CHAPTER 4

The Accounting Cycle

Accruals and Deferrals

After studying this chapter, you should be able to:

Learning Objectives

LO4-1 Explain the purpose of adjusting entries.

LO4-2 Describe and prepare the four basic types of adjusting entries.

LO4-3 Prepare adjusting entries to convert assets to expenses.

LO4-4 Prepare adjusting entries to convert liabilities to revenue.

LO4-5 Prepare adjusting entries to accrue unpaid expenses.

LO4-6 Prepare adjusting entries to accrue uncollected revenue.

LO4-7 Explain how the principles of realization and matching relate to adjusting entries.

LO4-8 Explain the concept of materiality.

LO4-9 Prepare an adjusted trial balance and describe its purpose.

© Christina Mendenhall/Bloomberg/Getty Images

CARNIVAL CORPORATION

When is revenue actually *earned* by a company? In many cases, revenue is earned when cash is received at the point of sale. For instance, when a hairdresser cuts a customer's hair, revenue is earned when the hair is cut and the fee is collected.

Suppose the same passenger boards a Carnival Corporation cruise ship to the Bahamas using a ticket that was purchased six months in advance. At what point should the cruise line recognize that ticket revenue has been earned? A recent Carnival Corporation balance sheet provides the answer to this question.

In its balance sheet, Carnival Corporation reports a $3.3 billion liability account called Customer Deposits. As passengers purchase tickets in advance, Carnival Corporation credits the Customer Deposits account for an amount equal to the cash it receives. It is not until passengers actually *use* their tickets that the company reduces this liability account and records Passenger Ticket Revenue in its income statement.

In many industries—such as airlines, insurance companies, and newspaper publishers—customer deposits and other forms of advance payments are the primary sources of cash flow from operating activities. For Carnival Corporation, approximately 75 percent of its ticket revenue is collected from travelers in advance. ■

For most companies, revenue is *not* always earned as cash is received, nor is an expense necessarily incurred as cash is disbursed. Timing differences between cash flows and the recognition of revenue and expenses are referred to as *accruals* and *deferrals*. In this chapter, we examine how accounting information must be adjusted for accruals and deferrals prior to the preparation of financial statements.

The first three steps of the accounting cycle were discussed in Chapter 3. They included (1) recording transactions, (2) posting transactions, and (3) preparing a trial balance. In this chapter, we focus solely upon the fourth step of the accounting cycle—performing the end-of-period adjustments required to measure business income. The remaining steps of the cycle are covered in Chapter 5.

Adjusting Entries

There is more to the measurement of business income than merely recording simple revenue and expense transactions that affect only a single accounting period. Certain transactions affect the revenue or expenses of two or more accounting periods. The purpose of adjusting entries is to assign to each accounting period appropriate amounts of revenue and expense. For example, Overnight Auto Service purchased shop supplies that will be used for several months. Thus, an adjusting entry is required to record the expense associated with the shop supplies that Overnight uses each month.

THE NEED FOR ADJUSTING ENTRIES

LO4-1

LEARNING OBJECTIVE
Explain the purpose of adjusting entries.

For purposes of measuring income and preparing financial statements, the life of a business is divided into a series of accounting periods. This practice enables decision makers to compare the financial statements of successive periods and to identify significant trends.

But measuring net income for a relatively short accounting period—such as a month or even a year—poses a problem because, as mentioned previously, some business activities affect the revenue and expenses of multiple accounting periods. Therefore, **adjusting entries** are needed at the end of each accounting period to make certain that appropriate amounts of revenue and expense are reported in the company's income statement.

For example, magazine publishers often sell two- or three-year subscriptions to their publications. At the end of each accounting period, these publishers make adjusting entries recognizing the portion of their advance receipts that have been earned during the current period. Most companies also purchase insurance policies that benefit more than one period. Therefore, an adjusting entry is needed to make certain that an appropriate portion of each policy's total cost is reported in the income statement as insurance expense for the period. In short, adjusting entries are needed whenever transactions affect the revenue or expenses of more than one accounting period. These entries assign revenues to the period in which they are *earned,* and expenses to the periods in which related goods or services are *used.*

In theory, a business could make adjusting entries on a daily basis. But as a practical matter, these entries are made only at the end of each accounting period. For most companies, adjusting entries are made on a monthly basis.

TYPES OF ADJUSTING ENTRIES

LO4-2

LEARNING OBJECTIVE
Describe and prepare the four basic types of adjusting entries.

The number of adjustments needed at the end of each accounting period depends entirely upon the nature of the company's business activities. However, most adjusting entries fall into one of four general categories.[1]

1. *Converting assets to expenses.* A cash expenditure (or cost) that will benefit more than one accounting period usually is recorded by debiting an asset account (for example, Supplies, Unexpired Insurance, and so on) and by crediting Cash. The asset account created actually represents the deferral (or the postponement) of an expense. In each future period

[1] A fifth category of adjusting entries consists of adjustments related to the valuation of certain assets, such as marketable securities and accounts receivable. These valuation adjustments are explained and illustrated in Chapter 7.

that benefits from the use of this asset, an adjusting entry is made to allocate a portion of the asset's cost from the balance sheet to the income statement as an expense. This adjusting entry is recorded by debiting the appropriate expense account (for example, Supplies Expense or Insurance Expense) and crediting the related asset account (for example, Supplies or Unexpired Insurance).

2. *Converting liabilities to revenue.* A business may collect cash in advance for services to be rendered in future accounting periods. Transactions of this nature are usually recorded by debiting Cash and by crediting a liability account (typically called Unearned Revenue or Customer Deposits). Here, the liability account created represents the deferral (or the postponement) of a revenue. In the period that services are actually rendered (or that goods are sold), an adjusting entry is made to allocate a portion of the liability from the balance sheet to the income statement to recognize the revenue earned during the period. The adjusting entry is recorded by debiting the liability (Unearned Revenue or Customer Deposits) and by crediting Revenue Earned (or a similar account) for the value of the services.
3. *Accruing unpaid expenses.* An expense may be incurred in the current accounting period even though no cash payment will occur until a future period. These accrued expenses are recorded by an adjusting entry made at the end of each accounting period. The adjusting entry is recorded by debiting the appropriate expense account (for example, Interest Expense or Salary Expense) and by crediting the related liability (for example, Interest Payable or Salaries Payable).
4. *Accruing uncollected revenue.* Revenue may be earned (or accrued) during the current period, even though the collection of cash will not occur until a future period. Unrecorded earned revenue, for which no cash has been received, requires an adjusting entry at the end of the accounting period. The adjusting entry is recorded by debiting the appropriate asset (for example, Accounts Receivable or Interest Receivable) and by crediting the appropriate revenue account (for example, Service Revenue Earned or Interest Earned).

