the change in owners' equity during a period, excluding the effects of any additional investments or withdrawals by the owners. It is computed as the difference between revenues and expenses.

If a company's activities during a period are successful, positive net income will be reported, and the owners' equity of the company will increase. The company's **net assets**, or assets minus liabilities, will also increase because the accounting equation, discussed in Chapter 2, ensures that assets minus liabilities always equals owners' equity. If a company's activities are not successful, the company will report negative net income, referred to as a **net loss**, and its net assets and owner's equity will decrease. Sometimes other terms, such as *net earnings* or *profit*, are used in place of the term *net income*.

Income is earned continuously by an entity but is measured for a particular period, such as a year or month. Even though the activities producing the income may be ongoing, measurements are made periodically so that decision makers will have timely information.

THE INCOME STATEMENT

The **income statement** reports the results of a company's activities for a specified period of time. It identifies the major sources of the company's income and the different costs incurred in running the business. The final result of all of the firm's activities during the period is

EXHIBIT 5-1

THE PROCTER & GAMBLE COMPANY INCOME STATEMENT

Amounts in Millions Except Per Share Amounts	Years 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

summarized in the bottom line of the income statement, net income. The income statement for Procter & Gamble (www.pg.com) is fairly typical of a manufacturing company's income statement and is shown in Exhibit 5-1.

Although not all of an entity's activities and events during the period appear in the income statement, the items that are included are taken directly from the accounting records of the company. The company's many revenue and expense items are summarized into a relatively few categories and then reported in the income statement. Any event not recognized in the accounts of the entity cannot appear in the income statement.

OPERATING AND NONOPERATING INCOME

The income statement shows the dollar amount of sales of the company's products or services during the period, listed as revenues, sales, or sales revenue. Many companies use the term *net sales* to indicate the amount of sales revenue earned after deducting sales returns and allowances. The statement also shows the cost of goods and services used up by the company during the period in producing revenues, listed as expenses. Revenues and expenses are usually related to the company's central operations, its primary reason for being.

The income statement also may report a number of items that are included in the computation of net income for the period that are not directly related to the company's principal operations. For example, a manufacturing company might report interest income from temporarily investing excess cash, or it might report a major fire loss in a particular year. To help financial statement users distinguish between items directly related to normal ongoing operations and those not directly related to operations and not regularly recurring, income statements often provide a subtotal, labeled *operating income*, obtained by deducting operating expenses from revenues, followed by a section titled *nonoperating income and expenses*. Decision makers typically place greater emphasis on operating rather than nonoperating items when projecting future income and cash flows.

THE IMPORTANCE OF INCOME

Information for Decisions

Investors increase their wealth by earning income on their investments. Often the success of their decisions, and of the businesses they are evaluating, is judged by the amount of income earned. Investors and creditors need to understand the

importance of income to answer questions such as these: Can I expect this company to prosper in the future? What levels of cash flows with respect to this company can be expected in the future?

To understand why income is important, think about why individuals who own resources allow others to use those resources. They do it with the expectation that they will get back the value of their resources plus some extra amount for allowing others to use those resources. In other words, they do it to increase their wealth by earning income. When you put money in a savings account, you do it to earn interest. You want to increase the amount of cash you have so you can later purchase things you need or want.

The success of a person's decisions and efforts is often judged by the amount of income earned. Similarly, the success of a business is judged by its income. Income is important because it provides additional resources that can be used to reach goals. Decision makers use income-related information to help assess a company's projected earnings, anticipated cash flows, and value.

A MEASURE OF CONTRIBUTION TO SOCIETY

By examining income statement information, decision makers can evaluate the degree to which a company's contributions to society are valued. If the company is well managed and provides something of value to society, it will be rewarded with profits. For example, a company that takes raw materials such as steel, aluminum, plastic, and glass and, using labor, technology, and machinery, efficiently transforms the raw materials into automobiles, provides something society wants and will make a profit. If, however, the company operates inefficiently and wastes society's resources because, for example, it uses outdated technology, it may suffer losses. A company's income serves as a measure of whether the company plays a valuable role in society and, therefore, is likely to prosper.

A BASIS FOR FORECASTING CASH FLOWS

For a company to remain in business, it must generate sufficient cash to acquire resources on a continuing basis and purchase new assets as existing ones are sold, used up, become obsolete, or cease functioning efficiently. Sufficient cash also must be generated to reward owners so they remain interested in continuing the enterprise. Income is an important factor in the overall financial picture of a business because it normally is, and should be, the primary source of cash for a company. (See In Practice 5-1.)

In Practice 5-1

POSITRON CORP.



The following report from *The Wall Street Journal* makes clear the connection between income and cash:

"Positron Corp., Houston, said it is running short of cash and will need either a cash infusion or a jump in sales to keep operating beyond Dec. 31. . . . The company attributed its cash shortage to an inability to sell imaging systems in large enough quantities to be profitable."²

ANALYSIS

Although Positron was able to keep operating temporarily by borrowing, its financial condition continued to deteriorate. By early 1999, with its short-term obligations fifty times the amount of its cash and receivables, it seemed to be facing bankruptcy or being taken over by another company. Shortly thereafter, however, the company seemed to be moving toward profitability. Sales must be Positron's primary continuing source of cash or the company has no long-run future.

² "Shortage of Cash Threatens Ability to Keep Operating," *The Wall Street Journal* (November 16, 1995), p. B9.

Because reported income is useful for forecasting future cash flows, investors place heavy emphasis on income when choosing from among investment alternatives. Ventures reporting very little income are likely, in the long-run, to generate little or no cash flow to their investors, while those reporting substantial income are more likely to provide significant cash flows to investors.

Beyond just knowing the amount of an entity's income, an understanding of how income is computed and reported is important in assessing the cash flow potential of a business. Often, the bottom line is not a sufficient basis on which to make a decision, and knowing the elements that contributed to the income reported by a business is important. Unexpected, unusual, and nonrecurring events do occur, and investors who rely solely on the amount of reported earnings to measure success may incorrectly assess future earnings potential and likely cash returns.

You Decide 5-1

DOES THE TYPE OF INCOME MAKE A DIFFERENCE?

Suppose you are deciding whether to invest in Company A or Company B, both of which report the same net income. Further analysis discloses that almost all of the income of Company A last year came from regular business operations, while nearly all of Company B's income was from a one-time sale of a factory building no longer used. In which company would you invest? Which type of income would be most likely to continue in the future and to result in steady cash flows to investors? Explain your answers.



THE CONNECTION BETWEEN THE PAST AND THE FUTURE

People make decisions about the future, not the past. Yet, much of the information used for those decisions is about the past. Financial statement users analyze information relating to current and past income so they may better understand the important relationships surrounding a business's operations. Such an understanding can help decision makers better forecast future earnings and cash flows. Knowing a company's reported income for last year does not automatically provide a good estimate of next year's income or cash distributions to owners, but it does provide one input for forming judgments about the future.

INCOME STATEMENT USERS

Many different types of decision makers rely on financial statements, as discussed in Chapter 2. Exhibit 5-2 lists some of the different types of users of income statement information and identifies some examples of how the information might be useful for their decisions. Although income statement information is only one of many types of information used by decision makers, there is no doubt about its importance.

EXHIBIT 5-2

USES AND USERS OF INCOME STATEMENT INFORMATION

INTERNAL USERS:

- | | |
|----------------------------|--|
| Owners/Managers | <ul style="list-style-type: none"> • Evaluate success in meeting established goals • Compute bonus or other contingent compensation • Project future cash distributions • Determine success in achieving operating efficiencies • Assess success in generating recurring operating income • Manage effects of reported income on taxes and regulation • Assess success of previous actions • Identify areas for potential cost-cutting or productivity gains |
| Employees and Labor Unions | <ul style="list-style-type: none"> • Assess stability of employment opportunities • Determine effects of increased pension, health-care, and other benefit costs • Support collective bargaining negotiations • Compute profit-sharing amounts |

EXTERNAL USERS:

- | | |
|---|---|
| Owners/Investors | <ul style="list-style-type: none"> • Evaluate success in meeting investment goals • Project future cash distributions • Evaluate performance of management • Assess long-run profit potential • Compare performance with other companies in industry • Identify areas for potential cost-cutting or productivity gains through comparisons with other companies and other periods |
| Creditors | <ul style="list-style-type: none"> • Assess the adequacy of income to cover interest cost • Evaluate the potential for long-run profitability to provide adequate cash to retire debt • Determine whether provisions of debt-related agreements have been met |
| Vendors | <ul style="list-style-type: none"> • Assess stability of company as customer • Evaluate credit-worthiness • Project future purchases |
| Taxing Agencies, Regulators, and Public Interest Groups | <ul style="list-style-type: none"> • Evaluate relationship between taxable income and income reported on income statement • Assess fairness of overall return to owners • Evaluate legitimacy and fairness of sources of income • Evaluate reasonableness of specific expense categories |

COMPONENTS OF INCOME

Information for Decisions

A company's income is the result of a number of different elements. Decision makers need to know how each of these elements affects net income, how these elements are reported in the financial statements, and which elements are critical for particular decisions so questions such as the following can be answered: Is the com-

pany's level of business increasing or decreasing? Is the company's revenue enough higher than the cost of inventory sold to cover other expenses and pay a return to me? Can I be sure that the company's profit does not result just from the sale of its operating assets or other resources needed for future operations?

A number of different elements are included in the computation of an entity's net income. The most important categories are revenues and expenses. In very simple situations, net income is computed as the difference between revenues and expenses. Computed income is always reported in the income statement for a specific period of time, such as one year.

REVENUES

Revenues are generated from an entity's ongoing central operations. Revenues represent increases in an enterprise's assets from selling goods and services.

Because the main reason that business enterprises exist is to sell products and services to customers for a profit, the following apply with respect to revenues:

1. Any sales or transfers within the company do not generate revenues; only sales to outsiders generate revenues.
2. Income from activities that are peripheral to the business's central operations is not included in revenues.

Many large companies are organized into departments or divisions, and they often transfer goods or services from one division to another. For example, a computer manufacturer may produce circuit boards, some of which are sold directly to customers and some of which are transferred to another department for inclusion in computers manufactured by the company. The amount of circuit board sales to outsiders would be recognized as revenue, while the transfers to the other department would not. The other department would recognize revenues when it sold the computers it produced. Because the business enterprise as a whole is viewed as the accounting entity, only sales to parties outside of the entity may be reported as revenues in the company's income statement.

Income may come from a number of sources, but revenues result only from the company's primary activities. The sale of a retail company's products to a customer gives rise to revenue, but the sale of an old delivery truck does not because the company is not in the business of selling old delivery trucks. Because financial statement users forecast future revenues, income, and cash flows based on past revenues and earnings, reporting irregularly or infrequently occurring items in the same manner as those related to normal operations could prove misleading. (See In Practice 5-2.)

In Practice 5-2

AMERITECH

Ameritech's income statement included revenues of \$15.998 billion from its primary operations, including local phone service and directory activities. In addition, the company reported other income of \$390 million, consisting largely of income from investments in foreign telecommunications companies and gains on sales of investments in telecommunications companies.

ANALYSIS

The other income sources were not considered part of the company's central operations and, therefore, were not included in revenues even though they were included in the computation of the company's net income. [www.ameritech.com]



EXPENSES

Expenses reflect the cost of goods and services used up during the period in conducting the company's central operations. They arise when assets are consumed or liabilities are incurred, and they represent expired costs, costs that have no service potential for the future. Expenses reduce net income.

Businesses incur many different types of operating costs. Typical costs include, among others, those incurred for labor, raw materials, goods purchased for resale to customers, supplies, equipment, buildings, and income taxes. Ultimately, these costs are reported as expenses in the income statement as they are matched against revenues to compute net income.

Merchandising firms, such as Wal-Mart, purchase goods from their suppliers and resell those goods to their customers. Manufacturing firms, such as Ford Motor Company, purchase raw materials and parts from their suppliers and fashion the raw materials and parts together to produce a finished product. For both types of companies, the largest and most important expense item is usually the cost to the company of purchasing or manufacturing the goods or products it sells. This amount normally is disclosed as a separate item in the income statement labeled **cost of goods sold** or **cost of sales**. Ralston Purina Company (www.ralston.com) reports *Cost of product sold* equal to almost 50 percent of net sales, which is about 57 percent of its total expenses.

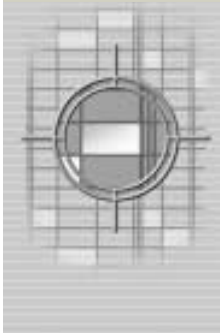
Service organizations, such as Andersen Consulting, rather than selling a product, provide some service to customers (often referred to as clients) for a fee. For these types of enterprises, wage and employee benefits expense typically is the largest single expense item. Ameritech Corporation, for example, reported labor expenses, including pensions and other employee benefits, of more than \$4 billion in 1998. These expenses were the largest single operating expense item for the year, accounting for about one-third of total operating expenses.

GAINS AND LOSSES

Gains and losses typically occur relatively infrequently and arise from events not directly associated with the entity's ongoing central operations. Gains increase net income and losses decrease net income.

A CLOSER LOOK AT

GAINS AND LOSSES



A manufacturing company owns an old warehouse it no longer uses, and the warehouse has a book value of \$400,000. The **book value** or **carrying amount** of an item is the amount at which it is shown in the accounting records, or on the books. If the warehouse is uninsured and is completely destroyed by fire, the company would record a loss equal to the book value of the asset destroyed, \$400,000. Obviously the destruction of the warehouse by a fire is not an event central to the operations of the company. Similarly, if the company had sold the warehouse (prior to the fire) for \$500,000, it would recognize a \$100,000 gain equal to the difference between the selling price of the warehouse and its book value. Although the company might sell unused or old assets from time to time, it is not in that business.

NONOPERATING INCOME AND EXPENSES

Items classified as other income and expenses stem from activities that are incidental to the primary focus of the business. Examples include interest income from temporary investments and rental income from leasing an unused portion of the company's factory. Other expenses might include interest expense and costs of reorganizing a struggling company.

MEASUREMENT OF INCOME

Information for Decisions

A number of different methods of measuring income exist. Financial statement users need to understand the methods that are used to measure income in practice so they can answer questions such as these: Does the company's reported in-

come provide me with useful information for assessing the company's future prospects? Is the company's reported income comparable with that reported by other companies?

We have seen that decision makers rely on net income for assessing success and forecasting future earnings and cash flows. So, how do you measure income? Does everyone measure income in the same way? Is the net income figure from one company's income statement comparable to the net income figure from another company's income statement? Unfortunately, income measurement is a complex issue. (See In Practice 5-3.)

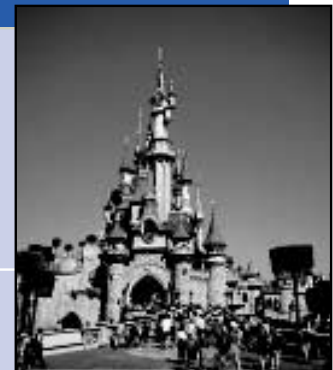
In Practice 5-3

THE WALT DISNEY COMPANY

In 1992, The Walt Disney Company opened its Euro Disney theme park near Paris, France. Euro Disney reported operating losses after it was opened. However, because of the financing agreement between Disney and Euro Disney and the financial reporting procedures used, Disney was able to report income from its investment in Euro Disney in 1990 and 1991, even before the theme park opened, and again in 1992 after the park operated at a loss.

