

Disposal of Plant and Equipment

10 years ago at a cost of \$20,000 and no expected residual value has been fully depreciated and is no longer useful. The entry to record the scrapping of the worthless equipment is as follows.

Accumulated Depreciation: Office Equipment	20,000	
Office Equipment		20,000

To remove from the accounts the cost and the accumulated depreciation on fully depreciated office equipment now being scrapped. No salvage value.

A=L+LOE
Scrapping a fully depreciated asset

Once an asset has been fully depreciated, no more depreciation should be recorded on it, even though the property may still be in use. The objective of depreciation is to spread the cost of an asset over the periods of its usefulness; in no case can depreciation expense be greater than the cost of the asset. When a fully depreciated asset remains in use beyond the original estimate of useful life, the asset account and the Accumulated Depreciation account should remain in the accounting records without further entries until the asset is retired.

GAINS AND LOSSES ON THE DISPOSAL OF PLANT AND EQUIPMENT

Because the residual values and useful lives of plant assets are only estimates, it is not uncommon for a plant asset to be disposed of at an amount that differs from its book value at the date of disposal. When plant assets are sold, any gain or loss on the disposal is computed by comparing the book value with the amount received from the sale. A sales price in excess of the book value produces a gain; a sales price below the book value produces a loss. These gains or losses, if material in amount, are shown separately in the income statement following the computation of income from operations, usually in a section titled "other income."

Disposal at a Price above Book Value Assume that a machine costing \$10,000 had accumulated depreciation of \$8,000 and a book value of \$2,000 at the time it was sold for \$3,000 cash. The journal entry to record this disposal is as follows.

Cash	3,000	
Accumulated Depreciation: Machinery	8,000	
Machinery		10,000
Gain on Disposal of Plant Assets		1,000

To record sale of machinery at a price above book value.

A=L+LOE
Gain on disposal of plant asset

In this situation, the gain on the disposal is calculated as follows.

Cost	\$10,000
Accumulated depreciation at time of disposal	(8,000)
Book value at time of disposal	\$ 2,000
Cash received	3,000
Gain on disposal	\$ 1,000

Disposal at a Price below Book Value Now assume instead that the same machine is sold for \$500. The journal entry in this case would be as follows.

Cash	500	
Accumulated Depreciation: Machinery	8,000	
Loss on Disposal of Plant Assets	1,500	
Machinery		10,000

To record sale of machinery at a price below book value.

A=L+LOE
Loss on disposal of plant asset

Chapter 9 Plant and Intangible Assets

In this situation, the loss on the disposal is calculated as follows.

Cost	\$10,000
Accumulated depreciation at time of disposal	(8,000)
Book value at time of disposal	\$ 2,000
Cash received	500
Loss on disposal	\$ 1,500

The disposal of a depreciable asset at a price equal to book value results in neither a gain nor a loss. The entry for such a transaction consists of a debit to Cash for the amount received, a debit to Accumulated Depreciation for the balance accumulated, and a credit to the asset account for the original cost.

TRADING IN USED ASSETS FOR NEW ONES

Certain types of depreciable assets, such as automobiles and trucks, sometimes are traded in for new assets of the same type. In most instances, a trade-in is viewed as both a sale of the old asset and a purchase of a new one. Transactions of this type are usually considered to have "commercial substance," and give rise to the recognition of a gain or loss.

To illustrate, assume that Rancho Landscape has an old pickup truck that originally cost \$10,000 but that now has a book value (and tax basis) of \$2,000. Rancho trades in this old truck for a new one with a fair market value of \$25,000. The truck dealership grants Rancho a trade-in allowance of \$3,500 for the old truck, and Rancho pays the remaining \$21,500 cost of the new truck in cash. Rancho Landscape will record this transaction as follows.

Vehicles (new truck)	25,000
Accumulated Depreciation: Trucks (old truck)	8,000
Vehicles (old truck)	10,000
Cash	21,500
Gain on Disposal of Plant Assets	1,500
Traded in old truck for a new one costing \$25,000. Received \$3,500 trade-in allowance on the old truck, which had a book value of \$2,000.	

Notice that Rancho treats the \$3,500 trade-in allowance granted by the truck dealership as the sales price of the old truck. Rancho recognizes a \$1,500 gain on the disposal (trade-in) of this asset (\$3,500 trade-in allowance – \$2,000 book value = \$1,500 gain).

