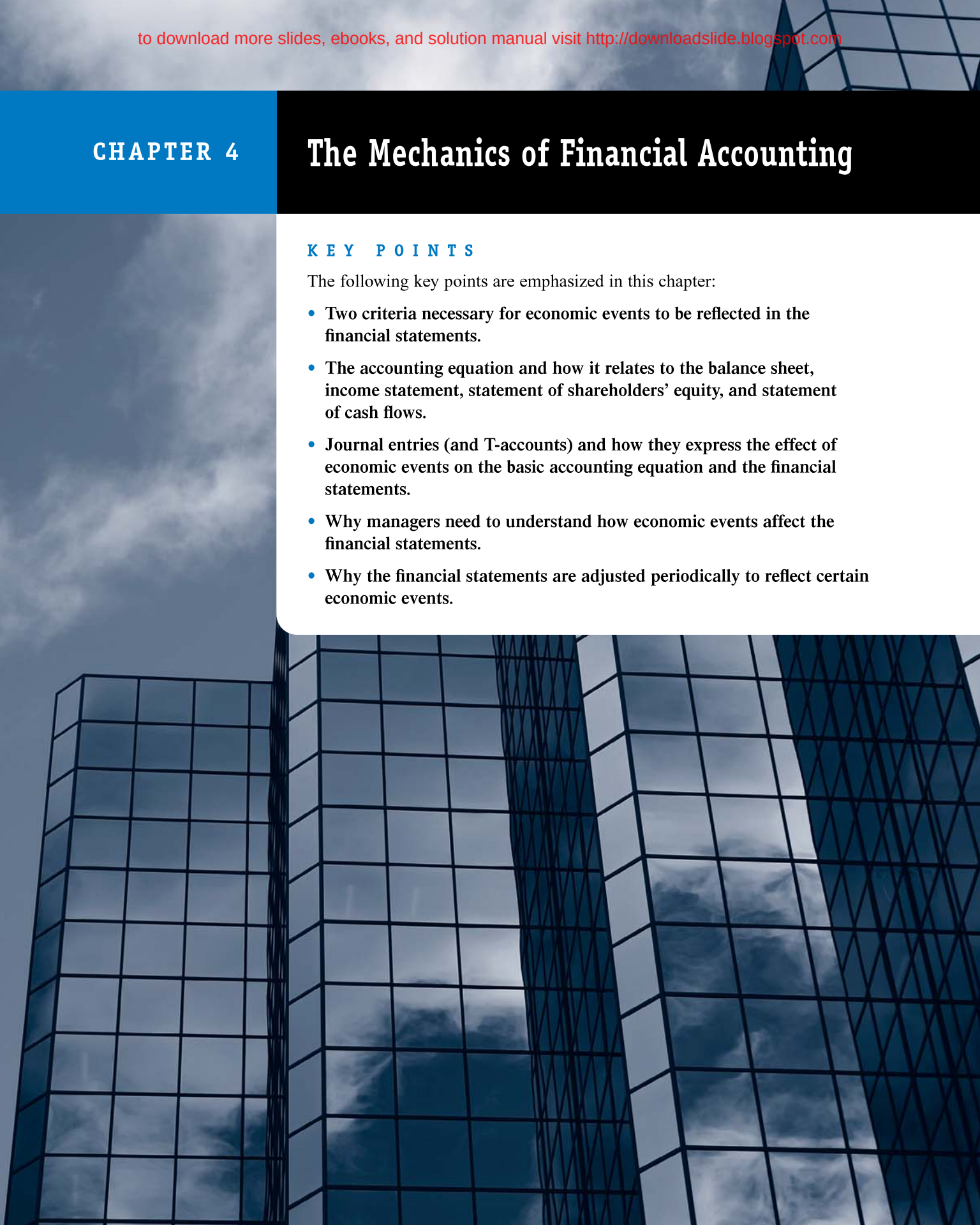
CHAPTER 4

The Mechanics of Financial Accounting

KEY POINTS

The following key points are emphasized in this chapter:

- **Two criteria necessary for economic events to be reflected in the financial statements.**
- **The accounting equation and how it relates to the balance sheet, income statement, statement of shareholders' equity, and statement of cash flows.**
- **Journal entries (and T-accounts) and how they express the effect of economic events on the basic accounting equation and the financial statements.**
- **Why managers need to understand how economic events affect the financial statements.**
- **Why the financial statements are adjusted periodically to reflect certain economic events.**



The U.S. General Accounting Office (GAO) periodically reports to Congress on the performance and accountability of various U.S. government agencies. In its report on the Small Business Administration (SBA), established to help small U.S. businesses, the GAO concluded:

The SBA continues to have difficulties producing complete, accurate, and timely financial statements. It incorrectly calculated the accounting losses on loan sales and did not perform key analyses to determine the overall financial impact of the sales. These errors and lack of key analyses also mean that congressional decision-makers are not receiving accurate financial data to make informed decisions about the SBA's budget and appropriations.

This quote reflects a problem confronting many large and well-known U.S. companies, not just governmental agencies—a lack of high-quality internal control designed to ensure that all transactions are recorded in a timely and accurate manner. As discussed in Chapter 1, the Sarbanes–Oxley Act recently placed greater emphasis on the need for internal control, as many believe that costly corporate financial frauds are in part due to internal control breakdowns.

This chapter covers the mechanics underlying the preparation of financial statements and how they help to ensure that a company's transactions are accurately and completely accounted for. After completing it, you should be able to construct financial statements from economic events.

Understanding the mechanics underlying the preparation of financial statements is crucial for effective management. Timely and accurate reporting is critical. Also, managers often choose among transactions, and such choices should not be made without considering the financial statement effects and the associated economic consequences. Consequently, managers must understand the mechanics that link transactions to the financial statements.

Managers must also understand how to read, interpret, and analyze financial statements. To do so effectively, it is useful to be able to infer from the financial statements events and transactions that occurred during the accounting period. A mechanical process, called T-account analysis, can enable users to make such inferences. This process is also helpful when preparing and understanding the statement of cash flows, and it is covered in Appendix 4A.

ECONOMIC EVENTS

Economic events reflected in the financial statements must be both relevant to the financial condition of a company and objectively measurable in monetary terms.

Relevant Events

Relevant events have economic significance to a particular company and include any occurrence that affects its financial condition. Events of general economic significance, like the election of a new U.S. president, the passage of federal legislation, or the outbreak of war, could be considered relevant. Events that are more company-specific, like the signing of a new labor agreement, the hiring of a new chief executive officer, the sale of an item of inventory, or simply the payment of monthly wages, are also relevant. Each of these events could have a significant impact on the financial resources of a particular company. Anyone interested in the company's financial status (shareholders, investors, creditors, managers, auditors, and other interested parties) wants to be able to assess the financial impact of all such events.

Objectivity

Unfortunately, only a small percentage of all relevant events are reflected on the financial statements. The dollar values assigned to the accounts on the financial statements must be determined in an objective manner.

In general, a dollar value is considered objective if it results from an exchange in which two parties with differing incentives reach agreement. To illustrate, in 2008 when Nokia offered to purchase NAVTEQ, a U.S.-based digital mapping company, from NAVTEQ's shareholders, Nokia's and NAVTEQ's shareholders had differing incentives. Nokia wanted to pay as little as possible, while the shareholders wanted to receive as much as possible. When they reached agreement on the value of NAVTEQ, a transaction took place. NAVTEQ passed to Nokia for a price of 5.3 billion euros. The price represented an objective valuation of NAVTEQ because two parties with differing incentives reached agreement on it. The transaction was accompanied by documented evidence (e.g., receipts, canceled checks, vouchers, a bill of sale) that could be used to verify its entry into Nokia's financial records, and after the purchase, an investment of 5.3 billion euros was reflected on Nokia's balance sheet.

Unfortunately, the most relevant information is not always the most objective. CBS Television Distribution, for example, is a television syndicator with the rights to *Jeopardy, Wheel of Fortune,* and *Oprah,* which generate millions of dollars in licensing fees. Yet, these rights are valued on the balance sheet at their purchase costs, less accumulated amortization, which are much less. Similarly, a partner at a major accounting firm once noted: "Coca-Cola is one of the best-recognized trademarks in the world, but it is not on their books. It got that recognition through advertising, but you don't book advertising as an asset, because you don't know if it will have future value."

In the pharmaceutical industry, when a drug passes its clinical tests, huge value is created. In the software industry, when software passes a beta test, it suddenly becomes valuable. In these two examples, do the pharmaceuticals and the software companies become more valuable when these events occur? Are the events recorded in the financial statements? Explain.

THE FUNDAMENTAL ACCOUNTING EQUATION

The four financial statements are all based on a mathematical equation, which states that the dollar value of a company's assets equals the dollar value of its liabilities plus the dollar value of its shareholders' equity. In fact, the balance sheet is a statement of this equation.

Assets = Liabilities + Shareholders' Equity

The mechanics of accounting are structured so that this equality is always maintained. If the two sides of this equation are unequal, the books do not balance, and an error has been made. However, maintaining this equality does not ensure that the financial statements are correct; errors can exist even if the **accounting equation** balances.

Assets

Assets are items and rights that a company acquires through objectively measurable transactions that can be used in the future to generate economic benefits (i.e., more

assets). Such acquisitions are usually made by purchase: An asset is received in exchange for another asset (often cash) or a payable. Assets include cash, securities, receivables from customers, land, buildings, machinery, equipment, and rights such as patents, copyrights, and trademarks. Simply, the left side of the accounting equation represents the dollar values of the items and rights that have been acquired by a company and are expected to benefit the company in the future.

Assets come from three sources: (1) They are borrowed; (2) they are contributed by shareholders (owners); and (3) they are generated by a company's operating activities. The right side of the equation, liabilities and shareholders' equity, represents the dollar values attached to these three sources. For each dollar amount on the asset side of the equation, a corresponding dollar amount is reflected on the liability and shareholders' equity side.

Liabilities

Liabilities consist primarily of a company's debts or payables. They are existing obligations for which assets must be used in the future. The dollar amount of the total liabilities on the balance sheet represents the portion of the assets that a company has borrowed and must repay.

The Associated Press reported in November, just as the 2009 holiday shopping season was beginning, that retail industry analysts were expecting shoppers to have a more difficult time finding the popular toys for Christmas presents, as stores were intentionally keeping their inventory levels to a minimum. Items such as robotic hamsters and the latest Barbie dolls were purchased by retailers in lower quantities in 2009, as stores had been hurt with excessive and slow-moving inventory during Christmas 2008. When a retailer purchases inventories from a supplier, how are the financial statements affected?

Shareholders' Equity

Shareholders' equity consists of two components: (1) **contributed capital,** the dollar value of the assets contributed by shareholders; and (2) **retained earnings,** the dollar value of the assets generated by operating activities and retained in the business (i.e., not paid to the shareholders in the form of dividends).[1] Operating activities are those transactions directly associated with the acquisition and sale of a company's products or services. Dividing shareholders' equity into its components, the fundamental accounting equation appears as follows:

Assets = Liabilities + Contributed Capital + Retained Earnings

That is, the dollar value of the assets is equal to the sum of the dollar amounts owed, the dollar amount of shareholders' contributions, and the dollar amount retained from profitable operations.

1. The second component of shareholders' equity is actually earned capital; the primary part of it is retained earnings. Later in the text we introduce another part of earned capital, called accumulated comprehensive income.

A summary of the 2008 balance sheet for Zimmer Holdings, a manufacturer of healthcare products, is provided below (dollars in millions). Describe it in terms of the basic accounting equation.

Current assets	$2,179	Liabilities	$1,585
Noncurrent assets	5,060	Contributed capital	1,268
		Retained earnings	4,386
Total	$7,239	Total	$7,239

BUSINESS TRANSACTIONS, THE ACCOUNTING EQUATION, AND THE FINANCIAL STATEMENTS

Companies conduct operations by exchanging assets and liabilities with other entities (e.g., individuals and businesses). These economic events are referred to as **business transactions.** Exchanging cash for a piece of equipment, for example, is a transaction that represents the purchase of equipment. Borrowing money is a transaction in which a promise to pay in the future (i.e., note payable) is exchanged for cash. The sale of a service on account is a transaction in which the service is exchanged for a receivable. In each of these exchanges, and in all business transactions, something is received and something is given up. *These receipts and disbursements affect the financial condition of a company in a way that always maintains the equality of the fundamental accounting equation. That is, each business transaction is recorded in the books so that the dollar values of a company's assets always equal the dollar values of its liabilities and shareholders' equity.*

Transactions and the Accounting Equation

The six transactions described here were entered into by Joe's Landscaping Service during 2011, its first year of operations. Figure 4–1 shows how each transaction affects the accounting equation. Study it carefully and read the following discussion of each transaction.

FIGURE 4–1 Business transactions and the accounting equation

Transaction	Assets	=	Liabilities	+	Contributed Capital	+	Retained Earnings
(1)	$+10,000	=			$+10,000		
(2)	+ 3,000	=	$+3,000				
(3)	+ 5,000	=					
	− 5,000						
(4)	+ 8,000						
	+ 4,000	=					$+12,000
(5)	− 9,000	=					− 9,000
(6)	− 1,000	=					− 1,000
End-of-year balance	$ 15,000	=	$ 3,000	+	$ 10,000	+	$ 2,000

TRANSACTION (1). Joe, the owner of the company, contributes $10,000. This dollar amount increases the company's cash balance, an asset, by $10,000 and is also recorded on the right side of the accounting equation under contributed capital. Note that both sides of the accounting equation are increased by $10,000, so its equality is maintained.

TRANSACTION (2). $3,000 is borrowed from a bank. The dollar amount of this exchange also increases the company's cash balance, but in this case liabilities are also increased; the company now owes $3,000 to the bank.

TRANSACTION (3). The company purchases equipment for $5,000 cash. This exchange both increases and decreases the company's assets. It now has an asset called *equipment,* and its cash balance is reduced by $5,000. Still, the equality of the accounting equation is maintained because the asset side was both increased and decreased by $5,000.

TRANSACTION (4). The company performs a service for $12,000. This transaction increases the company's cash balance by $8,000 and creates a receivable of $4,000. Thus, total assets increase by $12,000. The corresponding $12,000 adjustment on the right side of the equation, which maintains its equality, is reflected in retained earnings because the company generated this $12,000 through its own operations.

TRANSACTION (5). The company pays $9,000 for expenses—wages, interest, and maintenance. This transaction decreases the company's cash balance by $9,000 and maintains the equality of the equation by decreasing retained earnings in the amount of $9,000. Retained earnings is decreased because, as in Transaction (4), these expenses are associated with the company's operating activities.

TRANSACTION (6). Joe pays himself a $1,000 dividend as a return on his original investment. The dollar amount of the dividend reduces the company's cash balance by $1,000 and is also reflected on the right side of the equation by a $1,000 reduction in retained earnings. Retained earnings is reduced because the fundamental objective of the company's operating activities is to provide a return for the owner, and retained earnings is the measure of the assets that have been accumulated through operations.

During 2008, the Coca-Cola Company purchased property, plant, and equipment in the amount of $2.0 billion. The company also borrowed over $4.3 billion. How were these transactions reflected in the basic accounting equation?

The Accounting Equation and the Financial Statements

This section introduces and defines the concept of an account and describes the preparation of simplified versions of the balance sheet, statement of cash flows, income statement, and statement of shareholders' equity for Joe's Landscaping Service.

ACCOUNTS AND THE ACCOUNTING EQUATION

For purposes of recording transactions and preparing financial statements, the main components of the accounting equation (assets, liabilities, and shareholders' equity) can be further subdivided into separate categories called accounts. The general category of assets is normally divided into a number of accounts including, for example, a cash account, a receivables account, and an equipment account. Liabilities normally consist of various payable accounts, and as mentioned earlier, shareholders' equity can be divided into a contributed capital account and a retained earnings account.

Accounts serve as "storage units," where the dollar values of business transactions are initially recorded and later compiled into the financial statements. The accounts that appear on the financial statements represent a balance between enough detail to provide meaningful breakdowns of assets, liabilities, and shareholders' equity but not so much as to overwhelm the user.

In Figure 4–2, the main components of the accounting equation are divided into separate accounts for the purpose of recording the six transactions entered into by Joe's Landscaping Service. Note that Figure 4–2 is very similar to Figure 4–1. It differs only in that it records the transactions in more specific categories, which represent the accounts that eventually appear on the financial statements.

FIGURE 4–2 Accounts and the accounting equation

	Assets					=	Liabilities	+	Shareholders' Equity		
Transaction	Cash	+	Receivables	+	Equipment	=	Loan Payable	+	Contributed Capital	+	Retained Earnings
(1)	$+10,000					=			$+10,000		
(2)	+ 3,000					=	$+3,000				
(3)	− 5,000				$+5,000	=					
(4)	+ 8,000		$+4,000			=					$+12,000
(5)	− 9,000					=					− 9,000
(6)	− 1,000					=					− 1,000
Total	$ 6,000	+	$ 4,000	+	$ 5,000	=	$ 3,000	+	$ 10,000	+	$ 2,000

Note that total assets in Figure 4–2 ($15,000 = $6,000 + $4,000 + $5,000) equal total assets in Figure 4–1 as well as total liabilities plus shareholders' equity ($15,000 = $3,000 + $10,000 + $2,000). The components of the accounting equation have simply been divided into more specific "storage units." In the next sections, the information contained in Figure 4–2 is used to prepare the financial statements.

The basic accounting equation and its relationship to the individual accounts are exactly the same under IFRS as they are under U.S. GAAP.

THE BALANCE SHEET

The balance sheet is the statement of the basic accounting equation as of a particular date: in this case, the end of 2011. It is called a balance sheet because assets are always in balance with liabilities plus shareholders' equity. That is, there is a source for each asset the company has acquired. Figure 4–3 shows the balance sheet for Joe's Landscaping Service at the end of its first year of operations. This balance sheet was prepared by simply listing and grouping the totals of the individual asset, liability, and shareholders' equity accounts, which appear at the bottom of Figure 4–2.

FIGURE 4–3
Balance sheet for Joe's Landscaping

Joe's Landscaping Service
Balance Sheet
December 31, 2011

ASSETS		LIABILITIES AND SHAREHOLDERS' EQUITY	
Cash	$ 6,000	Loan payable	$ 3,000
Receivables	4,000	Contributed capital	10,000
Equipment	5,000	Retained earnings	2,000
Total assets	$15,000	Total liabilities and shareholders' equity	$15,000

STATEMENT OF CASH FLOWS

The statement of cash flows in Figure 4–4 was prepared directly from the activity recorded in the cash account in Figure 4–2. Each dollar value on the statement of cash flows corresponds to an increase or decrease in the cash account indicated in Figure 4–2. Note also that the ending cash balance of $6,000 on the statement of cash flows equals the balance in the cash account on the balance sheet. The statement of cash flows is nothing more than a summary of the activity in the company's cash account, divided into three sections—operating, investing, and financing activities.

FIGURE 4–4
Statement of cash flows for Joe's Landscaping

Joe's Landscaping Service
Statement of Cash Flows
for the Year Ended December 31, 2011

Operating activities:		
Sale of a service (4)	$ 8,000	
Payments for expenses (5)	(9,000)	
Net cash from operating activities		$ (1,000)
Investing activities:		
Purchase of equipment (3)	$ (5,000)	
Net cash from investing activities		(5,000)
Financing activities:		
Borrowings (2)	$ 3,000	
Owner contributions (1)	10,000	
Payment of dividends (6)	(1,000)	
Net cash from financing activities		12,000
Increase in cash balance		$ 6,000
Cash balance at beginning of year		0
Cash balance at end of year		$ 6,000

INCOME STATEMENT

The income statement is a measure of the assets generated from the company's operating activities during a period of time. It compares *revenues* (the asset inflows due to operating activities) to *expenses* (the asset outflows required to generate the revenues). The difference between revenues and expenses is called *net income* or *net loss*. If revenues exceed expenses, there is net income or profit; if expenses exceed revenues, there is a net loss.