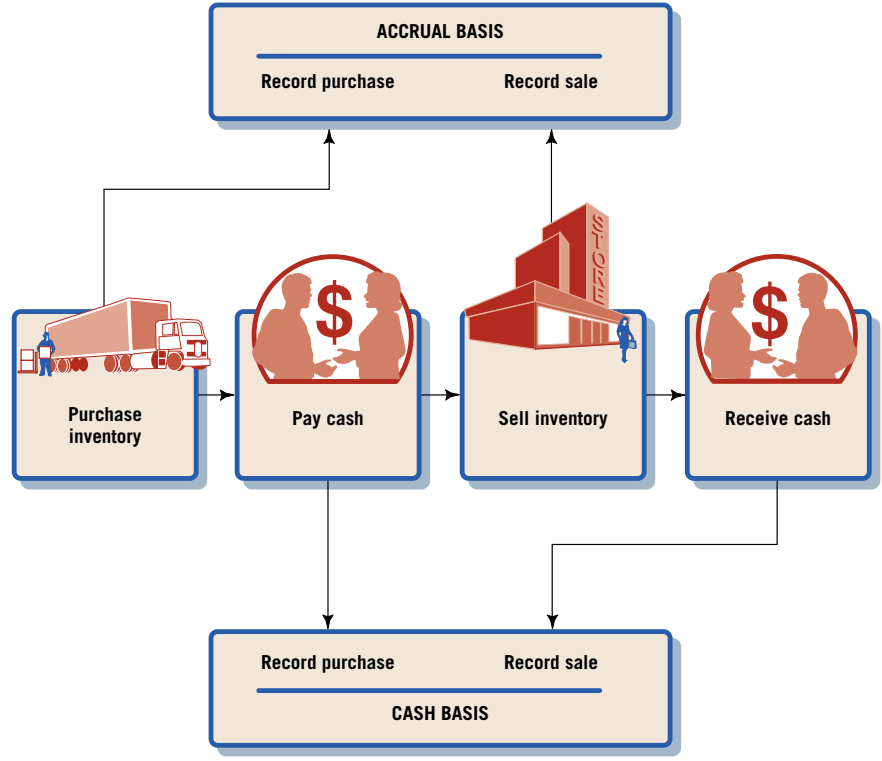
ANALYSIS

Because of the complexity of some income measurement and recognition methods, a careful analysis of the methods being employed is essential. The methods are disclosed in the notes to the financial statements. [www.disney.com]



General rules exist for the recognition and measurement of income, but the rules are sufficiently flexible that the income numbers reported by different companies are not all comparable. Two primary methods of measuring and reporting income are found in practice, both

EXHIBIT 5-3 CASH-BASIS VS. ACCRUAL-BASIS RECOGNITION



of which were illustrated briefly in Chapter 1. The cash basis for income recognition is based on the amounts and timing of cash inflows and outflows. The accrual basis of accounting is based on a series of recognition and measurement rules and places much less emphasis on the timing of cash flows. Exhibit 5–3 contrasts the two methods for a purchase and sale of inventory. The accrual basis is required to be used for financial statements prepared in accordance with generally accepted accounting principles.

INCOME RECOGNITION ON THE CASH BASIS

Information for Decisions

With the cash basis of accounting, cash receipts are treated as revenues and cash disbursements are treated as expenses. When decisions are based on cash-basis financial statements, investors and creditors need to be able to answer

questions such as these: Why is the cash basis of accounting being used? Do cash-basis financial statements provide an appropriate basis for assessing this company?

Although not considered generally accepted for financial reporting, the cash basis of income measurement is widely used by individuals and small businesses that do not need audited financial statements prepared in accordance with generally accepted accounting principles. Under the cash basis, cash inflows (receipts) are generally treated as revenues and cash outflows (disbursements) as expenses. Cash-basis income is the difference between cash receipts and disbursements. Investments by and distributions to owners are never included in the computation of income.

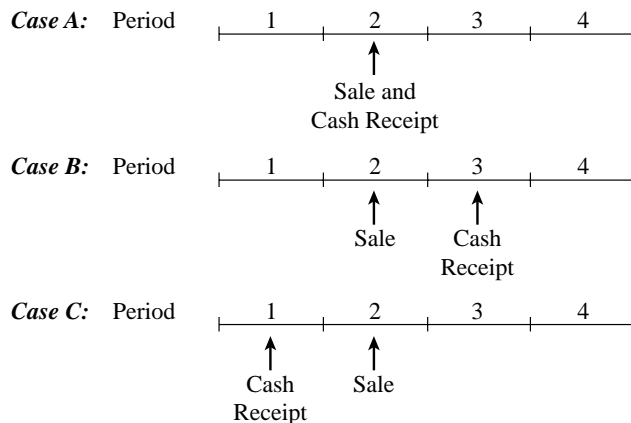
The primary advantage of using cash receipts and disbursements as a measure of income is the simplicity of the system. Cash-basis income can be computed quickly by deducting total cash disbursements from total cash receipts. Income can be more objectively determined under the cash basis than under accrual accounting.

A simple listing of cash receipts and payments may be sufficient to provide an accurate picture of the activities of businesses that conduct virtually all of their transactions for cash and do not hold assets beyond the end of the period. For example, the vendor who hawks hot dogs in the stands at baseball games may operate entirely on a cash basis. The vendor may pay the concessionaire cash for a steaming tray of Old Barnyard Hot Dogs and sell them to hungry fans at a price set by the concessionaire. Each trip into the stadium is a new business venture, with the success of the venture known immediately. Determining income for the day is a simple matter in this setting. The change in the amount of cash in the vendor's pocket between the beginning and end of the game provides a quick measure of income.

The cash-basis method generally proves adequate in simple situations. As the business activity becomes more complex, however, use of this method may result in reported information that is inaccurate and perhaps misleading.

CASH-BASIS REVENUE RECOGNITION

In simple cases, the receipt of cash occurs at completion of the sales process and removes any uncertainty as to the amount to be received from the sale. However, cash is often not received by the seller at the time of delivery of goods or services. Instead, a sale may take place at one point in time, with cash received at some other time. Three alternatives with respect to the timing of a sale and the receipt of cash from the sale are as follows:



Case A is the simplest situation, one in which the sale and cash collection take place at the same time, as with the hot dog vendor.

Case B illustrates the most common type of sale between commercial entities. A sale is made on credit, with the cash payment made a few weeks following the sale. When Kmart

takes delivery of a shipment of Tide laundry detergent, the receiving clerk on the loading dock does not hand the truck driver cash for the shipment. Instead, Kmart has agreed to send a check to Procter & Gamble, the maker of Tide, within a few weeks. Should P&G recognize the revenue from the sale at the time of delivery, the time the cash is received, or at some other time? If P&G were using cash-basis accounting (which it does not), the revenue would be recognized when the check was received from Kmart.

Case C portrays a situation in which the seller receives the cash before delivering the goods or service. For example, when Trans World Airlines sells for \$960 a fully refundable ticket for travel to Hawaii five months later, the cash is received by TWA long before the travel actually takes place. If TWA were using cash-basis accounting, the revenue from the sale would be recognized when the cash was received. Suppose the traveler decided not to go and asked for a refund of the cash paid?

CASH-BASIS EXPENSE RECOGNITION

When income is computed on a cash basis, cash outflows are treated as expenses in the period in which payment is made. Total expenses for the period are easy to determine using the cash basis because they equal total cash payments, excluding cash distributions to owners. A cash payment represents the final step in acquiring goods and services from others and removes any uncertainty regarding the cost.

INCOME RECOGNITION USING THE ACCRUAL METHOD

Information for Decisions

All major companies use accrual accounting to match costs incurred with the associated benefits received to determine net income. Decision makers need to understand how reported income statement numbers reflect accrual-basis revenue recognition rules and the matching concept to answer questions such as these: Have the company's operating efforts during the

period been successful? Does the company's net income reflect all of the company's sales during the current period, even though the balance sheet indicates that amounts are still owed to the company for some sales? Have all of the company's costs of making the current period's sales been deducted from income in the current period?

The accrual basis of accounting is used by all businesses that prepare financial statements in accordance with generally accepted accounting principles. While the cash basis emphasizes cash inflows and outflows as a basis for revenue and expense recognition, the accrual basis does not. Under accrual-basis accounting, the timing of cash flows is relatively unimportant for determining when to recognize revenues and expenses. Revenue and expense recognition may occur before, at the time of, or after the associated cash flow takes place, depending on the circumstances.

THE MATCHING PROCESS

One of the key concepts that differentiates the cash basis from the accrual basis is the matching concept. The central focus of accrual accounting is matching costs and benefits so financial

statement users can see the direct period-by-period results of an entity's activities. The matching process involves determining in which period specific benefits are received by the enterprise and then recognizing in that period both the benefits and the costs incurred to get the benefits. This allows a comparison between costs and benefits so financial statement users can assess how successful the company has been in incurring costs that generate benefits in excess of those costs.

Most business activities are aimed at acquiring one particular benefit, sales revenue. Therefore, much of accrual accounting involves determining when to recognize revenue and what costs are associated with the revenue recognized during the period.

ACCRUAL-BASIS REVENUE RECOGNITION

In general, accrual accounting recognizes revenues when they are realized and earned. **Realization** is the process of converting noncash assets into cash or claims to cash. For revenues to be recognized, two conditions ordinarily must be met:

1. An exchange must take place.
2. The earning process must be substantially complete.

In a typical sales transaction, a seller provides a product or service to a purchaser in exchange for cash or for the purchaser's promise to pay a specific amount of cash in the future. The exchange provides evidence that two independent parties, the seller and purchaser, have agreed on a value for the transaction, and this exchange amount provides objective evidence for recognition in the accounts.

Not only must an exchange take place for revenue to be recognized, but the revenue also must be earned. In determining when revenues are earned, a "critical-events" approach is typically used. The earning process is considered substantially complete once the critical event in the earning process has taken place.

What is the critical event? That depends on the situation. The critical event is the event, or events, most crucial for earning the right to cash. For example, if you manufacture shoes, you might be able to produce millions of pairs of shoes, but you are not successful unless someone buys the shoes; the critical event is the sale or exchange transaction. Thus, if revenue is earned from the sale of a product, the sale is normally considered the critical event, and the earning process is considered complete at the time the goods are delivered to the customer. When the local J. C. Penney store sells you a pair of shoes, the earning process is complete once you give the sales clerk cash or sign a charge-card slip and the sales clerk gives you the shoes.

If revenues are earned by providing a service, the earning process is usually considered substantially complete once the service has been provided and the revenues are billable. When the accounting firm of Deloitte & Touche completes an audit, it has the right to bill the client, and the revenue has been earned.

If revenues are earned by allowing others to use the company's assets, revenues are earned as those assets are made available to the other party after that party has agreed to pay for their use. For example, if a real estate management company rents a building to another company for \$25,000 per year on a three-year lease, the real estate company would recognize \$25,000 rental revenue each year regardless of whether the rent was paid in cash annually, all in advance, or all at the end. Similarly, banks lending money recognize interest revenue over the time the money lent is used by the borrower.

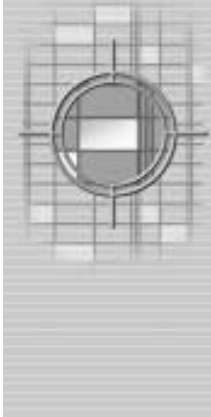
Note that revenue is recognized under accrual accounting whether cash is received immediately or not. The timing of revenue recognition is based on the recognition criteria rather than the timing of the cash inflow. In most cases, collection of cash once the purchaser has promised to pay is not considered to be a critical event in the earning process. Before extending credit, a seller normally evaluates the creditworthiness of the purchaser and concludes that payment is likely. Some purchasers ultimately might fail to pay, but special procedures discussed in Chapter 8 are used to account for this possibility.

ACCRUAL-BASIS EXPENSE RECOGNITION

Expenses are generally recognized under accrual accounting based on the matching concept. For each cost that an enterprise incurs in connection with its operations, the following determinations must be made:

1. What benefit will be received from having incurred the cost?
2. When will the benefit be received?

The cost is reported as an expense (an expired cost) in the period in which the associated benefit is received by the entity. If the benefit is received in more than one period, the cost is allocated to each of the periods in which a benefit is received, and an expense is recognized each period roughly in proportion to the benefits received.

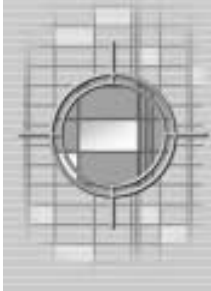
A CLOSER LOOK AT**MATCHING COSTS AND BENEFITS**

Ajax Corporation purchases a truck for \$50,000 to use for deliveries of merchandise to its customers. The truck is expected to last for 200,000 miles and then will be scrapped. It is purchased at the end of 1999 but is not used until the following year. In 2000, the truck is driven 20,000 miles, and during 2001 it is driven 30,000 miles. What is the benefit to be received from incurring the \$50,000 cost? The expected benefit is the use of the truck to deliver merchandise. What amount of depreciation expense associated with the truck should be recognized in 1999, 2000, and 2001? Because the truck was not used in 1999, no benefit was received from it and no expense should be recognized. In 2000 and 2001, expense would be recognized in proportion to the benefits received; that is, expense would be computed based on the usage of the truck during each year in relation to the total service potential of the truck:

$$2000: (20,000 \text{ miles} \div 200,000 \text{ miles}) \times \$50,000 = \underline{\$5,000}$$

$$2001: (30,000 \text{ miles} \div 200,000 \text{ miles}) \times \$50,000 = \underline{\$7,500}$$

The primary purpose for operating a business is to generate revenue and related profits. Therefore, matching most often involves tying costs to associated revenues so that both can be included in the computation of income for the same period.

A CLOSER LOOK AT**MATCHING COSTS WITH REVENUES**

Benlow Company purchases inventory in 2000 for \$70,000 cash and sells half of it on account (credit is extended) during 2001 for \$50,000. In addition, the company pays a salesperson a 5 percent commission on the 2001 sale. How much expense should be recognized in 2001? The \$35,000 ($\$70,000 \div 2$) of inventory sold in 2001 produced a benefit in that year and should be expensed. In addition, the sales commission is a cost associated with producing the sale. Therefore, cost of goods sold expense of \$35,000 and sales commission expense of \$2,500 ($\$50,000 \times .05$) would be recognized in 2001 and matched against the sales revenue of \$50,000, resulting in income of \$12,500.

As in the case of revenue recognition, a cash flow does not necessarily occur at the time an expense is recognized under the accrual model. Some expenses are recognized before the cash payments are made and others are recognized after the cash payment is made. In the Benlow Company example, inventory was purchased in 2000 and a cash outflow occurred at that time. However, no expense was recognized then for the inventory cost. Only when some of the inventory was sold in 2001 was expense (cost of goods sold) recognized, even though no cash outflow for the inventory occurred during that year.