For financial reporting purposes, gains and losses on routine trade-ins are recorded in the accounting records whenever the transaction also involves the payment of a significant amount of cash (or the creation of debt). Income tax rules do *not* permit recognition of gains or losses on exchanges of assets that are used for similar purposes. The \$1,500 gain recorded in our example is not regarded as taxable income.⁵

INTERNATIONAL FINANCIAL REPORTING STANDARDS

In discussing plant assets and depreciation, we have emphasized the use of historical cost and that depreciation is a process of allocating or spreading that cost over the useful life of the asset. Under U.S. generally accepted accounting principles, this emphasis on cost and depreciation is due primarily to the importance of including as an expense a portion of the cost of the plant assets which contributed to the earning of a company's income. Cost reduced by accumulated depreciation is the amount shown in the statement of financial position (balance sheet) and generally does not reflect the current value of the asset other than situations where an impairment in value is recorded as described earlier.

⁵ Had the trade-in allowance been less than book value, the resulting loss would not be deductible in the determination of taxable income.

Under international accounting standards, companies have an option to follow a revaluation process rather than continuing to use historical cost throughout the asset's useful life. This revaluation alternative requires that an asset's fair value can be reliably measured and it must be applied to an entire class of plant assets. Revaluation is not required every financial reporting period, but must be frequent enough to ensure that the carrying amount of the asset (i.e., its revalued amount less accumulated depreciation) does not differ materially from what it would be if determined by fair value at the end of the financial reporting period.

If an asset's carrying amount is increased as a result of a revaluation, the increase is recorded in other comprehensive income and accumulated equity. This subject is covered in greater depth in Chapter 12 of this textbook.

Intangible Assets

CHARACTERISTICS

As the word *intangible* suggests, assets of this type have no physical characteristics. Common examples are patents, trademarks, and goodwill. Intangible assets are classified in the balance sheet as a subgroup of plant assets. However, not all assets that lack physical substance are regarded as intangible assets. An account receivable, for example, has no physical attributes but is classified as a current asset and is not regarded as an intangible. Intangible assets are assets that are used in the operation of the business but that have no physical substance and are noncurrent.

The basis of valuation for intangible assets is cost. In some companies, however, certain intangible assets such as trademarks may be of great importance but may have been acquired without incurring any significant cost. These intangible assets appear in the balance sheet at their cost, regardless of their value to the company. Intangible assets are listed only if significant costs are incurred in their acquisition or development. If these costs are insignificant, they are treated as revenue expenditures (ordinary expenses).

OPERATING EXPENSES VERSUS INTANGIBLE ASSETS

For an expenditure to qualify as an intangible asset, there must be reasonable evidence of future benefits. Many expenditures offer some prospects of yielding benefits in subsequent years, but the existence and life span of these benefits are so uncertain that most companies treat these expenditures as operating expenses. Examples are the expenditures required to reorganize a business and the expense of training employees to work with new types of machinery or office equipment. There is little doubt that some benefits from these outlays continue beyond the current period, but because of the uncertain duration of the benefits, it is almost universal practice to treat expenditures of this nature as an expense of the current period.

AMORTIZATION

The term **amortization** describes the systematic write-off to expense of the cost of an intangible asset over its useful life. Amortization of an intangible asset is essentially the same as depreciation for a tangible asset. The usual accounting entry for amortization consists of a debit to Amortization Expense and a credit to the intangible asset account. There is no theoretical objection to crediting an accumulated amortization account rather than the intangible asset account, but this method is seldom encountered in practice.

Although it is difficult to estimate the useful life of an intangible such as a trademark, like most plant assets it is probable that such an asset will not contribute to future earnings on a permanent basis. The cost of the intangible asset should, therefore, be deducted from revenue during the years in which it may be expected to aid in producing revenue. The straight-line method normally is used for amortizing intangible assets.

GOODWILL

The intangible asset **goodwill** is often found in corporate balance sheets. While this word has a variety of meanings in our general vocabulary, it has a specific and specialized meaning

L09-6

LEARNING OBJECTIVE
Explain the nature of intangible assets, including goodwill.

in financial reporting. Goodwill represents an amount that a company has paid to acquire certain favorable intangible attributes as part of an acquisition of another company. For example, assume a company purchases another company that has a favorable reputation for high-quality customer service. The purchasing company might be willing to pay a premium price to acquire this favorable attribute because of the positive impact this customer service is expected to have on future profitability. Even though an intangible asset such as a favorable reputation for customer service lacks the physical qualities of land, buildings, and equipment, such service may be just as important for the future success of a company.