In terms of the accounting equation, revenues, expenses, and dividends are reflected in the retained earnings account. Like the general categories of assets, liabilities, and shareholders' equity, retained earnings can be further subdivided into revenue accounts, expense accounts, and dividend accounts. Recording a transaction in a revenue account increases retained earnings; recording a transaction in an expense or dividend account decreases retained earnings.

In the example of Joe's Landscaping Service, revenues in the form of cash and a receivable were generated in Transaction (4), the sale of landscaping services for $12,000. Expenses were recognized in Transaction (5), which reflects payments made for wages, interest, and equipment maintenance. The dollar amounts of these two transactions are recorded in the retained earnings account in Figure 4–2, but in practice they would be recorded in separate revenue and expense accounts, which are components of retained earnings. An income statement can be prepared by disclosing revenues and expenses in the manner shown in Figure 4–5.

FIGURE 4–5
Income statement for Joe's Landscaping

Joe's Landscaping Service
Income Statement
for the Year Ended December 31, 2011

Revenues: Fees earned for service	**$12,000**
Expenses: Wages, interest, maintenance	**9,000**
Net income	**$ 3,000**

STATEMENT OF SHAREHOLDERS' EQUITY

The statement of shareholders' equity describes the changes during 2011 in the shareholders' equity accounts—in this case, contributed capital and retained earnings. The statement appears in Figure 4–6, and note that it simply summarizes the activities in the contributed capital and retained earnings accounts indicated on Figure 4–2, except that the net income number appears on the statement instead of the individual revenues and expenses.

FIGURE 4–6
Statement of shareholders' equity

Joe's Landscaping Service
Statement of Shareholders' Equity
for the Year Ended December 31, 2011

	Contributed Capital	Retained Earnings	Total
Beginning balance (1/1/2011)	**$ 0**	**$ 0**	**$ 0**
Contribution by owner	**10,000**		**10,000**
Net income		**3,000**	**3,000**
Less: Dividends		**(1,000)**	**(1,000)**
Ending balance (12/31/11)	**$10,000**	**$2,000**	**$12,000**

A summary of the 2009 financial statements of Target follows (dollars in millions). Discuss each statement in terms of the basic accounting equation.

Income statement:

Revenues	$62,884
Expenses	(60,670)
Net income	$2,214

Balance sheet:

Current assets	$17,488	Liabilities	$30,393
Non-current assets	26,618	Contributed capital	2,826
		Earned capital	10,887*
Total	$44,106	Total	$44,106

Statement of cash flows:

Cash from operations	$ 4,430
Cash used for investing	(4,373)
Cash used for financing	(1,643)
Decrease in cash	(1,586)
Beginning cash	2,450
Ending cash	$ 864

Statement of shareholders' equity:

	Contributed Capital	Earned Capital	Total
Beginning balance	$ 2,724	$12,583	$15,307
Share issuances	106		106
Net income		2,214	2,214
Less: Dividends		(471)	(471)
Other	(4)	(3,439)	(3,443)
Ending balance	$ 2,826	$10,887	$13,713

*Recall that earned capital is primarily comprised of retained earnings.

THE JOURNAL ENTRY

In the previous section, we demonstrated how economic events affect the accounting equation and, ultimately, the financial statements. **Journal entries** provide a more efficient way to represent such effects. They are used to represent relevant and measurable economic events, and their content and structure indicate how such events affect the accounting equation. The form of a typical journal entry follows:

	Debit	Credit
Equipment	**5,000**	
Cash		**5,000**

Purchased equipment for cash

The affected accounts in this entry are equipment and cash, and the dollar amount of the transaction is $5,000. Placing the $5,000 assigned to equipment on the left side of the entry indicates that the equipment account has been increased by $5,000. That account is said to have been *debited*. In the terminology of financial accounting, to

debit an account simply means to place the dollar amount assigned to it on the left side of the journal entry.

Placing the $5,000 assigned to the cash account on the right side of the entry, or crediting it, indicates that the cash account has been decreased by $5,000. To **credit** an account means to place it on the right side of the journal entry. The sample entry indicates that equipment was purchased for $5,000 cash.

Compound journal entries are treated in exactly the same way, but they involve more than two accounts. For example, if equipment is purchased for $5,000 cash and a $10,000 note payable, we would record the following compound journal entry:

	Debit	Credit
Equipment	**15,000**	
Cash		**5,000**
Notes payable		**10,000**
Purchased equipment for cash and a note payable		

THE DOUBLE ENTRY SYSTEM

Note in the preceding journal entries that the total dollar value on the left side is always equal to the total dollar value on the right side and that at least two different accounts were affected. Both characteristics are true of all journal entries and illustrate the **double entry system,** which is the cornerstone of financial accounting. The equality of the debit and credit sides maintains the equality of the accounting equation, and the fact that at least two different accounts are affected indicates that in all exchange transactions, something is received and something is given up.

THE JOURNAL ENTRY BOX

A useful way to learn journal entries is to view them as shown in Figure 4–7, which provides a systematic way of converting exchange transactions to journal entries. The top of the box is an expression of the accounting equation. Answers to the three questions identify the three components of each transaction: (1) the accounts affected, (2) the direction of the effect, and (3) the dollar value of the transaction.

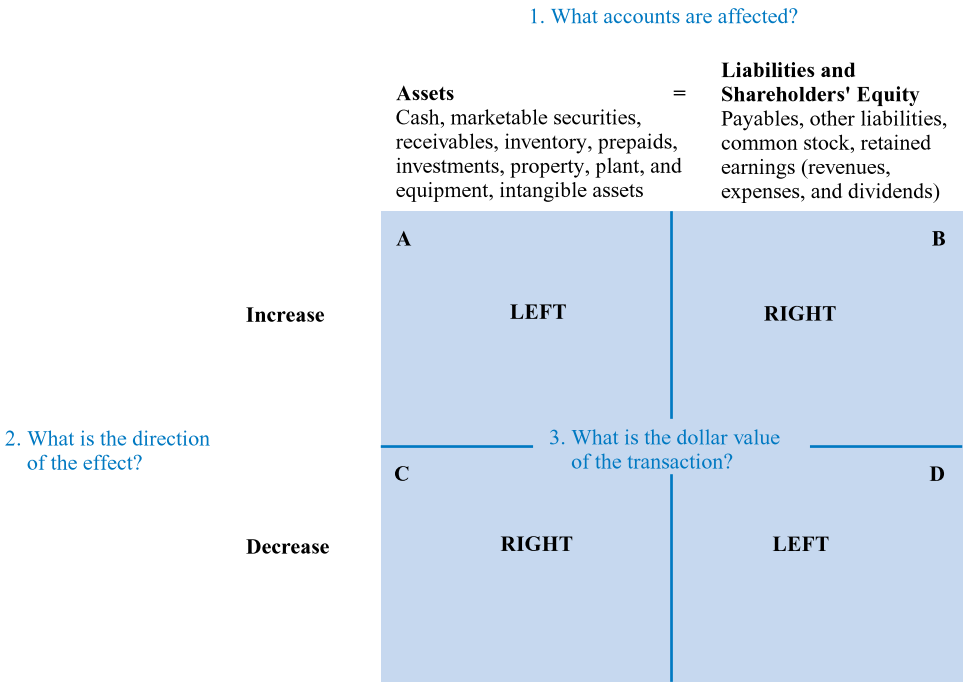
Increases in asset accounts (Cell A) and decreases in liability and shareholders' equity accounts (Cell D) are always represented on the debit (left) side of the journal entry. Decreases in asset accounts (Cell C) and increases in liability and shareholders' equity accounts (Cell B) are always recorded on the credit (right) side of the journal entry. It is important to recall that revenue, expense, and dividend accounts are all part of the shareholders' equity account, retained earnings. Thus, revenues, which increase retained earnings, are recorded on the credit side of the journal entry. Expenses and dividends, which decrease retained earnings, are recorded on the debit side of the journal entry.

Figure 4–7 shows that journal entries have been devised so that transactions are recorded in a way that always maintains the equality of the accounting equation. Debits always equal credits, and accordingly, assets always equal liabilities plus shareholders' equity.

JOURNAL ENTRIES AND THE ACCOUNTING EQUATION: EXAMPLES

In Figure 4–8, seven different transactions give rise to seven different journal entries, affecting the accounting equation in seven different ways. The equality of the accounting equation is always maintained, and the debit side of each journal entry is exactly

FIGURE 4–7 The journal entry box



equal to the credit side. Note especially Transactions 5, 6, and 7, where the equality of the accounting equation is maintained through the effect of a revenue, an expense, and a dividend on retained earnings. The explanations on the right side of the chart indicate how the journal entry box was used to construct each journal entry.

The account names in each journal entry contained in Figure 4–8 are followed by parenthetical notations designed to indicate how the entry affects the fundamental accounting equation. We use this notation throughout the remainder of the text because it emphasizes the important relationship between the economic event represented by the journal entry and the accounting equation and, ultimately, the financial statements.

During 2006, Cisco Systems recorded revenues of $36.1 billion, most of which were recorded on account. Describe how these transactions would be represented in Figure 4–8.

T-ACCOUNTS

When analyzing the effects of many economic events on the financial statements, it is useful to keep running tallies of the balances for each asset, liability, shareholders' equity, revenue, expense, and dividend account. This can be achieved by creating a T-account for each of the financial statement accounts. **T-accounts** are so named because they are in the form of a T—the left side of the T represents the debit side of

FIGURE 4–8 Journal entries and the accounting equation

Transaction	Accounting Equation: Assets	=	Accounting Equation: Liabilities and Shareholders' Equity	Journal Entry	Debit	Credit	Explanation*
1. Company receives $100 cash in payment from a customer on account.	Cash +100 Accts. Rec. −100 0	=	0	Cash (+A)** Accts. Rec. (−A)	100	100	Cash, an asset, is increased. Accts. Rec., an asset, is decreased.
2. Company borrows $500 from a bank in exchange for a short-term note payable.	Cash +500 +500	=	Notes Pay. +500 +500	Cash (+A) Notes. Pay. (+L)	500	500	Cash, an asset, is increased. Notes Pay., a liability, is increased.
3. Company pays $300 cash in payment of an account payable.	Cash −300 −300	=	Accts. Pay. −300 −300	Accts. Pay. (−L) Cash (−A)	300	300	Cash, an asset, is decreased. Accts. Pay., a liability, is decreased.
4. Company issues common share in exchange for an outstanding note payable.	0	=	Notes Pay. −1,000 Com. Stk. +1,000 0	Notes. Pay. (−L) Com. Stk. (+CC)	1,000	1,000	Notes Pay., a liability, is decreased. Com. Stk., an equity, is increased.
5. Company provides a service for which it bills its clients $2,000.	Accts. Rec. +2,000 +2,000	=	Ret. Earn. via Fees Earned +2,000 +2,000	Accts. Rec. (+A) Fees Earned (R, +RE)	2,000	2,000	Accts. Rec., an asset, is increased. Fees Earned, a revenue, increases Retained Earnings.
6. Company pays $500 in salaries to its employees.	Cash −500 −500	=	Ret. Earn. via Salary Expense −500 −500	Salary Exp. (E, −RE) Cash (−A)	500	500	Cash, an asset, is decreased. Salary Exp. decreases Retained Earnings.
7. Company declares an $800 dividend to be paid later to its owners.	0	=	Dividends Pay. +800 Ret. Earn. via Dividends −800 0	Dividends (−RE) Dividends Pay. (+L)	800	800	Dividends Pay., a liability, is increased. Dividends decreases Retained Earnings.

Note: Accts. Rec. = Accounts Receivable; Accts. Pay. = Accounts Payable; Com. Stk. = Common Stock; Dividends Pay. = Dividends Payable; Notes Pay. = Notes Payable; Ret. Earn. = Retained Earnings; Salary Exp. = Salary Expense.
*See journal entry box in Figure 4–7.
**Typically, journal entries would not include the information in parentheses:
+ = increase and − = decrease; A = Asset; L = Liability; SE = Shareholders' Equity; R = Revenue; E = Expense; Ga = Gain; Lo = Loss; CC = Contributed Capital; RE = Retained Earnings
Balance Sheet (A = L + SE)
Income Statement (R + Ga − E − Lo = NI). Note: No gains or losses are illustrated in this example.
SE = CC + RE

the entry, and the right side corresponds to the credit side. Since journal entries also have a debit and credit side, the debited and credited dollar amounts are easily transferred (posted) to their respective T-accounts.

Figure 4–9 illustrates the relationships among the basic accounting equation, T-accounts, and journal entries. The following example demonstrates how financial

statements can be prepared from a group of economic events (transactions), each of which is represented by a journal entry. The balances are maintained in T-accounts.

FIGURE 4–9 Relationships among basic accounting equation, T-accounts, and journal entries

Basic accounting equation:

Assets = Liabilities + Shareholders' Equity

Shareholders' Equity = Contributed Capital + Retained Earnings

Retained Earnings = Revenues − Expenses − Dividends

Corresponding T-accounts:

Assets	Liabilities	Contributed capital	Revenues	Expenses	Dividends
+ | −	− | +	− | +	− | +	+ | −	+ | −

Sample journal entries:

Issue stock:	*Cash (+A)*	*X*		**Sell service:**	*Asset (+A)*	*X*	
	Contr. Cap. (+CC)		*X*		*Revenue (+RE)*		*X*
Borrow:	*Cash (+A)*	*X*		**Pay salaries:**	*Expense (−RE)*	*X*	
	Liability (+L)		X		Asset (−A)		X
Buy Asset:	*Asset (+A)*	*X*		**Pay dividend:**	*Dividend (−RE)*	*X*	
	Cash (−A)		*X*		*Cash (−A)*		*X*

AN EXAMPLE. The December 31, 2011, balance sheet of Maple Services Company appears in Figure 4–10. The journal entries and associated T-accounts for ten transactions, entered into during 2012, are provided in Figure 4–11. Note first that the account balances from the balance sheet are the beginning balances in the T-accounts. Note also that the journal entries, numbered 1–10, are posted in the T-accounts. Review each journal entry and trace the dollar amounts of the debits and credits to the T-accounts. The financial statements, which appear in Figure 4–12, can be prepared directly from the T-accounts.[2]

FIGURE 4–10
Maple Services balance sheet

Maple Services Company
Balance Sheet
December 31, 2011

ASSETS		LIABILITIES AND SHAREHOLDERS' EQUITY	
Cash	$12,000	Salaries payable	$ 4,000
Accounts receivable	9,000	Notes payable	6,000
Land	15,000	Contributed capital	21,000
		Retained earnings	5,000
		Total liabilities and	
Total assets	$36,000	shareholders' equity	$36,000

2. The closing process is not illustrated in this example. It is illustrated, however, in the review problem at the end of the chapter (p. 163).

FIGURE 4–11 Maple Services Company

JOURNAL ENTRIES

(1) Cash (+A)	5,000	
Common Stock (+CC)		5,000
Issued common share		
(2) Land (+A)	7,000	
Cash (−A)		7,000
Purchased land		
(3) Salaries Payable (−L)	4,000	
Cash (−A)		4,000
Paid salaries owed at the end of 2008		
(4) Cash (+A)	6,000	
Accounts Receivable (−A)		6,000
Received cash on outstanding accounts receivable		
(5) Cash (+A)	7,000	
Service Revenue (R, +RE)		7,000
Received cash for services provided		
(6) Rent Expense (E, −RE)	500	
Cash (−A)		500
Paid rent		
(7) Insurance Expense (E, −RE)	100	
Cash (−A)		100
Paid for insurance coverage		
(8) Salary Expense (E, −RE)	3,000	
Cash (−A)		3,000
Paid salaries		
(9) Interest Expense (E, −RE)	500	
Notes Payable (−L)	2,000	
Cash (−A)		2,500
Paid interest and principal on an outstanding loan		
(10) Dividends (−RE)	1,000	
Cash (−A)		1,000
Paid cash dividend		

T-ACCOUNTS

Cash				Accounts Receivable			
	12,000			9,000		(4)	6,000
(1)	5,000	(2)	7,000				
(4)	6,000	(3)	4,000	3,000			
(5)	7,000	(6)	500				
		(7)	100				
		(8)	3,000				
		(9)	2,500				
		(10)	1,000				
	11,900						

Land				Salaries Payable			
	15,000						4,000
(2)	7,000			(3)	4,000		
	22,000						0

Notes Payable				Contributed Capital			
			6,000				21,000
(9)	2,000					(1)	5,000
			4,000				26,000

Retained Earnings				Service Revenue			
			5,000			(5)	7,000

Salary Expense				Rent Expense			
(8)	3,000			(6)	500		

Insurance Expense				Interest Expense			
(7)	100			(9)	500		

Dividends			
(10)	1,000		

FIGURE 4–12
Financial statements for Maple Services Company

Income Statement
for the Year Ended December 31, 2012

Service revenue		$7,000
Expenses:		
Salaries	$3,000	
Rent	500	
Insurance	100	
Interest	500	
Total expenses		4,100
Net income		$2,900

Statement of Shareholders' Equity
for the Year Ended December 31, 2012

	Common Share	Retained Earnings	Total
Beginning balance	$21,000	$ 5,000	$26,000
Common share issuances	5,000		5,000
Net income		2,900	2,900
Less: Dividends		(1,000)	(1,000)
Ending balance	$26,000	$ 6,900	$32,900

Balance Sheet
December 31, 2012

ASSETS		LIABILITIES AND SHAREHOLDERS' EQUITY	
Cash	$11,900	Notes payable	$ 4,000
Accounts receivable	3,000	Contributed capital	26,000
Land	22,000	Retained earnings	6,900
		Total liabilities and	
Total assets	$36,900	shareholders' equity	$36,900

Statement of Cash Flows
December 31, 2012

Operating activities:		
Cash receipts for services	$ 7,000	
Cash receipts from accounts receivable	6,000	
Cash payments for salaries	(7,000)	
Cash payments for rent	(500)	
Cash payments for insurance	(100)	
Cash payments for interest	(500)	
Cash increase (decrease) due to operating activities		$ 4,900
Investing activities:		
Cash payment for purchase of land	$(7,000)	
Cash increase (decrease) due to investing activities		(7,000)
Financing activities:		
Cash receipt from issuing share	$ 5,000	
Cash payment for loan principal	(2,000)	
Cash payment for dividends	(1,000)	
Cash increase (decrease) due to financing activities		2,000
Increase (decrease) in cash balance		$ (100)
Beginning cash balance		12,000
Ending cash balance		$11,900

INCOME STATEMENT. The income statement for the period ending December 31, 2012, is prepared by subtracting the balances in the expense T-accounts (salary expense, rent expense, insurance expense, and interest expense) from the balances in the revenue T-accounts (service revenue), resulting in net income.

The statement of shareholders' equity for that same period consists of adding the $5,000 common share issuance to the beginning balance in common share, coming to the ending (2012) balance of $26,000. Common stock is a form of contributed capital. The reconciliation of the retained earnings account consists of the addition of net income less the amount of dividends declared during the period. The result ($6,900) is the ending (December 31, 2012) balance in retained earnings.

BALANCE SHEET. The December 31, 2012, balance sheet consists of the balances in the asset (cash, accounts receivable, land), liability (notes payable), and shareholders' equity (contributed capital and retained earnings) T-accounts. Note that the ending balance in retained earnings ($6,900), which was computed on the statement of shareholders' equity, appears on the balance sheet.

