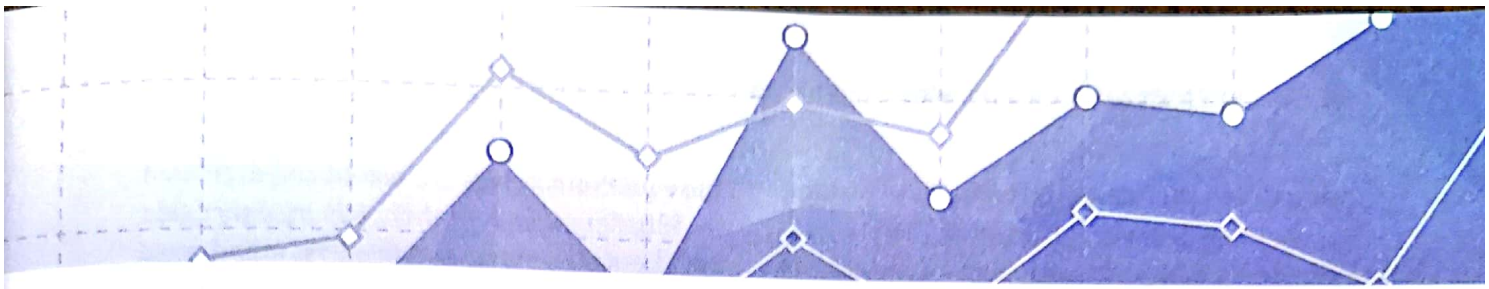


CHAPTER 7

Recording Financial Information

Double Entry and the Accounting Equation—The Golden Rule of Accounting

Financial accounting consists largely of keeping the financial history of the organization. In performing financial accounting, the accountant attempts to keep close track of each event that has a financial impact on the organization to facilitate financial statement preparation. By keeping track of events or transactions as they happen, the accountant can periodically summarize the organization's financial position and the results of its operations.

To keep track of the organization's financial history, the accountant has chosen a very common historical device. In the navy, officers keep a chronological history of a voyage by daily entries into a log. For a personal history, individuals make entries in their diaries. Explorers frequently record the events of their trips in a journal. Accountants follow in the tradition of explorers, each day recording the day's events in a journal, referred to as a *general* journal. The entries the accountant makes in the journal are simply called *journal entries*, and the general journal is often called the *book of original entry*. This term is used because an event is first entered into the organization's official history via a journal entry.

In recording a journal entry, adequate information to describe an entire event is needed. To be sure that all elements of a financial event (more commonly referred to as a *transaction*) are recorded, accountants use a system called *double-entry bookkeeping*. To understand double entry, we should think in terms of the basic equation of accounting:

$$\text{Assets (A)} = \text{Liabilities (L)} + \text{Net Assets (NA)}$$

Any event having a financial impact on the organization affects this equation because the equation summarizes the entire financial position of the organization. Furthermore, by definition, this equation must always remain in balance. Absolutely nothing can happen (barring a mathematical

miscalculation) that would cause this equation not to be in balance, because net assets have been defined in such a way that it is a residual value that brings the equation into balance.

If the equation must remain in balance, then a change of any one number in the equation must change at least one other number.

We have great latitude in which other number changes. For example, we might begin with the equation looking like:

A	=	L	+	NA
$300,000	=	$200,000	+	$100,000

This equation essentially tells us that the organization owns $300,000 of assets, and these assets were financed with $200,000 of borrowing (liabilities) and $100,000 of operating profits or contributions (net assets). If the organization were to borrow $40,000 from the bank, it would have more cash—assets would increase by $40,000—and it would owe more money to the bank—liabilities would increase by $40,000. The equation would, thus, change to:

A	=	L	+	NA
$340,000	=	$240,000	+	$100,000

The equation is in balance, with each side at $340,000. Compare this equation to the previous example. Two numbers in the equation have changed. *Double entry* signifies that it is not possible to change one number in an equation without changing at least one other number.

However, the two numbers that change need not be on different sides of the equation. For example, what if the organization bought some inventory for $30,000 and paid cash for it? The asset "cash" would decrease, whereas the asset "inventory" would increase. The equation becomes:

A	=	L	+	NA
$340,000	=	$240,000	+	$100,000

The equation appears as if it hasn't changed at all, but that's not quite true. The left side of the equation has both increased and decreased by $30,000. Although the totals on either side are the same, our journal entry would have recorded the specific parts of the double-entry change that took place on the left side of the equation.

Debits and Credits—The Accountant's Secret

It wouldn't be much fun to be an accountant if you didn't have a few tricks and secrets. Later in this text we discuss a few of the more interesting tricks; here, however, we discuss a secret, the meaning of *debit* and *credit*.

Previously, an accountant's journal was compared to a naval logbook. That's not the only similarity. Sailors use the terms *port* and *starboard*. If you've ever watched an old seafaring movie, in the middle of a fierce storm, with the skies clouded and the winds blowing, the seas heaving and the rains pouring, you may have heard someone yell out, "Hard to the port!" The sailor at the large oaken wheel, barely able to stand erect in the gusts of wind and the torrential downpour, struggles hard to turn the ship in the direction ordered. Perhaps you thought they were heading for the nearest port—ergo, "Hard to the port." Not at all. The shouted command was to make a left turn.

It seems that *port* simply stated means left, and *starboard* really means right. Of course, it's more sophisticated than that: port means the left-hand side as you face toward the front of the boat or ship, and starboard means the right-hand side as you face the front. Really what port means is *debit*, and starboard means *credit*. Certainly, we can drape the terms debit and credit in vague definitions and esoteric uses, but essentially debit means left, as you face the accounting document in front of you, and credit means right.

Perhaps you had figured that out on your own, perhaps not. If you had, then you are potentially threatening to take away the jobs of your accountants and bookkeepers. To prevent that, some rather interesting abbreviations have been introduced to common accounting usage. Rarely will the accountant write out the words debit or credit. Instead, abbreviations are used. The word credit is abbreviated "Cr." Got it? Then you can guess the abbreviation for debit, "Dr." If you didn't guess, it's not too surprising, given the absence of the letter "r" from the word debit. How did this abbreviation come about? Accounting, as we know it today, has its roots in Italy during the 1400s. Italy is the home of Latin, and were we to trace the word debit back to its Latin roots, the "r" would turn up.[1]

Debit and credit deserve a little more clarification. Prior to actually using debit and credit, accountants perform a modification to the accounting equation (i.e., Assets [A] = Liabilities [L] + Net Assets [NA]). Essentially, this modification requires examination of what causes net assets to change. As presented, the balance sheet equation is:

$$A = L + NA$$

To find out where an organization is at the end of a year, we need to know where it started and what changes occurred during the year. The changes in assets are equal to the change in liabilities plus the change in net assets, or:

$$\Delta A = \Delta L + \Delta NA$$

where the symbol "Δ" indicates a change in the number it precedes. For example, ΔA represents the change in assets (i.e., an increase or decrease in resources owned by the organization).