Goodwill is a general term that encompasses a wide variety of favorable attributes expected to permit the acquiring company to operate at a greater-than-normal level of profitability. Positive attributes often included in goodwill are:

- Favorable reputation.
- Positive market share.
- Positive advertising image.
- Reputation for high quality and loyal employees.
- Superior management.
- Manufacturing and other operating efficiency.

All of these attributes can be expected to contribute to positive future cash flows of the acquiring company. The **present value** of future cash flows is the amount that a knowledgeable investor would pay today for the right to receive those future cash flows. (The present value concept is discussed further in later chapters and in Appendix B.)

Goodwill is sometimes described and measured as the price paid to receive an above-normal return on the purchase of another company's net identifiable assets. *Net assets* refers to assets minus liabilities, or owners' equity. Goodwill is not a separately identifiable asset, however, and the existence of goodwill is implied by the ability of the entire business to earn an above-average return. The term **net identifiable assets** is used to mean all assets except goodwill, minus liabilities.

A *normal return* on net identifiable assets is the rate of return that investors demand in a particular industry to justify purchasing a business at the fair value of its net identifiable assets. A business has goodwill when investors pay an even higher price because the business is expected to earn more than the normal rate of return.

Assume that two similar restaurants are offered for sale and that the normal return on the fair market value of the net identifiable assets of restaurants of this type is 15 percent a year. The relative earning power of the two restaurants during the past five years is as follows.

	Mandarin Coast	Golden Dragon
Fair market value of net identifiable assets	\$1,000,000	\$1,000,000
Normal rate of return on net assets	15%	15%
Normal earnings, computed as 15% of net identifiable assets	\$ 150,000	\$ 150,000
Average actual net income for past five years	150,000	200,000
Earnings in excess of normal	\$ -0-	\$ 50,000

An investor presumably would be willing to pay \$1,000,000 to buy Mandarin Coast, because this restaurant earns the expected 15 percent return that justifies the fair market value of its net identifiable assets. Although Golden Dragon has the same amount of net identifiable assets, an investor should be willing to pay more for Golden Dragon than for Mandarin Coast, because Golden Dragon has a record of superior earnings. The extra amount that a buyer pays to purchase Golden Dragon represents the value of this business's goodwill.

Estimating Goodwill How much will an investor pay for goodwill? Above-average earnings in past years are of significance to prospective purchasers only if they believe that these earnings will continue after they acquire the business. Investors' appraisals of goodwill,

Which business is worth more?

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Intangible Assets

409

therefore, will vary with their estimates of the future earning power of the business. Few businesses, however, are able to maintain above-average earnings indefinitely. Consequently, the purchaser of a business will usually limit any amount paid for goodwill to not more than four or five times the amount by which annual earnings exceed normal earnings.

Estimating an amount for goodwill in the purchase of a business is a difficult and speculative process. In attempting to make such an estimate, you are essentially trying to look into the future and predict the extent to which purchasing another business will add enough value to your current business that you are willing to pay a price greater than the value of the identifiable net assets of the business you are acquiring. For example, in the previous example, how much more than \$1,000,000 would you be willing to pay for Golden Dragon in comparison with Mandarin Coast? History indicates that Golden Dragon is more profitable, and thus worth more, than Mandarin Coast, but whether that extra profitability will continue in the future requires considerable judgment.

Several methods are used to place a monetary value on the amount of goodwill in the purchase of a business. One widely used method that is consistent with our earlier description of goodwill is to value the business as a whole and then subtract the current value of the net identifiable assets to estimate the amount of goodwill. For example, assume that successful restaurants sell at about $6\frac{1}{2}$ times annual earnings.⁶ This suggests that Golden Dragon is worth about \$1,300,000, which is the company's \$200,000 average net income times 6.5. Because the company's net identifiable assets have a fair value of only \$1,000,000, using this method a reasonable estimate of the positive attributes of Golden Dragon, such as positive reputation or market share, is \$300,000, determined as follows.