ADJUSTING ENTRIES AND TIMING DIFFERENCES

In an accrual accounting system, there are often timing differences between cash flows and the recognition of expenses or revenue. A company can pay cash in advance of incurring certain expenses or receive cash before revenue has been earned. Likewise, it can incur certain expenses before paying any cash or it can earn revenue before any cash is received. These timing differences, and the adjusting entries that result from them, are summarized as follows.

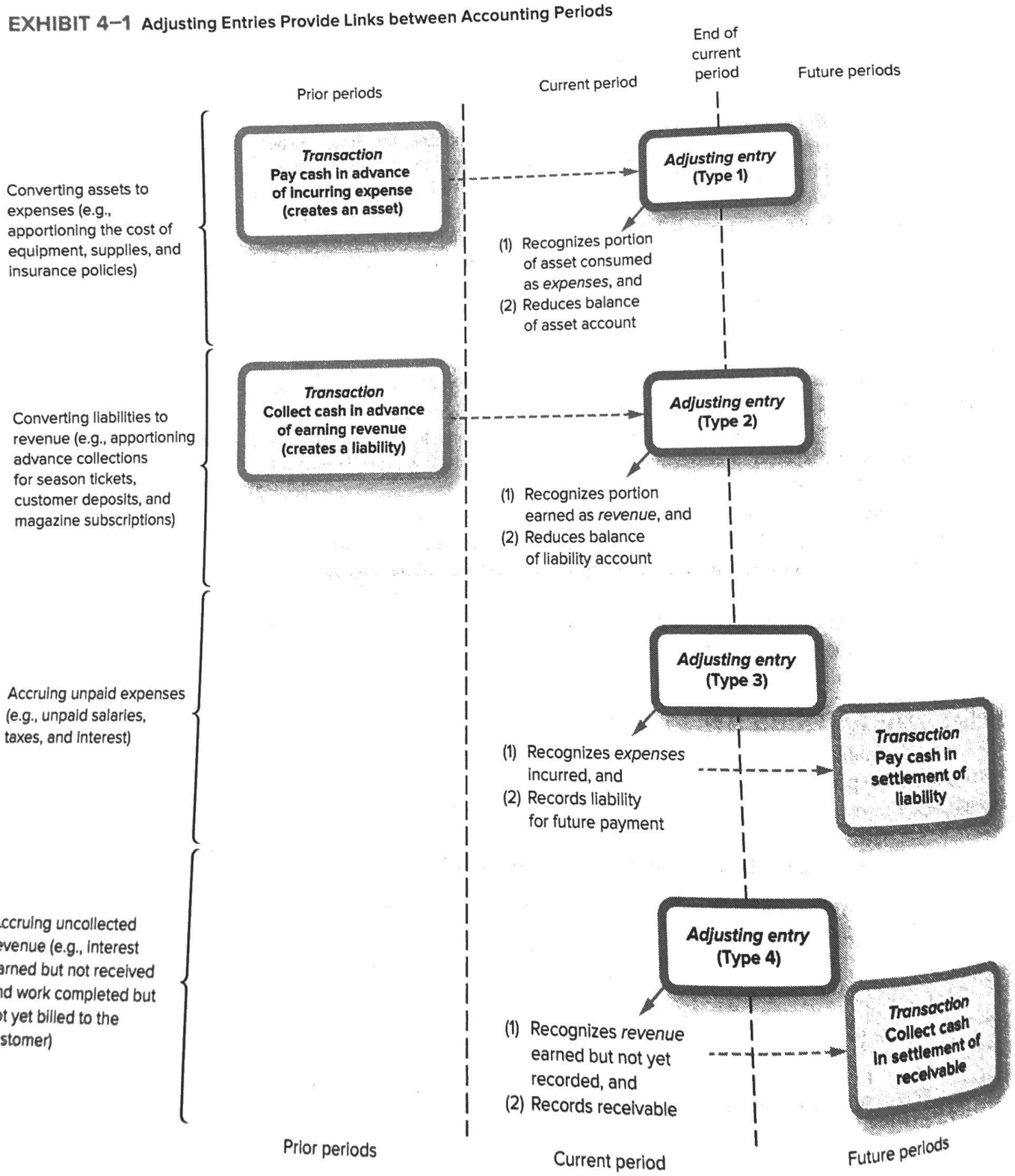
- Adjusting entries to convert assets to expenses result from cash being paid prior to an expense being incurred.
- Adjusting entries to convert liabilities to revenue result from cash being received prior to revenue being earned.
- Adjusting entries to accrue unpaid expenses result from expenses being incurred before cash is paid.
- Adjusting entries to accrue uncollected revenue result from revenue being earned before cash is received.

As illustrated in Exhibit 4–1, adjusting entries provide important linkages between accounting periods related to these timing differences. Specifically, they link: (1) prior period cash outflows to current period expenses, (2) prior period cash inflows to current period revenue, (3) current period expenses to future cash outflows, and (4) current period revenue to future period cash inflows.

CHARACTERISTICS OF ADJUSTING ENTRIES

Keep in mind two important characteristics of all adjusting entries: First, every adjusting entry involves the recognition of either revenue or expenses. Revenue and expenses represent changes in owners' equity. However, owners' equity cannot change by itself; there also must be a corresponding change in either assets or liabilities. Thus every adjusting entry affects both an income statement account (revenue or expense) and a balance sheet account (asset

EXHIBIT 4–1 Adjusting Entries Provide Links between Accounting Periods



or liability). Rarely do adjusting entries include an entry to Cash. It is important to recognize that none of the adjustments discussed in this chapter require a debit or a credit to Cash.

Second, adjusting entries are based on the concepts of accrual accounting, not upon monthly bills or month-end transactions. No one sends Overnight Auto Service a bill saying, "Shop Supply Expense for the month is $500." Yet Overnight must be aware of the need to record the estimated cost of shop supplies consumed if it is to measure income properly for the period. Making adjusting entries requires a greater understanding of accrual accounting concepts than does the recording of routine business transactions. In many businesses, the adjusting process is performed by the controller or by a professional accountant, rather than by the regular accounting staff.

YEAR-END AT OVERNIGHT AUTO SERVICE

To illustrate the various types of adjusting entries, we will again use our example involving Overnight Auto Service. Chapter 3 concluded with Overnight's trial balance dated February 28, 2018 (the end of the company's second month of operations). We will now skip ahead to December 31, 2018—the end of Overnight's first year of operations. This will enable us to illustrate the preparation of annual financial statements, rather than statements that cover only a single month.

Most companies make adjusting entries every month. We will assume that Overnight has been following this approach throughout 2018. The company's unadjusted trial balance dated December 31, 2018, appears in Exhibit 4–2. It is referred to as an unadjusted trial balance because Overnight last made adjusting entries on November 30; therefore, it is still necessary to make adjusting entries for the month of December.

In the next few pages we illustrate several transactions, as well as the related adjusting entries. Both are shown in the format of general journal entries. To help distinguish between transactions and adjusting entries, transactions are printed in blue and adjusting entries in red.