Moving a step further, net assets increase as a result of revenues (R) and decrease as a result of expenses (E). Revenues make owners better off and expenses make owners worse off. Therefore, our basic equation of accounting indicates that the change in assets is equal to the change in liabilities plus the change in revenues less expenses, or in equation form:

$$\Delta A = \Delta L + \Delta R - \Delta E$$

The only problem with this equation as it now stands is that accountants are very fond of addition, but only tolerate subtraction when absolutely necessary. The above equation can be manipulated using algebra. We can add the change in expenses to both sides of the equation, producing the following equation:

$$\Delta A + \Delta E = \Delta L + \Delta R$$

Having made these changes in the basic equation, we can return to the discussion of debits and credits. When we say that the debit means left, we mean that debits are increases to anything on the left side of this equation. When we say that credit means right, we mean that credits increase anything on the right side of this equation. Of course, that leaves a slight problem. What do we do if something on either side decreases? We have to reverse our terminology: an account on the left is decreased by a credit and an account on the right is decreased by a debit.

Debits and credits are mechanical tools that aid bookkeepers. Debits and credits have no underlying theoretical or intuitive basis. In fact, the use of debits and credits, as explained here, may seem counterintuitive. Cash, which is an asset, is increased by a debit and decreased by a credit. If you think about this, it may not tie in with the way you've previously thought about debits and credits. In fact, this may seem to be downright wrong. Most individuals who are not financial officers have relatively little need to use debit and credit in a business

1 The abbreviation can be traced back to the Latin past participle of debitum: "debere," returning the "r" to the word.

context. We come upon the terms much more frequently in their common lay usage.

Most of us have come into contact with the terms debit and credit primarily from bank debit cards, which allow us to withdraw cash from automated teller machines (ATMs) or pay for purchases at a grocery store. Perhaps we have a checking account, and we withdraw $20 from our account. Our monthly bank statement will indicate that our account was debited by $20. Something here doesn't tie in with the previous discussion of debits and credits.

If a debit increases items on the left and assets are on the left, our assets should increase with a debit. But when the bank debits our account, it takes money away from our account. The discrepancy results from the entity concept of accounting, discussed in Chapter 4. Under the *entity concept*, each entity must view financial transactions from its own point of view. In other words, the organization shouldn't worry about the impact on its owners, managers, or customers; it should only consider the impact of a transaction on itself. When the bank debits your account, it is not considering your cash balance at all! Rather the bank is considering its own set of books. To the bank, you are considered a liability. You give the bank your money and the bank owes that amount of money to you. The bank's focus is on the fact that is has a liability to repay you. When the bank debits your account, it is saying that it is reducing an item on its right; the bank is reducing a liability. To you, as an entity, there is a mirror image. Whereas the bank is reducing its liability, on your records, you must reduce your cash, which is an asset. A reduction in an asset is a credit. Therefore, withdrawing cash with your *debit* card would actually cause you to record a *credit* on your books or financial records, because an asset has decreased.

Consider returning merchandise to a store. The store issues you a credit slip. From the store's point of view, it now owes you money for the returned item. The store's liability has risen, so it has a credit. From your point of view, you have a receivable from that store; receivables are assets. Thus, you have an increase in an asset, or a debit.

In other words, about the best way to insult your accountant is to call him or her a credit (that is, liability) to the organization! You'll have to reflect on this new way of thinking about debits and credits for a while if you're not accustomed to it, and if you wish to become fluent in the use of debits and credits. Unfortunately, because the items on one side of the equation increase with debits and the items on the other side decrease with debits, and vice versa for credits, it can take a while before it becomes second nature. Imagine a product manager trying to explain to an accountant that a new product is going to generate extra cash of $100,000. The accountant says, "Okay, debit cash $100,000," and the product manager says, "No, no, I said it will *generate* $100,000, not use it!" Of course the accountant replies, "That's what I said, debit cash a hundred grand!"

If you still find debits and credits somewhat confusing, don't be overly concerned. Trying to look at things from a mirror image of what you've been used to all your life isn't easy. Fortunately, debits and credits are simply bookkeeping tools, and you don't need to use them extensively to understand the concepts of accounting and finance. Never hesitate to ask an accountant to put aside use of the terms debit and credit and to simply explain what is going up and what is going down.

Recording Financial Events

Now we are going to work through an example in which we actually record a series of transactions for a hypothetical health care organization, Healthy Hospital, for 2019. The purpose of this example is to give you a feel for the way financial information is recorded and show the process by which millions of transactions occurring during a year can be summarized into several pages of financial statements. At the same time, we use the specific transactions in the example to highlight a number of accounting conventions, principles, and methods.

TABLE 7-1 presents the balance sheet for Healthy Hospital, as of December 31, 2018. From this balance sheet, we obtain information about assets, liabilities, and net assets for the beginning of 2019. Year-end closing balances from the balance sheet will be identical to opening balances for the following year. Our basic equation at the start of 2019 is:

A	=	L	+	NA
$300,000	=	$134,000	+	$166,000

To examine financial events during the year, we are interested in the change in this equation. As explained, the change in the equation may be stated:

$$\Delta A + \Delta E = \Delta L + \Delta R$$

Every financial event is a transaction that affects the basic equation of accounting. Accountants should keep track of whether or not each transaction complies with the rules of double entry by examining its effect on this equation. After a journal entry is recorded, placing an event into the financial history of the organization, this equation must be in balance, or some error has been made. The way accountants actually record journal entries ensures that the equation remains in balance at all times. Each journal entry first lists all accounts that have a debit change, and then lists all accounts that have a credit change. The account names for accounts with a debit change are recorded in a column on the left and the account names for accounts with a credit change are recorded on a column indented slightly to the right. Similarly, the actual dollar amounts appear in two columns, with the debit column on the left of the credit column. For example, suppose we buy inventory and pay $12 cash for it. One asset, inventory increases by $12, and another asset, cash, decreases by $12. In journal entry form this would appear as:

	Dr.	Cr.
Inventory	$12	
Cash		$12

TABLE 7-1 Healthy Hospital Balance Sheet As of December 31, 2018

Assets	
Current assets	
Cash	$ 104,000
Accounts receivable	36,000
Inventory	40,000
Total current assets	$ 180,000
Fixed assets	
Plant and equipment	120,000
Total assets	$ 300,000
Liabilities and Net Assets	
Liabilities	
Current liabilities	
Accounts payable	$ 34,000
Wages payable	20,000
Total current liabilities	$ 54,000
Long-term liabilities	
Mortgage payable	80,000
Total liabilities	$ 134,000
Net assets	
Net assets without donor restrictions	$ 146,000
Net assets with donor restrictions	20,000
Total net assets	$ 166,000
Total liabilities and net assets	$ 300,000

Notice that *inventory* appears to be somewhat to the left, and the dollar amount on that line appears in the Dr. column. As noted, an increase in an asset is a debit. Cash is indented to the right, and the dollar amount on that line is on the Cr. column on the right. A decrease in the cash asset is a credit. A brief explanation is often recorded for each journal entry. For this entry, the explanation is: "To record purchase of inventory for cash." The total of all numbers in the Dr. column must equal the total of all numbers in the Cr. column, or the fundamental equation of accounting is not in balance.