The dollar amounts on the balance sheet represent the beginning balances for asset, liability, and shareholders' equity T-accounts for the next period (2013). Since the dollar amounts in the revenue, expense, and dividend accounts are reflected in the ending balance of retained earnings, the revenue, expense, and dividend T-accounts begin the next period (2013) with zero balances. The balance sheet accounts are described as **permanent** because their balances accumulate from one period to the next. The income statement and dividend accounts are described as **temporary** because their balances begin each new period at zero.[3]

STATEMENT OF CASH FLOWS. The statement of cash flows is prepared from the cash T-account. Each cash inflow and outflow is classified as operating, investing, or financing and then placed on the statement. This statement reconciles the change in the cash balance during the period, expressing it in terms of cash increases (decreases) due to operating, investing, and financing activities.

RECOGNIZING GAINS AND LOSSES

Companies often sell investments and noncurrent assets, receiving dollar amounts that do not match the amounts at which the investments are carried on the balance sheet. In such cases, a gain or loss must be recognized in the amount of the difference between the proceeds and the carrying amount.

When JCPenney sold the Eckerd drugstore chain to CVS Corporation for $4.53 billion, it recorded a $77 million loss on the transaction. How can a company sell a subsidiary for over $4 billion and record a loss on the transaction?

When McDonnell Douglas sold its North American Field Service business for $100 million, it recognized a $29 million gain because the investment was carried on the company's balance sheet at $71 million. Assuming that the business was acquired

3. In actual accounting systems, the year-end balances in the revenue, expense, and dividend accounts are formally transferred to retained earnings through a series of journal entries. This closing process zeroes out the balances in the temporary accounts so that they begin at zero the next period. This process is illustrated in the review problem at the end of this chapter.

for $71 million, the following journal entries were used to record these events. (Dollar amounts are in millions.)

Investment (+A)	**71**	
Cash (−A)		**71**
Acquired North American Field Service for cash		
Cash (+A)	**100**	
Investment (−A)		**71**
Gain on Sale (Ga, +RE)		**29**
Sold North American Field Service for gain		

If McDonnell Douglas had sold the business for an amount less than the $71 million carrying amount, $55 million for example, a loss would have been recognized in the following manner.

Cash (+A)	**55**	
Loss on Sale (Lo, −RE)	**16**	
Investment (−A)		**71**
Sold North American Field Service for loss		

The gain or loss in the entry represents the profit or loss on the transaction in the amount of the difference between the proceeds and the balance sheet value of the investment. Note also that the gain or loss appears on the income statement, and the cash proceeds from the sale would appear on the statement of cash flows under cash flows from investing activities.

Goodyear Tire & Rubber sold assets in its Latin American and European segments for $53.3 million. The value of the assets on the balance sheet prior to the sale was $27.6 million. How did Goodyear record this transaction?

PERIODIC ADJUSTMENTS

Up to now the discussion has focused on the financial statement effects of exchange transactions—transactions backed by documented evidence, in which assets and/or liabilities are transferred between parties. Assets and liabilities, however, are often created or discharged without the occurrence of a visible, document-driven exchange transaction. They sometimes build up or expire as time passes. Interest, for example, is earned continually on bank savings accounts, and machinery depreciates as it is used in a company's operations. Such phenomena are not evidenced by exchange transactions, but they can be very important to a company's performance and financial condition.

Net income for a particular period is measured by (1) recognizing revenues when the earning process is complete and (2) matching against those revenues the expenses incurred to generate them. Under this view of performance, called the **accrual system of accounting,** revenues are booked when assets are created (or liabilities are discharged) and expenses are recorded when liabilities arise (or assets are reduced). In other words, revenues and expenses can be recognized either before or after the related cash is received or paid. The accrual system requires that periodic adjustments be made to the financial statements so that net income for a given period of time will be the result of a proper matching of the revenues and expenses within that period.

Periodic adjustments take one of three forms: (1) accruals, (2) deferrals, and (3) revaluations. The first two are covered in this chapter; revaluation adjustments are covered in subsequent chapters as they arise.

Accruals

Accruals refer to amounts in asset and liability accounts that build up over time. The term *accrue* simply means to build up gradually.[4] Two very common examples are accrued wages and accrued interest.

ACCRUED WAGES

Suppose that employees of Taylor Motor are paid at the end of each week. The total weekly payroll is $10,000, which is earned at a rate of $2,000 per day for each of the five working days. Assume that December 31 falls on a Tuesday, and the financial statements are prepared as of that day. Figure 4–13 illustrates these facts and the journal entries that would be recorded under accrual accounting.

FIGURE 4–13 Accrued wages

	Period 1		Period 2		
	Monday (12/30)	Tuesday (12/31)	Wed. (1/1)	Thur. (1/2)	Friday (1/3)
Wages Earned:	$2,000	$2,000 *Adjustment* Wage Exp. (E, −RE) 4,000 Wages Pay. (+L) 4,000 *Recognized accrued wages*	$2,000	$2,000	$2,000 Wages Pay. (−L) 4,000 Wage Exp. (E, −RE) 6,000 Cash (−A) 10,000 *Paid accrued wages*

In applying the accrual system, it must be recognized that although no cash has been paid as of December 31, a liability has been created. The company owes its employees two days' worth of wages, or $4,000. This liability is recognized with an adjusting journal entry of the form indicated in Figure 4–13. Wage expense of $4,000 is reflected on the income statement of the period ending on December 31 (Period 1). Wages payable of $4,000 appears in the liability section of the December 31 balance sheet, and the amount is carried into Period 2. Note that on Friday, when the $10,000 cash payment for wages is made, $4,000 serves to remove the wages payable (the liability is discharged), and $6,000 is charged to wage expense of Period 2 and thus will appear on the income statement of Period 2.

The adjustment in this example achieves matching, in that it matches the cost of the effort expended by the employees in Period 1 with the revenues generated in Period 1. Wage expense of $4,000 is subtracted from Period 1 revenues in the computation of

4. Note that the term *accrual* refers to a system of accounting that recognizes revenues and expenses as assets and liabilities are created or discharged, as well as one of two kinds of adjusting entries. The double meaning of this term can be a source of confusion, and it is important that you be aware of the context in which it is used.

Period 1 net income. Similarly, the cost of the effort expended by the employees in Period 2 ($6,000) is matched against Period 2 revenues on the Period 2 income statement.

It is also important to realize that Taylor would prepare statements of cash flows for Periods 1 and 2 and the entire $10,000 cash payment would be reflected in the operating section of that statement in the second period only. None of it would appear on the statement of cash flows of Period 1. As Figure 4–14 indicates, the total resource expenditure recognized under the accrual system is the same as that recognized under the cash system. The difference lies in the timing of the recognition. Due to the adjustment, the accrual system recognizes $4,000 in Period 1 and $6,000 in Period 2.

FIGURE 4–14
Expenditure recognition

Accounting System/Financial Statement	Period 1	Period 2	Period 3
Accrual/Income statement	$4,000	$ 6,000	$10,000
Cash/Statement of cash flows	0	10,000	10,000

ACCRUED INTEREST

Suppose that on December 1, Bank of America Corporation loans $12,000 to Exxon Mobil Oil Company at an annual interest rate of 10 percent. Assume that the accounting period ends on December 31 and that Exxon pays Bank of America in full (principal and interest) on January 31 of the next year. Figure 4–15 illustrates these facts and the journal entries that would be recorded under accrual accounting.

FIGURE 4–15 Accrued interest revenue

Period 1 | **Period 2**

DECEMBER 1

Note Rec. (+A)	12,000	
Cash (−A)		12,000
Received note for cash		

DECEMBER 31

Adjustment		
Interest Rec. (+A)	100	
Interest Rev. (R, +RE)		100
Recognized accrued interest received		

JANUARY 31

Cash (+A)	12,200	
Interest Rec. (−A)		100
Interest Rev. (R, +RE)		100
Note Rec. (−A)		12,000
Received cash on outstanding note		

Bank of America records an adjustment on December 31 to reflect the fact that an asset, *interest receivable,* has been created. The company has earned $100 ([$12,000 × 10%]/12 months) in interest during the month of December. Interest receivable of $100 is recognized (debited), and *interest revenue* is credited. When the $12,200 cash payment is received on January 31, $12,000 serves to reduce the outstanding note receivable, $100 is charged against the interest receivable account, and the remaining $100 is recognized as interest revenue.

As in the example of accrued wages, the adjustment here helps to achieve a matching of revenues and expenses in the appropriate time period. It does so by dividing the

total interest earned on the loan ($200) into two components, based on the periods in which it was earned and the time when the asset, interest receivable, was created. Half of the $200 interest payment was earned in Period 1 and therefore should appear as a revenue on the income statement of Period 1. The remaining $100 should appear as a revenue on the income statement of Period 2 because the loan was outstanding during one month of Period 2.

Consider again the effect of these transactions on the statements of cash flows for Periods 1 and 2. No cash inflow related to interest is recorded in Period 1, and therefore nothing would be reflected on the statement of cash flows for that period. Instead, all $200 would appear on the statement of cash flows in Period 2, when the cash is actually received. Once again, the total interest recognized across the two periods under the cash system ($200) is the same as that recognized under the accrual system, but the timing of the recognition is different. The adjusting journal entry prepared under the accrual system ensures that $100 is recognized on the income statement of Period 1, with the remaining $100 appearing on the income statement of Period 2.

Figure 4–16, using the same facts as Figure 4–15, considers the borrower's (Exxon Mobil's) point of view. Examine the journal entries, and note especially how the adjusting journal entry matches revenues and expenses in the appropriate time period and gives rise to expense recognition in a time period when no cash payment is made.

FIGURE 4–16 Accrued interest expense

Period 1		Period 2
DECEMBER 1	**DECEMBER 31**	**JANUARY 31**
Cash (+A) 12,000 Note Pay. (+L) 12,000 *Borrowed cash and issued note payable*	*Adjustment* Interest Exp. (E, −RE) 100 Interest Pay. (+L) 100 *Recognized accrued interest payable*	Note Pay. (−L) 12,000 Interest Pay. (−L) 100 Interest Exp. (E, −RE) 100 Cash (−A) 12,200 *Paid interest and outstanding note*

Honeywell International, an advanced technology and manufacturing company, reported accrued liabilities of $6.0 billion on its 2008 balance sheet. Explain the meaning of that number.

Deferrals

The second type of adjustment is called a **deferral** (or **cost expiration**). Like accruals, these adjusting entries (1) are recorded in the books at the end of an accounting period to achieve an appropriate matching of revenues and expenses and (2) do not reflect cash exchanges. They are called deferrals because they are entries that serve to defer the recognition of an expense or revenue until the proper time.

ASSET CAPITALIZATION AND THE MATCHING PRINCIPLE

Before studying deferrals, you should understand one very important concept in financial accounting measurement—*asset capitalization* and how it relates to the matching principle. The **matching principle** involves a four-step process: (1) a cost is incurred in the current period for the purpose of generating revenue; (2) the revenue recognition principle determines the period in which the revenue is recognized; (3) if the revenue is recognized in the current period, the cost is **expensed** (appearing on the income statement as an expense); if the revenue is expected to be recognized in a future period, the cost is **capitalized** (appearing on the balance sheet as an asset); and (4) capitalized costs are converted to expenses (by recording cost expiration adjusting journal entries) in those future periods when revenue is recognized. Assets, by definition, are expected to generate economic benefits in the form of future revenues, and, according to the matching principle, the costs of acquiring assets should be matched against those benefits when they are recognized. The accrual system of accounting accomplishes this matching by initially capitalizing the costs of assets and then converting them to expenses (through periodic adjustments) as their usefulness expires and their benefits are realized.

To illustrate the important difference between expensing and capitalizing a cost, consider a company with the following simplified balance sheet as of December 31, 2011:

Assets	**$1,000**	**Liabilities**	**$ 600**
		Shareholders' equity	**400**
Total	**$1,000**	**Total**	**$1,000**

During 2012, the company recognizes $2,500 in revenues and $1,500 in expenses. In a separate transaction the company also spends $500 on its facilities. Should the $500 be considered an expense for 2012 or an asset? Figure 4–17 provides the resulting financial statements if the company expenses or capitalizes the $500 expenditure, assuming that all transactions were in cash.

FIGURE 4–17
Expensing vs. capitalizing

	Expenses $500	Capitalizes $500
Balance sheet:		
Assets	**$ 1,500**	**$2,000**
Liabilities	**600**	**600**
Shareholders' equity	**900**	**1,400**
Income statement:		
Revenues	**$ 2,500**	**$2,500**
Expenses	**2,000**	**1,500**
Net income	**$ 500**	**$1,000**

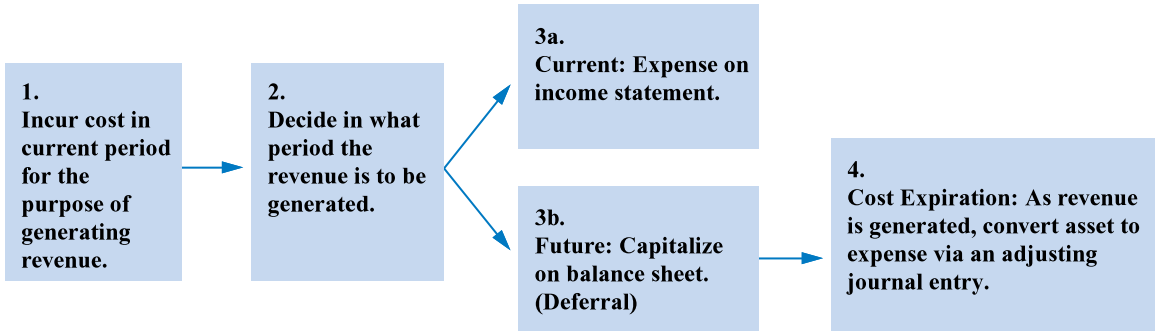
Note the differences in total assets, shareholders' equity, expenses, and net income. Assets and net income are clearly much higher if the company chooses to capitalize the $500 cost. As illustrated in the next section, however, if the cost is capitalized it will have to be amortized against revenues in future periods, reducing reported net income in those periods.

The *Baltimore Sun* reported that the WorldCom fraud, which cost investors billions of dollars, "was not complicated: the company's financial officers recorded routine maintenance expenses totaling $3.9 billion as capital expenditures. . . ." Explain how this scheme violated the matching principle and affected the financial statements.

EXPENSE OR CAPITALIZE EXAMPLES

Figure 4–18 illustrates the basic procedures used to account for expenses and capitalized costs. It is divided into two sections. The upper section depicts the matching process. The lower section consists of nine different transactions, each carried through the four steps involved in applying the matching principle.

FIGURE 4–18 Expense or capitalize?



Salaries	**Current period (expense)**	**Salary Exp. (E, −RE) XX** **Salary Pay. (+L) XX**	**None required**
Interest	**Current period (expense)**	**Interest Exp. (E, −RE) XX** **Interest Pay. (+L) XX**	**None required**
Utilities	**Current period (expense)**	**Utility Exp. (E, −RE) XX** **Cash (−A) XX**	**None required**
Purchase of supplies	**Future period (asset)**	**Supplies Inv. (+A) XX** **Cash (−A) XX**	**Supplies Exp. (E, −RE) XX** **Supplies Inv. (−A) XX** ***Adjusted for supplies used.***
Purchase of merchandise inventory	**Future period (asset)**	**Merch. Inv. (+A) XX** **Accounts Pay. (+L) XX**	**Cost of Goods Sold (E, −RE) XX** **Merchandise Inv. (−A) XX** ***Adjusted for inventory sold.***
Prepaid expenses (e.g., insurance, interest, rent)	**Future period (asset)**	**Prepaid Rent (+A) XX** **Cash (−A) XX**	**Rent Expense (E, −RE) XX** **Prepaid Rent (−A) XX** ***Adjusted for rent period expired.***
Payments received in advance	**Future period (liability)**	**Cash (+A) XX** **Unearned Rev. (+L) XX**	**Unearned Revenue (−L) XX** **Earned Revenue (R, +RE) XX** ***Adjusted for service performed.***
Purchase of property, plant, or equipment	**Future period (asset)**	**Equipment (+A) XX** **Cash (−A) XX** **Note Payable (+L) XX**	**Depreciation Exp. (E, −RE) XX** **Accumulated Depr. (−A) XX** ***Adjusted for useful life expired.***
Purchase of intangible asset (e.g., patent, trademark)	**Future period (asset)**	**Trademark (+A) XX** **Cash (−A) XX**	**Amortization Exp. (E, −RE) XX** **Accumulated Amort. (−A) XX** ***Adjusted for useful life expired.***

CURRENT EXPENSES. The first three transactions (salaries, interest, and utilities) represent resource expenditures, either through the creation of a liability or the payment of cash, for which the benefit is assumed to be realized in the current period. Salaries and interest in this case are accrued at the end of the current period with an accrual adjusting journal entry, and the associated cash payments are expected to follow in a future period. The utility expense is both recognized and paid in the current period. Since the benefit from each of these three expenditures is assumed to be realized in the current period, all are expensed, regardless of the timing of the cash payment. These expenditures have not been capitalized and, therefore, Step 4 in the matching process, an adjusting journal entry, is not necessary.

SUPPLIES INVENTORY. The fourth transaction in Figure 4–18, the purchase of supplies, is capitalized because supplies are normally expected to be useful beyond the current period. Typically, at the end of each period, an inventory of the remaining supplies is taken, and a cost expiration adjusting journal entry is entered in the books to reflect the cost of the supplies that were used (expired) during the period. This entry also restates the supplies inventory account on the balance sheet to reflect the supplies actually on hand at the end of the period.

To illustrate, assume that during 2011 Weyerhaeuser Company purchased materials and supplies to support the manufacture of forest products at a total cost of $700. On December 31, a count revealed that supplies in the amount of $300 remained on hand. If the company began the year with $500 in the supplies account, the cost of the supplies used during 2011 would be computed as shown below, and the following journal entries would have been recorded to reflect these facts.

Supplies Used	=	Beginning Inventory	+	Purchases	−	Ending Inventory
$900	=	$500	+	$700	−	$300

2011: Purchase of Supplies

Supplies Inventory (+A)	700	
Cash (−A)		700
Purchased supplies		

Dec. 31: Cost Expiration Adjusting Entry

Supplies Expense (E, −RE)	900	
Supplies Inventory (−A)		900
Recognized use of supplies		

In this situation, supplies in the amount of $300 would be reported on the company's December 31 balance sheet.

MERCHANDISE INVENTORY. The purchase of merchandise inventory is capitalized because inventories are expected to generate revenues in the future when they are sold. According to the matching principle, the cost of the merchandise should be converted to an expense, cost of goods sold, in the period when the inventories are sold. According to the matching principle, the cost of the merchandise inventory should be converted to an expense (called cost of goods sold) when the revenue associated with the sale of the inventory is recognized. Assuming that Macy's sold merchandise inventory with a cost of $5,000, the journal entries following demonstrate how the capitalized cost would become cost of goods sold.

2011: Purchase of Merchandise

Merchandise Inv. (+A)	5,000	
Cash (−A)		5,000
Purchased merchandise		

At Time of Sale

Cost of Goods Sold (E, −RE)	5,000	
Merchandise Inv. (−A)		5,000
Adjusted for inventory sold		

PREPAID EXPENSES. Prepaid expenses represent costs such as insurance, interest, and rent that are paid in advance, before the associated benefit is realized. Insurance

premiums, for example, are paid in advance and usually cover an entire year or more. Similarly, interest on loans is sometimes paid before the borrowed funds are used. In applying the matching principle, such prepayments are capitalized and then converted to expenses as the time period expires and benefits are realized. This periodic conversion is achieved through cost expiration adjusting journal entries.