CONVERTING ASSETS TO EXPENSES

LO4-3

LEARNING OBJECTIVE
Prepare adjusting entries to convert assets to expenses.

When a business makes an expenditure that will benefit more than one accounting period, the amount usually is debited to an asset account. At the end of each period benefiting from this expenditure, an adjusting entry is made to transfer an appropriate portion of the cost from the asset account to an expense account. This adjusting entry reflects the fact that part of the asset has been used up—or become an expense—during the current accounting period.

EXHIBIT 4–2
Unadjusted Trial Balance

OVERNIGHT AUTO SERVICE TRIAL BALANCE DECEMBER 31, 2018		
Cash	$ 18,592	
Accounts receivable	6,500	
Shop supplies	1,800	
Unexpired insurance	4,500	
Tools and equipment	12,000	
Accumulated depreciation: tools and equipment		$ 2,000
Building	36,000	
Accumulated depreciation: building		1,500
Land	52,000	
Notes payable		4,000
Accounts payable		2,690
Income taxes payable		1,560
Unearned rent revenue		9,000
Capital stock		80,000
Retained earnings		0
Dividends	14,000	
Repair service revenue		171,250
Advertising expense	3,900	
Wages expense	56,800	
Supplies expense	6,900	
Depreciation expense: building	1,500	
Depreciation expense: tools and equipment	2,000	
Utilities expense	19,400	
Insurance expense	13,500	
Income taxes expense	22,608	
	$272,000	$272,000

An adjusting entry to convert an asset to an expense consists of a debit to an expense account and a credit to an asset account (or contra-asset account). Examples of these adjustments include the entries to apportion the costs of **prepaid expenses** and entries to record depreciation expense.

Prepaid Expenses Payments in advance often are made for such items as insurance, rent, and office supplies. If the advance payment (or prepayment) will benefit more than just the current accounting period, the cost represents an asset rather than an expense. The cost of this asset will be allocated to expense in the accounting periods in which the services or the supplies are used. In summary, prepaid expenses are assets; they become expenses only as the goods or services are used up.

Shop Supplies To illustrate, consider Overnight's accounting policies for shop supplies. As supplies are purchased, their cost is debited to the asset account Shop Supplies. It is not practical to make journal entries every few minutes as supplies are used. Instead, an estimate is made of the supplies remaining on hand at the end of each month; the supplies that are "missing" are assumed to have been used.

Prior to making adjusting entries at December 31, the balance in Overnight's Shop Supplies account is $1,800. The balance of this asset account represents shop supplies on hand on November 30. The Supplies Expense account shows a balance of $6,900, which represents the cost of supplies used through November 30. Assume that approximately $1,200 of shop supplies remain on hand at December 31. This suggests that supplies costing about $600 have been used in December; thus, the following adjusting entry is made.

A=L+LOE — The adjusting entry required to convert the cost of supplies used from an asset account to an expense

Dec. 31	Supplies Expense	600	
	Shop Supplies		600
	December Shop Supplies adjusting entry.		

This adjusting entry serves two purposes: (1) It charges to expense the cost of supplies used in December, and (2) it reduces the balance of the Shop Supplies account to $1,200—the amount of supplies estimated to be on hand at December 31.

Insurance Policies Insurance policies also are a prepaid expense. These policies provide a benefit, insurance protection, over a specific period of time. As the time passes, the insurance policy expires—that is, it is used up in business operations.

To illustrate, assume that on March 1, Overnight purchased for $18,000 a one-year insurance policy providing comprehensive liability insurance and insurance against fire and damage to customers' vehicles while in Overnight's facilities. This expenditure (a transaction) was debited to an asset account, as follows (again, this is a transaction, *not* an adjusting entry).

A↑ L+OE — Purchase 12 months of insurance coverage

Mar. 1	Unexpired Insurance	18,000	
	Cash		18,000
	Purchased an insurance policy providing coverage for the next 12 months.		

This $18,000 expenditure provides insurance coverage for a period of one full year. Therefore, 1/12 of this cost, or $1,500, is recognized as insurance expense every month. The $13,500 insurance expense reported in Overnight's trial balance represents the portion of the insurance policy that has expired between March 1 and November 30 ($1,500/mo. × 9 months). The $4,500 amount of unexpired insurance shown in the trial balance is the remaining cost of the 12-month policy still in effect as of November 30 ($1,500/mo. × 3 months). By

December 31, another full month of the policy has expired. Thus, the insurance expense for December is recorded by the following adjusting entry at month-end.

Dec. 31	Insurance Expense	1,500	
	Unexpired Insurance		1,500
	December Insurance Expense adjusting entry.		

A=L+SE The adjusting entry required to record the cost of insurance coverage expiring in December

Notice the similarities between the effects of this adjusting entry and the one that we made previously for shop supplies. In both cases, the entries transfer to expense that portion of an asset used up during the period. This flow of costs from the balance sheet to the income statement is illustrated in Exhibit 4–3.

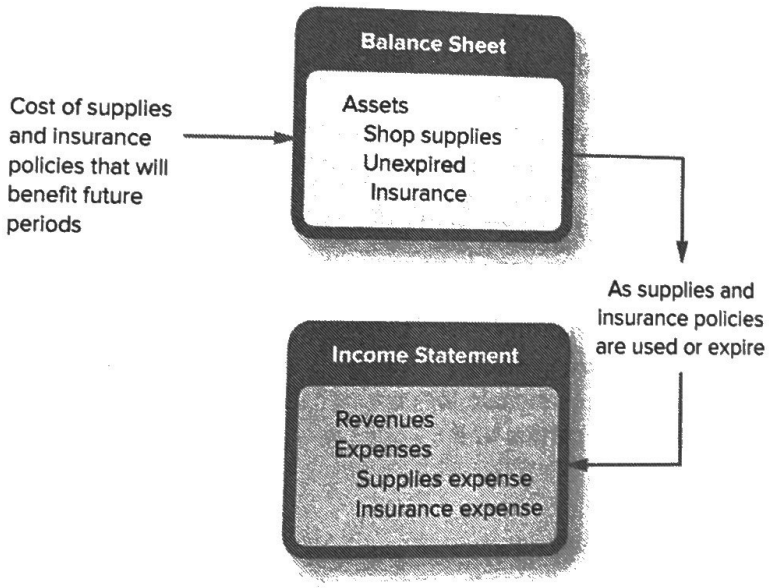


EXHIBIT 4–3
An Expired Asset Becomes an Expense

YOUR TURN — You as a Car Owner

Car owners typically pay insurance premiums six months in advance. Assume that you recently paid your six-month premium of $600 on February 1 (for coverage through July 31). On March 31, you decide to switch insurance companies. You call your existing agent and ask that your policy be canceled. Are you entitled to a refund? If so, why, and how much will it be?

(See our comments in Connect.)