Healthy Hospital 2019 Financial Events

In the example that follows, we indicate the impact of each transaction on the fundamental equation of accounting and then show how it appears in journal entry form.

1. January 2. Purchased a 3-year fire insurance policy for $6,000. A check was mailed. The starting point for making a journal entry is to determine what has happened. In this case, we have $6,000 less cash than we used to, and we have paid in advance for 3 years worth of insurance. Any item we would like to keep track of is called an *account*, because we want to account for the amount of that item. Here, the balance in our cash account (an asset) has gone down, and our prepaid insurance (P/I) account (also an asset) has increased. This results in offsetting changes on the left side of the equation, so there is no net effect or change to the equation.

ΔA	+ ΔE	=	ΔL + ΔR
Cash −6,000		=	No change on right side
P/I +6,000			

	Dr.	Cr.
Prepaid insurance	$6,000	
Cash		$6,000

2. January 18. The hospital mails a check to its supplier for $30,000 of the $34,000 it owed at the end of last year. (Refer to Table 7-1 for the accounts payable [A/P] liability balance at the end of the previous year.) This requires a journal entry showing a decrease in the cash balance and a reduction in the A/P liability to our supplier.

ΔA	+ ΔE	=	+ΔL	+ΔR
Cash −30,000		=	A/P −30,000	

	Dr.	Cr.
Accounts payable	$30,000	
Cash		$30,000

Notice that when we look at the impact on the equation, both cash and accounts payable are negative numbers; each decreases by $30,000. In the journal entry format, negative signs are never needed or used. The decrease in cash is a credit, and appears as $30,000 in the credit column. The decrease in accounts payable results in a debit and appears in the debit column.

3. February 15. The hospital places an order with an equipment manufacturer for a new piece of machinery. The new machine costs $20,000, and delivery is expected early next year. Both Healthy Hospital and the equipment manufacturer sign a contract. In this case, there is no journal entry even though there is a legally binding contract.

The *timing for recording transactions* in journal entries requires three requirements be fulfilled. The first is that we know how much money is involved. In this case, we do know the exact amount of the contract. The second is knowing when the transaction is to be fulfilled. Again, we know that delivery will take place early the following year. Finally, the accountant requires that there must have been some exchange and that the transaction be recorded only to the extent that there has been an exchange. From an accounting point of view, Healthy Hospital has not yet paid anything, nor has it received anything. There is no need to record this into the financial history of the organization via the formal process of a journal entry.

Not creating a journal entry doesn't mean the item must be totally ignored. If an unfilled contract involves an amount that is material, then the principle of full disclosure requires that a note to our financial statements disclose this future commitment. However, the balance sheet itself may not show the machine as an asset or show a liability to pay for it.

4. March 3. Healthy Hospital purchases inventory on account for $30,000. Healthy Hospital will use this inventory in the delivery of care for which they will be paid $60,000. The effect of this transaction is to increase the amount of inventory (Inv.) asset and increase a liability, A/P. Do we record the newly purchased inventory at $30,000 or the amount that will ultimately get paid? According to the cost principle, we must value inventory at what it costs even though it will be used to generate revenues greater than that amount.

ΔA	+ ΔE	=	ΔL	+ΔR
Inv. +30,000		=	A/P + 30,000	

	Dr.	Cr.
Inventory	$30,000	
Accounts payable		$30,000

5. April 16. Cash of $28,000 is received from third-party payers for services provided to patients last year. This increases one asset, cash, and reduces another asset, accounts receivables (A/R).

ΔA	+ ΔE	=	ΔL + ΔR
Cash +28,000		=	No change on right side
A/R − 28,000			

	Dr.	Cr.
Cash	$28,000	
Accounts receivable		$28,000

6. May 3. Healthy Hospital treats and discharges a patient for which they used $58,000 worth of inventory and have billed the patient's insurance company the agreed-upon rate of $112,000. This is an income-generating activity, and Healthy Hospital has revenues of $112,000 from the service. It also has an expense of $58,000, the cost of inventory used during treatment. (There would obviously be other costs directly related to treatment, such

as wages, but we will keep it simple for now.) We can treat this as two transactions. GAAP does not permit us to report just the net amount (i.e., revenues less expenses). More detail must be provided. The first transaction relates to the revenue, and the second to the expense.

First, Healthy Hospital generated patient service revenue (PSR) of $112,000, so we have to record revenue of $112,000. Healthy Hospital hasn't been paid yet, so we have an A/R of $112,000. This leaves the accounting equation in balance.

The second transaction concerns inventory and expense. To provide the service, Healthy Hospital used some of its inventory. Thus, it has less inventory on hand. This reduction in inventory is offset in the accounting equation by a corresponding inventory expense. Once again, this transaction leaves the accounting equation in balance.

ΔA	+ ΔE	= ΔL	+ ΔR
A/R		=	Patient
+ 112,000			Services
			Revenue
			+ 112,000

Inv.	Inv. Exp.
+ 56,000	+ 56,000

	Dr.	Cr.
Accounts receivable	$112,000	
Inventory expense	56,000	
Inventory		$56,000
PSR		112,000

7. June 27. Healthy Hospital places an $18,000 order to resupply its inventory. The goods have not yet been received. In this case, there is no formal journal entry. Our purchasing department undoubtedly keeps track of open purchase orders. However, as in the case of the equipment contract discussed previously, there is no journal entry until there is an exchange by at least one party to the transaction. Healthy Hospital hasn't paid for the goods and the supplies have not yet been received.

8. November 14. Employees were paid $36,000. This payment included all balances outstanding from the previous year. Because Healthy Hospital is paying $36,000, cash decreases by $36,000. Is this all an expense of the current year? No. Healthy Hospital owed employees $20,000 from work done during the previous year. Thus, only $16,000 is an expense of the current year. The journal entry shows that labor expense (Labor) rises by $16,000 and that wages payable (W/P) declines by $20,000. Note that three accounts have changed. Double-entry accounting requires that at least two accounts change. The equation would not be in balance if only one account changed. However, it is perfectly possible for more than two accounts to change. Here we can see that although three accounts have changed, in net, the equation is in balance.