To illustrate, assume that on January 1, 2011, Merck purchased a $1,000 insurance premium for a two-year period. The following journal entries would be made on the books of Merck over the life of the insurance coverage.

Jan. 1, 2011: Purchase of Insurance			Dec. 31, 2011 and 2012: Cost Expiration Adjusting Entry		
Prepaid Insurance (+A)	**1,000**		**Insurance Expense (E, −RE)**	**500**	
Cash (−A)		**1,000**	**Prepaid Insurance (−A)**		**500**
Paid insurance in advance			***Adjusted for expiration of insurance***		

In this example, Merck would report in the current asset section of its 2011 balance sheet $500 of prepaid (unexpired) insurance, which would be converted to an expense at the end of 2012.

UNEARNED (DEFERRED) REVENUES. Unearned revenues are the reverse of prepaid expenses. For every entity that prepays an expense before the associated benefit is realized, another entity receives a payment before it performs the required service. When applying the revenue recognition principle to the entity that receives payment and has yet to provide the service, a liability account, called **unearned revenues,** is credited when the cash is initially collected. This account is then converted to a revenue as the service is performed with an end-of-period adjusting journal entry.[5]

To illustrate, suppose that Delta Air Lines received $5,000 during 2011 for tickets not yet used. Delta's cash account would immediately increase by $5,000, but the company would not recognize revenue at that time because it had not yet performed the contracted service. Instead, Delta would recognize a $5,000 liability, indicating that it owed services in the form of airplane travel. Assume that as of the end of 2011, Delta had fulfilled 60 percent of the services. At that time, therefore, an adjusting journal entry would be recorded to remove 60 percent of the liability from the company's balance sheet and, at the same time, recognize 60 percent of the revenue. The following journal entries reflect these facts.

Receipt of Advance Payment			Cost Expiration Adjusting Entry		
Cash (+A)	**5,000**		**Unearned Revenue (−L)**	**3,000**	
Unearned Revenue (+L)		**5,000**	**Fees Earned (R, +RE)**		**3,000**
Received cash prior to providing service			***Recognized revenue from providing service***		

This sequence of journal entries would leave a liability for unearned revenues on Delta's 2011 balance sheet of $2,000, representing airline travel that Delta still had to fulfill.

PROPERTY, PLANT, AND EQUIPMENT. Transaction 8 in Figure 4–18 considers the costs of purchasing property, plant, and equipment. Since these assets are expected to

5. Technically, an unearned revenue does not represent a capitalized cost because it is not an asset, and therefore, the adjusting journal entry to convert it to a revenue is not a cost expiration adjusting journal entry. However, we have chosen to categorize it as such because the concept of deferring the recognition of a revenue until the service is performed is the same as deferring the recognition of an expense until the associated benefit is realized. Both are essential to implementing the matching principle.

help generate revenues beyond the current time period, the matching principle specifies that the acquisition costs be capitalized and systematically converted to an expense (**amortized**) over the estimated useful lives of the assets. At the end of each period of the estimated useful life, a cost expiration adjusting journal entry is recorded to amortize a portion of the capitalized cost. The process of amortizing the cost of property, plant, and equipment is called **depreciation.**

To illustrate, assume that Federal Express invested $10,000 in flight equipment on January 1, 2011. At the time of the purchase, FedEx management subjectively estimated that the equipment would have a useful life of ten years and chose to depreciate an equal amount of the capitalized cost ($1,000 = $10,000/10 years) at the end of each of the ten one-year periods. The following journal entries would have been recorded in FedEx's books.

Jan. 1, 2011: Purchase of Equipment			**Dec. 31, 2011, 2012 . . . , 2020: Cost Expiration Adjusting Entry**		
Equipment (+A)	**10,000**		**Depr. Exp. (E, −RE)**	**1,000**	
Cash (−A)		**10,000**	**Accumulated Depr. (−A)**		**1,000**
Purchased equipment			***Adjusted for depreciation on equipment***		

Note that the cost expiration adjusting journal entry involves a debit to depreciation expense that appears on the income statement for each of the ten years. It also involves a credit to an account called *accumulated depreciation,* instead of a credit to the equipment account itself. Accumulated depreciation is a special account that appears on the asset side of the balance sheet. It offsets the asset account to which it applies (i.e., *equipment*), maintaining an accumulated balance of the amount of depreciation taken on the asset up to the date of the balance sheet. Balance sheet accounts like accumulated depreciation, which are used to offset other balance sheet accounts, are called **contra accounts.** Subtracting the balance in the accumulated depreciation account from the original cost of the equipment on the balance sheet gives rise to a number referred to as **book value.**

Using the same information as in the preceding example, at the end of the second year (December 31, 2012) the equipment account would appear on FedEx's balance sheet as follows. The original cost of the equipment is $10,000, the accumulated depreciation is $2,000, and the net book value is $8,000.

Equipment	**$10,000**	
Less: Accumulated depreciation	**2,000**	**$8,000**

Estimating the useful life of property, plant, and equipment and choosing a method of allocating the capitalized cost to future periods is a subjective and difficult task for management. These choices can also have a significant effect on the amount of net income recognized each year because they have a direct bearing on the amount of depreciation expense that appears on the income statement. To illustrate the importance of such estimates, when Delta Air Lines decided to change the useful life estimate of its flight equipment from ten years to fifteen years, it disclosed in its financial report that the change decreased depreciation expense of that year by $130 million.

INTANGIBLE ASSETS. The final transaction in Figure 4–18 is the purchase of an intangible asset, such as a patent or trademark. The cost of this purchase is, once again, capitalized because the benefit of the purchase is expected to extend beyond the current period. Many intangibles have definable lives (often determined by law) over

which the capitalized cost is typically amortized. The cost expiration adjusting journal entry consists of a debit to *amortization expense* and a credit to the contra account, *accumulated amortization*.

To illustrate, assume that Johnson & Johnson, a leading manufacturer of consumer health care products, purchased a patent for $20,000, which was determined by law to have a twenty-year life. The following journal entries would be recorded by Johnson & Johnson over the patent's legal life.

Purchase of Patent			End of Each of 20 Subsequent Years: Cost Expiration Adjusting Entry		
Patent (+A)	**20,000**		**Amortization Exp. (E, −RE)**	**1,000**	
Cash (−A)		**20,000**	**Patent (−A)**		**1,000**
Acquired patent.			***Adjusted for amortization of patent.***		

Note that the *patent* account is credited directly in the entry to amortize the cost of the patent. This practice is common, although GAAP recommends the use of a separate accumulated amortization account.

Research and development (R&D) is a very important activity for pharmaceutical companies like Johnson & Johnson. In 2009 the company invested over $2.5 billion in these activities. Under U.S. GAAP Johnson & Johnson is required to treat these costs as expenses. However, under IFRS companies are allowed to capitalize the portion of R&D devoted to development. Comment on how this difference would affect the way in which an analyst compared the financial performance of Johnson & Johnson to Novartis, a Swiss pharmaceutical that uses IFRS.

CAPITALIZING AND MATCHING: EXAMPLES

Figure 4–19 contains several examples in which cost expiration adjusting journal entries are used to apply the matching principle. Such entries are designed to convert capitalized costs to expenses in future time periods as the benefits (revenues) from the initial expenditures are recognized. The transactions illustrated in Figure 4–19 consider supplies, merchandise inventory, prepaid insurance, unearned revenue, equipment, and a patent.

Note in Figure 4–19 that equal amounts of the cost of the equipment and the patent are depreciated, or amortized, in each of the three time periods. For example, the $9,000 equipment cost is depreciated at a rate of $3,000 per period. This method is referred to as **straight-line depreciation.** It is almost always used to amortize intangible assets, but it is only one of several methods that can be used to depreciate the capitalized costs of property, plant, and equipment.

During 2008, Eastman Kodak Company booked revenues of $9.4 billion; paid interest costs on outstanding debt of $108 million; purchased inventory of $7.3 billion; purchased property, plant, and equipment of $254 million; and recognized depreciation and amortization of $500 million. Explain each of these transactions in terms of Figures 4–18 and 4–19.

FIGURE 4–19 Capitalize and match

CAPITALIZE →	ADJUSTING ENTRIES DURING COST EXPIRATION PERIOD →			EXPLANATION
	1	2	3	
Supplies (+A) 100 Cash (−A) 100 *Purchased supplies.*	Sup. Exp. (E, −RE) 30 Supplies (−A) 30 *Supplies costing $70 on hand.*	Sup. Exp. (E, −RE) 50 Supplies (−A) 50 *Supplies costing $20 on hand.*	Sup. Exp. (E, −RE) 20 Supplies (−A) 20 *No supplies on hand.*	The cost of supplies is converted to expense as the supplies are used up.
Inventory (+A) 600 Accts. Pay. (+L) 600 *Purchased 6 items at $100 per item.*	COGS (E, −RE) 100 Inventory (−A) 100 *One item sold.*	COGS (E, −RE) 200 Inventory (−A) 200 *Two items sold.*	COGS (E, −RE) 300 Inventory (−A) 300 *Three items sold.*	The cost of inventory is converted to expense (Cost of Goods Sold) as the inventory is sold.
Pre. Ins. (+A) 300 Cash (−A) 300 *Paid 3 years of insurance coverage in advance.*	Ins. Exp. (E, −RE) 100 Prepaid Ins. (−A) 100 *The first year of insurance coverage expires.*	Ins. Exp. (E, −RE) 100 Prepaid ins. (−A) 100 *The second year of insurance coverage expires.*	Ins. Exp. (E, −RE) 100 Prepaid Ins. (−A) 100 *The third year of insurance coverage expires.*	The cost of prepaid insurance is converted to expense as the insurance coverage expires.
Cash (+A) 240 Un. Rev. (+L) 240 *Received $240 for services to be performed later.*	Un. Rev. (−L) 120 Fees Earned (R, +RE) 120 *Half of the service is performed.*	Un. Rev. (−L) 60 Fees Earned (R, +RE) 60 *One quarter of the service is performed.*	Un. Rev. (−L) 60 Fees Earned (R, +RE) 60 *One quarter of the service is performed.*	Revenue is recognized as the service is completed.
Equip. (+A) 9,000 Notes Pay. (+L) 9,000 *Purchased machinery with an estimated 3-year life and no salvage value.*	Dep. Exp. (E, −RE) 3,000 Accum. Dep. (−A) 3,000 *First year passes, assuming straight-line depreciation rate.*	Dep. Exp. (E, −RE) 3,000 Accum. Dep. (−A) 3,000 *Second year passes.*	Dep. Exp. (E, −RE) 3,000 Accum. Dep. (−A) 3,000 *Third year passes.*	The cost of machinery is converted to expense (Depreciation Expense) as the estimated useful life passes.
Patent (+A) 900 Cash (−A) 900 *Acquired patent with 3-year legal life.*	Amort. Exp. (E, −RE) 300 Accum. Amort. (−A) 300 *First year passes, assuming straight-line amortization rate.*	Amort. Exp. (E, −RE) 300 Accum. Amort. (−A) 300 *Second year passes.*	Amort. Exp. (E, −RE) 300 Accum. Amort. (−A) 300 *Third year passes.*	The cost of obtaining the patent is converted to an expense (Amortization Expense) as the legal life passes.

Revaluation Adjustments

At various points in the remainder of this text, we cover adjustments that do not fall into the categories of accruals or cost expirations. Such adjustments serve to restate certain accounts to keep their reported values in line with existing facts. For example, the balance sheet dollar amounts of short-term investments, accounts receivable, and inventories are sometimes adjusted when the market values of these assets change. The entries required in such situations are called **revaluation adjustments.**

REPORTING DIFFICULTIES FACED BY MULTINATIONAL COMPANIES

In this chapter we have covered the mechanics of preparing financial statements measured in U.S. dollars, written in the English language, and using U.S. GAAP. In this section we briefly discuss some of the reporting difficulties faced by **multinationals,** companies that have their home in one country but operate, own other companies (subsidiaries), and raise capital in other countries.

DuPont, for example, is a Delaware-based company that operates in approximately 90 different countries; has significant ownership interests in entities in the United States, Asia, Europe, and Latin America; and lists its common shares not only on the New York Stock Exchange, but also on a variety of non-U.S. exchanges. DuPont publishes U.S. GAAP-based financial reports expressed in U.S. dollars. Unilever, another world leader in consumer goods, is jointly based in the Netherlands and Britain and has significant ownership interests in entities operating in 23 different countries. Its common shares are listed on the New York, London, and Amsterdam stock exchanges, and it publishes IFRS-based financial statements expressed in euros.

We have already mentioned the difficulties faced by analysts who attempt to compare the financial performance of companies like DuPont and Unilever that publish financial statements based on different accounting standards expressed in different currencies. These same problems plague multinationals that must publish financial statements reflecting the financial performance of all the entities that make up the overall company.

All multinationals, U.S.-based and non-U.S.-based, report consolidated financial statements, meaning that the financial statements of all entities controlled by the parent company must be combined (consolidated) into a single set of financial reports. DuPont and Unilever, for example, both refer to their income statement as a "consolidated" income statement.

The process of consolidating all the different entities that comprise a company like DuPont or Unilever can be very difficult and costly. The separate entities that must be consolidated each prepare individual financial statements that often are expressed in different languages, using different currencies and different accounting standards. A subsidiary owned by DuPont and located in France, for example, may publish financial statements in French, expressed in euros, and using IFRS. In its effort to include this subsidiary's financial statements within the company's overall consolidated statements, DuPont must translate the French into English, convert the euro values into U.S. dollars, and adjust the IFRS-based financial statements to U.S. GAAP—and this process must be done for every one of DuPont's subsidiaries every time consolidated statements are prepared. Unilever has the same problem, but in its case the financial statements of the subsidiaries must be converted to euros and adjusted to IFRS standards.

These difficulties and the costs they impose on multinationals underscore the value of moving to a single global language, set of accounting standards, and currency. Right now almost all major multinationals publish financial statements in English, although a large percentage of non-U.S. companies publish financial statements in more than one language. U.S. GAAP and IFRS are the two predominant sets of financial reporting standards, and efforts are in place to eventually converge them. Differences in currencies across countries, on the other hand, are likely to persist well into the future, and as we discuss later, these differences introduce special risks, as well as reporting problems, faced by multinationals.

APPENDIX 4A

T-ACCOUNT ANALYSIS AND PREPARING THE STATEMENT OF CASH FLOWS

In this appendix we describe how the statement of cash flows can be prepared from two balance sheets and an income statement. The approach involves **T-account analysis,** a mechanical process by which by reconstructing activity in a T-account one can infer information not directly reported on the financial statements. T-account analysis is a valuable tool because it is used by companies to prepare the statement of cash flows, and it can be used by analysts to create useful information about a company not reported in the financial statements. We will also illustrate and differentiate the two methods used to present the statement of cash flows—the **direct method** and the more difficult but far more common **indirect method.**

Figure 4A–1 includes two balance sheets (2011 and 2010), an income statement (2011), and some additional information for Wildcat Industries. Figure 4A–2 includes the T-accounts corresponding to each of the accounts listed on the financial statements as well as the activity that took place in those accounts during 2011. The balance sheet accounts contain beginning balances (BB), which reflect the balances on the 2010 balance sheet as well as ending balances (EB), which reflect the balances on the 2011 balance sheet. Entries within the T-accounts correspond to the numbered journal entries listed in Figure 4A–3. Figure 4A–4 includes the statement of cash flows, derived using T-account analysis, using the direct form of presentation, and Figure 4A–5 includes the operating section of the statement of cash flows using the more common indirect form of presentation.

The statement of cash flows (direct form of presentation) in Figure 4A–4 was constructed from the activity in the cash T-account. Note that each of the amounts on the statement also appears in the cash T-account—cash increases on the left and cash decreases on the right. These cash amounts were derived as described below, divided into two categories: operating items and non-operating items.

OPERATING ITEMS

CASH FROM SALES (+$37,000). The income statement includes sales revenue of $40,000. Sales were made on account (see Additional Information on Figure 4A–1), which increased the accounts receivable T-account by 40,000 (1). Because the ending balance in accounts receivable was $15,000, accounts receivable must have been reduced during 2011 by $37,000, producing a cash increase of $37,000 (2). Customers must have made $37,000 in payments on account. The adjustment to convert the accrual-based sales revenue to cash inflow is illustrated below.

Income Statement Amount		Adjustment			Cash Flow
Sales revenue	$40,000	Less: Increase in accounts receivable	($3,000)	=	+$37,000

CASH FROM SERVICES (+$9,000). Service revenue of $12,000 on the income statement means that unearned revenue was reduced by $12,000 during 2011 (3). Cash is received in advance for services to be performed and the revenue is only recognized after the service is performed. Because the ending balance in unearned revenue is $5,000, cash received in advance for services to be performed during 2011 must have

FIGURE 4A–1 Two balance sheets and an income statement for Wildcat Industries

The following information was taken from the records of Wildcat Industries.

	2011	2010
BALANCE SHEET		
Cash	$ 8,000	$ 7,000
Accounts receivable	15,000	12,000
Inventory	18,000	15,000
Prepaid rent	5,000	3,000
Property, plant, and equipment	50,000	40,000
Less: Accumulated depreciation	(10,000)	(5,000)
Total assets	$86,000	$72,000
Accounts payable	8,000	4,000
Salaries payable	9,000	7,000
Dividend payable	2,000	3,000
Unearned revenue	5,000	8,000
Long-term debt	35,000	30,000
Contributed capital	19,000	15,000
Retained earnings	8,000	5,000
Total liabilities and stockholders' equity	$86,000	$72,000
INCOME STATEMENT		
Sales revenues	$40,000	
Service revenues	12,000	
Less:		
Cost of goods sold	30,000	
Salary expense	4,000	
Rent expense	6,000	
Depreciation expense	6,000	
Loss on sale of equipment	1,000	
Net income	$ 5,000	

Additional Information: **Wildcat purchased property, plant, and equipment during the year in the amount of $15,000, paying cash, and borrowed $5,000 on a long-term note. All sales of goods and inventory purchases were made on account; cash received in advance for services to be performed is reflected in the unearned revenue account; and salaries are accrued and rent is paid in advance.**

been $9,000 (4). During 2011, $9,000 was received from customers in advance, and services valued at $12,000 were performed. The adjustment to convert the accrual-based service revenue to cash inflow is illustrated below.