Recording Prepayments Directly in the Expense Accounts In our illustration, payments for shop supplies and for insurance covering more than one period were debited to asset accounts. However, some companies follow an alternative policy of debiting such prepayments directly to an expense account, such as Supplies Expense. At the end of the period, the adjusting entry then would be to debit Shop Supplies and credit Supplies Expense for the cost of supplies that had not been used.

This alternative method leads to the same results as does the procedure used by Overnight. Under either approach, the cost of supplies used during the current period is treated as an expense, and the cost of supplies still on hand is carried forward in the balance sheet as an asset.

In this text, we will follow Overnight's practice of recording prepayments in asset accounts and then making adjustments to transfer these costs to expense accounts as the assets expire. This approach correctly describes the conceptual flow of costs through the elements of financial statements. That is, a prepayment *is* an asset that later becomes an expense. The alternative approach is used widely in practice only because it is an efficient shortcut, which standardizes the recording of transactions and may reduce the number of adjusting entries needed at the end of the period. Remember, our goal in this course is to develop your ability to understand and use accounting information, not to train you in alternative bookkeeping procedures.

The idea of shop supplies and insurance policies being used up over several months is easy to understand. But the same concept also applies to assets such as buildings and equipment. These assets are converted to expenses through the process of depreciation.

THE CONCEPT OF DEPRECIATION

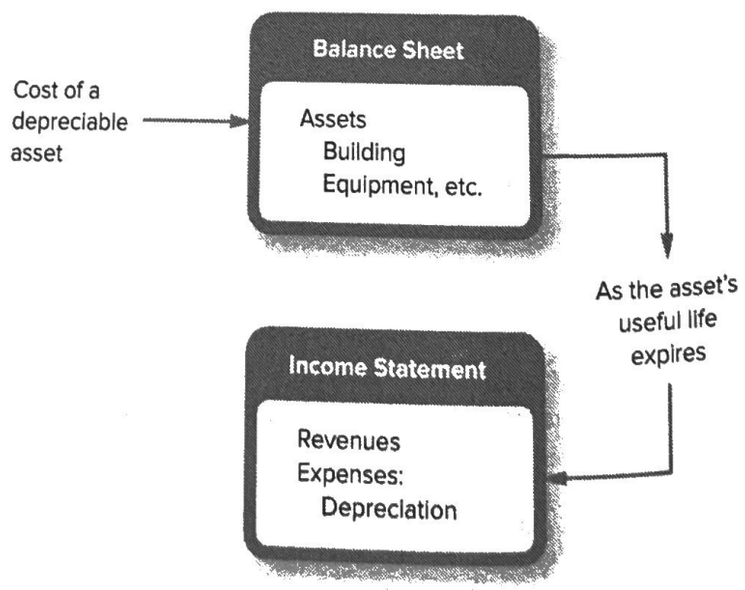
Depreciable assets are physical objects that retain their size and shape but that eventually wear out or become obsolete. They are not physically consumed, as are assets such as supplies, but nonetheless their economic usefulness diminishes over time. Examples of depreciable assets include buildings and all types of equipment, fixtures, furnishings—and even railroad tracks. Land, however, is *not* viewed as a depreciable asset, as it has an unlimited useful life.

Each period, a portion of a depreciable asset's usefulness expires. Therefore, a corresponding portion of its cost is recognized as depreciation expense.

What Is Depreciation? In accounting, the term **depreciation** means the systematic allocation of the cost of a depreciable asset to expense over the asset's useful life. This process is illustrated in Exhibit 4–4. Notice the similarities between Exhibit 4–4 and Exhibit 4–3.

Depreciation is not an attempt to record changes in the asset's market value. In the short run, the market value of some depreciable assets may even increase, but the process of depreciation continues anyway. The rationale for depreciation lies in the matching principle. Our goal is to offset a reasonable portion of the asset's cost against revenue in each period of the asset's **useful life.**

EXHIBIT 4–4
The Depreciation Process



Depreciation expense occurs continuously over the life of the asset, but there are no daily "depreciation transactions." In effect, depreciation expense is paid in advance when the asset is originally purchased. Therefore, adjusting entries are needed at the end of each accounting period to transfer an appropriate amount of the asset's cost to depreciation expense.

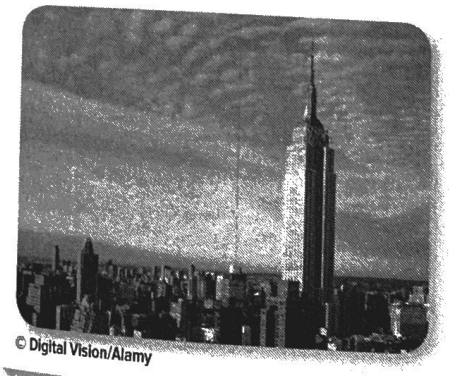
Depreciation Is Only an Estimate The appropriate amount of depreciation expense is only an estimate. After all, we cannot look at a building or a piece of equipment and determine precisely how much of its economic usefulness has expired during the current period.

The most widely used means of estimating periodic depreciation expense is the **straight-line method of depreciation.** Under the straight-line approach, an equal portion of the asset's cost is allocated to depreciation expense in every period of the asset's estimated useful life. The formula for computing depreciation expense by the straight-line method is as follows.[2]

$$\text{Depreciation expense (per period)} = \frac{\text{Cost of the asset}}{\text{Estimated useful life}}$$

The use of an estimated useful life is the major reason that depreciation expense is only an estimate. In most cases, management does not know in advance exactly how long the asset will remain in use.

CASE IN POINT



© Digital Vision/Alamy

How long does a building last? For purposes of computing depreciation expense, most companies estimate about 30 or 40 years. Yet the Empire State Building was built in 1931, and it's not likely to be torn down anytime soon. As you might guess, it often is difficult to estimate in advance just how long depreciable assets may remain in use.

Depreciation of Overnight's Building Overnight purchased its building for $36,000 on January 22. Because the building was old, its estimated remaining useful life is only 20 years. Therefore, the building's monthly depreciation expense is $150 ($36,000 cost ÷ 240 months). We will assume that Overnight did *not* record any depreciation expense in January because it operated for only a small part of the month. Thus, the building's $1,500 depreciation expense reported in Overnight's trial balance illustrated in Exhibit 4–2 represents 10 full months of depreciation recorded in 2018, from February 1 through November 30 ($150/mo. × 10 months). An additional $150 of depreciation expense is still needed on the building for December (bringing the total to be reported in the income statement for the year to $1,650).

The adjusting entry to record depreciation expense on Overnight's building for the month of December is as follows.

Dec. 31	Depreciation Expense: Building	150	
	Accumulated Depreciation: Building		150
	December building depreciation adjusting entry ($36,000 ÷ 240 mo.).		

A=L+LOE — The adjusting entry required to record monthly depreciation on the building

The Depreciation Expense: Building account will appear in Overnight's income statement along with other expenses for the year ended December 31, 2018. The balance in the

[2] At this point in our discussion, we are ignoring any possible *residual value* that might be recovered upon disposal of the asset. Residual values are discussed in Chapter 9. We will assume that Overnight Auto Service depreciates its assets using the straight-line method computed without any residual values.