ΔA	+ ΔE	= ΔL	+ ΔR
Cash − 36,000	Labor + 16,000	= W/P − 20,000	

	Dr.	Cr.
Labor expense	$16,000	
Wages payable	20,000	
Cash		$36,000

9. December 31. At year-end, Healthy Hospital makes its annual mortgage payment of $20,000. The payment reduces the mortgage balance by $8,000. It doesn't seem correct to pay $20,000 on a liability but only reduce the obligation by $8,000. Actually, mortgage payments are not merely repayment of a debt. They also include interest owed on the debt. If Healthy Hospital is making mortgage payments on its plant and equipment just once a year, then this payment includes interest on the $80,000 balance outstanding at the end of last year (see Table 7-1).

If the mortgage is at a 15% annual interest rate, then Healthy Hospital owes $12,000 of interest for the use of the $80,000 over the last year (15% × $80,000 = $12,000). Thus, the transaction lowers cash by $20,000, but increases interest expense (IE) (also on the left side of the equation) by $12,000. The reduction of $8,000 on the right side to reduce the mortgage payable (M/P) account leaves the equation exactly in balance.

ΔA	+ ΔE	= ΔL	+ ΔR
Cash − 20,000	IE + 12,000	= M/P − 8,000	

	Dr.	Cr.
Interest expense	$12,000	
Mortgage payable	8,000	
Cash		$20,000

10. December 31. At year-end, Healthy Hospital makes an adjustment to its books to indicate 1 year's worth of prepaid insurance has been used up. Many financial events happen at a specific moment in time, and those cases are simply recorded when the event happens. Some events, however, happen over a period of time. Technically, it could be argued that a little insurance coverage was used up each day, so the accountant should have recorded the expiration of part of the policy each day or, for that matter, each minute. There is no need for that degree of accuracy. The accountant merely wants to make sure the books are up to date prior to issuing any financial reports based on them. Therefore, a number of *adjusting entries* are made at the end of the accounting period.

You might ask why the accountant bothers to make such an entry even then. Why not wait until the insurance is completely expired? The answer is that the matching principle would not allow that. In each case of an adjusting entry, the overriding goal is to place expenses into the correct period—the period in which revenues were generated as a result of those expenses.

In the case of the insurance, Healthy Hospital has used up one-third of the $6,000, 3-year policy, so we must reduce our asset, prepaid insurance (P/I), by $2,000 and increase our insurance expense (Ins.) account by $2,000.

ΔA	+ΔE	= ΔL + ΔR
P/I − 2,000	Ins. +2,000	= No change on right side

	Dr.	Cr.
Insurance expense	$2,000	
Prepaid insurance		$2,000

11. December 31. Healthy Hospital finds that it owes office employees $6,000 at the end of the year. These wages will not be paid until the following year. This requires an adjusting entry to accrue this year's labor expenses. The entry increases labor expense and, at the same time, increases the wages payable liability account.

ΔA		= ΔL	+ ΔR
	Labor	+ 6,000 = W/P	+ 6,000

	Dr.	Cr.
Labor expense	$6,000	
Wages payable		$6,000

12. December 31. The plant and equipment that Healthy Hospital owns are now 1 year older. To get a proper matching of revenues for each period with the expenses incurred to generate those revenues, the cost of this plant and equipment was not charged to expense when it was acquired. Instead, some of the cost is allocated to each year in which the plant and equipment helps the organization provide its goods and services. The journal entry increases an expense account, called *depreciation expense* (Depr.), to show that some of the cost of the asset is becoming an expense in the current period. In this year, the expense amounts to $12,000. Chapter 10 discusses the calculation of annual depreciation.

The other impact (recall that the double-entry system requires at least two changes) is on the value of the plant and equipment (P&E). Because the plant and equipment are getting older, we must adjust their value downward by the amount of the depreciation.

ΔA	+ΔE	= ΔL + ΔR
P/E −12,000	Depr. +12,000	= No change on right side

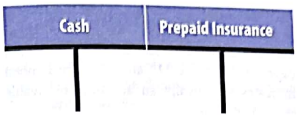
	Dr.	Cr.
Depreciation expense	$12,000	
Plant and equipment		$12,000

These transactions for Healthy Hospital give a highly consolidated view of the thousands, millions, or quite possibly billions of transactions recorded annually by an organization. These few transactions cannot hope to have captured every individual transaction or type of transaction that occurs in a particular organization. However, in this brief glance, you can begin to understand that there is a systematic approach for gathering the raw bits of data that make up the financial history of the organization.

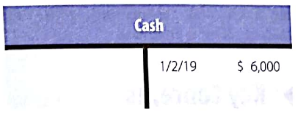
There may be an enormous number of individual journal entries for an organization during the year. Chapter 8 examines how to consolidate and summarize these numerous, individual journal entries to provide useful, summarized information to interested users of financial statements.

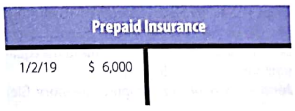
T-Accounts

Accountants frequently use a device called *T-accounts* as a form of shorthand when they consider the financial impact of transactions. For any account that might be affected by a Transaction, the accountant draws a large "T," and places the name of the account on the top. For example, in the first transaction for Healthy Hospital in 2019, Healthy Hospital purchased an insurance policy for $6,000. This affects both prepaid insurance and cash, and T-accounts would be set up as follows:

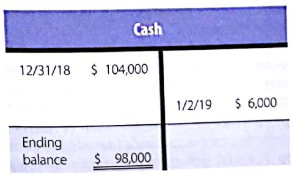


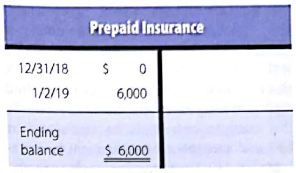
Within the T-account, any entries on the left side of the vertical line are debits, and any entries on the right side are credits. The purchase of $6,000 of insurance on January 2, 2019, generates a debit to prepaid insurance and a credit to cash as follows:





Often, T-accounts are used to assess the balance that remains in an account after a transaction. From Table 7-1, you see that at the end of 2018, Healthy Hospital had $104,000 in cash and no prepaid insurance. You can add this information to the T-accounts and then summarize the position immediately following the transaction to purchase the insurance as follows:





Notice that when the beginning debit balance of $104,000 of cash is combined with the $6,000 credit transaction on January 2, the result is a $98,000 debit balance. The $6,000 credit reduces the total amount of the debit balance in the same way that a negative number offsets a positive number.