Estimated value of the business as a whole ($\$200,000 \times 6.5$)	\$1,300,000
Fair market value of net identifiable assets	<u>1,000,000</u>
Estimated value of goodwill	\$ 300,000

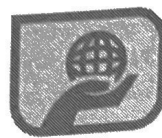
If a buyer of Golden Dragon pays \$1,300,000 to purchase the business, \$300,000 of goodwill would be recorded. On the other hand, if the buyer is able to purchase Golden Dragon for less than \$1,300,000, say, \$1,250,000, only \$250,000 of goodwill would be recorded ($\$1,250,000 - \$1,000,000 = \$250,000$), even though the estimated value of goodwill is more than the amount paid.

Recording Goodwill in the Accounts Because of the difficulties in objectively estimating the value of goodwill, this asset is recorded only when it is purchased. Goodwill is purchased when one company buys another. The purchaser records the identifiable assets it has purchased at their fair values and then establishes any additional amount paid to an asset account entitled Goodwill.

Many businesses never purchase goodwill but develop goodwill attributes like good customer relations, superior management, or other factors that result in above-average earnings. Because there is no objective way of determining the value of these qualities unless the business is sold, such internally generated goodwill is not recorded in the accounting records. The absence of internally generated goodwill and other intangible assets is one of the reasons why a balance sheet does not indicate a company's current market value.

Goodwill is not required to be amortized, but is subject to assessment for impairment in value, similar to that for plant assets as explained earlier in this chapter. When a company determines that the recorded amount of its goodwill is no longer recoverable, an impairment loss is recorded by reducing the asset amount and including a loss in the income statement of the same accounting period.

⁶ Investments in small businesses involve more risk and less liquidity than investments in publicly owned companies. For these reasons, the price-earnings ratios of small businesses tend to be substantially lower than those of publicly owned corporations.



INTERNATIONAL CASE IN POINT

Goodwill was identified as a topic for harmonization efforts when the FASB and the International Accounting Standards Board (IASB) agreed to work toward convergence of reporting requirements in 2002, an effort that continues today and will undoubtedly continue for years to come. U.S. GAAP requires capitalization of goodwill but no amortization. Instead, goodwill is reviewed annually and its value is adjusted if subject to impairment. Until March 2004, international standards required goodwill to be capitalized and amortized over its estimated useful life (20 years or less). In 2004, the IASB changed international standards for goodwill to be consistent with the U.S. GAAP approach by requiring an impairment test rather than amortization for goodwill.

PATENTS

A patent is an exclusive right granted by the federal government for manufacture, use, and sale of a particular product. The purpose of this exclusive grant is to encourage the invention of new products and processes. When a company acquires a patent by purchase from the inventor or other holder, the purchase price is recorded in an intangible asset account Patents.

Patents are granted for 20 years, and the period of amortization should not exceed that period. However, if the patent is likely to lose its usefulness in less than 20 years, amortization is based on the shorter estimated useful life. Assume that a patent is purchased from the inventor at a cost of \$100,000 after five years of the legal life have expired. The remaining *legal* life is, therefore, 15 years. But if the estimated *useful* life is only eight years, amortization is based on this shorter period. The entry to record the annual amortization expense would be as follows.

Entry for amortization of patent

Amortization Expense: Patents	12,500	
Patents		12,500
To amortize the \$100,000 cost of patent on a straight-line basis over an estimated useful life of 8 years.		

TRADEMARKS AND TRADE NAMES

Coca-Cola's famous name, usually printed in a distinctive typeface, is a classic example of a trademark known around the world. A trademark is a name, symbol, or design that identifies a product or group of products. A permanent exclusive right to use a trademark, brand name, or commercial symbol may be obtained by registering it with the federal government.

The costs of developing a trademark or brand name often consist of advertising campaigns, which should be treated as expenses when incurred. If a trademark or brand name is purchased, however, the cost may be substantial. Such cost is capitalized and amortized to expense over the time period the trademark or brand name is expected to be used. If the use of the trademark is discontinued or its contribution to earnings becomes doubtful, any unamortized cost is written off immediately.

FRANCHISES

A franchise is a right granted by a company or a governmental unit to conduct a certain type of business in a specific geographical area. An example of a franchise is the right to operate a McDonald's restaurant in a specific geographic region. The cost of franchises varies greatly and often is quite substantial. When the cost of a franchise is small, it may be charged immediately to expense or amortized over a short period such as five years. When the cost is material, amortization is based on the life of the franchise (if defined by the franchise agreement);

Intangible Assets

the amortization period, however, should not exceed the period the franchise is expected to generate revenue.