Accumulated Depreciation: Building account will be reported in the December 31 balance sheet as a deduction from the Building account, as shown.

A=L+SOE **How accumulated depreciation appears in the balance sheet**

Building	$36,000
Less: Accumulated Depreciation: Building	(1,650)
Book Value	$34,350

Accumulated Depreciation: Building is an example of a **contra-asset account** because (1) it has a credit balance, and (2) it is offset against an asset account (Building) to produce the book value for the asset. Accountants often use the term **book value** (or carrying value) to describe the net valuation of an asset in a company's accounting records. For depreciable assets, such as buildings and equipment, book value is equal to the cost of the asset, less the related amount of accumulated depreciation. The end result of crediting the Accumulated Depreciation: Building account is much the same as if the credit had been made directly to the Building account; that is, the book value reported in the balance sheet for the building is reduced from $36,000 to $34,350.

Book value is of significance primarily for accounting purposes. It represents costs that will be offset against the revenue of future periods. It also gives users of financial statements an indication of the age of a company's depreciable assets (older assets tend to have larger amounts of accumulated depreciation associated with them than newer assets). It is important to realize that the computation of book value is based upon an asset's historical cost. Thus, book value is *not* intended to represent an asset's current market value.

Depreciation of Tools and Equipment Overnight depreciates its tools and equipment over a period of five years (60 months) using the straight-line method. The December 31 trial balance shows that the company owns tools and equipment that cost $12,000. Therefore, the adjusting entry to record December's depreciation expense is as follows.

A–L+SOE **The adjusting entry required to record the monthly depreciation on tools and equipment**

Dec. 31	Depreciation Expense: Tools and Equipment	200	
	Accumulated Depreciation: Tools and Equipment		200
	December tools and equipment adjusting entry ($12,000 ÷ 60 months = $200/mo.).		

Again, we assume that Overnight did *not* record depreciation expense for tools and equipment in January because it operated for only a small part of the month. Thus, the related $2,000 depreciation expense reported in Overnight's trial balance in Exhibit 4–2 represents 10 full months of depreciation, from February 1 through November 30 ($200/mo. × 10 months). The tools and equipment still require an additional $200 of depreciation for December (bringing the total to be reported in the income statement for the year to $2,200).

What is the book value of Overnight's tools and equipment at December 31, 2018? If you said $9,800, you're right.[3]

Depreciation—A Noncash Expense Depreciation is a noncash expense. We have made the point that net income does not represent an inflow of cash or any other asset. Rather, it is a computation of the overall effect of certain business transactions on owners' equity. The recognition of depreciation expense illustrates this point. As depreciable assets expire, depreciation expense is recorded, net income is reduced, and owners' equity declines, but there is no corresponding cash outlay in the current period. For this reason, depreciation is called a noncash expense. Often it represents the largest difference between net income and the cash flow from business operations.

[3] Cost, $12,000, less accumulated depreciation, which amounts to $2,200 after the December 31 adjusting entry.

CONVERTING LIABILITIES TO REVENUE

LO4-4

LEARNING OBJECTIVE
Prepare adjusting entries to convert liabilities to revenue.

In some instances, customers may pay in advance for services to be rendered in later accounting periods. For example, a football team collects much of its revenue in advance through the sale of season tickets. Health clubs collect in advance by selling long-term membership contracts. Airlines sell many of their tickets well in advance of scheduled flights.

For accounting purposes, amounts collected in advance do not represent revenue, because these amounts have not yet been earned. Amounts collected from customers in advance are recorded by debiting the Cash account and crediting an unearned revenue account. **Unearned revenue** sometimes is referred to as *deferred revenue.*

When a company collects money in advance from its customers, it has an obligation to render services in the future. Therefore, the balance of an unearned revenue account is considered to be a liability; it appears in the liability section of the balance sheet, not in the income statement. Unearned revenue differs from other liabilities because it usually will be settled by rendering services, rather than by making payment in cash. In short, it will be worked off rather than paid off. Of course, if the business is unable to render the service, it must discharge this liability by refunding money to its customers.

When a company renders the services for which customers have paid in advance, it is working off its liability to these customers and is earning the revenue. At the end of the accounting period, an adjusting entry is made to transfer an appropriate amount from the unearned revenue account to a revenue account. This adjusting entry consists of a debit to a liability account (unearned revenue) and a credit to a revenue account. For instance, **The New York Times Company** reports a $59 million current liability in its balance sheet called Unexpired Subscriptions. This account represents unearned revenue from selling subscriptions for future newspaper deliveries. The liability is converted to Circulation Revenue and reported in the company's income statement as the actual deliveries occur.

To illustrate these concepts, assume that on December 1, Harbor Cab Co. agreed to rent space in Overnight's building to provide indoor storage for some of its cabs. The agreed-upon rent is $3,000 per month, and Harbor Cab paid for the first three months in advance. The journal entry to record this transaction on December 1 was as follows (again, this is a transaction, *not* an adjusting entry).

Dec. 1	Cash	9,000	
	Unearned Rent Revenue		9,000
	Collected in advance from Harbor Cab for rental of storage space for three months.		

Remember that Unearned Rent Revenue is a liability account, not a revenue account. Overnight will earn rental revenue gradually over a three-month period as it provides storage facilities for Harbor Cab. At the end of each of these three months, Overnight will make an adjusting entry, transferring $3,000 from the Unearned Rent Revenue account to an earned revenue account, Rent Revenue Earned, which will appear in Overnight's income statement. The first in this series of monthly transfers will be made at December 31 with the following adjusting entry.

A–L–LOE: An "advance"—it's not revenue; it's a liability

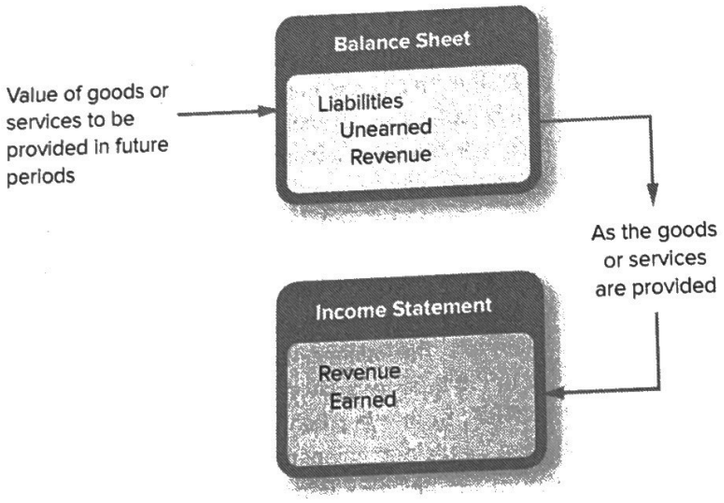
Dec. 31	Unearned Rent Revenue	3,000	
	Rent Revenue Earned		3,000
	December adjusting entry to convert Unearned Rent Revenue to Rent Revenue Earned ($9,000 ÷ 3 mo.).		