Some costs provide benefits other than revenues. However, these costs are still matched with the benefits they produce. A typical example is the purchase of a three-year insurance policy with all premiums paid in advance. The benefit received is insurance protection, and it is received over a three-year period. Accordingly, the premium is recognized as an expense over the three-year period during which the insurance coverage is received.

RECOGNITION OF GAINS AND LOSSES

Under accrual accounting, gains are generally recognized when realized, largely in the same manner as revenues. The treatment of losses, on the other hand, is more conservative. Losses are sometimes recognized before there is objective evidence that they have occurred. Losses are recognized when both of the following two conditions exist:

1. It is probable that an asset has been impaired or a liability incurred.
2. The amount of the loss can be reasonably estimated.

SUMMARY OF ACCRUAL-BASIS RECOGNITION RULES

Exhibit 5-4 summarizes the accrual-basis recognition criteria for revenues, expenses, gains, and losses. Note that the criteria listed are general in nature and, although they apply in most cases, there are some exceptions.

GENERAL ACCRUAL-BASIS RECOGNITION CRITERIA

EXHIBIT 5-4

Revenues

Recognized when realized and earned, meaning both of the following conditions are met:

1. An exchange has taken place.
2. The earning process is substantially complete.

Application to:

Sales of goods: when the goods are delivered to the customer and the customer agrees to pay

Sales of services: when, after the customer has agreed to pay for specified services, the services have been provided to the customer and the amounts are billable

Allowing others to use assets: as time passes, during which the assets are available for the use of another party after that party has contracted to pay for their use

Expenses

Recognized through the matching process by recognizing the expense in the same period as the associated revenue or other associated benefit

Gains

Recognized when realized

Losses

Recognized when (1) it is probable that an asset has been impaired or a liability incurred and (2) the amount can be estimated

RELATIONSHIP BETWEEN INCOME AND CASH FLOWS

Information for Decisions

Net income reported on an accrual basis can be a better predictor of future cash flows than the company's current cash flows. Financial statement users who understand the relationship between income and cash flows can use this information to their advantage and answer questions such as

these: What are the major factors that cause a difference between the company's net income and its net cash flow, and how should these differences affect my assessment of future cash flows? What does the company's net income imply about future cash flows?

In general, a close association between income and cash flows exists over the long run. Revenues generate cash inflows, while expenses generate cash outflows. If revenues exceed expenses, income results, and ultimately net cash flows can be expected to be positive.

Although these relationships exist, differences are found in the timing of when revenues and expenses are recognized using the accrual method and when the associated cash flows occur. Accounting recognizes changes in cash when cash flows actually occur. Revenues and expenses, on the other hand, are recognized using the accrual method based on the specific recognition criteria previously discussed. The key point to remember is that revenue and expense recognition is generally not determined by when the related cash flows occur.

Over a long enough period of time, the differences between cash flow and income disappear, but because businesses report periodically, substantial differences often exist between accrual-basis and cash-basis income. These differences could significantly affect decisions made using the reported information.

USEFULNESS OF ALTERNATIVE INCOME FIGURES

As we have seen, cash-basis accounting is simple and, therefore, is generally less costly and requires less expertise to apply. In some very simple cases, as with the hot dog vendor, cash-basis income provides an accurate measure of the results of enterprise activity. Many business situations are much more complex, however, and cash inflows are not always associated so directly with efforts and accomplishments. Several examples may be helpful in examining the usefulness of cash-basis and accrual-basis measures of income, as presented in You Decide 5-2, 5-3, and 5-4.

The usefulness of the alternative income figures should be judged based on how well they capture what has occurred during each of the periods and the extent to which each is helpful in projecting future earnings and cash flows.

CASH FLOWS OR ACCRUAL-BASIS INCOME?

Recall that an important objective of financial reporting is to assist financial statement users in assessing future cash flows. But, if cash flows are so important and net income often differs from cash flow, why bother computing net income? A significant amount of research in the fields of accounting and finance has focused on the usefulness of different types of in-

You Decide 5-2

CASH-BASIS VERSUS ACCRUAL-BASIS INCOME MEASURES

The Allen Shoe Store started business in March. During the month, the store purchased \$10,000 of shoes, but had no sales. During April, the store sold for \$8,000 half of the shoes purchased in March; no additional shoes were purchased in March; no additional shoes were purchased in April. During May, the store sold for \$8,000 the remaining shoes purchased in March and also purchased an additional \$12,000 of shoes. All purchases and sales were for cash. The activities can be pictured in the following timeline:

	Inventory \$10,000	Cash \$8,000	Cash \$8,000	Inventory \$12,000
Inflows				
	↓	↓	↓	↓
	----- March ----- ----- April ----- ----- May -----			
Outflows				
	↓	↓	↓	↓
	Cash \$10,000	Inventory \$5,000	Inventory \$5,000	Cash \$12,000

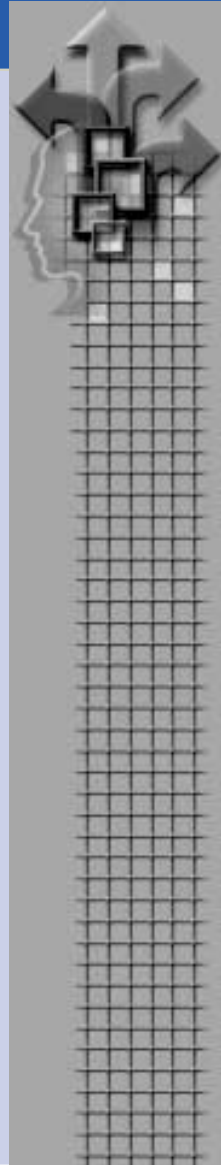
Income (loss) computed on a cash basis is the difference between the cash inflows and the cash outflows for each of the months, as follows:

$$\begin{aligned} \text{March: } & \$0 - \$10,000 = \underline{\underline{\$(10,000)}} \\ \text{April: } & \$8,000 - \$0 = \underline{\underline{\$ 8,000}} \\ \text{May: } & \$8,000 - \$12,000 = \underline{\underline{\$ (4,000)}} \end{aligned}$$

Income on an accrual basis is computed as the difference between Allen's revenues and expenses. In March, no sales take place, so no revenue is recognized. Because no benefit is received during the period, no expense is recognized. In April, revenue of \$8,000 is recognized, and the cost associated with the sales is the cost of the inventory sold, \$5,000; this amount is expensed during the period. In May, revenue of \$8,000 and expense of \$5,000 are recognized, as in April. Accrual-basis net income for the three months is summarized as follows:

$$\begin{aligned} \text{March: } & \$0 - \$0 = \underline{\underline{\$ 0}} \\ \text{April: } & \$8,000 - \$5,000 = \underline{\underline{\$3,000}} \\ \text{May: } & \$8,000 - \$5,000 = \underline{\underline{\$3,000}} \end{aligned}$$

Compare the income computed under the cash basis with that computed under the accrual method and think about which set of income numbers would be more useful to you if you were thinking of investing in the Allen Shoe Store. Which income figures provide the more accurate and useful portrayal of the store's activities for the three-month period? Which do you think would be most useful for projecting future earnings and cash flows?

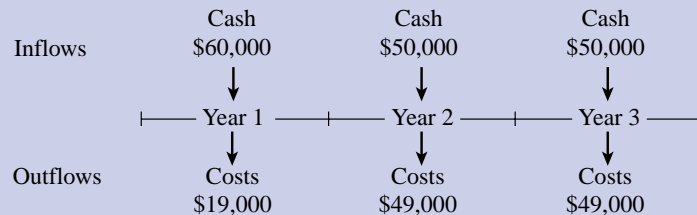


formation for predicting future cash flows. This research indicates that accrual-basis net income predicts future cash flows better than information about current cash flows. The matching process used in computing accrual-basis net income removes much of the random impact reflected in cash flows of highly variable factors such as major purchases of plant and equipment and early or late payments of receivables and liabilities. Net income results

You Decide 5-3

CASH-BASIS VERSUS ACCRUAL-BASIS
INCOME MEASURES

Peppy Puppy Magazine, a new publication, accepts subscriptions only on a calendar-year basis. The company, at a cost of \$4,000, advertises on television during the first several days of each year, and takes orders over the phone. All subscriptions start with the January issue. All orders are paid within a few days, and the company pays cash for all costs it incurs. The company starts business by offering a special three-year subscription for only \$60, payable in advance. At the beginning of the first year of business, 1,000 subscriptions are sold at the special price. In each of the next two years, 2,000 one-year subscriptions are sold for \$25 each. Each subscription costs the company \$15 per year for printing and mailing. The company's activities can be pictured in the following timeline:



Income computed on a cash basis is as follows for each of the years:

$$\text{Year 1: } \$60,000 - (\$15 \times 1,000) - \$4,000 = \underline{\underline{\$41,000}}$$

$$\text{Year 2: } \$50,000 - (\$15 \times 3,000) - \$4,000 = \underline{\underline{\$ 1,000}}$$

$$\text{Year 3: } \$50,000 - (\$15 \times 3,000) - \$4,000 = \underline{\underline{\$ 1,000}}$$

Net income using the accrual method would have been computed as follows:

$$\text{Year 1: } (\$60,000 \div 3) - (\$15 \times 1,000) - \$4,000 = \underline{\underline{\$ 1,000}}$$

$$\text{Year 2: } [(\$60,000 \div 3) + \$50,000] - (\$15 \times 3,000) - \$4,000 = \underline{\underline{\$21,000}}$$

$$\text{Year 3: } [(\$60,000 \div 3) + \$50,000] - (\$15 \times 3,000) - \$4,000 = \underline{\underline{\$21,000}}$$

Which set of income figures best portrays the company's activities, its efforts and accomplishments for each period, and the way in which income is earned over time? Explain. How might one set of numbers be better for decision making than the other?

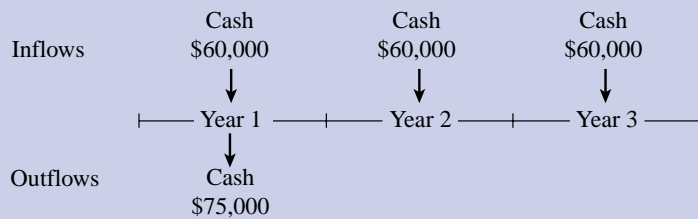
in a more direct matching of efforts and accomplishments, the foundation for generating future cash flows.

Although accrual-basis income may provide better forecasts of future cash flows, current cash flow information is also useful to financial statement users in understanding a company's operations. For this reason, companies are required to provide both income and cash flow statements.

You Decide 5-4

MORE ON CASH-BASIS AND ACCRUAL-BASIS MEASURES

Index Corporation leases a small building for its new sales office. The company signs a three-year lease, and pays rent in advance of \$75,000 for the full three-year period. Excluding the cost of the lease, the company earns income of \$60,000 each year from this sales office. All of the company's transactions are for cash. The company's activities for this sales office can be pictured in the following timeline:



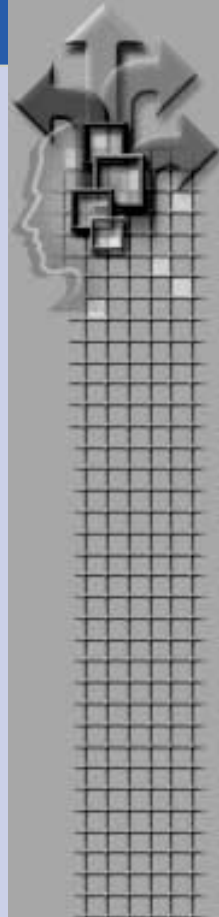
Income computed on a cash basis is as follows for each of the years:

$$\begin{aligned} \text{Year 1: } & \$60,000 - \$75,000 = \underline{\underline{\$(15,000)}} \\ \text{Year 2: } & \$60,000 - \$0 = \underline{\underline{\$60,000}} \\ \text{Year 3: } & \$60,000 - \$0 = \underline{\underline{\$60,000}} \end{aligned}$$

Income computed using the accrual method is as follows:

$$\begin{aligned} \text{Year 1: } & \$60,000 - (\$75,000 \div 3) = \underline{\underline{\$35,000}} \\ \text{Year 2: } & \$60,000 - (\$75,000 \div 3) = \underline{\underline{\$35,000}} \\ \text{Year 3: } & \$60,000 - (\$75,000 \div 3) = \underline{\underline{\$35,000}} \end{aligned}$$

Which set of income numbers do you think is most useful for decision making? For example, if you were assessing the future potential for this sales office after the first year, what would each of the two sets of numbers suggest for the future? Explain.



REPORTING INCOME STATEMENT ELEMENTS

Information for Decisions

The income statements of most companies use a similar format and include similar terminology. Knowledge about the form of the statement and its terminology will help investors and creditors effectively use the income statement for decisions and help answer questions such as these: What sources of income are most important to the com-

pany's success? Is the company's operating income comparable with other companies in the same industry? Given my ownership interest, what is my share of the company's income? Which items included in the company's income this period can be expected to occur again in the future?

The form of the income statement is not entirely specified by authoritative requirements, but most companies prepare income statements that follow a general pattern. Some companies minimize the number of individual items shown in the income statement, while others provide much more detail. The income statement for Our Video Store, shown in Exhibit 2–1, includes revenues from two types of rentals and lists several expenses. Because the business is not incorporated, neither income taxes nor earnings per share are reported. A simplified corporate income statement might appear as follows:

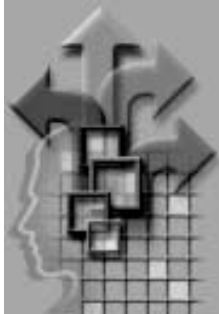
MODEL COMPANY	
INCOME STATEMENT	
FOR THE YEAR ENDED DECEMBER 31, 2001	
Revenues	\$1,000,000
Operating expenses:	
Cost of goods sold	\$470,000
Selling expenses	150,000
General and administrative expenses	110,000
Miscellaneous expenses	35,000
Total operating expenses	(765,000)
Operating income	\$ 235,000
Nonoperating income and gains	23,000
Nonoperating expenses and losses	(8,000)
Income before income taxes	\$ 250,000
Income tax expense	(100,000)
Net income	<u>\$ 150,000</u>
Earnings per common share	<u>\$1.50</u>

REVENUES

Revenues result from the primary activities of the business enterprise. If a company is involved in a variety of activities, the revenues derived from each of the major activities should be disclosed separately, either in the income statement or in a separate presentation, to help financial statement readers better understand the operations of the company. For example, Deere & Company (www.deere.com), a major producer of farm and lawn and garden equipment, also has financial and health services divisions. Deere & Company provides a breakdown of revenues in its income statement to show separately those derived from equipment sales, finance and interest income, and insurance and health premium income. Because information provided

You Decide 5-5

THE IMPACT OF REVENUE CHANGES



UAL Corporation (United Airlines) (www.ual.com) reports revenues in three categories: Passenger, \$15,342,000,000; Cargo, \$892,000,000; and Other Operating Revenues, \$1,144,000,000. Which would be more significant to UAL, and to you as a decision maker: a 10 percent decrease in cargo shipments resulting from the loss of a government contract, or a 5 percent decline in passenger revenue from the loss of gate space at New York's Kennedy Airport? Explain.

about revenues varies considerably among companies, financial statement users should be sure they understand a company's various revenue sources when assessing the company's future. (See You Decide 5-5.)