Income Statement	Amount	Adjustment			Cash Flow
Service revenue	$12,000	Less: Decrease in unearned revenue	($3,000)	=	+$9,000

CASH PAID TO INVENTORY SUPPLIERS (−$29,000). Cost of goods sold of $30,000 on the income statement means that the inventory T-account was reduced by $30,000 to reflect the outflow of sold inventory (5). Because the ending balance of inventory was $18,000, merchandise inventory in the amount of $33,000 must have been purchased from suppliers (6). Inventory purchases were made on account (see Additional Information on Figure 4A–1), meaning that the accounts payable T-account must have been increased by $33,000 (6). Because the ending balance in this account was

FIGURE 4A–2 Reconstructed Wildcat ledger

Cash

BB	7,000				
(2)	37,000				
(4)	9,000				
		29,000	(7)		
(14)	3,000				
		2,000	(9)		
(15)	5,000	8,000	(11)		
(16)	4,000	15,000	(13)		
		3,000	(18)		
EB	8,000				

Accounts Receivable

BB	12,000				
(1)	40,000				
		37,000	(2)		
EB	15,000				

Inventory

BB	15,000				
		30,000	(5)		
(6)	33,000				
EB	18,000				

Prepaid Rent

BB	3,000				
(11)	8,000	6,000	(10)		
EB	5,000				

Property, Plant, and Equipment

BB	40,000				
(13)	15,000				
		5,000	(14)		
EB	50,000				

Accumulated Depreciation

		5,000	(BB)		
		6,000	(12)		
(14)	1,000				
		10,000	EB		

Accounts Payable

		4,000	(BB)		
		33,000	(6)		
(7)	29,000				
		8,000	EB		

Salaries Payable

		7,000	BB		
		4,000	(8)		
(9)	2,000				
		9,000	EB		

Dividend Payable

		3,000	BB		
		2,000	(17)		
(18)	3,000				
		2,000	EB		

Unearned Revenue

		8,000	BB		
(3)	12,000				
		9,000	(4)		
		5,000	EB		

Long-Term Debt

		30,000	BB		
		5,000	(15)		
		35,000	EB		

Contributed Capital

		15,000	BB		
		4,000	(16)		
		19,000	EB		

Retained Earnings

		5,000	BB		
		5,000	NI*		
(17)	2,000				
		8,000	EB		

Sales Revenue

		40,000	(1)		

Service Revenue

		12,000	(3)		

Cost of Goods Sold

(5)	30,000				

Salary Expense

(8)	4,000				

Rent Expense

(10)	6,000				

Depreciation Expense

(12)	6,000				

Loss on Sale of Equipment

(14)	1,000				

* NI net income.

$8,000, $29,000 in cash must have been paid to inventory suppliers (7). The adjustment to convert the accrual-based cost of goods sold to cash payments to suppliers is illustrated below.

Income Statement Amount	Adjustment		Cash Flow
Cost of goods sold $30,000	Plus: Increase in inventory ($3,000)	=	
	Less: Increase in accounts payable ($4,000)	=	−$29,000

CASH PAID FOR SALARIES (−$2,000). Salary expense of $4,000 on the income statement means that salaries payable was increased by $4,000 during 2011 (see Additional Information on Figure 4A–1 stating that salaries are accrued, and entry (8) on Figure 4A–3). Because the ending balance in the salaries payable T-account was $9,000, $2,000 in cash must have been paid for salaries (9). The adjustment to convert the accrual-based salary expense to cash payments to employees is illustrated on next page.

FIGURE 4A–3 Reconstructed Wildcat journal entries

(1)	Accounts Receivable (+A)	40,000	
	Sales Revenue (R, +R/E)		40,000
(2)	Cash (+A)	37,000	
	Accounts Receivable (−A)		37,000
(3)	Unearned Revenue (−L)	12,000	
	Service Revenue (R, +R/E)		12,000
(4)	Cash (+A)	9,000	
	Unearned Revenue (+L)		9,000
(5)	Cost of Goods Sold (E, −R/E)	30,000	
	Inventory (−A)		30,000
(6)	Inventory (+A)	33,000	
	Accounts Payable (+L)		33,000
(7)	Accounts Payable (−L)	29,000	
	Cash (−A)		29,000
(8)	Salary Expense (E, −R/E)	4,000	
	Salary Payable (+L)		4,000
(9)	Salary Payable (−L)	2,000	
	Cash (−A)		2,000
(10)	Rent Expense (E, −R/E)	6,000	
	Prepaid Rent (−A)		6,000
(11)	Prepaid Rent (+A)	8,000	
	Cash (−A)		8,000
(12)	Depreciation Expense (E, −R/E)	6,000	
	Accumulated Depreciation (−A)		6,000
(13)	Property, Plant, and Equipment (+A)	15,000	
	Cash (−A)		15,000
(14)	Cash (+A)	3,000	
	Accumulated Depreciation (+A)	1,000	
	Loss on Sale of Equipment (E, −R/E)	1,000	
	Property, Plant, and Equipment (−A)		5,000
(15)	Cash (+A)	5,000	
	Long-Term Debt (+L)		5,000
(16)	Cash (+A)	4,000	
	Contributed Capital (+SE)		4,000
(17)	Retained Earnings (−SE)	2,000	
	Dividend Payable (+L)		2,000
(18)	Dividend Payable (−L)	3,000	
	Cash (−A)		3,000

Income Statement Amount		Adjustment			Cash Flow
Salary expense	$4,000	Less: Increase in salary payable	($2,000)	=	−$2,000

CASH PAID FOR RENT (−$8,000). Rent expense of $6,000 on the income statement means that prepaid rent in the amount of $6,000 must have been expired, reducing the prepaid rent T-account (10). Because the ending balance in the account was

FIGURE 4A–4
Statement of cash flows—direct method of presentation

Statement of Cash Flows
for the Year Ended December 31, 2011

Cash from sales (2)*	$37,000
Cash from services (4)	9,000
Cash paid to inventory suppliers (7)	(29,000)
Cash paid for salaries (9)	(2,000)
Cash paid for rent (11)	(8,000)
Net cash from operations	7,000
Cash paid for PP&E (13)	(15,000)
Cash received from equipment sale (14)	3,000
Net cash used for investing	(12,000)
Cash received from borrowings (15)	5,000
Cash received from stock issuance (16)	4,000
Cash paid for dividends (18)	(3,000)
Net cash from financing	6,000
Change in cash balance	1,000
Beginning cash balance	7,000
Ending cash balance	$ 8,000

**Number in parentheses refer to entries numbered in Figure 4A–3.*

$5,000, $8,000 of prepaid rent must have been paid for during 2011, reducing cash by $8,000 (11). The adjustment to convert the accrual-based rent expense to cash payments for rent is illustrated below.

Income Statement Amount		Adjustment			Cash Flow
Rent expense	$8,000	Less: Increase in prepaid rent	($2,000)	=	−$6,000

NON-OPERATING ITEMS

CASH PAID FOR PROPERTY, PLANT, AND EQUIPMENT (PP&E) (−$15,000). See Additional Information on Figure 14A–1 and entry (13) on Figure 4A–3. The $15,000 PP&E purchase increased the PP&E T-account by $15,000. Because the ending balance in the PP&E T-account was $50,000, PP&E with an original cost of $5,000 must have been sold (or disposed of) during 2011 (14).

FIGURE 4A–5
Operating section of statement of cash flows—indirect method of presentation

Net income	$5,000
Non-current items:	
Depreciation	6,000
Loss on sale of equipment	1,000
Current items:	
Less: Increase in accounts receivable	(3,000)
Less: Increase in inventory	(3,000)
Less: Increase in prepaid rent	(2,000)
Plus: Increase in accounts payable	4,000
Plus: Increase in salaries payable	2,000
Less: Decrease in unearned revenue	(3,000)
Net cash from operations	$7,000

CASH RECEIVED FROM EQUIPMENT SALE (+$3,000). Depreciation expense of $6,000 on the income statement means that the accumulated depreciation T-account was increased by $6,000 (12). Because the ending balance in the accumulated depreciation T-account was $10,000, this account must have been reduced by $1,000 during 2011 (14), which means the PP&E sold during 2011 (see above) must have had accumulated depreciation attached to it of $1,000—in other words, its book value at the time of sale was $4,000 ($5,000 original cost − $1,000 accumulated depreciation). The loss on sale of equipment of $1,000 on the income statement means that when this equipment was sold, the cash proceeds ($3,000) were $1,000 less than the book value of the sold equipment (14).

CASH RECEIVED FROM BORROWING (+$5,000). The long-term debt T-account increased from $30,000 to $35,000 during 2011, indicating that the cash increase from (net) additional borrowings during the year equaled $5,000 (15).

CASH RECEIVED FROM STOCK ISSUANCES (+$4,000). The contributed capital T-account increased from $15,000 to $19,000 during 2011, indicating that the cash increase from (net) additional stock issuances during the year equaled $4,000 (16).

CASH PAID FOR DIVIDENDS (−$3,000). Net income reported on the income statement was $5,000 for 2011, meaning that the retained earnings T-account was increased by $5,000. Because the ending balance in retained earnings was $8,000, dividends declared by the board of directors, which reduces retained earnings and increases dividend payable, must have been $2,000 (17). Because the ending balance in the dividend payable T-account was $2,000, the cash payment to shareholders for dividends during 2011 must have been $3,000 (18).

INDIRECT FORM OF PRESENTATION

The explanations above describe how each of the items on the statement of cash flows—direct method of presentation (Figure 4A–4) was derived. Each of these items is represented on the cash T-account, and reflects an actual cash flow. The phrase "direct method of presentation" is used because each item is *directly* related to the cash account.

The statement of cash flows—indirect method of presentation (Figure 4A–5) is exactly the same as the Direct Method of Presentation *except for the manner in which net cash from operations ($7,000) is computed*. Rather than taking the operating cash flows directly from the cash T-account, the indirect method computes net cash from operations by first taking net income ($5,000) from the income statement (Figure 4A–1), and then adjusting it for the differences between the accrual-based measures of revenues and expenses and actual cash flows.

Depreciation ($6,000) and loss on sale of equipment ($1,000), for example, are both added back to net income in the calculation of net cash from operations. Both represent expenses on the income statement, recorded under the accrual basis, that reduced net income, but did not reduce operating cash flows. Note that in entries (12) and (14) on Figure 4A–3, neither involves an operating cash outflow. Consequently, both amounts are added back to net income in the calculation of net cash from operations.

The remaining adjustments all deal with changes in the current balance sheet accounts from 2010 to 2011. Each of these adjustments to the operating balance sheet items was illustrated earlier when we used T-account analysis to derive the cash flows associated with sales and service revenues, cost of goods sold, salaries, and rent. In each case the change in the current balance sheet account balance was added to or subtracted from net income in the calculation of net cash from operations. Table 4A–1 summarizes the relationships between changes in current balance-sheet account balances and the direction of the adjustment to net income in the calculation of net cash from operations.

TABLE 4A–1 Adjustments for changes in current balance sheet accounts on the statement of cash flows—Indirect form of presentation

	Increase	Decrease
Current Assets	***Subtract from net income***	***Add to net income***
Current Liabilities	***Add to net income***	***Subtract from net income***

Students normally have difficulty understanding T-account analysis and the adjustments to net income on the statement of cash flows in the calculation of net cash from operations. However, understanding T-account analysis and these adjustments is important because the indirect method of presentation is used by almost all major U.S. and non-U.S. companies, and T-account analysis can be a valuable tool for an analyst. Throughout this text we review these adjustments as they arise, and we return to the statement of cash flows in Chapter 14.

REVIEW PROBLEM

Consider the balance sheet of a small retail company, Kelly Supply, as of December 31, 2011 (Figure 4–20). Exchange transactions that occurred during 2012 are recorded in Figure 4–21 and posted to T-accounts in Figure 4–22. The financial statements are contained in Figures 4–23 and 4–24.

The December 31, 2011, balance sheet accounts are reflected in the T-accounts as beginning balances. The exchange transactions are numbered (1)–(11), and each is described and has been posted in the T-accounts.

At year-end, the adjusting journal entries are recorded and posted to the T-accounts. Adjusting entries are numbered (12)–(18). Entries (13), (16), and (17) are accruals, and entries (12), (14), (15), and (18) are cost expirations. Entries (19) and (20) close revenues, expenses, and dividends to retained earnings.

FIGURE 4–20 Balance sheet for Kelly Supply

Kelly Supply
Balance Sheet
December 31, 2011

ASSETS			LIABILITIES AND SHAREHOLDERS' EQUITY	
Cash		$12,000	Accounts payable	$ 8,000
Accounts receivable		15,000	Wages payable	3,000
Merchandise inventory		12,000	Interest payable	1,000
Prepaid rent		3,000	Dividends payable	2,000
Machinery	$25,000		Unearned revenue	3,000
Less: Accum. depr.	5,000	20,000	Short-term notes pay.	5,000
Patent		5,000	Long-term notes pay.	10,000
			Contributed capital	30,000
			Retained earnings	5,000
Total assets		$67,000	Total liabilities and shareholders' equity	$67,000

FIGURE 4–21 General journal for Kelly Supply

Daily Journal Entries

(1)	Cash (+A)	10,000		
	Accounts Receivable (+A)	15,000		
	Sales (R, +RE)		25,000	
	Cost of Goods Sold (E, −RE)	9,000		
	Merchandise Inventory (−A)		9,000	
	Sold merchandise with a cost of $9,000 for cash and on account.			
(2)	Cash (+A)	8,000		
	Accounts Receivable (−A)		8,000	
	Received cash on account.			
(3)	Merchandise Inventory (+A)	10,000		
	Cash (−A)		3,000	
	Accounts Payable (+L)		7,000	
	Purchased merchandise inventory for cash and on account.			
(4)	Accounts Payable (−L)	10,000		
	Cash (−A)		10,000	
	Paid cash on account.			
(5)	Wages Payable (−L)	3,000		
	Wage Expense (E, −RE)	7,000		
	Cash (−A)		10,000	
	Paid accrued wages.			
(6)	Interest Payable (−L)	1,000		
	Interest Expense (E, −RE)	1,000		
	Cash (−A)		2,000	
	Paid accrued interest.			
(7)	Short-Term Notes Pay. (−L)	2,500		
	Cash (−A)		2,500	
	Paid short-term note.			
(8)	Cash (+A)	10,000		
	Contributed Capital (+CC)		10,000	
	Issued common stock for cash.			
(9)	Dividends Payable (−L)	2,000		
	Cash (−A)		2,000	
	Paid cash dividend.			
(10)	Machinery (+A)	1,000		
	Cash (−A)		1,000	
	Acquired machinery for cash.			
(11)	Dividends (−RE)	1,000		
	Dividends Payable (+L)		1,000	
	Declared dividends.			

Adjusting Journal Entries

(12)	Unearned Revenue (−L)	2,000		
	Sales (R, +RE)		2,000	
	Recognized 2/3 of goods delivered.			
(13)	Interest Receivable (+A)	50		
	Interest Revenue (R, +RE)		50	
	Recognized accrued interest on savings account.			
(14)	Depreciation Expense (E, −RE)	3,000		
	Accumulated Depr. (−A)		3,000	
	Recognized depreciation on machinery.			
(15)	Amortization Expense (E, −RE)	500		
	Patent (−A)		500	
	Recognized amortization of patent.			
(16)	Wage Expense (E, −RE)	1,000		
	Wages Payable (+L)		1,000	
	Recognized accrued wages.			
(17)	Interest Expense (E, −RE)	2,000		
	Interest Payable (+L)		2,000	
	Recognized accrued interest on note payables.			
(18)	Rent Expense (E, −RE)	1,000		
	Prepaid Rent (−A)		1,000	
	Recognized 1/3 of rent period expired.			
	Closing entry			
(19)	Sales	27,000		
	Interest Revenue	50		
	Cost of Goods Sold		9,000	
	Wage Expense		8,000	
	Rent Expense		1,000	
	Interest Expense		3,000	
	Deprec. Expense		3,000	
	Amortization Expense		500	
	Retained Earnings		2,550	
	To close revenue and expense accounts to Retained Earnings.			
(20)	Retained Earnings	1,000		
	Dividends		1,000	
	To close dividends to Retained Earnings.			

FIGURE 4–22 T-accounts for Kelly Supply

Cash

	12,000		
(1)	10,000		
(2)	8,000		
		(3)	3,000
		(4)	10,000
		(5)	10,000
		(6)	2,000
		(7)	2,500
(8)	10,000	(9)	2,000
		(10)	1,000
	9,500		

Accounts Receivable

	15,000		
(1)	15,000		
		(2)	8,000
	22,000		

Interest Receivable

(13)	50		
	50		

Merchandise Inventory

	12,000		
(3)	10,000		
		(1)	9,000
	13,000		

Prepaid Rent

	3,000	(18)	1,000
	2,000		

Machinery

	25,000		
(10)	1,000		
	26,000		

Accumulated Depreciation

			5,000
		(14)	3,000
			8,000

Patent

	5,000	(15)	500
	4,500		

Accounts Payable

			8,000
		(3)	7,000
(4)	10,000		
			5,000

Wages Payable

			3,000
(5)	3,000	(16)	1,000
			1,000

Interest Payable

			1,000
(6)	1,000	(17)	2,000
			2,000

Dividends Payable

			2,000
(9)	2,000	(11)	1,000
			1,000

Unearned Revenue

			3,000
(12)	2,000		
			1,000

Short-Term Notes Payable

			5,000
(7)	2,500		
			2,500

Long-Term Notes Payable

			10,000
			10,000

Contributed Capital

			30,000
		(8)	10,000
			40,000

Retained Earnings

			5,000
(20)	1,000	(19)	2,550
			6,550

Sales

(19)	27,000	(1)	25,000
		(12)	2,000
			0

Interest Revenue

(19)	50	(13)	50
			0

Cost of Goods Sold

(1)	9,000	(19)	9,000
	0		

Wage Expense

(5)	7,000		
(16)	1,000	(19)	8,000
	0		

Rent Expense

(18)	1,000		
		(19)	1,000
	0		

Interest Expense

(6)	1,000		
(17)	2,000	(19)	3,000
	0		

Depreciation Expense

(14)	3,000	(19)	3,000
	0		

Amortization Expense

(15)	500	(19)	500
	0		

Dividends

(11)	1,000	(20)	1,000
	0		

FIGURE 4–23
Financial statements for Kelly Supply

Kelly Supply
Income Statement
for the Year Ended December 31, 2012

Revenues:		
Sales	$27,000	
Interest revenue	50	
Total revenues		$27,050
Expenses:		
Cost of goods sold	$ 9,000	
Wage expense	8,000	
Rent expense	1,000	
Interest expense	3,000	
Depreciation expense	3,000	
Amortization expense	500	
Total expenses		24,500
Net income		$ 2,550

Kelly Supply
Statement of Shareholders' Equity
for the Year Ended December 31, 2012

	Contributed Capital	Retained Earnings	Total
Beginning balance	$30,000	$ 5,000	$35,000
Common stock issuances	10,000		10,000
Net income		2,550	2,550
Less: Dividends		(1,000)	(1,000)
Ending balance	$40,000	$ 6,550	$46,550

Kelly Supply
Balance Sheet
December 31, 2012

ASSETS			LIABILITIES AND SHAREHOLDERS' EQUITY	
Cash		$ 9,500	Accounts payable	$ 5,000
Accounts receivable		22,000	Wages payable	1,000
Interest receivable		50	Interest payable	2,000
Merchandise inventory		13,000	Dividends payable	1,000
Prepaid rent		2,000	Unearned revenue	1,000
Machinery	$26,000		Short-term notes pay.	2,500
Less: Accumulated depreciation	8,000	18,000	Long-term notes pay.	10,000
			Contributed capital	40,000
Patent		4,500	Retained earnings	6,550
			Total liabilities and shareholders' equity	
Total assets		$69,050		$69,050

FIGURE 4–24
Statement of cash flows for Kelly Supply

Kelly Supply
Statement of Cash Flows
for the Year Ended December 31, 2012

Operating activities:		
Collections from sales	$10,000	
Collections of accounts receivable	8,000	
Payments for inventory purchases	(3,000)	
Payments on accounts payable	(10,000)	
Payments for wages	(10,000)	
Payments for interest	(2,000)	
Net cash increase (decrease) from operating activities		$(7,000)
Investing activities:		
Purchase of machinery	$ (1,000)	
Net cash increase (decrease) from investing activities		(1,000)
Financing activities:		
Issuance of common stock	$10,000	
Payment of dividend	(2,000)	
Principal payments on short-term notes payable	(2,500)	
Net cash increase (decrease) from financing activities		5,500
Net cash increase (decrease) during 2012		$(2,500)
Beginning cash balance (December 31, 2011)		12,000
Ending cash balance (December 31, 2012)		$ 9,500

The income statement contains revenues and expenses; the statement of shareholders' equity explains the change in the contributed capital and retained earnings balances; and the balance sheet consists of the ending balances in the asset, liability, and shareholders' equity accounts. The statement of cash flows was prepared directly from the entries in the cash T-account. The indirect method of presentation for the statement of cash flows is illustrated in Figure 4–25 (see Appendix 4A).