A–L–LOE: An adjusting entry showing that some unearned revenue was earned in December

After this adjusting entry has been posted, the Unearned Rent Revenue account will have a $6,000 credit balance. This balance represents Overnight's obligation to render $6,000 worth of service over the next two months and will appear in the liability section of the company's balance sheet. The Rent Revenue Earned account will appear in Overnight's income statement.

The conversion of unearned revenue to recognize earned revenue is illustrated in Exhibit 4–5.

EXHIBIT 4–5
Unearned Revenue Becomes Earned Revenue



Recording Advance Collections Directly in the Revenue Accounts We have stressed that amounts collected from customers in advance represent liabilities, not revenue. However, some companies follow an accounting policy of crediting these advance collections directly to revenue accounts. The adjusting entry then should consist of a debit to the revenue account and a credit to the unearned revenue account for the portion of the advance payments not yet earned. This alternative accounting practice leads to the same results as does the method used in our illustration.

In this text, we will follow the originally described practice of crediting advance payments from customers to an unearned revenue account.

ACCRUING UNPAID EXPENSES

LO4-5

LEARNING OBJECTIVE
Prepare adjusting entries to accrue unpaid expenses.

This type of adjusting entry recognizes expenses that will be paid in future transactions; therefore, no cost has yet been recorded in the accounting records. Salaries of employees and interest on borrowed money are common examples of expenses that accumulate from day to day but that usually are not recorded until they are paid. These expenses are said to **accrue** over time, that is, to grow or to accumulate. At the end of the accounting period, an adjusting entry should be made to record any expenses that have accrued but that have not yet been recorded. Since these expenses will be paid at a future date, the adjusting entry consists of a debit to an expense account and a credit to a liability account. We shall now use the example of Overnight Auto Service to illustrate this type of adjusting entry.

Accrual of Wages (or Salaries) Expense Overnight, like many businesses, pays its employees every other Friday. This month, however, ends on a Tuesday—three days before the next scheduled payday. Thus Overnight's employees have worked for more than a week in December for which they have not yet been paid.

Time cards indicate that since the last payroll date, Overnight's employees have worked a total of 130 hours. Including payroll taxes, Overnight's wage expense averages about $15 per hour. Therefore, at December 31, the company owes its employees approximately $1,950 for work performed in December.[4] The following adjusting entry should be made to record this amount both as wages expense of the current period and as a liability.

A=L+OE Adjusting entry required to accrue wages owed at the end of the month

Dec. 31	Wages Expense	1,950	
	Wages Payable		1,950
	Adjusting entry to accrue wages owed but unpaid as of December 31.		

[4] In the preparation of a formal payroll, wages and payroll taxes must be computed "down to the last cent." But this is not a payroll; it is an amount to be used in the company's financial statements. Therefore, a reasonable estimate will suffice. The accounting principle of *materiality* is discussed later in this chapter.

This adjusting entry increases Overnight's wages expense for 2018 and also creates a liability—wages payable—that will appear in the December 31 balance sheet.

On Friday, January 3, 2019, Overnight will pay its regular biweekly payroll. Let us assume that this payroll amounts to $2,397. In this case, the transaction to record payment is as follows (again, this is a transaction, *not* an adjusting entry).[5]

2019			
Jan. 3	Wages Expense (for January)	447	
	Wages Payable (accrued in December)	1,950	
	Cash		2,397
	Biweekly payroll, $1,950 of which had been accrued at December 31, 2018.		

A=L+LOE Payment of wages earned in two accounting periods

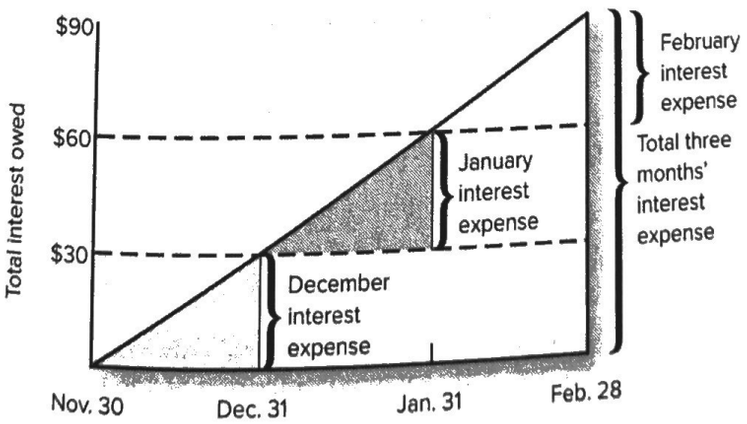
Accrual of Interest Expense On January 22, 2018, Overnight purchased its building, an old bus garage, from the Metropolitan Transit Authority for $36,000. Overnight paid $6,000 cash, and issued a $30,000 90-day note payable for the balance owed. Overnight paid the $30,000 obligation in April. There was no interest expense to accrue because this note payable was non-interest-bearing.

On November 30, 2018, Overnight borrowed $4,000 from American National Bank by issuing an interest-bearing note payable. This loan is to be repaid in three months (on February 28, 2019), along with interest computed at an annual rate of 9 percent. The entry made on November 30 to record this borrowing transaction is (again, this is a transaction, *not* an adjusting entry) as follows.

Nov. 30	Cash	4,000	
	Notes Payable		4,000
	Borrowed cash from American National Bank, issuing a 9%, $4,000 note payable, due in three months.		

On February 28, Overnight must pay the bank $4,090. This represents the $4,000 amount borrowed, plus $90 interest ($4,000 × 0.09 × 3/12). The $90 interest charge covers a period of three months. Although no payment is made until February 28, 2019, interest expense is incurred (or accrued) at a rate of $30 per month, as shown in Exhibit 4–6.

EXHIBIT 4–6
Accrual of Interest



The following adjusting entry is made at December 31 to accrue one month's interest expense and to record the amount of unpaid interest owed to the bank at December 31, 2018.

Dec. 31	Interest Expense	30	
	Interest Payable		30
	Adjusting entry to accrue December Interest Expense ($4,000 × .09 × 1/12).		

A=L+LOE Adjusting entry required to record interest expense accrued in December

[5] In this illustration, we do not address the details associated with payroll taxes and amounts withheld. These topics are discussed in Chapter 10.

The $30 interest expense that accrued in December will appear in Overnight's 2018 income statement. Both the $30 interest payable and the $4,000 note payable to American National Bank will appear as liabilities in the December 31, 2018, balance sheet.

Overnight will make a second adjusting entry recognizing another $30 in interest expense on January 31, 2019. The transaction on February 28 to record the repayment of this loan, including $90 in interest charges, is as follows (again, this is a transaction, *not* an adjusting entry).