Some companies report sales revenues net, while others report gross sales and show a deduction to arrive at net sales, as follows:

Sales revenue	\$78,654,000
Less returns and allowances	<u>(602,000)</u>
Net Sales	<u>\$78,052,000</u>

The term *net* means after deductions, while the term *gross* means before deductions. Some companies permit purchased goods to be returned for a refund under certain conditions, and some companies may give customers allowances if goods or services are in some way unsatisfactory. The amount of **sales returns and allowances** during the period is deducted from sales revenue, resulting in net sales. If the amount of returns and allowances is significant, it should be disclosed. A large amount of returns and allowances may indicate problems, such as overly aggressive sales personnel or inadequate quality control procedures.

OPERATING EXPENSES

Operating expenses include those costs associated with supporting the central activities of the company. For a manufacturing or merchandising company, the largest operating expense is typically the cost of the inventory sold during the period, while for a service company, the largest single cost may be salaries and associated benefits.

Companies usually have many different operating expenses, perhaps fifty or a hundred different kinds. To avoid undue complexity in the income statement, most companies combine various expenses into several major categories. For example, UAL Corporation's income statement lists ten categories of operating expenses.

Cost of Goods Sold. For many companies, the cost of products sold exceeds all of the other operating expenses combined. This expense includes those materials, labor, and other costs associated with manufacturing or purchasing products that have been sold during the period and the revenue from which is included in revenues. For example, a producer of breakfast cereals would include, for all products sold during the period, the cost of corn, wheat, rice, sugar, and other ingredients, together with the cost of production labor, packaging, and other production costs, in the reported cost of goods sold.

For manufacturing and merchandising companies, cost of goods sold is such an important item that it is often shown separate from other expenses, as follows:

Sales revenue	\$45,389,000
Cost of goods sold	<u>26,885,000</u>
Gross profit	<u>\$18,504,000</u>

Other operating expenses are shown following gross profit. The term **gross profit** or **gross margin** simply refers to net sales minus cost of goods sold. Because the profits of a manufacturing or merchandising company come from the sale of the company's products, gross profit is an important figure for assessing the company's current operations and its future. If, for example, a company's gross profit as a percentage of sales is low compared with other companies in the industry, it might indicate the company is operating inefficiently or its products have an inferior reputation. Similarly, a declining gross profit over time would not bode well for the company's future.

An income statement that reports cost of goods sold separately and shows a gross profit figure is called a multistep income statement. An income statement that shows cost of goods sold with the other operating expenses—and, accordingly, does not include a gross profit fig-

ure—is called a single-step income statement. Unlike in decades past, many companies today are engaged in a number of different types of operations, often including the sale of both goods and services. For these types of enterprises, called conglomerates, single-step income statements may be best because cost of goods sold may relate to only a portion of the revenues reported and the gross profit figure may be meaningless.

Marketing, Advertising, and Promotional Expenses. Selling or marketing expenses are found in the income statements of most companies. Businesses often need well-trained sales staffs to sell their products or services, and incur costs for sales salaries and commissions, as well as training and travel costs and the costs of operating sales offices.

Also, companies attempt to influence people to purchase their goods and services by providing them with selected information in the form of advertisements. As we watch endless T.V. commercials or listen to the latest attempt at a memorable soft drink jingle, we are receiving a message that may or may not be useful for our decisions and may or may not influence us. In addition, companies attempt other types of promotions to try to get us to purchase what they are selling. Does anyone not know about the sweepstakes promoted by Ed McMahon? Mr. McMahon, of course, does not work for free, and the sweepstakes prizes, although having a present value far below the total value advertised, are substantial. All of these costs are reported as advertising and promotional expenses and often constitute a significant portion of total operating expenses.

The amount and type of advertising and promotional activities may differ from company to company and industry to industry. Nevertheless, all companies must promote their products or services in some way, and the cost of doing so often is important information for financial statement users.

General and Administrative Expenses. Many companies incur considerable costs in the overall operation of the business. These costs might include salaries and benefits for the corporate management and office staff, utility expenses, insurance expense, legal and accounting fees, the cost associated with operating the corporate headquarters, and costs of new product development.

Interest Expense. Most major corporations have borrowed and currently owe significant amounts of money. For example, long-term debt of about \$1.8 billion has financed nearly one-third of the total assets of Ralston Purina Company. The cost of borrowing, interest expense, often is an important factor in the profitability of a company. Interest on long-term debt is essentially a fixed cost that does not change with the level of operations, and financial statement users are concerned with the amount of operating profits that must be generated to ensure coverage of interest. As an example, TWA had such a large amount of debt and related interest expense before entering its first bankruptcy that the company had virtually no chance of being profitable, regardless of the success of its operations. Some companies classify interest expense as a nonoperating item.

Other Operating Income and Expenses. Other operating income and expenses arise from a number of sources. Examples include gains and losses related to sales of assets or to foreign currency changes, environmental costs, and litigation settlements.

OPERATING INCOME

Operating income is computed as the difference between revenues and operating expenses and represents the income earned from the central operations of the business. Operating income is expected to be the mainstay of the enterprise. It provides the incentive for owners to continue as suppliers of capital and, therefore, represents one of the most important pieces of information used in evaluating future prospects.

Comparisons of operating income over time for a particular company or comparisons to operating incomes of other companies in relation to their revenues can reveal whether earnings are improving or declining and how efficiently the company is operated relative to other companies. However, there is not complete uniformity in the items included in or excluded from operating income, so caution should be exercised when making comparisons across companies. For example, Ralston Purina includes investment income in the computation of operating income where many companies would report this as a nonoperating item. Further, not all companies separately identify operating income, so detailed analysis of the income statement is especially important.

GAINS, LOSSES, AND NONOPERATING ITEMS

A variety of items are unrelated or only partially related to the normal operating activities of a business, yet they are part of the overall activities of the company and must be included in the computation of net income. **Gains** are increases in net assets resulting from peripheral activities or incidental events, and **losses** are decreases in net assets resulting from peripheral activities or incidental events. Examples include a gain on the sale of old equipment no longer used in operations and an uninsured loss from an earthquake. Other nonoperating items might include costs of reorganizing the company or costs related to other unusual events.

INCOME TAX EXPENSE

Income tax expense reflects the amount of federal, state, local, and foreign taxes the company expects to pay based on its income. This amount is often quite significant, draining off perhaps one-third of a company's pretax profits, as with Procter & Gamble, or even more. Because of its significance, income tax expense is of concern to financial statement users and is reported separately. Some companies label this item "Provision for Income Taxes."

Tax laws are exceedingly complex. Many special tax provisions often make a company's income tax expense difficult to estimate based simply on a knowledge of the company's pretax income and current tax rates. Therefore, companies are required to provide a detailed description of the computation of income tax expense in the notes to the financial statements.

NET INCOME

Net income or net earnings is the "bottom line" of the income statement. Net income is an all-inclusive figure. It includes everything that affects the wealth of the business, with the exception of additional investments by owners, distributions to owners, and a few special items.

The amount reported as net income represents a return to the owners for investing in the company. Often a portion of the reported net income is distributed to owners in the form of dividends. The portion of the earnings not distributed to owners is added to the owners' equity or retained earnings balance in the balance sheet. Companies seldom pay out all of their net income as cash dividends because they often need to conserve cash for reinvestment in additional assets and operations.

Not all of the dividend payments necessarily go to the true residual owners of the corporation, the common shareholders. In some cases another class of stock, preferred stock, might be outstanding. **Preferred stock** represents a special ownership interest with rights specified by the agreement between the preferred stockholders and the corporation. Preferred stockholders usually have preference over common shareholders in receiving dividend distributions and distributions of assets if the corporation is liquidated. Preferred stock usually has a fixed dividend rate, but the right to vote is typically withheld. Because preferred dividends normally must be paid before dividends can be paid to common shareholders, preferred dividends are deducted when determining the income remaining for common

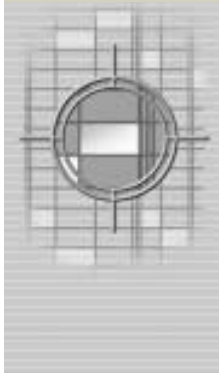
shareholders. Note, however, that dividends, whether common or preferred, are not expenses, but distributions of income.

EARNINGS PER SHARE

Earnings per share (EPS) is the most commonly quoted measure of operating success. Investors rely heavily on EPS information in determining how much to pay for a company's stock. Net income alone may not be a sufficient measure of operating success because it fails to consider the effects of the number of owners who share in the income available to common shareholders.

A CLOSER LOOK AT

EARNINGS PER SHARE



Sandy Barcon owns 100 shares of Blue Company's common stock and 100 shares of Orange Company's common stock. Blue has a total of 10,000 shares of common stock outstanding, and Orange has 25,000 shares outstanding. Both companies report net income of \$100,000 for the year. What is Sandy's share of the income of each of the two companies?

	Blue	Orange
Net income	\$100,000	\$100,000
Number of common shares	$\div 10,000$	$\div 25,000$
Earnings per common share	\$ 10	\$ 4
Shares held by Sandy	$\times 100$	$\times 100$
Sandy's share of income	<u>\$ 1,000</u>	<u>\$ 400</u>

By considering the number of shares outstanding, the EPS number provides a clearer picture of the extent to which each share of stock participates in the earnings of the company and the extent to which it may be expected to share in future profits and cash flows. The magnitude of the difference in EPS between Blue and Orange suggests a significantly higher future cash return from owning a share of Blue stock. Accordingly, Blue's stock could be expected to sell at a higher price per share than Orange's stock.

In its simplest form, EPS is computed by dividing net income by the weighted average number of shares of common stock outstanding during the period. If the company has preferred stock outstanding, preferred dividends must be deducted before computing EPS. This complex topic is discussed in more detail in Chapter 14.

ADDITIONAL ELEMENTS OF THE INCOME STATEMENT

In addition to the major elements typically found in the income statement, several special items may appear on an irregular basis. To alert financial statement users to the inclusion of these items in income, they are separately disclosed in the income statement if the amounts are material. Exhibit 5-5 illustrates how a complex income statement that includes all of the special items might appear.

BUSINESS ENTERPRISE OPERATING STATEMENT**EXHIBIT 5-5**

MODEL COMPANY	
INCOME STATEMENT	
FOR THE YEAR ENDED DECEMBER 31, 2001	
Revenues	\$1,000,000
Operating expenses	(765,000)
Operating income	\$ 235,000
Other income and gains	23,000
Other expenses and losses	(8,000)
Income from continuing operations before income taxes	\$ 250,000
Income tax expense	(100,000)
Income from continuing operations	\$ 150,000
Loss from discontinued operations	(85,000)
Income before extraordinary loss and cumulative adjustment	\$ 65,000
Extraordinary loss	(50,000)
Income before cumulative adjustment	\$ 15,000
Cumulative adjustment from change in accounting principle	25,000
Net income	<u>\$ 40,000</u>
Earnings Per Share:	
Income from continuing operations	\$1.50
Income before extraordinary loss and cumulative adjustment	.65
Income before cumulative adjustment	.15
Net income	.40

Three types of special items are classified separately in the income statement: (1) income and losses from discontinued operations, (2) extraordinary gains and losses, and (3) cumulative adjustments from changes in accounting principles. All these items must be reported “net of taxes.” This means that the income tax effect of each of these items must be included in the reported amount for the item rather than being included in reported income tax expense. For example, if a company with a 40 percent tax rate reported operating income before taxes of \$100,000 and a \$50,000 extraordinary gain on an insurance settlement, the bottom portion of its income statement would appear as follows:

Operating income before income taxes	\$100,000
Income tax expense (40 percent)	<u>(40,000)</u>
Income before extraordinary gain	\$60,000
Extraordinary gain (net of \$20,000 taxes)	<u>30,000</u>
Net income	<u>\$ 90,000</u>

Discontinued Operations. A dynamic business environment means companies must constantly change if they are to remain competitive. In some cases, a company may discontinue a major product line or dispose of an operating division that has become unprofitable or no longer fits into the company’s overall strategic plan.

A decision to eliminate a major product line or operating division has greater potential impact on the future operating capability of a company than does the sale of individual assets. For that reason, a gain or loss on the disposal of an operating segment must be shown separately in the income statement, along with any income earned by that segment from the beginning of the reporting period until the time of disposal.

Extraordinary Items. Events that are (1) unusual in nature and (2) not expected to recur in the foreseeable future are called **extraordinary items**. Gains and losses arising from extraordinary items must be reported separately in the income statement if they are material in amount. An example of an extraordinary loss would be an uninsured flood loss in a region where floods seldom occur.

Why does anyone care if an item is classified as extraordinary? Extraordinary events are considered anomalies and should not be considered as part of the recurring earnings of the company. Separate classification of such items allows financial statement users to focus on recurring earnings when assessing enterprise performance and attempting to project future earnings and cash flows.

Changes in Accounting Principles. Although consistency dictates that the accounting methods used by a company should remain constant from period to period, changes in circumstances sometimes lead to changes in accounting principles. In most cases, a change from one acceptable accounting principle to another is done through a “catch-up” adjustment so that subsequent financial statements are the same as if the company had always used the new principle. This *cumulative adjustment from a change in accounting principle* is reported at the bottom of the income statement immediately before net income.

These changes in accounting principles are included in the computation of net income, but they do not arise from operations. In fact, they are simply “paper events” resulting from a decision to change the way in which real events are given recognition in the accounts. To avoid distortions of income projections that might result if these adjustments were included in the income figures on which forecasts are based, cumulative adjustments must be classified separately, with an explanation provided in the notes.

ADDITIONAL DISCLOSURES

Companies provide considerable additional income-related information in their annual reports beyond the income statement itself. Although not required, most major companies include in their annual reports financial summaries that include selected income statement information for some number of periods, such as five or ten years, for comparative purposes. These summaries typically include net sales, gross margin, operating income, net income, and earnings per share. They may also include other items such as interest expense and income taxes.

The notes to the financial statements also provide additional income statement information, depending on the type of entity and the detail in the income statement. Common items found in the notes include the following:

- A summary of significant accounting policies
- The amount of repairs and maintenance expense
- The amount spent for research and development
- An explanation of the computation of income tax expense
- A detailing of significant debt terms and debt maturities
- Information related to the cost of retirement plans and other postretirement benefits
- Sales, income, and assets of different operating and geographic segments of the enterprise
- Computation of earnings per share
- The effects of recent authoritative accounting pronouncements

REPORTING COMPREHENSIVE INCOME

Information for Decisions

Some events affect the well-being of a business but are not directly related to normal operations. Accounting rules require that certain of these items be excluded from net income and be reported separately so their effects on the enterprise's current performance and financial position can be considered by financial statement users. Understanding these items can help decision

makers answer questions such as the following: To what extent did the company become better or worse off during the period by holding (and not selling) investments in securities? To what extent was the company's position with respect to its foreign subsidiaries affected by changes in the rate at which foreign currencies can be exchanged for U.S. dollars?