COPYRIGHTS

A copyright is an exclusive right granted by the federal government to protect the production and sale of literary or artistic materials for the life of the creator plus 70 years. The cost of obtaining a copyright may be minor and therefore is chargeable to expense when paid. Only when a copyright is purchased from an existing owner will the expenditure be material enough to warrant its being capitalized and spread over the useful life. The revenue from copyrights is usually limited to only a few years, and the purchase cost is amortized over the years in which the revenue is expected.

OTHER INTANGIBLES AND DEFERRED CHARGES

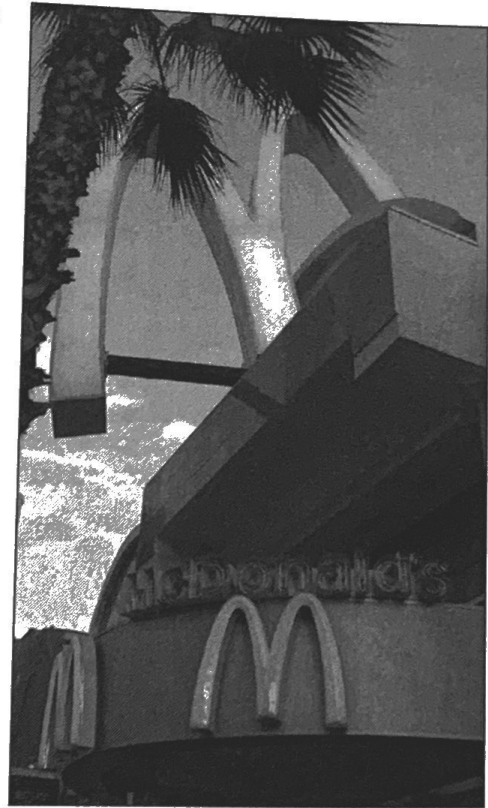
Among the other intangibles found in the published balance sheets of large corporations are moving costs, plant rearrangement costs, formulas, processes, name lists, and film rights. Some companies group items of this type under the title of Deferred Charges, meaning expenditures that will provide benefits beyond the current year and that will be written off to expense over their useful economic lives. It is also common practice to combine these items under the heading of Other Assets, which is listed at the bottom of the asset section of the balance sheet.

RESEARCH AND DEVELOPMENT (R&D) COSTS

Companies spend billions of dollars each year on research and development of new products. In fact, R&D is a defining characteristic of U.S. industry. The annual research and development expenditures of some companies often exceed \$1 billion and account for a substantial percentage of their total costs and expenses.

In the past, some companies treated all research and development costs as expenses in the year incurred; other companies recorded these costs as intangible assets and amortized them over future years. This diversity of practice prevented financial statements of different companies from being comparable.

The Financial Accounting Standards Board standardized accounting for R&D when it ruled that as a general rule research and development expenditures are required to be charged to expense when incurred. This action by the FASB had the beneficial effect of reducing the number of alternative accounting practices and helping to make financial statements of different companies more comparable.



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**PATHWAYS CONNECTION**

The success of many businesses depends on research and development activities (R&D). The case can be made that a strong commitment to R&D is a major factor in the economic strength of countries that benefit from a prosperous society. In making investment and credit decisions, to better understand a company's commitment to funding R&D, users of financial statements often examine the level of, and trends in, a company's R&D expenditures as a percentage of revenue.

$$\text{R\&D to Sales} = \text{R\&D Costs} \div \text{Net Sales}$$

R&D expenditures as a percentage of revenue are naturally higher in some industries than in others. To illustrate this point, see the R&D figures in Exhibit 9-7 for a recent year for well-known companies from three industries that rely heavily on research and development.

EXHIBIT 9-7
Comparative R&D
Expenditures

	R&D Costs (in millions)	Revenue (in millions)	R&D (%)
Chemical Products			
DuPont	1,958	28,406	6.9
Dow Chemical	1,647	58,167	2.8
Pharmaceuticals			
Eli Lilly & Co.	4,734	19,616	24.1
Pfizer	6,678	51,584	13.0
Computer Software			
Oracle	5,524	38,226	14.5
Microsoft	12,046	93,580	12.9



YOUR TURN

You as a Financial Analyst

You are working as an equity analyst on Wall Street and a college intern asks you to explain why companies can differ greatly in the R&D expense to net sales ratio. How do you respond?

(See our comments in Connect.)