A=L+LOE **Payment of interest expense accrued over three months**

2019			
Feb. 28	Notes Payable	4,000	
	Interest Payable (from December and January)	60	
	Interest Expense (February only)	30	
	Cash		4,090
	Repaid $4,000 note payable to American National Bank, including $90 in interest charges.		

ACCRUING UNCOLLECTED REVENUE

LO4-6

LEARNING OBJECTIVE
Prepare adjusting entries to accrue uncollected revenue.

A business may earn revenue during the current accounting period but not bill the customer until a future accounting period. This situation is likely to occur if additional services are being performed for the same customer, in which case the bill might not be prepared until all services are completed. Any revenue that has been earned but not recorded during the current accounting period should be recorded at the end of the period by means of an adjusting entry. This adjusting entry consists of a debit to an account receivable and a credit to the appropriate revenue account. The term *accrued revenue* often is used to describe revenue that has been earned during the period but that has not been recorded prior to the closing date.

To illustrate this type of adjusting entry, assume that in December, Overnight entered into an agreement to perform routine maintenance on several vans owned by Airport Shuttle Service. Overnight agreed to maintain these vans for a flat fee of $1,500 per month, payable on the fifteenth of each month.

No entry was made to record the signing of this agreement, because no services had yet been rendered. Overnight began rendering services on December 15, but the first monthly payment will not be received until January 15. Therefore, Overnight should make the following adjusting entry at December 31 to record the revenue earned from Airport Shuttle during the month.

A=L+LOE **Adjusting entry required to accrue revenue earned but not yet billed or collected**

Dec. 31	Accounts Receivable	750	
	Repair Service Revenue		750
	Adjusting entry to record accrued Repair Service Revenue earned in December.		

The collection of the first monthly fee from Airport Shuttle will occur on January 15, 2019. Of this $1,500 cash receipt, half represents collection of the receivable recorded on December 31; the other half represents revenue earned in January. Thus, the transaction to record the receipt of $1,500 from Airport Shuttle on January 15 will be as follows (again, this is a transaction, *not* an adjusting entry).

A=L+LOE **Entry to record collection of accrued revenue**

2019			
Jan. 15	Cash	1,500	
	Accounts Receivable		750
	Repair Service Revenue		750
	Cash collected from Airport Shuttle for van maintenance provided December 15 through January 15.		

The net result of the December 31 adjusting entry has been to divide the revenue from maintenance of Airport Shuttle's vans between December and January in proportion to the services rendered during each month.

ACCRUING INCOME TAXES EXPENSE: THE FINAL ADJUSTING ENTRY

As a corporation earns taxable income, it incurs income taxes expense, and also a liability to governmental tax authorities. This liability is paid in four installments called estimated quarterly payments. The first three payments normally are made on April 15, June 15, and September 15. The final installment actually is due on December 15; but for purposes of our illustration and assignment materials, we will assume the final payment is not due until January 15 of the following year.[6]

In its unadjusted trial balance (Exhibit 4–2), Overnight shows income taxes expense of $22,608. This is the income taxes expense recognized from January 20, 2018, (the date Overnight opened for business) through November 30, 2018. Income taxes accrued through September 30 have already been paid. Thus, the $1,560 liability for income taxes payable represents only the income taxes accrued in October and November.

The amount of income taxes expense accrued for any given month is only an estimate. The actual amount of income taxes cannot be determined until the company prepares its annual income tax return. In our illustrations and assignment materials, we estimate income taxes expense at 40 percent of taxable income. We also assume that taxable income is equal to income before income taxes, a subtotal often shown in an income statement. This subtotal is total revenue less all expenses other than income taxes.

INTERNATIONAL CASE IN POINT

Corporate income tax rates vary around the world. A recent survey shows that rates range from 9 percent in Montenegro to 55 percent in the United Arab Emirates. Worldwide, the average tax rate is 24 percent. The average rate in the United States is 40 percent, which is the highest rate among OECD countries.* In addition to corporate income taxes, some countries also (1) withhold taxes on dividends, interest, and royalties, (2) charge value-added taxes at specified production and distribution points, and (3) impose border taxes such as customs and import duties. A few countries, including the Bahamas, have no corporate taxes.

**KPMG Corporate Tax Rate Survey (2015).*

In 2018, Overnight earned income before income taxes of $66,570 (see the income statement in Exhibit 5–2 in Chapter 5). Therefore, income taxes expense for the entire year is estimated at $26,628 ($66,570 × 40 percent). Given that income taxes expense recognized through November 30 amounts to $22,608 (see the unadjusted trial balance in Exhibit 4–2), an additional $4,020 in income taxes expense must have accrued during December ($26,628 − $22,608). The adjusting entry to record this expense is as follows.

Dec. 31	Income Taxes Expense	4,020	
	Income Taxes Payable		4,020
	Adjusting entry to record income taxes accrued in December.		

A=L+LOE — Adjusting entry required to record income taxes accrued in December

[6] This assumption enables us to accrue income taxes in December in the same manner as in other months. Otherwise, income taxes for this month would be recorded as a mid-month transaction, rather than in an end-of-month adjusting entry. The adjusting entry for income taxes is an example of an accrued, but unpaid, expense.

This entry increases the balance in the Income Taxes Expense account to the $26,628 amount required for the year ended December 31, 2018. It also increases the liability for income taxes payable to $5,580 ($1,560 + $4,020). The transaction to record the payment of this liability on January 15, 2019, will be as follows (again, this is a transaction, *not* an adjusting entry).

2019			
Jan. 15	Income Taxes Payable	5,580	
	Cash		5,580
	Payment of the remaining 2015 income tax liability.		

Income Taxes in Unprofitable Periods What happens to income taxes expense when losses are incurred? In these situations, the company recognizes a "negative amount" of income taxes expense. The adjusting entry to record income taxes at the end of an unprofitable accounting period consists of a debit to Income Taxes Payable and a credit to Income Taxes Expense.

"Negative" income taxes expense means that the company may be able to recover from the government some of the income taxes recognized as expense in prior periods.[7] If the Income Taxes Payable account has a debit balance at year-end, it is reclassified as an asset, called Income Tax Refund Receivable. A credit balance in the Income Taxes Expense account is offset against the amount of the before-tax loss, as shown in Exhibit 4–7.

EXHIBIT 4–7
Partial Income Statement

Partial Income Statement—for an *Unprofitable* Period	
Income (loss) before income taxes	$(20,000)
Income tax benefit (recovery of previously recorded taxes)	8,000
Net loss	$(12,000)

A-L-I-O-E **Income tax benefit can reduce a pretax loss**

We have already seen that income taxes expense reduces the amount of before-tax profits. Notice now that income tax benefits—in the form of tax refunds—can reduce the amount of a pretax loss. Thus, income taxes reduce the size of *both* profits and losses. The detailed reporting of profits and losses in the income statement is illustrated in Chapter 5.