The use of T-accounts by accountants for informal discussions and analyses is quite common, even though T-accounts are not generally part of the organization's formal accounting system. The biggest problem T-accounts create for nonaccountants is that negative signs are not used. Each part of a transaction, or journal entry, is recorded in a T-account on the left or right side of the T, depending on whether it is a debit or credit, respectively. When you look at a T-account, to understand if the account balance is increasing or decreasing as a result of a specific entry, the user must be aware whether each specific account is an account that increases with a debit or a credit. Simply keep in mind that assets and expenses increase with debits and decrease with credits. Liabilities and revenues increase with credits and decrease with debits.

Chart of Accounts

Up until this point, we have referred to accounts by their names, such as accounts receivable or wages payable. In practice, most organizations find it helpful to assign code numbers to each account. This facilitates the process of recording journal entries in the computer systems widely used for accounting.

Typically, an organization will use a fairly systematic approach to assigning numbers. For example, all asset code numbers must begin with 1, liabilities with a 2, revenues with a 3, and expenses with a 4, with a second and third digit providing more specific information. In this example, cash might be represented by 100, and accounts receivable might be represented by 110. Most organizations have receivables from many customers. A second set of numbers might provide that detailed information. For example, 110-12850 might refer to accounts receivable from customer number 12850. The organization might, therefore, sell $5,000 of its product to customer 12850 on account. It would record a $5,000 increase in its account number 110-12850.

Charts of accounts can be quite flexible. If an organization has five divisions, it can set aside one digit for each division. That digit might come at the beginning or the end of the entire account code used for each transaction. Also, the organization may choose to use the chart to identify specific programs, projects, departments, or other information. Thus, an account number might look something like "4-110-12850-028." This account number might indicate that the home health division (division 4 of the company's five divisions) has an account receivable (110) from customer 12850 related to hospice services (028).

Although this may appear complicated, it actually keeps things clear and simple once you know how the organization's chart of accounts is set up. The official chart of accounts provides the guide to the system of accounts used by any organization. It first defines the intended purpose of each digit and the meaning of each number contained in each digit. So, the first thing you learn is that the first digit represents the division of the organization and that the specific number associated with each of the five divisions is listed. Next, you learn the meaning of the second digit, which in this case indicates an asset, liability, revenue, or expense. If the second digit is 1 in this system, it means asset account. The next two digits indicate the specific asset, liability, revenue, or expense. Thus, the 110 after the first hyphen indicates specifically an accounts receivable asset. And so on.

Generally, in addition to defining the meaning of each digit and providing all data needed to interpret an account number, a complete chart is also maintained. This allows a user to look up any specific account number. Bear in mind, however, that the chart of accounts is a dynamic document. New accounts are frequently added to an accounting system, and it is important to keep the chart of accounts up to date.

Key Concepts

Double-entry accounting Each financial event affects the basic equation of accounting. For the equation to remain in balance, every event must affect at least two items in the equation; thus, the "double" entry.

Journal A book (or computer memory file) in which all financial events are recorded in chronological sequence.

Debits Increases in assets and expenses; decreases in liabilities and revenues.

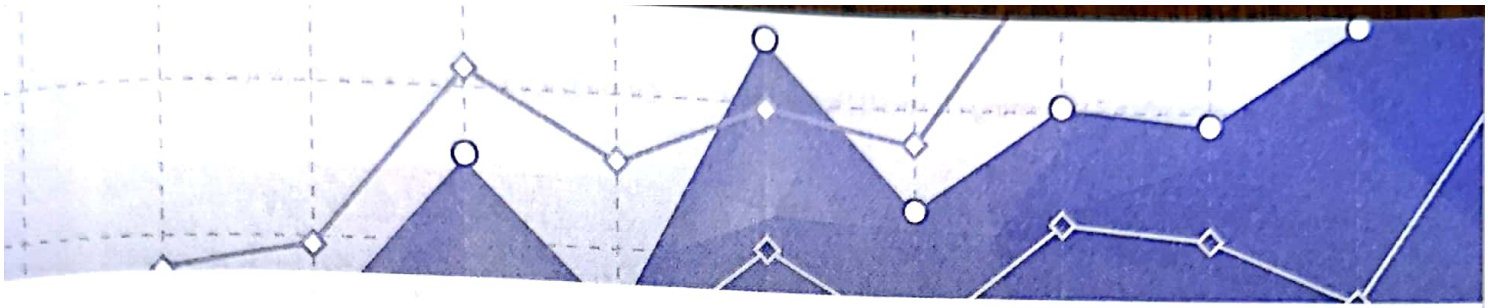
Credits Increases in liabilities and revenues; decreases in assets and expenses.

Timing for recording transactions Journal entries can be made only if the amount of money involved and the timing of the event are known with reasonable certainty and if there has been exchange by at least one party to the transaction.

Adjusting entries Most financial events occur at one specific time and are recorded as they occur. Some financial events occur continuously over time, such as the expiration of insurance or the accumulation of interest. Adjusting entries are made immediately prior to financial statement preparation to bring these accounts up to date.

Test Your Knowledge

1. Describe the basic accounting equation. How does the double entry accounting system work?
2. What is the accounting journal?
3. Create a journal entry and a T-account entry for each of the following transactions:
   a. $30,000 worth of supplies purchased with cash
   b. $10,000 worth of supplies used to provide clients with goods and services
   c. Wages due to employees that had been previously recorded as a liability now paid in cash in the amount of $50,000
   d. Bills submitted to insurance companies in the amount of $90,000 for services rendered to patients
   e. Cash payments of $60,000 received for services previously provided and billed
   f. $5,000 worth of additional supplies purchased on account



CHAPTER 8

Reporting Financial Information—A Closer Look at the Financial Statements

Chapter 7 discusses how each of the numerous financial transactions affecting an organization can be recorded into the organization's financial history through the use of a journal and journal entries. When the organization gets to the end of an accounting period (whether a month, quarter, or year), it wants to report what has already occurred. Some method of summarizing the massive quantity of information that has been recorded into a format concise enough to be useful to those who desire financial information about the organization is needed.

Financial statements are used to present the organization's financial position and results of operations to interested users of financial information. As Chapter 5 discusses, financial statements are only several pages long. How can an organization process its journal entry information in such a way as to allow for such a substantial summarization? It does it via use of a ledger.

Ledgers

A *ledger* is a book of accounts, and an *account* is an item we would like to keep track of. Every account that might be affected by a journal entry is individually accounted for in a ledger. Although many organizations have computerized their bookkeeping systems, so that they no longer have a physical ledger book, you can think of a ledger as if it were simply a book. Each page in the ledger book represents one account. For instance, there is a page for the cash account, a page for the inventory account, and a page for patient revenue. As Chapter 7 describes, every time we make a journal entry, we are changing the amount we have in at least two ledger accounts to keep the basic equation of accounting in balance.