A few events that affect the well-being of the business enterprise in the long run are not as closely tied to management's decisions during the period as those transactions and events reported in the income statement. These items are not included in the computation of net income. Instead, they are included in a new measure of performance called **comprehensive income**.

Comprehensive income includes all changes in owners' equity during the period except capital transactions (investments by and distributions to owners). Comprehensive income is equal to net income plus other comprehensive income. Other comprehensive income includes the following three elements:

- Unrealized gains and losses from holding (rather than selling) certain types of investments (see Chapter 8)
- Gains and losses from translating foreign-currency financial statements of foreign subsidiaries into U.S. dollars (see Chapter 16)
- Special adjustments relating to pensions

Companies may report other comprehensive income elements in any one of three ways:

- In a combined statement of income and comprehensive income, following net income
- In a separate statement of comprehensive income, starting with net income
- Separately within the statement of changes in stockholders' equity

Most companies report other comprehensive income in the statement of changes in stockholders' equity. This alternative downplays other comprehensive income, consistent with the views of most corporate chief financial officers that this information is not very useful. However, the FASB may eliminate this alternative in the future. Few companies present a combined statement of income and comprehensive income to avoid confusing readers as to which measure of performance is primary.

The computation of net income is unaffected by the rules governing comprehensive income, and net income is expected to continue as the primary performance measure. The cumulative effect of other comprehensive income from the current and all prior periods is reported in the balance sheet in a special stockholders' equity account in a manner similar to the way in which the effects of net income for the current and past periods are accumulated in Retained Earnings.

In Practice 5-4



MAYTAG'S COMPREHENSIVE INCOME

Maytag Corporation's financial statements include a separate statement of comprehensive income, with comparative statements included for the three years ending December 31, 1998 (in thousands):

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31		
	1998	1997	1996
Net income	\$280,610	\$180,290	\$136,429
Other comprehensive income items, net of income taxes:			
Unrealized losses on securities	(1,257)	(3,605)	
Minimum pension liability adjustment		107	5,549
Foreign currency translation	(2,929)	(445)	585
Total other comprehensive income	(4,186)	(3,943)	6,134
Comprehensive income	\$276,424	\$176,347	\$142,563

In addition, in its December 31, 1998, balance sheet, Maytag reports a negative Accumulated Other Comprehensive Income balance of \$15 million.

ANALYSIS

Maytag has experienced all three types of other comprehensive income over the three-year period reported. The company uses a clear, straightforward presentation of comprehensive income by providing a separate statement of comprehensive income. The negative balance sheet amount, Accumulated Other Comprehensive Income, reflects a cumulative decrease in stockholders' equity up to the end of the current year. As can be seen from the statement of other comprehensive income, approximately \$8 million of that amount occurred in the past two years. [www.maytag.com]

SUMMARY

Income is the incentive for businesses to exist. It attracts investors to risk their money with the expectation of getting back their investments, with a return on the investment in addition. Income is a measure of the extent to which society values what it is that a business entity does. If the enterprise does something society values, the enterprise will prosper; otherwise, the enterprise will incur losses and will ultimately cease to exist.

Businesses report the results of their operations periodically so interested parties can use the information to make decisions about the future. In particular, information about past income may be useful for forecasting future earnings and cash flows. Many different groups use income information, but primary among them are investors and creditors.

In a simple situation, net income is the excess of revenues and gains over expenses and losses. Revenues derive

from the sale of an enterprise's goods and services through its central operations. Revenues are usually recognized when they are realized and earned, which is when (1) an exchange has occurred in which the seller receives cash or a claim to cash and (2) the earning process has been completed. Expenses reflect the cost of goods and services used up in the production of revenues and are recognized when the related revenues or other benefits are recognized. Gains and losses derive from activities and events that are peripheral or unrelated to the central operations of the enterprise. They often are not included in operating income, although they are included in the net income of the entity.

Some small businesses recognize income on a cash basis, treating cash inflows as revenues and cash outflows as expenses. Because the cash basis fails to match efforts and

accomplishments by period, the cash basis is not generally accepted. The accrual basis of measuring income matches costs with the benefits they produce, reporting both in the same period. This approach is considered more useful for assessing the results of an enterprise's activities and as a basis for forecasting future earnings and cash flows.

The income statement reports on a business's productive activities for a period of time. While the bottom line, or net income, is important, a complete analysis of the items within the statement must be made for a thorough under-

standing of the enterprise. In particular, comparisons with other enterprises and across time may be especially useful. The amount of earnings per share of common stock is a figure that receives particular attention from investors and financial analysts.

Some items reported by businesses affect the overall well-being of the company but are excluded from net income. Several such items are reported as elements of other comprehensive income and, together with net income, result in total comprehensive income.

LIST OF IMPORTANT TERMS

book value (162)	gains (177)	net income (156)
carrying amount (162)	gross margin (175)	net loss (156)
comprehensive income (181)	gross profit (175)	preferred stock (177)
cost of goods sold (162)	income statement (156)	realization (167)
cost of sales (162)	losses (177)	sales returns and allowances (175)
extraordinary items (180)	net assets (156)	

EXAMINING THE CONCEPTS

- Q5-1** Why do investors place a great deal of emphasis on reported net income?
- Q5-2** How is net income defined?
- Q5-3** What parties other than shareholders use income statement information in arriving at economic decisions?
- Q5-4** In what ways does corporate management use income statement data?
- Q5-5** In what ways can employees find income statement data useful?
- Q5-6** In what ways may taxing and regulatory authorities find income statement data useful?
- Q5-7** Why should an investor not rely solely on the amount of reported net income or loss for the current period in arriving at a decision on whether or not to purchase the stock of a particular company?
- Q5-8** When is the term *cost of goods sold* used in the income statement and what does it mean?
- Q5-9** What are the primary advantages and disadvantages of recording revenue on a cash basis?
- Q5-10** What are the primary advantages and disadvantages of recording expenses on a cash basis?
- Q5-11** Using the accrual basis of accounting, when is revenue recognized?
- Q5-12** Using the accrual basis of accounting, when are expenses recognized?
- Q5-13** Why is it generally considered inappropriate to recognize revenue at the point of production for most products? For what type(s) of business operations might it be appropriate to recognize income at the time of production?
- Q5-14** When are losses recognized for financial reporting purposes?
- Q5-15** When are gains generally recognized? Why are different standards used in the recognition of gains and losses?
- Q5-16** What factors may cause the cash generated from operations to be substantially greater than the amount of reported operating income?
- Q5-17** Most of Stone Jewelry's sales are on the store's charge cards and are collected evenly over 120 days. If about 80 percent of the store's sales are in November and December, in which months will reported revenue be greatest under cash-basis accounting and under accrual accounting?
- Q5-18** When do sales returns and allowances arise? How are they reported in the financial statements?
- Q5-19** What is gross profit, and how is it computed? Why is it important?
- Q5-20** What types of expenses are normally classified as general and administrative expenses in the income statement?

Q5-21 How is operating income measured, and why is it important to decision makers?

Q5-22 In what way do preferred shareholders participate in the distribution of dividends and in the distribution of assets if the corporation is liquidated?

Q5-23 Why is a provision for income taxes typically included in the income statement of a business entity?

Q5-24 How is earnings per share calculated? Why is earnings per share considered useful?

Q5-25 What events are reported as discontinued operations, and why are they reported separately?

Q5-26 What events are reported as extraordinary items, and why are they reported separately?

Q5-27 When are cumulative adjustments reported in the income statement, and what does the amount reported represent?

Q5-28 Distinguish between a sales return and a sales allowance. How are these items included in the income statement?

Q5-29 Why is earnings available to common shareholders used in place of net income in computing earnings per share?

UNDERSTANDING ACCOUNTING INFORMATION

E5-1 The Nature of Income Acme Company prepared the following income statement for the year 2000:

Acme Company	
Income Statement	
Year Ended December 31, 2000	
Net Sales	\$44,545
Cost of products sold	(30,734)
Marketing, administrative and other operating expenses	(10,743)
Operating income	<u>\$ 3,068</u>
Interest expense	(599)
Other income, net	410
Earnings before income taxes	<u>\$ 2,879</u>
Income taxes	(466)
Net earnings	<u><u>\$ 2,413</u></u>

Use the income statement of Acme Company and your knowledge of income reporting to answer each of the following:

- a. What was the change in owners' equity during the period excluding the effects of any additional investments or withdrawals by the owners?
- b. Over what period was Acme's income measured?
- c. What was the major source of Acme's income?
- d. What costs did Acme incur in running the business?
- e. What item or items were included in the income statement that were not directly related to Acme's operating activities for the period?

E5-2 The Importance of Income

- a. The success of a company's efforts is often judged by the amount of income it earns.
 1. How does the fact that a company manufactures television sets and generates a profit from its operations indicate society values its activities?

2. How is reported income used in forecasting future cash flows?

3. Should investors rely primarily on the amount reported as net income in assessing a company's future earnings potential and cash flows? What effect will an unexpected or unusual event have on these assessments?

- b. You are considering buying an insurance agency and have received the following information on two agencies operating in your city:

	Agency A	Agency B
Total revenue for the year	\$100,000	\$125,000
Total operating expenses for the year	60,000	88,000
Nonoperating income and expense	<u>-0-</u>	<u>-0-</u>
Net income	<u>\$ 40,000</u>	<u>\$ 37,000</u>
Total number of insurance policies sold	1,000	1,250

Which agency seems to be the more efficiently operated? Explain why.

E5-3 Components of Income

- a. For each of the following, indicate whether the item would be classified as an operating revenue, operating expense, gain or loss, nonoperating income, nonoperating expense, or not included in the computation of net income:
 1. Sale of products to other divisions within the company.
 2. Sale of products to parties outside the company.
 3. Cost of goods sold.
 4. Income taxes.
 5. Labor costs.
 6. Pension costs.
 7. The amount received in excess of the carrying amount of land that is sold.

8. Interest income from temporary investments.
 9. The cost of reorganizing a struggling company.
- b. Indicate which of the items above you would consider important in developing a forecast of a company's future net income and cash flows. If you are not sure if a component should be included, indicate the reason for your uncertainty.

E5-4 Measurement of Income You are planning to invest in either Company A or Company C. In making your decision, you want to project future income and future cash flows for each company. The following information was made available by the companies:

Company A	
Income Statement	
Year Ended December 31, 2000	
Revenues	\$15,000
Costs and expenses	(10,000)
Operating income	\$ 5,000
Gain from sale of building	10,000
Interest income from temporary investment	2,000
Net Income	<u>\$17,000</u>

Company C	
Income Statement	
Year Ended December 31, 2000	
Cash receipts:	
Collected from sales	\$18,000
Sale of building	45,000
Interest income	1,000
Total receipts	<u>\$64,000</u>
Cash payments:	
Costs and expenses paid	\$ 8,000
Purchase of delivery trucks	30,000
Distribution to owners	5,000
Total payments	<u>(\$43,000)</u>
Net cash flow	<u>\$21,000</u>

Company A has measured income on the accrual basis, while Company C has measured income using cash receipts and disbursements. Identify and describe the differences in the measures used by the two companies and indicate how these differences will affect your comparison of the companies.

E5-5 Income Recognition on the Cash Basis

- a. Although the cash basis of income measurement is not generally accepted for financial reporting purposes, it is often used. Indicate the reasons why a company or an individual may use cash basis income measurement and reporting.

- b. Jim Golden regularly builds and sells custom-made furniture. Some customers pay cash for the furniture at the time they place the order, other customers pay cash when the furniture is delivered, and still others pay for the furniture 30 days after delivery. If Jim uses the cash basis for income recognition, when will he recognize revenue from the sale of furniture?

E5-6 Income Recognition Using the Accrual Method

- a. When are revenues recognized under the accrual accounting model? What conditions must be met?
- b. Use the matching concept to determine the amount of expense or other items to be recognized in the income statement of the current year for each of the following:
1. The Morales Company purchases a delivery truck for \$40,000 at the beginning of the year and expects to use the truck for 5 years. Repairs and operating costs during the first year are \$4,700.
 2. Takayama Company received \$25,000 from the sale of a building that originally cost \$100,000 and had a carrying value of \$60,000 at the time of sale.
 3. Lucinda Company purchased inventory costing \$48,000 last year and \$30,000 this year. A total of three-fourths of the inventory purchased last year was sold during that year. The remaining one-fourth was sold this year, along with one-half of the inventory purchased this year. What amount of cost of goods sold should be recognized in each of the years?
 4. Tasis Company borrowed \$50,000 on July 1 of the current year. The amount of the note and all accumulated interest are to be repaid in 18 months, assuming an annual interest rate of 8 percent. What amount of interest expense should be recognized for the current year?

E5-7 Relationship Between Income and Cash Flows In each of the following cases, indicate whether reported income on the accrual basis will be greater than or less than the reported net cash flow.

- a. The company purchases buildings and equipment for cash.
- b. Money borrowed in the prior year is repaid this year.
- c. The company is short of cash and delays payment on many of its current expenses.
- d. The company makes a major effort to collect its outstanding receivables, and the amount of customer's receivables outstanding is reduced by 50 percent.
- e. A supplier goes into bankruptcy and the company purchases enough inventory to meet its production needs for the next two years.

E5-8 Reporting Income Statement Elements

- a. Gross profit as a percentage of Orion Company's sales has declined from 20 percent to 15 percent over the past three years. Has cost of goods sold been increasing or decreasing relative to sales during these years? Explain.

- b. Reclassify the expenses of Company B so the operating incomes of Company A and Company B may be compared. After the reclassification, determine which company has the highest operating income as a percentage of sales.

Company A	
Income Statement	
Year Ended December 31, 2000	
Revenues	\$1,000,000
Cost of goods sold	<u>(600,000)</u>
Gross profit	\$ 400,000
Selling & administrative expenses	<u>(100,000)</u>
Operating Income	\$ 300,000
Other income and expense:	
Interest income	\$ 20,000
Income tax expense	(150,000)
Other gains & losses	<u>(30,000)</u> <u>(160,000)</u>
Net Income	<u>\$ 140,000</u>

Company B	
Income Statement	
Year Ended December 31, 2000	
Revenues	\$2,500,000
Cost of goods sold	(1,300,000)
Selling and administrative expenses	(550,000)
Interest expense	(25,000)
Other losses	(50,000)
Income tax expense	(200,000)
Special provision for reorganization	<u>(35,000)</u>
Net Income	<u>\$ 340,000</u>

E5-9 Reporting Comprehensive Income Gladbrook Corporation reported income from operations of \$500,000 and net income of \$240,000 for 2000. In addition to its income statement, Gladbrook reported a statement of other comprehensive income, as follows:

Gladbrook Corporation	
Statement of Other Comprehensive Income	
For the Year Ended December 31, 2000	
Net income	\$240,000
Gain on holding certain marketable securities	<u>88,000</u>
Comprehensive income	<u>\$328,000</u>

Gladbrook Corporation is accumulating money for a major expansion in its facilities and in January 2000 invested \$600,000 in marketable securities, which increased in value to \$688,000 at December 31, 2000. Because the securities have not been sold and the gain is unrealized, the \$88,000 increase is not included in net income. Gladbrook paid no dividends in 2000.