LO4-7

LEARNING OBJECTIVE
Explain how the principles of realization and matching relate to adjusting entries.

Adjusting Entries and Accounting Principles

Adjusting entries are the means by which accountants apply the **realization** and **matching principles**. Through these entries, revenues are recognized as they are *earned*, and expenses are recognized as resources are *used* or consumed in producing the related revenue.

In most cases, the realization principle indicates that revenue should be recognized at the time goods are sold or services are rendered. At this point the business has essentially completed the earning process and the sales value of the goods or services can be measured objectively. At any time prior to sale, the ultimate sales value of the goods or services sold can only be estimated. After the sale, the only step that remains is to collect from the customer, and this is usually a relatively certain event.

The matching principle underlies such accounting practices as depreciating plant assets, measuring the cost of supplies used, and amortizing the cost of unexpired insurance policies. All end-of-the-period adjusting entries involving expense recognition are applications of the matching principle.

Costs are matched with revenue in one of two ways.

1. *Direct association of costs with specific revenue transactions.* The ideal method of matching revenue with expenses is to determine the actual amount of expense associated with

[7] Tax refunds may be limited to tax payments in recent years. In this introductory discussion, we assume the company has paid sufficient taxes in prior years to permit a full recovery of any "negative tax expense" relating to the loss in the current period.

specific revenue transactions. However, this approach works only for those costs and expenses that can be directly associated with specific revenue transactions. Commissions paid to salespeople are an example of costs that can be directly associated with the revenue of a specific accounting period.

2. *Systematic allocation of costs over the useful life of the expenditure.* Many expenditures contribute to the earning of revenue for a number of accounting periods but cannot be directly associated with specific revenue transactions. Examples include the costs of insurance policies and depreciable assets. In these cases, accountants attempt to match revenue and expenses by systematically allocating the cost to expense over its useful life. Straight-line depreciation is an example of a systematic technique used to match the cost of an asset with the related revenue that it helps to earn over its useful life.

THE CONCEPT OF MATERIALITY

LO4-8

LEARNING OBJECTIVE
Explain the concept of materiality.

Another underlying accounting principle also plays a major role in the making of adjusting entries—the concept of **materiality.** The term *materiality* refers to the relative importance of an item or an event. An item is considered material if knowledge of the item might reasonably influence the decisions of users of financial statements. Accountants must be sure that all material items are properly reported in financial statements.

However, the financial reporting process should be cost-effective—that is, the value of the information should exceed the cost of its preparation. By definition, the accounting treatment accorded to **immaterial** items is of little or no consequence to decision makers. Therefore, immaterial items may be handled in the easiest and most convenient manner.

Materiality and Adjusting Entries The concept of materiality enables accountants to shorten and simplify the process of making adjusting entries in several ways. For example:

1. Businesses purchase many assets that have a very low cost or that will be consumed quickly in business operations. Examples include wastebaskets, lightbulbs, and janitorial supplies. The materiality concept permits charging such purchases directly to expense accounts, rather than to asset accounts. This treatment conveniently eliminates the need to prepare adjusting entries to depreciate these items.
2. Some expenses, such as telephone bills and utility bills, may be charged to expenses as the bills are paid, rather than as the services are used. Technically this treatment violates the matching principle. However, accounting for utility bills on a cash basis is very convenient, as the monthly cost of utility service is not even known until the utility bill is received. Under this cash basis approach, the amount of utility expense recorded each month is actually based on the prior month's bill.
3. Adjusting entries to accrue unrecorded expenses or unrecorded revenue may actually be ignored if the dollar amounts are immaterial.

Materiality Is a Matter of Professional Judgment Whether a specific item or event is material is a matter of professional judgment. In making these judgments, accountants consider several factors.

First, what constitutes a material amount varies with the size of the organization. For example, a $1,000 expenditure may be material in relation to the financial statements of a small business but not to the statements of a large corporation such as General Electric.[8] There are no official rules as to what constitutes a material amount, but most accountants would consider amounts of less than 2 percent or 3 percent of net income to be immaterial, unless there were other factors to consider. One such other factor is the cumulative effect of numerous immaterial events. Each of a dozen items may be immaterial when considered

[8] This point is emphasized by the fact that General Electric rounds the dollar amounts shown in its financial statements to the nearest $1 million. This rounding of financial statement amounts is, in itself, an application of the materiality concept.

PATHWAYS CONNECTION

As we emphasized when we introduced the Pathways Model in Chapter 1, accounting involves much more judgment than simply applying black-and-white rules. A good example of where judgment needs to be applied is in determining annual depreciation expense. A first glance computing depreciation seems straightforward—divide the asset's historical cost by its estimated useful life. But determining estimated useful life, especially for assets with an extended useful life and in industries that are changing rapidly, is a challenging estimate.

Verizon is a company where the computation of annual depreciation expense is a challenge. First, fixed assets represent almost 40 percent of Verizon's total assets, so the computation of depreciation expense is material to the company. In 2014, depreciation expense represented approximately 16 percent of Verizon's total operating expenses. Second, many of Verizon's fixed assets have extended useful lives. Buildings and equipment have useful lives between 15 and 45 years, and cables, poles, and conduits have useful lives between 11 and 50 years. Third, given rapid technological changes in telecommunications, the biggest determinant of the correct useful life is not the physical life of a fixed asset but rather its economic life. That is, due to technological change, an asset may no longer be useful in generating revenue long before the physical life of the asset is over. Estimating an asset's likely economic life requires accountants to exercise significant judgment.

by itself. When viewed together, however, the combined effect of all 12 items may be material.

Finally, materiality depends on the nature of the item, as well as its dollar amount. Assume, for example, that several managers systematically have been stealing money from the company that they manage. Stockholders probably would consider this fact important even if the dollar amounts were small in relation to the company's total resources.

YOUR TURN

You as Overnight Auto's Service Department Manager

You just found out that Betty, one of the best mechanics that you supervise for Overnight Auto, has taken home small items from the company's supplies, such as a screwdriver and a couple of cans of oil. When you talk to Betty, she suggests that these items are immaterial to Overnight Auto because they are not recorded in the inventory and they are expensed when they are purchased. How should you respond to Betty?

(See our comments in Connect.)

Note to students: In the assignment material accompanying this textbook, you are to consider all dollar amounts to be material, unless the problem specifically raises the question of materiality.

EFFECTS OF THE ADJUSTING ENTRIES

At the beginning of the chapter, we identified four types of adjusting entries, each of which involve one income statement account and one balance sheet account. The effects of these adjustment types on the income statement and balance sheet are summarized in Exhibit 4–8.

The four adjustment types were illustrated and discussed in nine separate adjusting entries made by Overnight on December 31. These adjustments appear in the format of general journal entries in Exhibit 4–9. (Overnight also recorded many transactions throughout the month of December. These transactions are not illustrated here but were accounted for in the manner described in Chapter 3.)