An intermediate benefit of the ledger system is that it allows us to determine how much we have of any item at any point in time. For example, suppose someone asked you on May 4 how much cash you currently have. One way to provide that information would be to review each journal entry made since the beginning of the year, determine which entries affected cash, and calculate by how much the cash total has changed. This, however, presents an enormous amount of work.

Using a ledger approach, immediately after making a journal entry, we update our ledger for each account changed as a result of that entry. For example, in Chapter 7, the first thing that happened to Healthy Hospital in 2019 was the purchase of insurance for $6,000, which was paid for in cash. This expenditure requires you to go to the ledger account for cash and show a decrease of $6,000, as well as go to the ledger account for prepaid insurance and show an increase of $6,000. At the same time, you would update the balance in each account.

The ledger is, in some respects, a more complete picture of the organization than the journal is. Each year, the journal indicates what happened or changed. The ledger not only contains this year's events, but also indicates where the organization was at the beginning of the year. For instance, Healthy Hospital had $104,000 in cash at the end of 2018, according to Table 7-1. Our cash account in the ledger shows $104,000 as the opening balance at the beginning of 2019. Thus, when the insurance was purchased on January 2, 2019, you would be able to determine that the initial balance of $104,000 was decreased by $6,000 and that there is a remaining cash balance of $98,000. This gives a better overall picture of the organization than the $6,000 change alone does.

Essentially, the ledger combines account balances from the beginning of the year with the journal entries recorded during the year. All of the beginning balances for the year can be found by looking at the previous year's ending balance sheet, also called the statement of financial position. The organization's financial position at the beginning of the year is identical to its financial position at the end of the previous year. Therefore, the ledger accounts start the year with balances from the year-end balance sheet of the previous year. During the year, the changes that occur and are recorded as journal entries are used to update the ledger accounts. The year-end balance in each account is the sum of the opening balance plus the changes recorded in that account during the year.

Healthy Hospital's Financial Statements

TABLE 8-1 presents the information from which you can prepare a set of financial statements for Healthy Hospital. This table represents a highly abbreviated ledger for the entire organization for the whole year. All of the journal entries for the year have been recorded. Each column represents one ledger account; that is, each column is the same as one page in a ledger book. The opening balance is recorded for each account, based on information from Table 7-1, Healthy Hospital's December 31, 2018 balance sheet. The horizontal lines represent the individual numbered journal entries from Chapter 7. A running balance in each account has not been provided in this example.

A number of the ledger accounts in Table 8-1 start with a zero balance. This occurs for one of two reasons. The first reason is simply that there was no balance at the end of the previous year, so there is no balance at the beginning of the current year. Such is the case with prepaid insurance. The second reason is that some items are tracked year by year rather than cumulatively. The income or operating statement accounts relate specifically to the accounting period (month, quarter, or year) only. The organization kept track of its income for 2018. Once 2018 was over and its results were reported in the financial statements, the organization wished to keep track of 2019's income separately from 2018's. Therefore, all of the revenue and expense accounts start 2019 with a zero balance. When the organization gets to the end of this year and asks, "What was our revenue this year?" the organization wants to know the revenue of the current year, separate and apart from any revenue made in earlier years. The revenue and expense accounts are called *temporary accounts* because they start each year with a zero balance. Asset, liability, and net asset accounts, conversely, are called *permanent accounts* because any ending balances in these accounts become the starting

TABLE 8-1 Healthy Hospital Ledger for 2019 (000s omitted)

	Assets							= Liabilities		+ Net Assets	+ Revenue
	Beginning balance	Cash	Prepaid Insurance	Accounts Receivable	Inventory	Plant and Equipment	Inventory	Labor	Interest	Insurance	Depreciation	Accounts Payable	Wages Payable	Mortgage Payable	Net Assets Without Donor Restrictions	Net Assets With Donor Restrictions	Revenue
	$104	$0	$36	$40	$120	$0	$0	$0	$0	$0	$0	$34	$20	$80	$146	$20	$0
1		−6															
2		−30										−30					
3					30												
4		28		−28		30						30					
5				112	−56		56										112
6								16				−20		−8			
7		−36							12				6				
8		−20	−2					6		2	12						
9						−12											
10																	
11																	
12																	
	Ending balance	$40	$4	$120	$14	$108	$56	$22	$12	$2	$12	$34	$6	$72	$146	$20	$112

balance for those same accounts for the next fiscal year (i.e., they are "rolled over"), rather than starting those accounts over with a zero balance.

The key to conveying financial information is the ending balance of each ledger account. As long as you are using a system in which each journal entry is posted or recorded in the individual ledger accounts involved, you are able to determine the ending balance in each account. These ending balances provide the information needed to prepare a complete set of financial statements.

EXCEL TEMPLATE

Use **TEMPLATE 4** to record journal entries, post them to ledger accounts, and calculate ending balances that can be used to prepare financial statements. The template is available at this book's companion website. Please redeem the code found at the front of the book to access the template.

The Operating Statement

TABLE 8-2 presents the 2019 operating statement for Healthy Hospital. The operating statement for any organization consists merely of a comparison of its revenues and expenses. *Operating statement preparation* looks at the ending balance in each revenue and expense ledger account. The ending balance in the revenue account at the bottom of Table 8-1 shows revenue of $112,000, which is exactly the same as the revenue in the operating statement in Table 8-2. You can compare each of the expenses between Tables 8-1 and 8-2 as well and find them to be the same. This must be so, because the way the operating statement was prepared was to simply take the ending balances from each of the revenue and expense ledger accounts.

Notice that the last line in Table 8-2 is called the *increase in net assets*. For-profit health care organizations often refer to this as *net income*, whereas not-for-profit organizations indicate an *increase in net assets*. Similarly, a loss would be shown as a *net loss* or a *decrease in net assets*. If financial statements for 2 years are shown side by side and there was a profit 1 year and a loss the other, the heading becomes *change in net assets*.

TABLE 8-2 Healthy Hospital Operating Statement For the Year Ending December 31, 2019

Revenue		$ 112,000
Less expenses		
Inventory	$ 56,000	
Labor	22,000	
Interest	12,000	
Insurance	2,000	
Depreciation	12,000	
Total expenses		104,000
Increase in net assets		$ 8,000

Where did the "increase in net assets" terminology come from? Generally, all organizations, whether for-profit or not-for-profit, attempt to earn a profit each year. However, many not-for-profit organizations are uncomfortable subtracting expenses from revenue and reporting the difference as net income. These organizations fear that would give the public an incorrect impression—the public might view the organization as a for-profit organization if it were to see the organization has earned income. This could significantly reduce donations the organization might hope to receive or make the organization a target of attempts to limit its tax exemption.