- a. By what amount will retained earnings increase in 2000?
- b. By what amount will Gladbrook's reported net assets increase in 2000?
- c. As a potential investor, does the disclosure of comprehensive income provide useful information? Explain.
- d. Would your response to part c change if the value of the securities declined in 2001 and Gladbrook were to sell them for \$580,000? Explain why.

E5-10 Multiple Choice: Using Income Data Select the correct answer for each of the following:

1. An income statement provides information on:
 - a. Cash receipts and disbursements for the period.
 - b. The amount of money contributed to the business entity by shareholders during the period.
 - c. The amount of money contributed to the business entity by creditors during the period.
 - d. The operating results for the business entity during the period.
2. Shareholders often find income statement information useful in:
 - a. Developing estimates of future cash flows from the business entity.
 - b. Developing estimates of the value of long-term assets held by the business entity.
 - c. Determining the amount of long-term debt and new equity securities that have been sold during the period.
 - d. All of the above.
3. Income statement information often is useful to:
 - a. Individual investors.
 - b. Creditors and suppliers.
 - c. Labor unions.
 - d. All of the above.
4. Corporate management focuses on net income:
 - a. As a primary basis for deciding when to sell long-term assets.
 - b. As an important measure of the operating success for the current period.
 - c. As a way of determining how much cash was generated from operations during the period.
 - d. As a way of determining how much cash was generated from the sale of stock and long-term liabilities during the period.
5. Income statement data is especially useful in:
 - a. Determining trends in profitability from period to period.
 - b. Comparing the profitability of similar companies.
 - c. Deciding whether to discontinue operations in an operating division.
 - d. All of the above.

E5-11 Multiple Choice: Income Statement Amounts Select the correct answer for each of the following:

1. Under generally accepted accounting principles, revenue normally includes:
 - a. Cash and receivables generated from the sale of goods and services.

- b. The amount of cash generated from the sale of long-term assets.
 - c. Increases in the value of long-term assets and decreases in the value of long-term liabilities.
 - d. Increases in the value of inventory produced during the period.
2. A gain is recorded when:
 - a. Inventory held for resale is sold at more than its carrying amount.
 - b. Inventory held for resale is sold for less than its carrying amount.
 - c. Land is sold for more than its carrying amount.
 - d. Land is sold for less than its carrying amount.
 3. Cost of goods sold normally includes:
 - a. The cost of raw materials included in products sold.
 - b. The cost of labor used to produce goods currently held in inventory.
 - c. The cost of production equipment purchased during the period.
 - d. All of the above.
 4. Other expenses reported in the income statement should include:
 - a. The cost of materials used in the production process.
 - b. Interest expense on bank loans.
 - c. The purchase price of land acquired during the period to be used as a future building site.
 - d. The cost of labor used in the production process.
- c. Recognizes the cost of producing the product as an expense at the time the cash payment is received from the sale of the product.
 - d. All of the above.
4. The accrual basis of income measurement:
 - a. Recognizes revenue at the time cash payment is received from selling a product to a customer.
 - b. Recognizes revenue in the period in which a product is produced.
 - c. Recognizes the cost of producing a product as an expense in the period in which the product is produced.
 - d. Recognizes the cost of producing a product as an expense in the period in which the product is sold.
 5. The matching concept means that:
 - a. The full cost of a noncurrent asset is matched against revenue in the period in which the asset is purchased.
 - b. A proportionate share of the cost of a long-lived asset is matched against revenue in the periods in which the asset is used.
 - c. The cost of producing a product is treated as an expense in the period in which the product is produced.
 - d. The cost of producing a product is treated as an expense in the period in which the product is made available for sale.

E5-12 Multiple Choice: Cash Versus Accrual Income

Select the best answer for each of the following:

1. When cash-basis income measurement is used:
 - a. Income nearly always will be greater than income reported on an accrual basis.
 - b. Income nearly always will be less than income reported on an accrual basis.
 - c. Actual cash receipts and cash payments serve as a basis for determining the amount of income to be reported.
 - d. Actual cash receipts and cash payments are adjusted to match the cash flows with the timing of the underlying economic events.
 2. The cash basis of income measurement is most likely to be appropriate for:
 - a. A small company that sells on credit and pays for everything with cash.
 - b. A major corporation with a great deal of cash coming in and going out each day.
 - c. A middle-sized company that leases all facilities and equipment annually and sells only for cash.
 - d. A small video rental store that has just purchased a large number of new video tapes.
 3. The cash basis of income measurement:
 - a. Does not recognize insurance expense in the current period if a three-year policy was purchased in the prior period.
 - b. Recognizes revenue at the time the product is delivered to the customer.
1. Which of the following is not reported in the income statement?
 - a. Cash received from operations.
 - b. Dividend income from investments.
 - c. Provision for income taxes.
 - d. Cost of goods sold.
 2. Net sales are derived by deducting from gross sales:
 - a. The cost of all items sold this period.
 - b. Interest expense and other financing costs.
 - c. Sales returns and allowances.
 - d. Manufacturing costs not included in cost of goods sold.
 3. A cumulative adjustment is reported in an income statement when:
 - a. A highly unusual event occurs and a gain or loss results.
 - b. A long-lived asset is sold and a gain or loss results.
 - c. A major segment of the business is sold and a gain or loss results.
 - d. A change in accounting principle occurs.
 4. An extraordinary item is reported in the income statement when:
 - a. An unusual and infrequent event occurs.
 - b. A major segment of a business is sold.
 - c. A significant price reduction is given to a customer as a result of shipping the wrong product.
 - d. A warehouse is sold at a significant loss.
 5. In computing earnings per share:
 - a. Net income is divided by the total number of shares of common and preferred stock actually outstanding.

E5-13 Multiple Choice: Reporting Income Select the best answer for each of the following:

- b. Net income is reduced by the amount of dividends paid to common shareholders before it is divided by the weighted average number of common shares outstanding.
- c. Net income is reduced by the amount of dividends paid to preferred shareholders before it is divided by the weighted average number of preferred shares outstanding.
- d. Net income is reduced by the amount of dividends paid to preferred shareholders before it is divided by the weighted average number of common shares outstanding.

E5-14 Income Statement Effects Explain how each of the following individual transactions affects (increases, decreases, or does not affect) the amount of net income Southwest Company would report under generally accepted accounting principles; if income is unaffected, explain why:

- a. Products are sold for \$55,000.
- b. The cost of materials used in producing the products sold is \$25,000.
- c. The cost of labor used to produce the products sold is \$12,000.
- d. Cash collected on accounts receivable from the prior year is \$15,000.
- e. Land costing \$8,000 is purchased.
- f. Equipment with a carrying amount of \$7,200 is sold for \$6,300.
- g. Property taxes amounting to \$8,700 are paid.
- h. Dividends of \$1,700 on investments in other companies are received, and dividends of \$7,500 are paid by Southwest Company.

E5-15 Income Statement Items Explain how each of the following individual transactions affects (increases, decreases, or does not affect) the reported accrual-basis net income of Central Corporation. If income is unaffected, explain why:

- a. Payments of \$35,000 are made on accounts payable.
- b. Inventory costing \$75,000 is purchased and all but \$8,000 of it is sold during the period for \$32,000.
- c. Land previously purchased for \$84,000 is sold for \$97,000.
- d. A change of accounting methods results in an upward cumulative adjustment of \$6,300.
- e. Utility bills totaling \$4,100 are received during the period, but remain unpaid at the end of the period.
- f. Total credit sales for the period are \$285,000. At the end of the period, \$82,000 is uncollected. All accounts receivable are expected to be collected.
- g. Additional shares of common stock are sold by Central Corporation for \$325,000.

E5-16 Basic Income Statement Copper Corporation recorded sales of \$720,000 during 2000. Operating costs for the year included cost of goods sold of \$550,000, salaries and wages of \$90,000, and other operating costs of \$42,000. Copper Corporation also received dividend income of \$15,000

and miscellaneous income of \$19,000. During 2000, Copper recorded interest expense of \$31,000 and income tax expense of \$16,000. You have been asked by the vice president of finance to prepare an income statement in good form.

E5-17 Computing Income Cyril's Bowling Lanes recorded the following revenues and expenses for the month of September:

Receipts from bowling	\$75,000
Receipts from locker rentals	1,200
Receipts from shoe rentals	2,800
Salary expense	43,000
Repairs on lanes and equipment	19,000
Cleaning supplies and materials	400
Gain on sale of used bowling balls	650
Building rental expense for September	5,000

The local banker wishes to have an income statement for the month of September prepared before approving renewal of a loan to Cyril. Cyril has requested your assistance in preparing an income statement in good form.

E5-18 Income Statement During April, Totz Company sold for \$875,000 merchandise for which it had paid \$612,000. The company paid wages of \$106,000 during the month, all related to work performed during April, and owed an additional \$3,000 of wages at the end of the month. The company's rent is \$1,500 per month. April's rent was paid at the end of March, and May's rent will be paid on the first of May. Aside from wages, the company's only liability is a \$10,000 six-month, 12 percent note to the bank, which was issued on January 17, with the interest paid at the end of each calendar month. Other expenses totaled \$45,000 for the month. Prepare a formal income statement for April for Totz Company in accordance with generally accepted accounting principles.

E5-19 Comparative Income Computations Broadhurst Corporation had cash sales of \$175,000 during the month of January. On credit sales in January, \$120,000 was collected prior to the end of the month, and \$40,000 remains to be collected in February. Also in January, \$65,000 was collected on accounts receivable held at January 1. If total expenses for January were \$264,000, what amount of net income will Broadhurst Corporation report for January using each of the following:

- a. A cash basis of income measurement?
- b. An accrual basis of income measurement?

E5-20 Cash and Accrual Basis During July, Tamblyn Corporation paid \$25,000 for July's heat, light, and power and \$200,000 for materials and supplies. All but \$30,000 of the materials and supplies were used during the month. Total payments for salaries and wages for the month were \$70,000. Additional salaries of \$15,000 for the last four working days of July have not yet been paid at the end of July. If all sales are made on a cash basis and sales revenue for Tamblyn was

\$350,000, what amount of net income will Tamblyn report for July using each of the following:

- a. A cash basis of income measurement?
- b. An accrual basis of income measurement?

E5-21 Accounting Classifications Janet Gomez is attempting to evaluate the desirability of investing some of her savings in Stanway Enterprises. Stanway Enterprises is a regional food wholesaler and has provided her with a list of its transactions during the last accounting period. She has sought your help in determining whether some of the transactions included on the list should be classified under accrual accounting as revenues (R), gains (G), expenses (E), losses (L), or items that should not appear in the income statement (O):

- a. Sales of meat products for cash.
- b. Sales of vegetables on credit, with cash to be collected early in the next period.
- c. Cost of meat products sold during the period.
- d. Cost of vegetables sold during the period.
- e. Cost of frozen juice products to be sold next period.
- f. Total sales price of unused delivery vehicles.
- g. Excess of the selling price of land sold during the period over its cost.
- h. Uninsured cost of building repairs necessitated by fire damage that occurred during the period.
- i. Cost of new delivery equipment purchased during the period.

E5-22 Income Statement Strain Manufacturing produces specialized exercise equipment for professional athletes. At the end of 2000, the head of marketing for Strain was given a printout with the following amounts:

Sales of exercise equipment	\$530,000
Gain on sale of investments	20,000
Cost of products sold	300,000
Salaries and wages	70,000
Shipping costs	45,000
Property tax expense	23,000
Depreciation expense	20,000
Interest expense	18,000
Income tax expense	24,000

The head of marketing for Strain does not have a background in finance or accounting and needs to have an income statement prepared. You are asked to prepare an income statement for Strain Manufacturing for 2000.

E5-23 Retail Income Statement Tonya's Diveshop had the following cash receipts and payments during July:

Sale of diving equipment	\$100,000
Purchase of diving equipment for sale	90,000
Salary and wage payments	18,000
Receipts from apartment rentals	8,000
Heat, light, and power used in July	3,200
Summer advertising campaign	4,200

A review of the supporting documents indicates the following:

- a. Customers must pay for all diving equipment on a same-day-as-purchase basis.
- b. One-third of the diving equipment purchased in July is still on hand at July 31 and is expected to be sold in August at normal prices.
- c. Salaries and wages are paid in full on the last day of the month.
- d. The building the store is located in is owned by Tonya and has five large apartments on the upper floors. Rent of \$1,600 covering the months of July and August was collected in advance on July 1 on each of the apartments.
- e. Depreciation of \$2,500 per month on the building is considered appropriate.

Prepare an income statement for Tonya's Diveshop for July in accordance with generally accepted accounting principles.

E5-24 Gross Profit Computations Compute the missing figure in each of the following independent cases:

	Sales Revenue	Sales Returns	Sales Allowances	Cost of Goods Sold	Gross Profit
a.	\$340,000	\$10,000	\$15,000	\$230,000	\$_____
b.	_____	1,000	9,000	70,000	13,000
c.	215,000	21,000	4,000	_____	36,000
d.	541,000	_____	7,000	316,000	214,000

E5-25 Gross Profit Cogburn Corporation recorded sales of \$800,000 during 2000. Cogburn had sales returns of \$45,000 and gave special sales allowances of \$19,000 for late delivery of products due to a strike by its delivery personnel. Cogburn took delivery of \$527,000 of inventory during the year. It reported inventory of \$107,000 at January 1 and \$88,000 at December 31. Prepare the gross profit section of Cogburn's income statement for 2000.

E5-26 Gross Profit Computation Thunder Company reported inventory of \$36,000 at January 1 and \$47,000 at December 31. A total of \$208,000 of inventory was purchased during the year. Sales returns of \$14,000 were experienced on total sales of \$341,000. Special sales allowances of \$9,000 were given to long-standing customers. Compute gross profit for Thunder Company for the year.

E5-27 Computation of Net Sales and Gross Profit Lamb Company reported the following summary data for the year ended December 31, 2000:

Cash sales	\$333,000
Collections on accounts receivable	441,000
Accounts receivable, January 1	174,000
Accounts receivable, December 31	162,000
Cost of goods sold	416,000

- Compute the amount of sales on account during 2000.
- Compute the amount of total sales for 2000.
- Compute the amount to be reported as gross profit for 2000.

E5-28 Computation of Gross Sales Rollman Corporation reported the following data for the year ended December 31, 2000:

Accounts receivable, January 1	\$ 65,000
Accounts receivable, December 31	84,000
Cash collected from customers	188,000

- Compute the amount reported as total sales by Rollman Corporation for 2000.
- What effect do sales returns and allowance have on net sales and accounts receivable?
- What amount of total sales did Rollman record during 2000 if it had \$11,000 of sales returns and allowances?