FIGURE 4–25
Operating section of statement of cash flows for Kelly Supply—indirect method

Net income	$ 2,550
Non-current items:	
Plus depreciation	3,000
Plus amortization	500
Current items:	
Less increase in accounts receivable	(7,000)
Less increase in interest receivable	(50)
Less increase in merchandise inventory	(1,000)
Plus decrease in prepaid rent	1,000
Less decrease in accounts payable	(3,000)
Less decrease in wages payable	(2,000)
Plus increase in interest payable	1,000
Less decrease in unearned revenue	(2,000)
Net cash increase (decrease) from operating activities	$(7,000)

SUMMARY OF KEY POINTS

- *Two criteria necessary for economic events to be reflected in the financial statements.*

  Economic events must be both relevant and objectively measurable in monetary terms if they are to be reflected on the financial statements. Relevant events have economic significance to the company. Objectively measurable events must be backed by documented evidence. Economic events must be relevant so that they can be used to evaluate the financial condition of the company; they must be objectively measurable so that they can be audited and viewed as credible by users.

- *The accounting equation and how it relates to the balance sheet, income statement, statement of shareholders' equity, and statement of cash flows.*

  The accounting equation states that assets equal liabilities plus shareholders' equity. The main components of the accounting equation (assets, liabilities, and shareholders' equity) are divided into subcategories, called *accounts,* in which transactions are recorded and from which the financial statements are compiled. When a business transaction occurs, two or more accounts are increased or decreased in such a way as to maintain the equality of the equation.

  The balance sheet contains the balances as of a given point in time of all the asset, liability, and shareholders' equity accounts. It is a statement of the accounting equation.

  The income statement contains a summary of the operating transactions, measured on an accrual basis, entered into by a company during a period of time. Operating transactions affect asset or liability accounts and always either increase or decrease retained earnings in the shareholders' equity section of the accounting equation.

  The statement of shareholders' equity and the statement of cash flows summarize the transactions that affect the shareholders' equity and cash accounts, respectively. The statement of shareholders' equity includes the net effect of the operating transactions as well as transactions with shareholders. The statement of cash flows is composed of cash inflows and outflows and explains the change in the cash account during the period.

- *Journal entries (and T-accounts) and how they express the effect of economic events on the basic accounting equation and the financial statements.*

  Journal entries (and T-accounts) are structured to indicate three aspects about economic events: (1) the accounts affected, (2) the direction of the effect, and (3) the dollar amount of the effect. Increases (decreases) in asset accounts and decreases (increases) in liability and equity accounts are placed on the left (right) side of the entry. Recognized revenues (expenses) are always placed on the right (left) side of the entry because they are always accompanied by increases (decreases) in assets or decreases (increases) in equities, which are indicated on the left (right) side. Following these rules ensures that economic events will be recorded in a way that maintains the equality of the accounting equation, and understanding these rules enables one to efficiently communicate the effects of any economic event on the financial statements.

- *Why managers need to understand how economic events affect the financial statements.*

  Managers often face situations in which they must choose whether to enter into certain transactions or how to structure transactions. Such choices should not be made without considering their economic consequences. The financial statement effects of transactions can lead to important economic consequences because outsiders use financial statement numbers to control and evaluate the firm and its management. Therefore, astute managers must understand in advance how transactions and other economic events affect the financial statements. In addition, adequate internal controls over the recording process are crucial to ensure that all transactions are recorded in a timely and accurate manner.

- *Why the financial statements are adjusted periodically to reflect certain economic events.*

  A large number of economic events are not represented by exchange transactions (e.g., depreciation of productive assets, and accruals of salaries, interest, and rent), yet they meet the criteria

(relevant and objective) for inclusion on the financial statements. These events require that adjustments be made to the financial statements periodically. Normally such adjustments are made to apply the principles of revenue recognition and matching. Revenue recognition states that revenues should be recognized when the earning process is substantially complete, not necessarily when cash is received. Matching states that expenses should be recognized in those periods when the associated benefit (revenue) is realized, not necessarily when cash is paid. These principles are fundamental to an accrual accounting system.

KEY TERMS

Note: Definitions for these terms are provided in the glossary at the end of the text.

Accounting equation (p. 114)
Accrual system of accounting (p. 129)
Accruals (p. 130)
Amortized (p. 137)
Assets (p. 114)
Book value (p. 137)
Business transactions (p. 116)
Capitalized (p. 133)
Compound journal entries (p. 122)
Contra accounts (p. 137)
Contributed capital (p. 115)
Credit (p. 122)
Debit (p. 122)
Deferral (cost expiration) (p. 132)
Depreciation (p. 137)
Double entry system (p. 122)
Economic events (p. 113)
Expensed (p. 133)
Journal entries (p. 121)
Liabilities (p. 115)
Matching principle (p. 133)
Multinationals (p. 140)
Permanent accounts (p. 128)
Relevant events (p. 113)
Retained earnings (p. 115)
Revaluation adjustments (p. 139)
Shareholders' equity (p. 115)
Statement of cash flows—direct method of presentation (p. 141)
Statement of cash flows—indirect method of presentation (p. 141)
Straight-line depreciation (p. 138)
T-accounts (p. 123)
T-account analysis (p. 141)
Temporary accounts (p. 128)
Unearned revenues (p. 136)

ETHICS in the Real World

In an article about the subjectivity involved when deciding to capitalize or expense a cost, *Forbes* reports:

A dollar spent on a toaster doesn't reduce wealth in the same way as one spent on a Twinkie. One lasts, the other doesn't. But where do toasters end and Twinkies begin in [today's] economy? . . . Accountants understand the general problem, but they do not know what to do about it. Capitalizing anything that you can't drop on your foot—software, worker training, marketing expense—can be hugely speculative. You never find out whether such things have real future value until the future arrives.

A case in point involves Fine Host Corp., which spent huge dollar amounts to obtain new food service contracts. The company listed these costs on the balance sheet and depreciated them over time. When the company was accused of aggressive accounting, the share price dropped from $12 to $3 per share. Many believed that the food service contract costs should have been accounted for "as current expenses against revenue." Fine Host ended up restating its net income number, reducing it from $13 million to a loss of almost $18 million.

ETHICAL ISSUE Fine Host management was not convicted, or even accused, of fraud. The company just subjectively called an asset what many in the financial community considered an expense. Was it ethical for Fine Host to do so? Was management acting in the interests of the shareholders?

INTERNET RESEARCH EXERCISE

The chapter opener points out that there are some accounting problems in U.S. federal agencies. The government organization assigned to oversee budgeting and accounting for the federal government is the General Accounting Office (GAO). What is the GAO, what kind of reports does it provide, and how is it organized? Begin your search at www.gao.gov.

BRIEF EXERCISES

REAL DATA

BE4–1

Effects of transactions on the accounting equation

During 2008, Intel entered into the transactions listed below.

a. On a separate sheet of paper, complete the following chart to show the effect of these transactions on the accounting equation and compute the net effect (dollars in millions).

Transaction	Assets = Liabilities + Shareholders' Equity
1. Paid $5,197 to purchase property, plant, and equipment.	
2. Issued common stock for $1,105.	
3. Recorded depreciation of $4,360.	
Net effect	

b. Which one of the transactions did not appear to affect the accounting equation? Why didn't it?

REAL DATA

BE4–2

Effects of transactions on the accounting equation

During 2008, The Limited entered into the transactions listed below.

a. On a separate sheet of paper, complete the following chart to show the effect of these transactions on the accounting equation and compute the net effect (dollars in millions).

Transaction	Assets = Liabilities + Shareholders' Equity
1. Repaid $15 of long-term debt.	
2. Paid cash dividends of $201.	
3. Repurchased common stock for $379.	
Net effect	

b. Compare and discuss how transactions 2 and 3 affected the basic accounting equation.

REAL DATA

BE4–3

Effects of transactions on the accounting equation

During 2008, Yahoo!, Inc. entered into the transactions listed below.

a. On a separate sheet of paper, complete the following chart to show the effect of these transactions on the accounting equation and compute the net effect (dollars in millions).

Transaction	Assets = Liabilities + Shareholders' Equity
1. Recognized service revenues of $6,426 in exchange for accounts receivable.	
2. Paid $1,322 for sales and marketing.	
3. Issued common stock for $363.	
4. Purchased marketable securities for $2,317	
Net effect	

b. Which of these transactions would be reflected on the income statement? Which of these transactions would be reflected on the statement of cash flows?

EXERCISES

E4–1
Effects of transactions on the accounting equation

On a separate piece of paper, complete the following chart to show the effect of each transaction on the accounting equation.

Transaction	Assets = Liabilities + Shareholders' Equity
1. Owners contributed $30,000 cash.	
2. Purchased land for $20,000 cash.	
3. Borrowed $9,000 cash from bank.	
4. Provided services for $8,000 on account.	
5. Paid $5,500 cash for expenses.	
6. Paid $500 cash dividend to owners.	

E4–2
Effects of transactions on accounts

Consider the same transactions as in E4–1, but this time complete the following chart, using a separate sheet of paper.

	Assets			=	Liabilities	+	Shareholders' Equity	
Trans.	Cash	Accounts Receivable	Land	=	Notes Payable	+	Contributed Capital	Retained Earnings
1.								
2.								
3.								
4.								
5.								
6.								

E4–3
Preparing the financial statements from the accounts

Total each asset, liability, and shareholders' equity account in E4–2, and prepare an income statement, a statement of shareholders' equity, a balance sheet, and a statement of cash flows. Assume that the current year is the company's first year of operations.

E4–4
Preparing the financial statements

Assume that Cathedral Enterprises, which is in its first year of operations, entered into the following transactions. Show how the five transactions affect the accounting equation, and prepare an income statement, statement of shareholders' equity, balance sheet, and statement of cash flows.

1. Shareholders contributed $10,000 cash.
2. Performed services for $8,000, receiving $6,000 in cash and a $2,000 receivable.
3. Incurred expenses of $6,000. Paid $3,000 in cash, and $3,000 is still payable.
4. Purchased land for $12,000. Paid $2,000 in cash and signed a long-term note for the remainder.
5. Paid the shareholders $400 in the form of a dividend.
6. Sold one-half of the land purchased in (4) for $7,000 cash.

E4–5
Which economic events are relevant and objectively measurable?

The Brown Corporation experienced the following financial events on October 10, 2012:

1. The company entered into a new contract with the employees' union that calls for a $2.00 per hour increase in wages, a longer lunch break, and cost-of-living adjustments, effective January 1, 2013.
2. The company issued $200,000 in bonds that mature on October 10, 2022. The terms of the bond issuance stipulate that interest is to be paid semiannually at an annual rate of 10 percent.
3. The company president retired and was replaced by the vice president of finance.
4. The company received $10,000 from a customer in settlement of an open account receivable.
5. The company paid $1,000 interest on an outstanding loan. The interest is applicable to September 2012 and is included on the books as a liability, "Accrued Interest Payable."

(Continued)

6. The market value of all the company's long-lived assets is $275,000. They are currently reported on the balance sheet at $250,000.
7. The company purchased a fire insurance policy for $1,500 that will pay the Brown Corporation $1 million if its primary production plant is destroyed. The policy insures the company from November 1, 2012, through October 31, 2013.
8. The company placed an order to have $10,000 of inventory shipped on October 17, 2012.

Indicate whether each of these economic events has accounting significance (i.e., whether the company would prepare a journal entry for the event). In each case, explain why or why not.

REAL DATA

E4–6

Preparing financial statements

The following accounts and balances were taken from the records of US Airways (dollars in millions).

Flight equipment	**$3,157**	**Accounts payable**	**$ 797**
Passenger revenue	**8,183**	**Common stock**	**1**
Retained earnings	**(2,307)**	**Fuel expense**	**3,618**
Notes payable	**3,634**	**Other revenues**	**912**
Interest expense	**253**	**Short-term investments**	**20**
Accounts receivable	**293**	**Depreciation expense**	**215**
Prepaid expenses	**684**	**Landing fees**	**562**

Identify each account as an income statement or balance sheet account. Where is each account reflected in the basic accounting equation?

REAL DATA

E4–7

Preparing financial statements

The following information was taken from the 2008 annual report of Bristol-Myers Squibb, a world-leading drug company (dollars in millions).

Cost of goods sold	**$ 6,396**	**Cash and equivalents**	**$ 7,976**
Net cash from operations	**3,707**	**Short-term borrowings**	**154**
Accounts receivable	**3,710**	**Advertising and product expense**	**1,550**
Restructuring expense	**218**	**Accounts payable**	**1,535**
Net cash from financing	**(2,582)**	**Long-term liabilities**	**10,601**
Shareholders' equity	**12,241**	**Net sales**	**20,597**
Net cash from investing	**5,079**	**Property, plant, and equipment**	**5,405**
Research and dev. expense	**3,585**	**Other current assets**	**2,788**
Other noncurrent assets	**9,384**	**Other current liabilities**	**2,085**
Other expenses	**901**	**Selling and adm. expenses**	**4,792**
Marketable securities	**289**	**Accrued payables**	**2,936**

Prepare an income statement, balance sheet, and statement of cash flows, and comment on the financial performance and condition of the company.

E4–8

Preparing a statement of cash flows from the cash ledger

The following cash T-account for Miller Manufacturing summarizes all the transactions affecting cash during 2012.

Cash

Beginning balance	**9,000**	**Equipment purchases**	**24,000**
Sales of services	**45,000**	**Rent payable payments**	**7,000**
Receivables collections	**50,000**	**Bank loan principal**	**12,000**
Sale of land	**7,500**	**Loan interest**	**3,000**
Issuance of common stock	**15,000**	**Salaries**	**26,500**
Long-term borrowings	**16,000**	**Dividend payments**	**4,000**
		Miscellaneous expenses	**13,000**
		Long-term investment purchase	**10,000**

a. Compute the ending cash balance.
b. Prepare a statement of cash flows.

E4–9

Preparing a statement of cash flows from journal entries

Small and Associates, a small manufacturing firm, entered into the following cash transactions during January 2012:

1. Issued 600 shares of stock for $25 each.
2. Sold services for $4,000.
3. Paid wages of $1,600.
4. Purchased land as a long-term investment for $9,000 cash.
5. Paid a $2,000 dividend.
6. Sold land with a book value of $3,000 for $3,500 cash.
7. Paid $1,500 to the bank: $900 to reduce the principal on an outstanding loan and $600 as an interest payment.
8. Paid miscellaneous expenses of $1,800.

a. Prepare journal entries for each transaction.
b. Prepare a cash T-account, and compute Small's cash balance as of the end of January. Assume a beginning balance of $5,000.
c. Prepare a statement of cash flows for the month of January.

E4–10

Preparing statements from transactions

Ed's Lawn Service entered into the following transactions during 2012, its first year of operations:

1. Collected $12,000 in cash from shareholders.
2. Borrowed $5,000 from a bank.
3. Purchased two parcels of land for a total of $10,000.
4. Paid $5,000 to rent lawn equipment for the remainder of the year.
5. Provided lawn services, receiving $10,000 in cash and $4,000 in receivables.
6. Paid miscellaneous expenses of $4,000.
7. Sold one parcel of land with a cost of $3,000 for $2,800.
8. Paid a $2,200 dividend to the shareholders.

a. In a manner similar to Figure 4–2, show how each transaction affected the fundamental accounting equation and prepare an income statement, a statement of shareholders' equity, a year-end balance sheet, and a statement of cash flows for 2012.
b. Journalize each transaction and post it in the appropriate T-accounts. From this information, prepare a year-end balance sheet, an income statement, a statement of shareholders' equity, and a statement of cash flows for 2012.

E4–11

Preparing the statement of cash flows from the cash T-account

The following cash T-account for Holcomb Manufacturing summarizes all the transactions affecting cash during 2012.

Cash

Beginning balance	**8,000**	**Inventory purchases**	**27,000**
Sales of inventories	**34,000**	**Accounts payable payments**	**7,000**
Receivable collections	**40,000**	**Bank loan principal payments**	**10,000**
Sales of long-term investments	**12,500**	**Loan interest**	**3,000**
Issuance of common stock	**14,000**	**Wages**	**16,000**
Long-term borrowings	**9,000**	**Dividend payments**	**4,000**
		Administrative expenses	**12,000**
		Equipment purchases	**11,000**

a. Compute the ending cash balance.
b. Prepare a statement of cash flows (direct method).

E4–12

Classifying adjusting journal entries

Eaton Enterprises made the following adjusting journal entries on December 31, 2011:

1. Rent Expense	**1,200**	
Rent Payable		**1,200**

(*Continued*)

2. Insurance Expense	**5,000**	
Prepaid Insurance		**5,000**
3. Depreciation Expense	**20,000**	
Accumulated Depreciation		**20,000**
4. Interest Receivable	**1,500**	
Interest Revenue		**1,500**
5. Unearned Revenue	**200**	
Fees Earned		**200**

a. Give a brief explanation for each of the above entries.
b. Classify each of the above entries as either a cost expiration adjusting entry or an accrual adjusting entry.

E4–13

Classifying transactions

Hog Heaven Rib Joint made the following journal entries on December 31, 2011:

1. Wage Expense	**6,000**	
Wages Payable		**6,000**
2. Interest Expense	**1,000**	
Cash		**1,000**
3. Cash	**10,500**	
Note Payable		**10,500**
4. Rent Expense	**1,500**	
Prepaid Rent		**1,500**
5. Insurance Expense	**2,800**	
Prepaid Insurance		**2,800**
6. Cash	**2,000**	
Unearned Revenues		**2,000**
7. Equipment	**9,000**	
Cash		**9,000**
8. Supplies Expense	**12,000**	
Supplies Inventory		**12,000**
9. Accounts Payable	**8,000**	
Cash		**8,000**
10. Depreciation Expense	**13,000**	
Accumulated Depreciation		**13,000**
11. Advertising Expense	**8,000**	
Cash		**8,000**
12. Advertising Expense	**3,000**	
Prepaid Advertising		**3,000**

Place each of the transactions above in one of the following five categories: (1) operating cash flow, (2) investing cash flow, (3) financing cash flow, (4) accrual adjusting journal entry, and (5) cost expiration adjusting journal entry.

E4–14

Recognizing accrued wages

The Hurst Corporation pays its employees every Friday for the five-day week just ended. On January 2, 2013, the company paid its employees $70,000 for the week beginning Monday, December 29.

a. Assuming that the employees earned wages evenly throughout the week, prepare any adjusting journal entries that were necessary on December 31, 2012.
b. Prepare the journal entry that would be recorded on Friday, January 2, when the wages are paid.
c. Complete a chart like the following.

	2012	2013	Total
Wage expense			
Cash outflow associated with wages			

d. What is the purpose of the adjusting journal entry on December 31?

REAL DATA

E4–15

Depreciating a fixed asset

During 2009, Starbucks purchased fixed assets costing approximately $450 million. Assume that the company purchased the assets at the beginning of the year, uses straight-line depreciation, and normally depreciates its equipment over three years.

a. Compute the book value of the equipment at the end of each of the three years.
b. Complete a chart like the following.

	2009	2010	2011	Total
Depreciation expense				
Cash outflow associated with the purchase of the equipment				

c. What is the purpose of the adjustments at the end of each period?