So an alternative name was sought for the difference between revenues and expenses.

Revenue transactions result in an increase in net assets. For example, a health care organization provides care and gets paid $100 for that care. Cash goes up $100 on the left side of the fundamental equation and revenue goes up $100 on the right side in the net assets category. So, net assets increase by $100. Suppose it cost $80 to provide that care. Expenses result in either a decrease in assets or an increase in a liability, as well as a decrease in net assets. So, net assets would have declined by $80. Because net assets rose by $100 and declined by $80, there was a $20 change in net assets. Because it was a positive net change, it can be referred to as an *increase in net assets*.

The Balance Sheet

The net assets ledger accounts (i.e., net assets without donor restrictions and net assets with donor restrictions) in Table 8-1 have the same balances at the end of the year as they had at the beginning of the year. As noted, the net assets of an organization increase when it has revenue and decrease when it has expense. In fact, every revenue increases net assets, and all expenses decrease it. Healthy Hospital had both revenues and expenses, but the net assets accounts have not changed. The reason for this is that it has simply been keeping track of the specific changes in revenues and expenses separately, instead of immediately showing their impact on the net asset accounts.

By keeping track of revenues and expenses in detail rather than directly indicating their impact on net assets, additional information is generated. This information has been used to derive an operating statement. If you simply changed net assets directly whenever there was a revenue or expense, Healthy Hospital would not have had the information needed to produce that statement.

Nevertheless's *balance sheet preparation* requires updating the information in the net asset accounts. **TABLE 8-3** provides a statement that updates both net asset accounts. In Table 8-3, you can see that the net asset with donor restrictions account did not change this year. This account changes as a result of gifts from donors. The increase in net assets without donor restrictions is a result of the difference between the $112,000 of revenues and the $104,000 of expenses.

All of the information used in Table 8-3 comes directly or indirectly from the ledger accounts shown in Table 8-1. The increase in net assets figure in Table 8-3 does not appear anywhere in Table 8-1. It is a summary of the year-end revenue and expense items from the operating statement (Table 8-2). All of

TABLE 8-3 Healthy Hospital Analysis of Changes in Net Assets For the Year Ending December 31, 2019

	Net Assets Without Donor Restrictions	Net Assets with Donor Restrictions
Beginning balance 1/1/19	$ 146,000	$ 20,000
Donor gifts for 2019	0	0
Increase in net assets for 2019	8,000	
Ending balance 12/31/19	$ 154,000	$ 20,000

the Table 8-2 items also came directly from Table 8-1. You now have all of the information needed to produce a balance sheet.

The balance sheet for Healthy Hospital statement for 2019 appears in **TABLE 8-4**. The asset and liability balances came directly from Table 8-1, and the net asset balances were derived from Table 8-3. The preparation of this financial statement is really quite simple, given the ledger account balances. The balances are transferred to the financial statement, with the main work involved being the determination of which accounts are short term and which are long term.

TABLE 8-4 Healthy Hospital Balance Sheet As of December 31, 2019

Assets	
Current Assets:	
Cash	$ 40,000
Prepaid insurance	4,000
Accounts receivables	120,000
Inventory	14,000
Total current assets	$ 178,000
Fixed Assets:	
Plant and equipment, net	108,000
Total assets	$ 286,000
Liabilities and Net Assets	
Liabilities	
Current liabilities	
Accounts payable	$ 34,000
Wages payable	6,000
Total current liabilities	$ 40,000
Long-term liabilities:	
Mortgage payable	72,000
Total liabilities	$ 112,000
Net Assets	
Net assets without donor restrictions	$ 154,000
Net assets with donor restrictions	$ 20,000
Total net assets	$ 174,000
Total liabilities and net assets	$ 286,000

EXCEL TEMPLATE

TEMPLATE 5 uses the journal entry information from **TEMPLATE 4** to derive a Statement of Operations and Changes in Unrestricted Net Assets and a Balance Sheet. The template is available at this book's companion website. Please redeem the code found at the front of the book to access the template.

The Statement of Cash Flows

The one remaining financial statement that is widely used to report the results of operations is the *statement of cash flows*. As discussed in Chapter 5, this statement focuses on the organization's sources and uses of cash. This statement also provides insight about the organization's liquidity, or its ability to meet its current obligations as they come due for payment.

The statement of cash flows shows where the organization generated its cash and how it used its cash over the entire period covered by the financial statement. This feature is similar to the operating statement, which shows revenues and expenses for the entire accounting period, and is different from the balance sheet, which shows the organization's financial position at a single point in time. The statement of cash flows is divided into three major sections:

cash from operating activities, cash from investing activities, and cash from financing activities.

The operating activities are those that relate to the ordinary revenue and expense-producing activities. Organizations tend to be particularly interested in how their day-to-day revenues and expenses affect cash balances. These activities include items such as payments to employees and suppliers and collections of cash from customers. A controversial element involves interest and dividends. Many people believe that interest and dividends are more closely associated with investing and financing activities. However, interest and dividends *received* and interest *paid* must be included with operating activities because they impact revenues and expenses.

The investing activities of the organization relate to the purchase and sale of fixed assets and securities. It is clear that the purchase of stocks and bonds represents an investing activity. The accounting rule-making body determined that the purchase of property, plant, and equipment also represents an investment and should be accounted for in this category. Lending money (and receiving repayments) also represents an investing activity.

The financing activities of the organization are concerned with borrowing money (or repaying it), issuance of stock, and the payment of dividends. Note that when an organization lends money, it is investing. However, borrowing money relates to getting the financial resources the organization needs to operate. Thus, borrowing is included in the financing category, along with issuance of stock. For-profit organizations may choose to distribute some of their profits to their stockholders in the form of a *dividend*. Dividends paid are considered a financing activity because they are a return of financial resources to the organization's owners. They are not included in operating activities because dividends paid are not classified as an expense, but rather as a distribution to the organization's owners of income earned.

There are two different approaches to calculating and presenting the statement of cash flows. These are the direct and indirect methods. Under Generally Accepted Accounting Principles, health care organizations may use either method. **TABLE 8-5** presents an example of the statement of cash flows prepared using the direct method. The direct method lists each individual type of account that resulted in a change in cash.

Looking at Table 8-1, you can see that cash was affected by transactions 1, 2, 5, 8, and 9. Review of each of those journal entries provides the information needed to prepare Table 8-5. For example, transaction 1 consisted of a $6,000 payment for insurance. Therefore, the decrease in cash was for an operating activity, specifically payment for insurance.