E5-29 Income Computations Compute the missing figure in each of the following independent cases:

	Revenues	Expenses	Gains	Losses	Net Income
a.	\$35,000	\$17,000	\$3,000	\$ 0	\$ _____
b.	50,000	34,000	7,000	12,000	_____
c.	_____	6,000	500	1,000	8,700
d.	82,500	_____	1,700	2,500	18,800

E5-30 Income Statement Preparation Bill Braddock started a small business in 1999 with rented equipment and soon found that his business was booming. After a successful 1999, Bill decided to invest additional money so the company could purchase equipment and additional inventory. Selected account balances for the Braddock Corporation at the end of 2000 are as follows:

Cash on hand	\$ 4,500
Cash in the bank	51,200
Accounts receivable	161,700
Inventory	388,900
Equipment	620,000
Cost of goods sold	964,300
Rent expense	56,000
Wage expense	412,000
Utilities expense	131,000
Miscellaneous expense	53,700
Accounts payable	147,500
Taxes payable	3,600
Notes payable (11 percent)	25,000
Capital stock	700,000
Sales revenue	1,790,400
Income tax expense	22,300

All of Braddock's equipment was purchased on July 1, 2000, and is expected to have a ten-year life with no residual value. The note payable to the bank was taken out on December 31, 1999, and is due on June 30, 2001. Braddock has not recorded any interest on the note because no principal or interest payments are due until the note matures. Braddock also has left unrecorded \$1,500 of wages that will be paid to employees in 2001 for work performed in 2000. The recorded rent expense includes \$4,000 rent that has been prepaid for 2001. Now Bill wants to know how his company is doing.

- Prepare a formal income statement for Braddock for 2000 in accordance with generally accepted accounting principles.
- How does Braddock Corporation seem to be doing? Explain.

E5-31 Other Income Items Compute the missing figure in each of the following independent cases:

	Gross Profit	Other Income (Expense)	Extraordinary Gain (Loss)	Net Income
a.	\$204,000	\$(9,000)	\$17,000	\$ _____
b.	94,000	16,000	_____	78,000
c.	_____	(11,000)	41,000	160,000
d.	630,000	_____	(70,000)	578,000

E5-32 Owners' Equity Compute the missing figure in each of the following independent cases:

	Beginning Owners' Equity	Net Income	Additional Investments	Distri- butions	Ending Owners' Equity
a.	\$118,000	\$23,000	\$20,000	\$15,000	\$ _____
b.	751,000	84,000	10,000	95,000	_____
c.	_____	50,000	2,000	10,000	329,000
d.	420,000	_____	25,500	12,000	452,800
e.	500,000	_____	32,000	10,000	515,000

E5-33 Unusual Events During November, Stable Trucking Corporation reported a gain of \$45,000 as a result of changing from one generally acceptable accounting principle to another. Also during November, Stable Trucking reported a loss of \$38,000 as a result of an accident in which a nearly new cement transport truck was destroyed.

- The president of Stable Trucking thinks the \$45,000 gain should be reported as a cumulative adjustment somewhere in the income statement. When are cumulative adjustments reported? Does this change qualify as a cumulative adjustment? Explain.
- The president also thinks the \$38,000 loss on the accident should be reported as an extraordinary item. When are extraordinary items reported? Does this accident qualify as an extraordinary item? Explain.

E5-34 Earnings Per Share Gonzalez Enterprises reported net income of \$360,000 for the current period. Gonzalez Enterprises is a broadly held company with 30,000 shares of common stock outstanding. What amount of earnings per share will Gonzalez Enterprises report? How can a shareholder determine whether the amount reported this year is good news or bad news?

E5-35 Earnings Per Share with Additional Stock Issued Barton Company reported net income of \$84,000 and \$92,000 in 1999 and 2000, respectively. On January 1, 1999, Barton had 10,000 shares of common stock outstanding, and on January 1, 2000, it issued an additional 10,000 shares.

- What was the weighted average number of common shares outstanding in each of the years?
- Compute earnings per share for 1999.
- Compute earnings per share for 2000.

E5-36 Earnings Per Share with Preferred Stock Kurt Corporation issued 50,000 shares of common stock and 30,000 shares of preferred stock on January 1, 1996. On January 1, 2000, it issued an additional 20,000 shares of common stock. The preferred stock has an annual dividend rate of \$4 per share. If Kurt Corporation reported net income of \$426,000 for 2000, compute the following:

- The weighted average number of common shares outstanding during 2000.
- Earnings per share for 2000.

E5-37 Other Income Statement Elements Prowell Company reported the following income statement elements for the year ended December 31, 2000:

Gross profit	\$420,000
Interest income from investments	32,000
Loss on sale of discontinued operations	71,000
Extraordinary gain on insurance settlement	14,000
Cumulative adjustment for change in depreciation methods (loss)	21,000
Income tax expense	87,000

Prowell Company had 40,000 shares of common stock outstanding on January 1, 2000, and that number did not change during the year.

- Compute Prowell's net income for 2000.
- Compute Prowell's earnings per share for 2000.

E5-38 Complex Income Statement Waldo Company reported the following income statement elements for the year 2001:

Sales	\$639,000
Cost of goods sold	428,000
Extraordinary loss on flood (net of tax)	27,000
Gain on sale of operating division (net of tax)	52,000
Loss on sale of used equipment	8,000

Other operating expenses	63,000
Income tax expense	31,000

Prepare an income statement for Waldo Company for 2001.

E5-39 Recognizing Changes in Asset Values Al and Jana Bushweiler purchased Acme Cleaning Supplies, Inc., approximately nine years ago. The previous owners had planned to expand the operations from a small midwestern business to a national supply chain and, just before Al and Jana purchased the company, acquired property in Florida, California, and Oregon. Although the property has not yet been used for expansion purposes, the value of the property in all three states has increased substantially since Al and Jana acquired Acme. In preparing the financial statements for Acme Cleaning Supplies for the current period, Al and Jana plan to report the current values of the property in the balance sheet and show the full amount of the increase as "other income" in the income statement for this year.

- How is land and other property normally valued for financial statement purposes?
- When is an increase in the value of property included in the income statement?
- When is a decrease in the value of property included in the income statement?
- If a CPA is hired to audit the financial statements of Acme Cleaning Supplies, how is the auditor likely to react to the proposal?

E5-40 Income Recognition on a Cash Basis

- For each of the following, indicate whether it would normally be appropriate or inappropriate for a company to recognize income measured on the cash basis. Explain your answer.
 - Financial statements are prepared for an individual or small business.
 - Financial statements are to be prepared in accordance with generally accepted accounting principles.
 - Sales are made on a "cash only" basis.
 - Payments for parts and labor are made as work progresses. Final products require three years to complete.
- There are three alternative possibilities with respect to the timing of the receipt of cash from a sale. Identify the three alternative possibilities and the alternative under which cash-basis income is appropriate.

E5-41 Cash-Basis Income During the month of March, Dallway Corporation received \$400,000 of inventory, and it paid suppliers \$205,000 for inventory received and sold in February and \$195,000 for inventory received in March. The total cost of inventory sold during the month of March was \$500,000. Sales of \$690,000 were reported in March, with collections from customers totaling \$335,000 from March sales and \$80,000 from February sales.

- If Dallway had no other cash receipts or payments during March, compute the amount reported as net income using the cash basis.

- b. How well does cash-basis income appear to represent the results of operations for Dallway Corporation for March?

E5-42 Evaluation of Cash-Basis Net Income Toz Company reports sales revenue and operating expenses on a cash basis. How will each of the following affect the accuracy with which cash-basis net income reports the monthly operating results of Toz?

- A building used as a warehouse is purchased for \$350,000 rather than continuing to pay monthly rent for its use.
- All of the materials needed for production for the year are purchased in early January because prices are at a low at that time of year. Under normal circumstances, materials are purchased monthly.
- At present, payment from customers is received within 30 days of the time the product is shipped. Toz is considering requiring customers to make payment by wire transfer on the day the order is shipped.
- Income taxes have been paid annually in February. Toz is considering making monthly payments.
- Employees currently are paid on the 10th of the month for work done in the previous month. The company is considering changing its procedures so that it can make payment on the last day of the month for work done that month.

E5-43 Conversion from Cash to Accrual Tucker Corporation had the following cash receipts and payments in the month of November:

Cash received from customers	\$364,000
Cash paid to suppliers	185,000
Wages and salaries paid	90,000
Cash received from sale of vehicles	28,500
Payment of liability insurance policy	30,000
Payment of estimated income taxes	37,000

In reviewing its accounting records for November, the chief accountant found the following:

- Cash received from customers during November included collections of \$26,000 from sales in October. Sales totaling \$47,000 made on account during November will be collected in December.
- Cash payments to suppliers in November included \$21,000 for merchandise purchased in November but unsold at the end of the month. Payments to suppliers in October included \$17,000 for merchandise sold in November.
- Wage and salary payments made in November included payment of \$9,000 for wages earned by employees in October. Unpaid wages earned by employees at the end of November were \$13,000.
- Vehicles sold in November had a carrying value of \$16,500 on Tucker's books at the time of sale.
- A 12-month liability insurance policy was paid in advance on November 1. Tucker had no insurance coverage prior to November 1.

Prepare an accrual-basis income statement for November for Tucker Corporation.

E5-44 Earnings Per Share—Two Classes of Stock El Paso Corporation reported net income of \$80,000 for the year 2001. El Paso Corporation has 20,000 shares of common stock and 5,000 shares of preferred stock outstanding. The preferred stock, which cannot be converted into common stock, pays an annual dividend of \$3 per share.

- What amount of earnings per share would El Paso report if there were no preferred stock outstanding?
- What amount of earnings per share will El Paso report for 2001?
- What will be the effect on reported earnings per share if a dividend of \$1 per share is paid on the common stock of El Paso Corporation in 2001? Explain your answer.

USING ACCOUNTING FOR DECISION MAKING

P5-45 Evaluating Income A friend of yours has a copy of Goody Corporation's financial statements for 2000, and the following comparative income statement information is included:

	2000	1999
Revenue	\$800,000	\$600,000
Cost of goods sold and other operating expenses	(400,000)	(420,000)
Operating income	\$400,000	\$180,000
Other income	250,000	60,000
Income before taxes	\$650,000	\$240,000
Income taxes	(260,000)	96,000
Net income	<u>\$390,000</u>	<u>\$336,000</u>

Although your friend was told by a relative about the wonderful prospects for Goody Corporation's future sales and the way management has taken control of the company, your friend is skeptical and would like your opinion. Goody Corporation is a small company, and its financial statements are not audited. Which income statement items would you like to explore in more detail? Explain why.

P5-46 Determining Sales Revenue The management of Brainway Corporation reported sales revenue of \$655,000 for the month of September. Sales revenue consists of the following:

- A total of \$420,000 was received from customers who came to the store and made immediate payment; they took their purchases with them.

2. An additional \$65,000 of products were sold to customers with established credit who came to the store and picked up their purchases, but have not yet paid for their purchases.
3. Advance payments of \$80,000 were received from customers who ordered products that Brainway will deliver during October.
4. Orders for \$90,000 of sales were received prior to the end of September. The goods were prepared for shipping, but were not yet sent.

Assuming income is measured on an accrual-accounting basis:

- a. Explain why or why not each item listed is appropriately included in Brainway's sales revenue for September.
- b. Compute the total revenue that should be reported for September.
- c. Which of the items listed above would be reported in the same period under both cash-basis and accrual-basis accounting?
- d. Why is focusing on the completion of the earning process rather than the receipt of cash important for the recognition of revenue? Why does accrual-basis revenue recognition provide more useful information for external decision makers?

P5-47 Income Statement Preparation At the request of its local bank, Spotfree Cleaners is attempting to prepare an income statement for 2000 using correct financial reporting methods. The following list of transactions was developed by carefully examining the company records and looking at a variety of receipts and vouchers:

1. Cash received from customers totaled \$397,000. Of this total, \$42,000 represented payments on commercial work that had been completed and billed in 1999. At the end of 2000, \$23,000 of additional billings had been mailed, but payment had not yet been received.
2. Salary expense is recorded at the time of payment. To date, salary payments of \$115,000 have been made during 2000. An additional \$9,000 of salary was earned by employees between the date of the last payment and the end of the year.
3. Cleaning solvent costing \$45,000 was received and paid for in 1999 but was used in 2000. Cleaning solvent costing \$75,000 was purchased during 2000. A total of 80 percent of this solvent was used up before the end of the year.
4. On January 1, 2000, \$48,000 was paid for professional liability insurance to cover a three-year period beginning with the date of payment.
5. The company borrowed \$100,000 from a local bank at the beginning of 1999. At the end of 2000, Spotfree Cleaners repaid the loan and \$12,000 of interest for the two-year period.
6. The company decided to initiate a new advertising campaign focusing on college students and paid \$8,000 for ads to be run in the local campus newspaper during the last four weeks of 2000 and the first four weeks of 2001.

Spotfree Cleaners is requesting an additional bank loan, and, as their bank loan officer, you have been trying to make sense out of their income information.

- a. For each income or expense item listed, determine the amount that should be reported in 2000. Explain your treatment of each item.
- b. Prepare an income statement for Spotfree Cleaners for 2000.
- c. Based on the limited information available, what is your assessment of Spotfree's ability to repay the loan?

P5-48 Evaluating Income Barbara Farzner has received financial statements from Green Corporation and Wilke Company and is attempting to determine which of the companies would be a better investment. The 2000 income statements of the two companies are as follows:

Income Statement Item	Green Corporation	Wilke Company
Revenue from sale of product	\$520,000	\$550,000
Investment income	80,000	150,000
Total revenue	<u>\$600,000</u>	<u>\$700,000</u>
Cost of products sold	\$400,000	\$350,000
Advertising expense	250,000	30,000
Other expenses	50,000	20,000
Total operating costs	<u>\$700,000</u>	<u>\$400,000</u>
Operating income	(\$100,000)	\$300,000
Gain on sale of land	200,000	
Loss on sale of investments		(160,000)
Cumulative adjustment from change in accounting principle		(200,000)
Net income	<u>\$100,000</u>	<u>(\$ 60,000)</u>

Although Green Corporation reports the higher net income, Barbara is concerned about the significance of several of the income statement amounts and seeks your advice:

- a. Is operating income or net income a better indicator to use when evaluating companies? Explain.
- b. Are the sale of land by Green and the sale of investments by Wilke likely to be recurring or infrequent? What impact is the sale of land likely to have on Green's income next year? What impact is the sale of investments likely to have on Wilke's income next year?
- c. What is meant by a cumulative adjustment from a change in accounting principle? Will the deduction be repeated next year?
- d. On the basis of the income statement data presented, in which company would you advise Barbara to invest? Explain why.

P5-49 Income Statement Recognition During 2000, the following events occurred that affected Northeastern Fisheries, Yarmouth, Maine:

1. Products costing \$300,000 were sold for \$450,000 cash.
2. A building with a book value of \$285,000 was destroyed by fire. Insurance proceeds were \$244,000.
3. The Great Lakes Canning Division was sold for a gain of \$372,000. Great Lakes Canning provided approximately 40 percent of Northeastern's total revenue in the prior year.

4. A change in accounting principle resulted in a \$68,000 reduction of the carrying value of inventory, with a corresponding decrease in income.
5. A meteorite struck one of the fishing boats as the boat was coming back into port and caused damage of \$97,000.
6. The president of Northeastern Fisheries fell while he was walking on the dock and required medical assistance of \$12,000.