E4–16

The difference between accrual and cash accounting

Washington Forest Products began operations on January 1, 2011. On December 31, 2011, the company's accountant ascertains that the following amounts should be reported as expenses on the income statement:

Insurance expense	**$20,000**
Supplies expense	**11,000**
Rent expense	**14,000**

A review of the company's cash disbursements indicates that the company made related cash payments during 2011 as follows:

Insurance	**$29,000**
Supplies	**27,000**
Rent	**8,000**

a. Explain why the amounts shown as expenses do not equal the cash paid.
b. For each expense account, compute the amount that should be in the related balance sheet account as of December 31, 2011. *Hint:* Note that Forest Products began operations on January 1, 2011.

E4–17

The difference between net income and net cash flow from operations

The following journal entries were recorded by Lauren Retailing during the month of July:

1. Cash	**5,000**		
Accounts Receivable	**3,000**		
Sales		**8,000**	
2. Cash	**2,000**		
Accounts Receivable		**2,000**	
3. Inventory	**5,800**		
Accounts Payable		**5,800**	
4. Accounts Payable	**2,800**		
Cash		**2,800**	
5. Cost of Goods Sold	**3,700**		
Inventory		**3,700**	
6. Accrued Expenses	**2,500**		
Accrued Payables		**2,500**	

a. Prepare an income statement and the operating section of a statement of cash flows.
b. Explain why net income is not equal to net cash flow from operations, and reconcile the two numbers.

E4–18

Preparing a statement of cash flows from original transactions

Rahal and Watson, a small manufacturing company, entered into the following cash transactions during January of 2012:

1. Issued 800 shares of common stock for $30 each.
2. Collected $3,900 on outstanding accounts receivable.

(*Continued*)

3. Paid wages for the month of January of $1,530.
4. Purchased land as a long-term investment for $12,000 cash.
5. Paid a $6,000 dividend.
6. Sold a piece of equipment with a book value of $5,000 for $7,000 cash.
7. Paid $2,000 to the bank: $900 to reduce the principal on an outstanding loan and $1,100 as an interest payment.
8. Paid miscellaneous expenses of $5,000.

a. Prepare a journal entry for each transaction. Indicate the classification and the effect on the accounting equation.
b. Prepare a cash T-account, and compute the company's cash balance as of the end of January. Assume a beginning balance of $4,000.
c. Prepare a statement of cash flows (direct method) for the month of January.

E4–19

Cash and accrual accounting: comparison of performance measures

Peters Company was in business for two years, during which time it entered into the following transactions:

Year 1:
1. The owners contributed $24,000 cash.
2. At the beginning of the year, rented a warehouse for two years with a prepaid rent payment of $12,000.
3. Purchased $10,000 of inventory on account.
4. Sold half the inventory for $24,000, receiving $20,000 in cash and an account receivable of $4,000.
5. Paid wages of $6,000 and also accrued wages payable of $4,000.

Year 2:
1. Paid the outstanding balance for the inventory purchased in Year 1.
2. Paid the outstanding wages payable balance.
3. Sold the remaining inventory for $30,000 cash.
4. Received full payment on the outstanding accounts receivable.
5. Incurred and paid wages of $12,000.
6. Returned the cash balance to the owners and shut down operations.

a. Prepare an income statement and a statement of cash flows for both Year 1 and Year 2.
b. Complete a chart like the following.

Performance Measure	Year 1	Year 2	Total
Net income			
Net cash flow from operating activities			

REAL DATA

E4–20

Assessing economic consequences

Condensed balance sheets for 2007 and 2008 and the 2009 income statement for Goodyear, the world's largest tire company, are as follows (dollars in millions).

	2008	2007
Current assets	$ 8,340	$10,172
Long-term assets	6,886	7,019
Total assets	$15,226	$17,191
Current liabilities	$ 4,779	$ 4,664
Long-term liabilities	9,425	9,677
Shareholders' equity	1,022	2,850
Total liabilities and shareholders' equity	$15,226	$17,191
Revenues	$19,488	
Expenses	19,565	
Net loss	$ (77)	

a. Early in 2009, assume that Goodyear is considering the following transactions. Treat each separately and compute how it would affect the company's ratios of current assets divided by current liabilities and total liabilities divided by total shareholders' equity.
   1. Purchase $1,000 in inventory on account.
   2. Issue common stock for $2,000 cash.
   3. Refinance a $500 short-term liability with a $500 long-term liability.
   4. Purchase equipment in exchange for a $400 long-term note payable.
   5. Pay a $1,000 short-term debt with cash.

b. Assume that the terms of Goodyear's long-term debt require the company to maintain a ratio of current assets divided by current liabilities of 1.65. Is this covenant restriction relevant to whether the company should enter into any of the above transactions? Explain.

c. How much cash could Goodyear pay for a long-term investment and still be in compliance with the covenant?

E4–21

Appendix 4A: T-account analysis

Excerpts from the financial statements of Dunbar Manufacturing are provided below.

Wages	
Cash payments for wages during 2012	**$35,000**
Wages payable as of December 31, 2012	**17,000**
Wage expense on the 2012 income statement	**39,000**
Rent	
Prepaid rent as of December 31, 2011	**$12,000**
Prepaid rent as of December 31, 2012	**15,000**
Rent expense on the 2012 income statement	**21,000**
Accounts Receivable	
Cash collected from customers during 2012	**$38,000**
Accounts receivable as of December 31, 2011	**14,000**
Sales revenue on the 2012 income statement	**45,000**

a. Compute the wages payable as of December 31, 2011.
b. Compute the cash payments for rent during 2012.
c. Compute the accounts receivable as of December 31, 2012.

E4–22

Appendix 4A: Depreciation and cash flows

Your boss asks you to examine the following income statements of Hamilton Hardware and Watson Glass:

	Hamilton Hardware	**Watson Glass**
Sales	**$900,000**	**$900,000**
Cost of goods sold	**(400,000)**	**(400,000)**
Depreciation expense	**(50,000)**	**(100,000)**
Other expenses	**(200,000)**	**(200,000)**
Net income	**$250,000**	**$200,000**

In the notes to the financial statements, you notice that Hamilton Hardware uses the straight-line method of depreciation and that Watson Glass uses the double-declining-balance method.

a. Assume that the dollar amounts for sales, cost of goods sold, and other expenses reflect total cash collections from customers, total cash paid for inventory, and total cash paid

for other expenses, respectively. Compute cash provided (used) by operating activities for each company, using each of the following:
1. The direct method format
2. The indirect method format

b. Why is the cash provided (used) by operations different from net income? Which of the two methods shows this more clearly?
c. Would you agree of disagree with the following statement? *Depreciation is an important source of cash for most companies.* Explain your answer.

E4–23

Appendix 4A: Preparing a statement of cash flows—direct and indirect method of presentation

Tony began a small retailing operation on January 1, 2012. During 2012, the following transactions occurred:

1. Tony contributed $20,000 of his own money to the business.
2. $60,000 was borrowed from the bank.
3. Long-lived assets were purchased for $25,000 cash.
4. Inventory was purchased: $25,000 cash and $15,000 on account.
5. Inventory with a cost of $25,000 was sold for $80,000: $20,000 cash and $60,000 on account.
6. Cash payments included $18,000 for operating expenses, $5,000 for loan principal, and a $2,000 dividend.
7. $15,000 in expenses were accrued at the end of the year, and depreciation expense of $1,000 was recorded.

a. Prepare journal entries for each economic event.
b. Prepare a balance sheet as of the end of 2012 and an income statement and statement of shareholders' equity for Tony's business.
c. Prepare a cash T-account and a statement of cash flows using the direct method.
d. Prepare a statement of cash flows using the indirect method, but this time prepare it from the company's two balance sheets, the income statement, and the statement of shareholders' equity earnings. Tony's first balance sheet contains all zero balances.

PROBLEMS

P4–1

Journal entries and the accounting equation

Below are several transactions entered into by Vulcan Metal Corporation during 2012. Unless otherwise noted, all transactions involve cash.

1. Purchased equipment for $150,000.
2. Paid employees $30,000 in wages.
3. Collected $15,000 from customers as payments on open accounts.
4. Provided services for $24,000: $16,000 received in cash and the remainder on open account.
5. Paid $50,000 on an outstanding note payable: $10,000 for interest and $40,000 to reduce the principal.
6. Purchased a one-month ad in the local newspaper for $5,000.
7. Purchased a building valued at $250,000 in exchange for $130,000 cash and a long-term note payable.
8. Sold investments with a cost of $20,000 for $35,000.

REQUIRED:

Prepare journal entries for each transaction and explain how each affects the accounting equation.

P4–2

T-accounts and the accounting equation

The following T-accounts reflect seven different transactions that Rodman Container Company entered into during 2012:

Cash				Accounts Receivable				Equipment			
(a)	7,000	(c)	2,000	(a)	21,000	(f)	5,000	(d)	50,000		
(f)	5,000	(d)	20,000								
(g)	25,000	(e)	1,200								

Inventory				Accounts Payable				Notes Payable			
(b)	6,000			(c)	2,000	(b)	6,000			(d)	30,000

Common Stock				Sales Revenue				Rent Expense			
		(g)	25,000			(a)	28,000	(e)	1,200		

REQUIRED:

For each transaction, describe what occurred and how it affected the accounting equation.

P4–3

Journal entries and preparing the four financial statements

Ryan Hope, controller of Hope, Inc., provides you with the following information concerning Hope during 2012. (Hope, Inc. began operations on January 1, 2012.)

1. Issued 1,000 shares of common stock at $95 per share.
2. Paid $2,600 per month to rent office and warehouse space. The rent was paid on the last day of each month.
3. Made total sales for services of $190,000: $65,000 for cash and $125,000 on account.
4. Purchased land for $32,000.
5. Borrowed $75,000 on December 31. The note payable matures in two years.
6. Salaries totaling $80,000 were paid during the year.
7. Other expenses totaling $40,000 were paid during the year.
8. $56,000 was received from customers as payment on account.
9. Declared and paid a dividend of $26,000.

REQUIRED:

a. Prepare journal entries for these transactions.
b. Establish T-accounts for each account, and post the journal entries to these T-accounts.
c. Prepare an income statement, statement of shareholders' equity, a December 31, 2012, balance sheet, and statement of cash flows for 2012.

P4–4

Preparing the four financial statements

The December 31, 2011, balance sheet for Morrison Home Services is summarized below.

Assets		Liabilities and Shareholders' Equity	
Cash	$10,000	Liabilities	$ 6,000
Receivables	4,000	Contributed capital	10,000
Long-term assets	10,000	Retained earnings	8,000
		Total liabilities and	
Total assets	$24,000	shareholders' equity	$24,000

During January of 2012, the following transactions were entered into:

1. Services were performed for $7,000 cash.
2. $3,000 cash was received from customers on outstanding accounts receivable.

(*Continued*)

3. $3,000 cash was paid for outstanding liabilities.
4. Long-term assets were purchased in exchange for a $6,000 note payable.
5. Expenses of $4,000 were paid in cash.
6. A dividend of $800 was issued to the owners.

REQUIRED:

a. Provide a journal entry for each transaction.
b. Treat each transaction independently and describe how each would affect the ratios of current assets divided by current liabilities, net income divided by shareholders' equity, and total liabilities divided by shareholders' equity; and Morrison's current ratio, return on equity, and debt/equity ratio, respectively.
c. Prepare the income statement, statement of shareholders' equity, the January 31 balance sheet, and the statement of cash flows (direct method) for January.
d. (Appendix 4A) Prepare the operating section of the statement of cash flows under the indirect method.

P4–5

Comprehensive problem

The December 31, 2011, balance sheet of Tybee Corporation is provided below (in millions).

Assets		Liabilities and Shareholders' Equity	
Cash	$ 24	Accounts payable	$ 4
Accounts receivable	15	Interest payable	3
Supplies	6	Unearned revenue	12
Prepaid insurance	12	Other short-term payables	4
Equipment	50	Long-term note payable	50
Less: Acc. dep. (12)	38	Contributed capital	20
Land	10	Retained earnings	12
Total	$105	Total	$105

Transactions during January 2012:

- Paid $5 for employee wages.
- Collected $10 cash from customers for work previously performed and billed.
- Purchased equipment for $5 cash.
- Purchased $2 of supplies for cash.
- Paid $3 to a vendor for supplies previously purchased on credit in December 2011.
- Paid the interest owed as of December 31, 2011.
- Completed $18 in services for customers, receiving 50 percent payment in cash and billing the remainder.
- Paid $15 to reduce outstanding long-term note payable.
- Collected $5 for the issuance of common shares.

As of 1/31/12:

- Had performed 25 percent of the services for which it had been paid in advance.
- Owes $1 for interest that will be paid next month.
- Depreciated equipment in the amount of $4.
- Physical count of supplies reveals $3 on hand.
- Declared and paid a cash dividend in the amount of 50 percent of January's net income.

REQUIRED:

Prepare a complete set of financial statements as of January 31, 2012, and prepare the statement of cash flows under the direct and the indirect (Appendix 4A) method.

P4–6

Effects of transactions on the income statement and statement of cash flows

Ten transactions are listed below.

Transaction	Accounts	Direction	Net Income	Net Operating Cash Flow
1. Issued ownership securities for cash.	**Cash**	**+**		
	Contributed Capital	**+**	**NE**	**NE**
2. Purchased inventory on account.				
3. Sold a service on account.				
4. Received cash payments from customers on previously recorded sales.				
5. Purchased equipment for cash.				
6. Paid cash to reduce the wages payable account.				
7. Sold a service for cash.				
8. Paid off a long-term loan.				
9. Made a cash interest payment.				
10. Sold land for an amount greater than its cost.				

REQUIRED:

For each one, indicate what specific accounts are affected as well as the direction (increase or decrease) of the effect. Also indicate whether the transaction would increase or decrease both net income (revenues minus expenses) on the income statement and net cash flow from operations (operating cash inflows minus operating cash outflows) on the statement of cash flows. Use the following key: increase (+), decrease (−), and no effect (NE). The first one has been completed for you.

P4–7

The effects of adjusting journal entries on the accounting equation

Beta Alloys made the following adjusting journal entries on December 31, 2011.

1. Wage Expense	**10,000**		
Wages Payable			**10,000**
2. Insurance Expense	**5,000**		
Prepaid Insurance			**5,000**
3. Interest Receivable	**1,000**		
Interest Revenue			**1,000**
4. Unearned Rent Revenue	**6,000**		
Rent Revenue			**6,000**
5. Depreciation Expense	**20,000**		
Accumulated Depreciation			**20,000**
6. Supplies Expense	**8,000**		
Supplies Inventory			**8,000**
7. Unearned Subscription Revenue	**2,000**		
Subscription Revenue			**2,000**

REQUIRED:

Classify each adjusting entry as either an accrual adjustment (A) or a cost expiration adjustment (C), and indicate whether each entry increases (+), decreases (−), or has no effect (NE) on assets, liabilities, shareholders' equity, revenues, and expenses. Organize your answer in the following way. The first journal entry has been done for you.

Entry	Classification	Assets	Liabilities	Shareholders' Equity	Revenues	Expenses
(1)	**A**	**NE**	**+**	**−**	**NE**	**+**

P4–8

Preparing adjusting journal entries

The following information is available for M&M Johnson, Inc.:

a. The December 31, 2011, supplies inventory balance is $85,000. A count of supplies reveals that the company actually has $30,000 of supplies on hand.
b. As of December 31, 2011, Johnson, Inc. had not paid the rent for December. The monthly rent is $2,400.
c. On December 20, 2011, Johnson collected $18,000 in customer advances for the subsequent performance of a service. Johnson recorded the $18,000 as unearned revenue, and as of December 31 two-thirds of the service had been performed.
d. The total cost of Johnson's fixed assets is $500,000. Johnson estimates that the assets have a useful life of ten years and uses the straight-line method of depreciation.
e. Johnson borrowed $10,000 at an annual rate of 12 percent on July 1, 2011. The first interest payment will be made on January 1, 2012.
f. Johnson placed several ads in local newspapers during December. On December 31, the company received a $28,000 bill for the ads, which was not recorded at that time.
g. On July 1, 2011, Johnson paid the premium for a one-year life insurance policy. The $350 cost of the premium was capitalized when paid.

REQUIRED:

Prepare the adjusting journal entries necessary on December 31, 2011.

P4–9

Inferring adjusting journal entries from changes in T-account balances

The following information is available for Derrick Company:

Account	T-Account Balance before Adjustments	T-Account Balance after Adjustments
Prepaid Rent	**14,500**	**11,800**
Prepaid Insurance	**8,500**	**7,800**
Accumulated Depreciation	**36,000**	**38,400**
Salaries Payable	**1,300**	**2,500**
Unearned Revenues	**800**	**600**
Fees Earned	**87,600**	**87,800**
Rent Expense	**6,500**	**9,200**
Insurance Expense	**5,500**	**6,200**
Depreciation Expense	**0**	**2,400**
Salary Expense	**3,500**	**4,700**

REQUIRED:

Prepare the adjusting journal entries that gave rise to the changes indicated.

P4–10

Reconciling accrual and cash flow dollar amounts

Burkholder Corporation borrowed $28,000 from its bank on January 1, 2011, at an annual interest rate of 10 percent. The $28,000 principal is to be paid as a lump sum at the end of the period of the loan, which is after December 31, 2012. This is the only interest-bearing debt held by Burkholder.

REQUIRED:

The following chart below contains six independent cases, each related to the Burkholder Corporation. Compute the missing amount in each case, assuming that the loan described is Burkholder's only outstanding loan.

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
12/31/11 interest payable balance	**400**	**800**	**400**	**?**	**200**	**?**
Cash interest payments—2012	**3,000**	**?**	**2,300**	**2,600**	**?**	**2,500**
12/31/12 interest payable balance	**?**	**300**	**?**	**200**	**400**	**0**

P4–11

Revenue recognition, cost expiration, and cash flows

Prustate Insurance Company collected $240,000 from Jacobs Printing Corporation for a two-year fire insurance policy on May 31, 2011. The policy is in effect from June 1, 2011, to May 31, 2012.

REQUIRED:

a. Assume that Prustate Insurance Company recorded the $240,000 cash collection as a liability on May 31, 2011.
   1. Prepare the entry to record the cash collection.
   2. Prepare the adjusting entry necessary on December 31, 2011.
   3. What was the purpose of the adjusting journal entry on December 31, 2011?
   4. Complete a chart like the following:

	2011	2012	Total
Insurance revenue			
Cash receipts associated with insurance			

b. Assume that Jacobs Printing Corporation recorded the $240,000 cash payment as an asset on May 31, 2011.
   1. Prepare the entry to record the cash payment.
   2. Prepare the adjusting entry necessary on December 31, 2011.
   3. What was the purpose of the adjusting journal entry on December 31, 2011?
   4. Complete a chart like the following:

	2011	2012	Total
Insurance expense			
Cash payments associated with insurance			

REAL DATA

P4–12

The effects of transactions on financial ratios

The balance sheet of Walgreens, a leading chain drugstore, as of August 31, 2009, appears as follows (dollars in millions):

Assets		Liabilities and Shareholders' Equity	
Cash	**$ 2,587**	**Accounts payable**	**$ 4,308**
Accounts receivable	**2,496**	**Other short-term payables**	**2,461**
Inventory	**6,789**	**Long-term payable**	**3,997**
Other noncurrent assets	**13,270**	**Shareholders' equity**	**14,376**
		Total liabilities and	
Total assets	**$25,142**	**shareholders' equity**	**$25,142**

REQUIRED:

Assume that the following eight transactions occurred the next year (dollars in millions). Indicate the effect of each transaction on net income (revenues minus expenses), the current ratio (current assets divided by current liabilities), working capital (current assets minus current liabilities), and the debt/equity ratio (total liabilities divided by total shareholders' equity) of Walgreens. Use the following key: increase (+), decrease (−), no effect (NE). Treat each transaction independently.