This may be a cumbersome task when there are a large number of individual transactions. For example, how much cash was collected from customers during 2019? By looking at transaction 5 from Table 8-1, you know the answer is $28,000. You can see the increase in cash and the reduction in accounts receivable. Typically, however, there are an extremely large number of individual journal entries related to receipts from customers.

Rather than reviewing each transaction, accountants usually prepare the cash flow statement by making general inferences from the changes in the balances of various accounts. Note that accounts receivable at the beginning of the year were $36,000, and patient service revenue during the year was $112,000. Combining what was owed at the beginning of the year with the amount billed to patients and insurance companies this year indicates that there was a total of $148,000 that Healthy Hospital would hope to, eventually, collect from insurers and patients. At the end of the year, the accounts receivable balance was $120,000. Therefore, you can infer that $28,000 must have been collected (i.e., the $148,000 total due less the $120,000 still due at the end of the year).

Consider another example: The mortgage payable account started with a balance of

TABLE 8-5 Healthy Hospital
Statement of Cash Flows (Direct Method)
For the Year Ending December 31, 2019

Cash flows from operating activities		
Collections from third-party payers	$ 28,000	
Payments to employees	(36,000)	
Payments to suppliers	(30,000)	
Payments for insurance	(6,000)	
Payments for interest	(12,000)	
Net cash used for operating activities		$ (56,000)
Cash flows from investing activities		
None		
Net cash used for investing activities		0
Cash flows from financing activities		
Payment of mortgage principal	$ 8,000	
Net cash used for financing activities		(8,000)
Net increase/(decrease) in cash		$ (64,000)
Cash, December 31, 2018		104,000
Cash, December 31, 2019		$ 40,000

$80,000 and ended with a balance of $72,000 (see Table 8-1). Rather than review all of the journal entries related to mortgage payments, accountants infer that $8,000 was spent on the financing activity of repaying debt. However, this inference process requires care. It is possible, for instance, that $40,000 was paid on the mortgage principal, but a new mortgage of $32,000 was taken on a new piece of equipment. The statement of cash flows must show both the source of cash from the new mortgage, as well as the payment of cash on the old mortgage. Therefore, preparation of the statement requires, at least, some in-depth knowledge about changes in the accounts of the organization.

An alternative approach for developing and presenting the statement of cash flows is referred to as the *indirect method*. The indirect method starts with net income, or the change in net assets, as a measure of cash from operations. It then makes adjustments to the extent that net income is not a true measure of cash flow. **TABLE 8-6** is prepared using the indirect method.

One of the most common adjustments to income is for depreciation. When buildings and equipment are purchased, there is a

TABLE 8-6 Healthy Hospital
Statement of Cash Flows (Indirect Method)
For the Year Ending December 31, 2019

Cash flows from operating activities		
Net income		$ 8,000
Adjustments		
Depreciation expense	$ 12,000	
Decrease in inventory	26,000	
Increase in accounts receivable	(84,000)	
Increase in prepaid insurance	(4,000)	
Decreases in wages payable	(14,000)	
Total adjustments to net income		(64,000)
Net cash used for operating activities		$ (56,000)
Cash flows from investing activities		
None		
Net cash used for investing activities		0
Cash flows from financing activities		
Payment of mortgage principal	$ (8,000)	
Net cash used for financing activities		(8,000)
Net increase/(decrease) in cash		$ (64,000)
Cash, December 31, 2018		104,000
Cash, December 31, 2019		$ 40,000

cash outflow. Each year, a portion of the cost of the buildings or equipment is charged as a depreciation expense. That expense lowers net income, but it does not require a cash outflow. Therefore, the amount of the depreciation expense is added back to net income to make net income more reflective of true cash flow. Table 8-6 shows the $12,000 depreciation expense is added to net income.

There are a variety of other items that cause net income to over or understate the true cash flow. For example, if customers buy a product or service, but do not pay for it before the end of the year, then income overstates cash inflow. Therefore, in Table 8-6, there is a negative adjustment for the increase in accounts receivable.

The information contained in the statement of cash flows is quite dramatic in this example. Although Table 8-2 indicates there was a positive net income of $8,000, the organization is using substantially more cash than it is receiving. In some cases this might reflect recent spending on buildings and equipment. A decline in cash is not necessarily bad. However, in this case, note from the statement of cash flows (Table 8-5 or 8-6) that no money was used for investing activities. The largest decline in cash came from operations. What was the single largest cause of the decline? Table 8-5 indicates payments to employees were the largest item. These payments caused the largest cash outflow.

However, this is an example in which the net income reconciliation provides particularly useful information. Looking at the cash flows from the operating activities section of Table 8-6, the most striking number is the $84,000 increase in receivables. A growing company is likely to have growing receivables. In this case, however, the growth in receivables seems unusually large. What does this mean? It could mean that the organization needs to make a stronger effort to collect payment from its customers on a timely basis. Or it could mean that services were provided to patients who can't pay for them. The statement of cash flows highlights the fact that if receivables continue to grow at this rate, the organization will run out of cash, probably before the end of the next year. Although there is no crisis yet, there may be, unless we take this situation into account in managing the organization and planning for cash inflows and outflows for the coming year.

In the previous chapters, we have followed the basic course of accounting events. Transactions get recorded via debits and credits in a journal using a chart of accounts. In turn, the journal entries get aggregated into the financial statements reviewed in this chapter. The next step in the accounting process is the audit of financial statements by outside independent CPAs.

Key Concepts

Ledger A book, or computer file, in which the impact of financial events on each account is kept. The ledger can provide the balance in any account at any time.

Operating statement preparation The operating statement is directly prepared from the year-end ledger balances of the revenue and expense accounts.

Balance sheet preparation Ledger account balances can be used to provide an analysis of changes in net asset accounts. This analysis, together with other ledger account balances, is used to prepare the balance sheet.

Statement of cash flows This statement shows the sources and uses of the organization's cash. It specifically shows cash from operating, investing, and financing activities. It can be prepared under two alternative methods:

a. *Direct method*—Lists the change in cash caused by each account.
b. *Indirect method*—Starts with net income, as an estimate of cash flow, and makes a series of adjustments to net income to determine cash flow from operating activities.

Test Your Knowledge

1. How do ledger and journal entries interact with one another?
2. Explain how the ledger provides the information needed to prepare the balance sheet.
3. Explain how the ledger provides the information needed to prepare the operating statement.
4. What is the main purpose of the statement of cash flows?
5. What are the three categories used within the statement of cash flows? Why are these categories important for understanding an organization's cash situation?
6. Differentiate between the direct and the indirect methods for preparing and presenting the statement of cash flows.