Income statements typically classify the effects of different types of events and transactions separately. Assume that you are acquiring information about Northeastern Fisheries because you might be interested in buying stock in the company.

- a. For each of the events listed, explain how it should be reported in Northeastern's 2000 income statement.
- b. Why are the income statement effects of discontinued operations, extraordinary gains and losses, and accounting changes not included as part of operating income?
- c. If the gain on the disposal of the Great Lakes Canning Division was included in operating income and not separately disclosed, how might you, as a potential investor, be misled?

P5-50 Earnings Per Share After finally paying off your car, you have saved enough money to take the plunge in the stock market. You have been particularly interested in two companies, but only have enough money to invest in one. In trying to make a choice between them, you have paid special attention to income, and have focused on the growth in income over the past several years. Dawn Company reported net income of \$4 million five years ago, and it now reports net income of \$10 million. That looks great, but Boomer Company's net income has grown from \$3 million to \$16 million during the same period. Of course, that latest income figure includes an extraordinary gain of \$4 million, but still, that's pretty impressive growth. The other good thing about Boomer is that it has virtually no debt, financing all of its growth from operations and by issuing stock. Boomer now has 6 million shares outstanding, having issued about 2.5 million during the past five years. Dawn's shares outstanding have remained constant at 4 million.

- a. How would you analyze the earnings growth of Dawn and Boomer? What income numbers would you use, and what role would earnings per share play?
- b. Discuss how the growth of the two companies compares. Based on an analysis of earnings, do you judge one of the companies as being better than the other for a potential stock investment? Explain.
- c. List at least two pieces of information in addition to earnings data that you would find crucial in making your investment decision. Explain why.

P5-51 Cash Basis Net Income Temple Corporation reported the following cash receipts and payments during 2000:

Collection on accounts receivable:	
From sales in current year	\$340,000
From sales in prior year	50,000

Cash sales	240,000
Payments for salaries and wages	180,000
Payment received for issuing additional common stock to shareholders	100,000
Utility bills paid	60,000
Payments to suppliers on accounts payable:	
From purchases in current year	190,000
From purchases in prior year	80,000
Payments to suppliers on cash purchases	27,000
Sale of used equipment	15,000
Purchase of new delivery truck	30,000

- a. Assuming Temple Corporation uses the cash basis in reporting income, compute net income for the year 2000.
- b. Which cash receipts and payments do not appear to represent income or expenses associated with the results of Temple Corporation's activities during 2000?

P5-52 Cash Flow as a Measure of Income Stone City Weavers reported the following net income for the month of July, computed on a cash basis:

Sales		\$48,000
Less: Cost of goods sold	\$ 7,000	
Salaries and wages	34,000	
Rent	<u>2,000</u>	<u>(43,000)</u>
Net Income		<u>\$ 5,000</u>

Stone City Weavers produces high-quality birch-bark baskets. Sales are made on a cash basis only to tourists who visit the workshop. Due to the unusual nature of the baskets and the high-quality workmanship, all baskets are sold on the day they are completed. Raw materials for the baskets are purchased monthly with immediate payment made. All employees are paid for work performed during the month on the last day of the month. Rent on the building is paid on the first day of the month.

- a. Does cash-basis income for Stone City appear to accurately reflect its operations?
- b. Would a change in sales approach to distribution through a national catalog that features high-quality merchandise affect the accuracy of cash flow as a measure of monthly income? In what way?
- c. The owners of Stone City are considering adopting a profit-sharing plan for their employees. The company has reported net income in excess of \$100,000 each year for the last six years. Under the proposed plan, employees would receive 25 percent of all company profits in excess of \$50,000 per year. What effect would the adoption of such a plan have on the accuracy of reported net income on a cash basis?

P5-53 Income Generation Nordic Enterprises manufactures snowmobiles and recreational equipment and has reported the following revenues and expenses in 2000:

Equipment sales	\$ 7,000,000
Cost of parts and equipment sold	4,600,000
Wages and salaries	1,300,000
Sales of replacement parts	1,200,000

Revenue from labor charges for repair work	800,000
Income tax expense	775,000
Shipping and delivery costs	750,000
Property taxes	112,000
Interest expense on mortgage payable	103,000
Interest income on investments	88,000

- Prepare a 2000 multistep income statement for Nordic Enterprises.
- In 1999, Nordic Enterprises reported net income of \$1,150,000 and earned an 18 percent return on total revenue (net income divided by total revenue). The goal for 2000 was to earn income in excess of \$1,300,000 and earn a 20 percent return on total revenue. What amounts were reported? Did Nordic attain its goals in 2000?
- In setting its goals for net income and return on sales for future periods, what types of factors should Nordic take into consideration?

P5-54 Income Statement Preparation and Analysis

Tensel Corporation markets high-quality grinding tools. During 2000, Tensel Corporation recorded the following:

- Total sales revenue was \$578,000.
- Inventory purchases were \$345,000.
- In addition to selling all of the inventory purchased during 2000, inventory was reduced from \$120,000 at January 1, 2000, to \$75,000 at December 31, 2000.
- Wage and salaries expense was \$100,000.
- Dividend income on investments was \$26,000.
- Interest expense on bank loans was \$35,000.

- The company decided to sell the cars driven by sales personnel and lease all automobiles. The cars sold had a book value of \$85,000 and were sold for \$165,000.
- As a result of a change in accounting procedures, the book value of certain depreciable assets as of January 1, 2000, was increased from \$220,000 to \$255,000, with an accompanying \$35,000 cumulative adjustment (increase) to income for 2000.
- Using the new accounting procedures, depreciation expense on equipment used for delivery during 2000 was \$40,000.
- Sales returns and allowances for 2000 were \$12,000.
- The company paid a special \$9,000 bonus to the company president on December 20, 2000.
- On December 30, 2000, the board of directors declared and paid a dividend on common stock in the amount of \$50,000.
- Income tax expense for 2000 was computed to be \$30,000.

Using this information, do the following:

- Prepare an income statement for Tensel Corporation for 2000.
- Compute the return on total sales (net income divided by sales revenue) for 2000. The company has a goal of earning a 20 percent return on total sales. Did Tensel Corporation meet its goal in 2000?
- Determine what factors in addition to the sale of products were important in generating Tensel's reported net income for 2000. Does it appear likely that Tensel will meet its goal in 2001? Describe the factors you consider important in answering.

EXPANDING YOUR HORIZONS

C5-55 Accrual-Basis Income Sport Company has been expanding rapidly over the past five years. Because it is privately owned and has not needed to borrow any large sums of money, Sport has prepared its financial statements on a cash basis. It is now considering selling some of its shares to outside investors and needs to prepare accrual-based financial statements. The 2000 income statement for Sport company prepared on a cash basis resulted in reported net income of \$185,000, consisting of the following amounts:

Collections from customers	\$400,000
Payments to suppliers	250,000
Wage and salary payments	90,000
Income tax payments	30,000
Sale of land	220,000
Purchase of equipment	65,000

Had Sport used accrual accounting, its balance sheet accounts would have included the following:

	Jan. 1	Dec. 31
Accounts receivable	\$ 40,000	\$75,000
Inventory	100,000	70,000
Wages and salaries payable	15,000	20,000
Income taxes payable	10,000	32,000

The equipment purchased by Sport Company was delivered and payment made on December 31, 2000. Sport also sold the land on that date. The land had been purchased for \$235,000 several years earlier. An analysis of fixed assets indicates that Sport Company would have recorded \$24,000 of depreciation expense for 2000 on an accrual-accounting basis. Also during 2000, Sport Company was forced to scrap

\$46,000 of equipment that was destroyed when an earthen dam built in 1946 collapsed and water entered the plant. Fortunately, the equipment was insured, and Sport Company has reached an agreement with the insurance company. Payment of \$90,000 will be received in January 2001.

- Prepare an income statement for Sport Company for 2000 on an accrual-accounting basis.
- What are the major changes in net income computed under the accrual basis?
- Is cash-basis income a good measure of Sport's operations for 2000? Explain.
- A potential investor in Sport Company is a friend; would you recommend she invest in the company? Explain.

C5-56 Analyzing Gateway, Inc. Examine the Consolidated Income Statements of Gateway, Inc., in Appendix A and answer the following questions:

- What was the percentage change in net sales in the two most recent years?
- What was the percentage change in cost of goods sold in the two most recent years? Did cost of goods sold increase more rapidly or less rapidly than net sales during the past two years?
- What was the percentage change in earnings before income taxes during the past two years? Have earnings increased more rapidly or less rapidly than net sales?
- What was the percentage change in basic earnings per share during the past two years? Has earnings per share increased more rapidly or less rapidly than net sales?
- Would you consider purchasing shares of Gateway if you had money available for investment? What other information about Gateway might you wish to collect before purchasing Gateway shares?

C5-57 Revenue Recognition Methods Following are excerpts from the footnote disclosures of two companies, both in the business of transporting passengers:

American Airlines

Passenger ticket sales are initially recorded as a current liability. Revenue derived from the sale is recognized at the time transportation is provided.

Carnival Cruise Lines

Customer cruise deposits, which represent unearned revenue, are included in the balance sheet when received and are recognized as cruise revenue upon completion of voyages with durations of ten days or less and on a pro rata basis computed using the number of days completed for voyages in excess of ten days. Revenues from tour and related services are recognized at the time the related service is performed.

- Explain the revenue recognition issues faced by airlines. What method does American Airlines use in recognizing revenues? How does American Airlines treat amounts received from the sale of tickets prior to recognizing revenue? How would you justify this treatment?

- Explain the revenue recognition issues faced by cruise lines. What method(s) does Carnival use in recognizing revenues? How does Carnival treat amounts received for cruises prior to recognizing revenue? How would you justify this treatment?
- Would it be appropriate for Carnival to recognize revenue at the beginning of each trip when the ship sails? Explain.

C5-58 The American Dream Pilgrim Corporation offers the American dream to people wanting to "get away from it all." Pilgrim purchases unspoiled woodland and farmland plots in parcels of 200 to 300 acres. The company divides the parcels into 15-acre plots and resells them as building lots for vacation homes. Although the lots are unimproved, they are quite marketable because they are usually within a two-hour drive of a major metropolitan area. Each lot sells for \$22,500. In 2000, Pilgrim sold 1,600 plots. Approximately 20 percent of Pilgrim's customers pay cash for their purchases. The remainder of the sales are on contract under the terms of which the customer makes a 15 percent down payment and signs a 10-year note with Pilgrim. The interest rate on these notes currently is 12 percent, figured on the balance of the note outstanding during the year. Buyers pay the interest and one-tenth of the principal at the end of each year (December 31) for 10 years. Assume (for simplicity) that customers pay a full year's interest in the year land is purchased on contract. The cost of the land sold in 2000 was \$15 million, and Pilgrim held \$7 million of land that had not yet been sold at the end of 2000. Pilgrim started business on December 31, 1999, by issuing stock for \$6.4 million.

- How do you think Pilgrim should record revenues from the sale of land? Explain your method for recognizing revenues and your reasons for choosing that method.
- Based on the revenue recognition method you chose in part a, prepare an accrual-basis income statement for 2000. All of Pilgrim's expenses other than the cost of land sold total \$820,800.
- Prepare a schedule showing Pilgrim's cash inflows, outflows, and changes in its cash balance for 2000. All of Pilgrim's land purchases and other expenses are paid in cash.
- Evaluate Pilgrim's cash position at the end of 2000.
- What revenue recognition approaches might Pilgrim have adopted other than the one you recommended in part a? How would you characterize those methods, and the one you chose in part a, from aggressive to conservative? What problems do you see with the other methods?

C5-59 Evaluating Income Buzzer Corporation reported the following operating income and net income amounts:

	Income from Continuing Operations	Net Income
1997	\$ 380,000	\$ 450,000
1998	400,000	400,000
1999	(285,000)	(375,000)
2000	160,000	190,000

The income from continuing operations reported by Buzzer includes operating income and other income and expenses. Included in the 1999 loss from continuing operations was a \$150,000 write down for an anticipated loss on inventory. Although inventory prices had not dropped, the emergence of new products on the market increased the possibility that the resale value of the inventory would decline. All of the inventory held at the end of 1999 was sold in 2000 at normal profit margins.

Included in 1997 net income was a \$70,000 gain on bond retirement, which under generally accepted accounting principles must be reported as an extraordinary item. A \$90,000 charge for overtime worked by employees in 1998, but recorded as an expense and paid in 1999, also was treated as an extraordinary item. A change in accounting principle in 2000 increased income by \$30,000. Because Buzzer had excess cash on hand on January 1, 1999, it paid \$72,000 for three years' equipment rental and recorded rent expense for the full amount. Income from continuing operations for 2000 also included a \$14,000 gain on the sale of land to another company.

Upon receiving a copy of the reported operating results of the company for the four-year period, one of the new members of the board of directors of Buzzer Corporation demanded that the company recompute reported income for 1999 and 2000. He was especially concerned that the management of Buzzer used an approach called the "big bath," under which companies write off excessive amounts to expense in years when they will already be reporting a loss. This then makes reported operating results in subsequent years appear more favorable than they should.

- a. What amounts should Buzzer Corporation have reported as income from continuing operations and net income for

each of the four years? Were Buzzer's operations profitable in 2000? Explain.

- b. Would you agree that the big bath approach was used by the management of Buzzer Corporation? Explain.
- c. How would it be possible for management to adjust the amounts spent for other items such as advertising and publicity to shift reported income from one period to another? In general, would this seem to be a wise strategy for management to pursue? Why?
- d. Would the use of cash-basis net income rather than the accrual basis used by Buzzer Corporation increase or decrease the possibility of management being able to influence the amount of income reported in a particular period? Explain.

C5-60 Earnings Per Share Starburst Corporation reported net income of \$300,000 for the year 2000. On December 31, 1999, Starburst had 75,000 shares of common stock outstanding. On January 1, 2000, Starburst sold an additional 25,000 shares of common stock and 10,000 shares of preferred stock. The preferred stock pays an annual total dividend of \$60,000. A dividend of 60 cents per share currently is being paid on common shares, and is likely to continue at that level for the next five years.

- a. Compute earnings per common share for 2000.
- b. Suppose the preferred stock (known as convertible preferred) had a feature allowing stockholders to convert the preferred stock into a total of 50,000 shares of common stock at their option. Even though the preferred shares have not been converted into common stock by the end of 2000, why would a common shareholder be concerned about possible future conversion?



Internet Exercises: Visit our Web site for additional exercises.

Annual Report Project Part 5

Refer to the Annual Report Project, Part 1, at the end of Chapter 1. Using the annual report of the company you have chosen, and any other available information, answer the following questions, providing sources and computations where appropriate.

- a. How has your company's sales revenue changed over the past three years?
- b. How has your company's cost of goods sold changed over the past three years?
- c. Assess the trend in your company's gross profit (gross margin) over the current and preceding two years.
- d. Assess the trend in your company's earnings per share over the current and preceding two years
- e. Reported income tax expense is approximately what percentage of your company's income before taxes?
- f. What percentage of the company's income was distributed to owners during the most recent fiscal year?
- g. Did your company report any elements of other comprehensive income during the latest annual reporting period? If so, in which financial statement did the company report other comprehensive income?