Transaction	Net Income	Current Ratio	Working Capital	Debt/Equity Ratio
1. Issued ownership shares for $100 cash.				
2. Purchased equipment costing $95 for cash.				
3. Paid off a $200 long-term liability				

(*Continued*)

Transaction	Net Income	Current Ratio	Working Capital	Debt/Equity Ratio
4. Sold inventory costing $500 for $685 cash.				
5. Declared a $152 dividend but have not paid.				
6. Paid $200 in wages payable.				
7. Received $75 from customers on account.				
8. Incurred and paid $30 in interest on short-term payables.				

P4–13

Effects of different forms of financing on financial ratios

The following condensed balance sheet for December 31, 2012, comes from the records of Buzz and Associates:

Assets		Liabilities and Shareholders' Equity	
Cash	**$ 10,000**	**Current liabilities**	**$ 20,000**
Other current assets	**40,000**	**Long-term notes payable**	**20,000**
Property, plant, and equipment	**70,000**	**Contributed capital**	**30,000**
		Retained earnings	**50,000**
Total assets	**$120,000**	**Total liabilities and shareholders' equity**	**$120,000**

Buzz and Associates is considering the purchase of a new piece of equipment for $30,000. The company does not have enough cash to purchase it outright, so it is considering alternative ways of financing. As management sees it, there are three basic options: (1) issue 3,000 ownership shares for $10 per share, (2) take out a long-term loan (12 percent annual interest) for $30,000 from the bank, or (3) purchase the equipment on open account (must be paid in full in thirty days). Presently Buzz has 12,000 ownership shares outstanding.

REQUIRED:

a. Compute the present current ratio (current assets/current liabilities), the debt/equity ratio (total liabilities/shareholders' equity), and the book value of Buzz's outstanding ownership shares: (total assets minus total liabilities) divided by number of shares outstanding.

b. Compute the current ratio, debt/equity ratio, and book value per share under each of the three financing alternatives, and express your answers in the following format:

Financing Alternative	Current Ratio	Debt/Equity Ratio	Book Value per Share
1. Share issuance			
2. Long-term note			
3. Open account			

c. Discuss some of the pros and cons associated with each of the three financing options.

d. The chairman of the board of directors stated at a recent board meeting that with $50,000 in Retained Earnings, the company should be able to purchase the $30,000 piece of equipment. Comment on the chairman's statement.

REAL DATA

P4–14

Effects of events on financial ratios

The following balances were taken from the October 31, 2008, balance sheet of Hewlett-Packard (dollars in millions).

Current assets	**$51,728**
Long-term assets	**61,603**
Current liabilities	**52,939**
Long-term liabilities	**21,450**
Shareholders' equity	**38,942**

Early in fiscal 2009, Hewlett-Packard considered the financial effects of several events.

REQUIRED:

For each of the five events listed here, indicate how they would affect the financial ratios listed by completing the following chart. Assume that financial statements are prepared immediately after each event. Treat each event independently, and use the following key: Increase (+), Decrease (−), and No Effect (NE).

	Net Income / Shareholders' Equity	Current Assets / Current Liabilities	Total Liabilities / Shareholders' Equity
1. Purchase inventory on account.			
2. Sell assets for cash at a gain.			
3. Provide services to customers, receiving cash in return.			
4. Make a principal payment on an outstanding long-term liability.			
5. Issue common stock for cash.			

REAL DATA

P4–15

Effects of events on financial ratios

The following balances were taken from the December 31, 2008, balance sheet of Manpower, Inc., a world-leading workforce provider (dollars in millions):

Current assets	**$4,690**
Long-term assets	**1,928**
Current liabilities	**2,907**
Long-term liabilities	**1,228**
Shareholders' equity	**2,483**

Early in 2009, Manpower considered the financial effects of several events.

REQUIRED:

For each of the five events listed here, indicate how each event would affect the financial ratios listed by completing the following chart. Assume that financial statements are prepared immediately after each event. Treat each event independently, and use the following key: Increase (+), Decrease (−), and No Effect (NE).

	Net Income / Sales	Current Assets / Current Liabilities	Total Liabilities / Shareholders' Equity
1. Purchase equipment for cash.			
2. Purchase machinery in exchange for a long-term note payable.			
3. Pay salaries, which have not been accrued, to employees.			
4. Declare a dividend.			
5. Issue common stock to satisfy a current obligation.			

REAL DATA

P4–16

Effects of events on financial ratios

The following balances were taken from the December 31, 2008, balance sheet of Time Warner (dollars in millions):

Current assets	**$16,602**
Long-term assets	**97,294**
Current liabilities	**13,976**
Long-term liabilities	**57,632**
Shareholders' equity	**42,288**

Early in 2009, Time Warner considered the financial effects of several events.

REQUIRED:

For each of the five events listed here, indicate how they would affect the financial ratios listed by completing the following chart. Assume that financial statements are prepared immediately after each event. Treat each event independently, and use the following key: Increase (+), Decrease (−), and No Effect (NE).

	Net Income / Total Assets	Current Assets / Current Liabilities
1. Purchase equipment in exchange for a note payable.		
2. Pay cash for marketing its services.		
3. Sell equipment for an amount less than its book value.		
4. Pay wages that were accrued in a previous period.		
5. Provide a service for which cash was collected in a previous period.		

P4–17

Comprehensive problem

The following balance sheet is presented for J.D.F. Company as of December 31, 2011.

J.D.F. Company
Balance Sheet
December 31, 2011

ASSETS		
Cash		**$ 170,000**
Accounts receivable		**188,000**
Merchandise inventory		**200,000**
Prepaid insurance		**74,000**
Supplies inventory		**40,000**
Long-term investments		**160,000**
Equipment	**$480,000**	
Less: Accumulated depreciation	**98,000**	**382,000**
Machinery	**$950,000**	
Less: Accumulated depreciation	**230,000**	**720,000**
Patent		**75,000**
Total assets		**$2,009,000**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Accounts payable		**$ 220,000**
Wages payable		**73,000**
Mortgage payable		**300,000**
Bonds payable		**500,000**
Contributed capital		**500,000**
Retained earnings		**416,000**
Total liabilities and shareholders' equity		**$2,009,000**

During 2012, J.D.F. entered into the following transactions.

1. Made credit sales of $1,350,000 and cash sales of $350,000. The cost of the inventory sold was $700,000.
2. Purchased $820,000 of merchandise inventory on account.
3. Made cash payments of $400,000 to employees for salaries. This amount includes the wages due employees as of December 31, 2011.
4. Purchased $110,000 of supplies inventory by issuing a six-month note that matures on March 12, 2013.
5. Collected $850,000 from customers in payment of open accounts receivable.
6. Paid suppliers $870,000 for payment of open accounts payable.
7. Sold a long-term investment for $37,000. The investment had been purchased for $30,000.
8. Paid $148,000 in cash for miscellaneous operating expenses.
9. Issued additional common stock for $120,000 cash.
10. On September 30, 2012, a customer gave the company a note due on May 1, 2013, in payment of a $72,000 account receivable.
11. The company declared and paid a cash dividend of $50,000.
12. The company purchased stock in Microsoft as a long-term investment for $50,000.

J.D.F. used the following information to prepare adjusting journal entries on December 31, 2012.

(a) Forty percent of the prepaid insurance on January 1 was still in effect as of December 31, 2012.
(b) A physical count of the supplies inventory indicated that the company had $40,000 on hand as of December 31, 2012.
(c) A review of the company's advertising campaign indicates that of the expenditures made during 2012 for miscellaneous operating expenses, $25,000 applies to promotions to be undertaken during 2013.
(d) The company is charged at a rate of $3,500 per month for certain operating expenses. It paid $36,000 for these expenses during the year.
(e) The company owes employees $43,000 for wages as of December 31, 2012.
(f) The $72,000 note receivable accepted in payment of an account receivable (see [10] above) specifies an annual interest rate of 9 percent.
(g) Equipment has an estimated useful life of ten years, and machinery has an estimated useful life of twenty years. The patent originally cost $125,000 and had an estimated useful life of ten years. The company uses the straight-line method to depreciate and amortize all property, plant, equipment, and intangibles.
(h) The note issued by the company (see [4] above) has a stated rate of 10 percent and was issued on September 12, 2012.

REQUIRED:

a. Prepare an income statement, a statement of shareholders' equity, a balance sheet, and a statement of cash flows using the direct form of presentation.
b. (Appendix 4A) Prepare the operating section of the statement of cash flows under the indirect method.

P4–18

Appendix 4A: T-account analysis

Excerpts from the financial statements of Tree Tops Services are as follows.

	2012	2011
Balance sheet:		
Accounts receivable	**$ 2,500**	**$ 3,100**
Unearned revenue	**1,300**	**2,600**
Income statement:		
Revenues from services	**54,700**	**49,800**
Statement of cash flows:		
Net cash from operations	**62,400**	**58,700**

Note: Net cash from operations consists of two components: (1) cash collections from services rendered and (2) cash payments due to operating activities.

REQUIRED:
For 2012, compute (1) cash collections from services rendered and (2) cash payments due to operating activities.

P4–19
Appendix 4A: T-account analysis

Mayberry Enterprises has two sources of revenue. It sells advertising displays to retail firms and provides a consulting service on how to mount and use these displays. You represent a large manufacturing company that is considering purchasing Mayberry. You have reviewed Mayberry's most recent financial statements, excerpts of which are provided below and are concerned about which of the two revenue sources is growing in importance for Mayberry. Mayberry's customers always pay for the consulting services in advance, indicating that the accounts receivable balance is associated only with sales of advertising displays.

	2012	2011	2010
Income statement:			
Revenues	**$89,500**	**$76,000**	**$67,000**
Balance sheet:			
Accounts receivable	**29,500**	**32,200**	**35,000**
Statement of cash flows:			
Collections from display sales	**43,500**	**41,500**	**39,500**

REQUIRED:
Which of the two revenue sources is growing in importance for Mayberry? Support your conclusion with calculations.

P4–20
Appendix 4A: T-account analysis

You are a credit analyst for First American Bank, and Badger Business has applied for a loan. The company claims to have more than tripled profits from 2011 to 2012 and believes that it should be given prime credit terms. In addition, you note that Badger has expanded its operations, recently paying $37,000 for new equipment that replaced older equipment, which was sold that same year. No other transactions affected the company's equipment account. Excerpts from the company's 2012 financial statements are provided below.

	2012	2011
Balance sheet:		
Equipment	**$97,400**	**$84,800**
Accumulated depreciation	**(26,400)**	**(24,300)**
Income statement:		
Net income	**5,200**	**1,500**
Depreciation expense	**8,700**	**7,600**
Statement of cash flows:		
Proceeds from equipment sale	**23,400**	**0**

REQUIRED:
Reconstruct the journal entry to record the sale of equipment, and comment on Badger's claim that profits more than tripled in 2012.

ISSUES FOR DISCUSSION

REAL DATA
ID4–1
A transaction and its effect on the accounting equation and balance sheet

When MCI Communications Corporation (now part of Verizon Communications) purchased Satellite Business Systems (SBS) from International Business Machines Corporation (IBM), it issued common stock to IBM, valued at $376 million, and signed a note payable for $104 million. MCI received miscellaneous assets valued at $52 million and the SBS system.

REQUIRED:

Respond to the following:

a. At what dollar amount was the SBS system recorded on MCI's balance sheet?
b. Describe how this transaction affected the accounting equation from MCI's point of view.
c. Describe how this transaction affected MCI's balance sheet.
d. Identify the financial statement accounts affected, the direction of the effect, and the dollar amount of the effect on each account.
e. Prepare the journal entry MCI recorded when the transaction took place.

REAL DATA
ID4–2
The effect of a transaction on the basic accounting equation

When Campbell Soup purchased the European culinary business from Unilever, the acquisition was funded with available cash and a short-term notes payable. The $920 million purchase price was allocated: $100 million to fixed assets and inventory; $490 million to identifiable intangible assets (e.g., trademarks), and $330 representing the excess of the purchase price over the fair value of the individual assets acquired (goodwill).

REQUIRED:

a. How did the transaction affect the accounting equation from Campbell Soup's perspective?
b. How did the transaction affect the accounting equation from Unilever's perspective?
c. Describe how the transaction affected Campbell Soup's balance sheet.
d. Prepare the journal entry made by Campbell Soup to record the transaction.

REAL DATA
ID4–3
The effects of transactions on the accounting equation

In the late 1990s the Internet explosion sent the share values of well-known Internet companies soaring. Many of these companies took advantage of the high prices by making major share issuances and using the funds as their major source of financing. Lycos collected $111 million from a 1998 issuance; Yahoo! collected over $800 million over a three-year period; and America Online topped them all, collecting over $1 billion. While each company used the proceeds a little differently, they all used some of it to reduce debt, update equipment, and increase current assets.

REQUIRED:

a. Describe how the issuance of stock to reduce debt, update equipment, and increase current assets affects the fundamental accounting equation.
b. Explain how the issuance of stock could increase a company's credit rating.

REAL DATA
ID4–4
Cash flows and business failures

The W.T. Grant Company was the nation's largest retailer until it filed for bankruptcy only one year after it had reported profits of over $20 million for more than ten consecutive years. Yet cash flow provided by operations started dipping several years earlier and remained negative until the company's collapse.

REQUIRED:

a. What kind of items might account for such a divergence between net income and cash flow provided by operations?
b. What information on the financial statements could have provided some warning of the company's failure?

REAL DATA
ID4–5
Corporate frauds and the auditor

In "Behind the Wave of Corporate Fraud: A Change in How Auditors Work," the *Wall Street Journal* detailed several of the recent accounting scandals and the techniques management used to deceive both the auditors and the investing public. The article focused on audit techniques that contributed to the ability of management to undertake deceptive practices. For example, WorldCom reclassified ordinary expenses as assets, which the auditors missed because there was "no supporting documentation"; Tyco International, charged with inflating profits by over $1 billion, left "warning signs" that were not followed up on by auditors; and HealthSouth Corporation pulled it off by inflating the dollar amounts of a large number of small revenue recognition transactions because they "knew the auditors did not look at increases of less than $5,000."

REQUIRED:

a. Explain how WorldCom showed higher profits in the current period by inaccurately classifying expenses as assets. How would this technique affect the profits of future periods?
b. Explain why management may be tempted to inflate profits in the current period.
c. Explain why auditors might not check transactions below a certain dollar amount.
d. How could high-quality internal controls have helped in avoiding these frauds?

REAL DATA
ID4–6
Watch cash flow

Herbert S. Bailey, Jr., published the following poem in *Publishers Weekly* (Jan. 13, 1975), which was written in the meter of Edgar Allan Poe's famous poem, *The Raven*.

Though my bottom line is black, I am flat upon my back.
My cash flows out and customers pay slow.
The growth of my receivables is almost unbelievable;
The result is certain—unremitting woe!
And I hear the banker utter an ominous low mutter,
"Watch cash flow."

REQUIRED:

Explain Mr. Bailey's message.

REAL DATA
ID4–7
Income statement classification and International Financial Reporting Standards

In January 2004, Munich-based automaker BMW switched how it classified certain expenses to match what it anticipates to be the format approved by International Financial Reporting Standards (IFRS). Previously, BMW classified these expenses as part of operating profit, and now it has decided to move them to the nonoperating section of the income statement in line with IFRS. As reported in the *Wall Street Journal,* a Goldman Sachs analyst commented that BMW's action would significantly boost its operating income, and "if GM took BMW's approach, it would boost operating income by over $7 billion."

REQUIRED:

a. How would the change made by BMW affect net income, that is, its "bottom line"?
b. Provide several reasons why BMW might be interested in making this change.
c. Why would an analyst from Goldman Sachs be concerned about how operating profits are measured by BMW and GM?
d. Would BMW be allowed to make this change if it wished to issue stock on the New York Stock Exchange? Discuss.

REAL DATA
ID4–8
Problems with the federal government's accounting systems

The Associated Press reported:

The military's money managers last year made almost $7 trillion in adjustments to their financial ledgers in an attempt to make them add up, the Pentagon's inspector general said in a report released yesterday. The Pentagon could not show receipts of $2.3 trillion of those changes, and half a trillion dollars of it was just corrections of mistakes made in earlier adjustments. . . . The magnitude of accounting entries required to compile the financial statements highlights the significant problems [the Pentagon] has producing accurate and reliable financial statements with existing systems and processes . . . the military can't measure the results of closing a base; can't rationally decide whether to contract out a service or keep it in government hands; and may inaccurately peg the cost of programs under debate, from national missile defense to retirees' health care.

REQUIRED:

Discuss problems that might arise due to the significant weaknesses of the Pentagon's accounting systems.

REAL DATA
ID4–9
Debt transactions and the basic accounting equation

The *Wall Street Journal* (October 5, 2009) reported that analysts are worried about companies borrowing money to pay dividends and to repurchase outstanding shares of stock. Aircraft parts manufacturer TransDigm Group borrowed $360 million to pay dividends, while Intel Corporation borrowed $1.5 billion to buy back shares of stock. These concerns of

analysts are not new; in March 2007 the *Wall Street Journal* reported two instances of borrowings-for-dividends (Rexnord Corporation and Scotts Miracle-Gro) that sparked concerns. Companies have defended the actions, often citing historically low borrowing costs.

REQUIRED:
Discuss how the above transactions affect the basic accounting equation for the companies involved. What risks are posed when a company pursues such a strategy? What are the benefits of such a decision?

REAL DATA
ID4–10
Consolidated financial statements and multinationals

In October 2008 NIKE completed the acquisition of 100% of the common shares of Umbro, a leading United Kingdom–based global soccer brand. The acquisition price was approximately $576 million, and since the acquisition Umbro has operated as a wholly owned NIKE subsidiary. Umbro prepares its financial statements under IFRS and the amounts are denominated in British pounds.

REQUIRED:
Describe some of the difficulties faced by NIKE each year when it consolidates the financial statements prepared by Umbro into its overall consolidated financial statements.

REAL DATA
ID4–11
Real-time accounting

According to *The Internal Auditor* (April 2000):

In the past, credible financial reports could be produced, audited, and published only on a periodic basis, because the information needed to generate such reports was either impossible or too costly to obtain on a real-time basis. However, a growing number of important items on financial statements have come under real-time management, as information technology has made such practices both economically feasible and competitively necessary for survival.

REQUIRED:
What does it mean that information can be obtained on a real-time basis? What items on the financial statements do you think have come under real-time management, and what advantages might real-time accounting create?

REAL DATA
ID4–12
The SEC Form 10-K of NIKE

The SEC Form 10-K of NIKE is reproduced in Appendix C.

REQUIRED:
Review the NIKE Form 10-K, and answer the following questions.

a. In terms of the basic accounting equation, explain how NIKE accounts for prepaid expenses. What is the dollar value of prepaid expenses on the 2009 and 2008 balance sheets?
b. In terms of the basic accounting equation, explain how NIKE accounts for accrued liabilities.
c. How much cash did NIKE spend for capital expenditures and dividends during the year ended May 31, 2009? How did these transactions affect the basic accounting equation? How much cash was collected from share issuances through stock options, and how did these transactions affect the basic accounting equation?
d. What is the balance of accounts payable on NIKE's May 31, 2009, balance sheet, and how did it get there?
e. What does NIKE's management say in its management letter about its system of internal controls?
f. (Appendix 4A) Why is depreciation added to net income in the operating section of the statement of cash flows, and why is the increase in accounts receivable subtracted from net income?