Natural Resources

ACCOUNTING FOR NATURAL RESOURCES

Mining properties, oil and gas reserves, and tracts of standing timber are examples of natural resources. The distinguishing characteristic of these assets is that they are physically removed from their natural environment and are converted into inventory. Theoretically, a coal mine might be regarded as an underground inventory of coal; however, such an inventory is certainly not a current asset. In the balance sheet, mining property and other natural resources are classified as property, plant, and equipment. Once the coal is removed from the ground, however, this coal does represent inventory.

We have explained that plant assets such as buildings and equipment depreciate because of physical deterioration or obsolescence. A mine or an oil reserve does not depreciate for these reasons, but it is gradually depleted as the natural resource is removed from the ground. Once all of the coal has been removed from a coal mine, for example, the mine is fully depleted and will be abandoned or sold for its residual value.

To illustrate the **depletion** of a natural resource, assume that Rainbow Minerals pays \$48 million to acquire the Red Valley Mine, which is believed to contain 5 million tons of coal. The residual value of the mine after all of the coal is removed is estimated to be \$8 million. The depletion that will occur over the life of the mine is the original cost minus the residual value, or \$40 million. This depletion will occur at the rate of \$8 per ton (\$40 million ÷ 5 million tons) as the coal is removed from the mine. If we assume that 2 million tons are mined during the first year of operations, the entry to record the depletion of the mine would be as follows.

Inventory	16,000,000	
Accumulated Depletion: Red Valley Mine		16,000,000
To record depletion of the Red Valley Mine for the year; 2,000,000 tons mined @ \$8 per ton.		

LO9-7

LEARNING OBJECTIVE
Account for the depletion of
natural resources.

A=L-LOE

Recording depletion

Plant Transactions and the Statement of Cash Flows

413

Once removed from the mine, coal becomes available for sale. Therefore, the estimated cost of this coal is added to the Inventory account. As the coal is sold, this cost is transferred from the Inventory account to the Cost of Goods Sold account.

Accumulated Depletion is a *contra-asset account* similar to the Accumulated Depreciation account; it represents the portion of the mine that has been used up (depleted) to date. In Rainbow Minerals's balance sheet, the Red Valley Mine now appears as follows.

Property, Plant, & Equipment:

Mining properties: Red Valley Mine	\$48,000,000	
Less: Accumulated depletion	<u>16,000,000</u>	\$32,000,000

A-1, LOE

The mine gradually is turned into inventory

Depreciation of Buildings and Equipment Closely Related to Natural Resources

Buildings and equipment installed at a mine or drilling site may be useful only at that particular location. Consequently, such assets should be depreciated over their normal useful lives or over the life of the natural resource, whichever is shorter. Often depreciation on such assets is computed using the units-of-output method, which was discussed earlier in the chapter, based on the quantity of the natural resource removed.

DEPRECIATION, AMORTIZATION, AND DEPLETION— A COMMON GOAL

The processes of depreciation, amortization, and depletion discussed in this chapter all have a common goal. That is to allocate the acquisition cost of long-lived assets to expense over the years in which the asset contributes to revenue. Allocating the acquisition cost of long-lived assets over the years that benefit from the use of these assets is an important application of the matching principle. The determination of income requires matching revenue with the expenses incurred to produce that revenue.

Plant Transactions and the Statement of Cash Flows

The cash effects of plant and equipment transactions are different from the effects reported in the income statement. Cash payments for plant assets occur when those assets are purchased—or, more precisely, when payment is made. Cash receipts often occur when assets are sold. (These receipts are equal to the total proceeds received from the sale, not just the amount of any gain.) Cash flows relating to acquisitions and disposals of plant assets appear in the statement of cash flows, classified as investing activities.

Depreciation and amortization expense both reduce net income, but they have no effect on cash flows. As a result, both tend to make net income less than the net cash flows from operating activities. Likewise, the write-down of impaired assets is another example of a **noncash charge or expense** against income having no immediate effect on cash flows.

Noncash Investing Activities Not all purchases and sales of plant assets result in cash payments or cash receipts during the current accounting period. For example, a company may finance the purchase of plant assets by issuing notes payable, or it may sell plant assets in exchange for notes receivable. The noncash aspects of investing and financing activities are summarized in a special schedule that accompanies a statement of cash flows. This schedule is illustrated and explained in Chapter 13.

LO9-8

LEARNING OBJECTIVE
Explain the cash effects of transactions involving plant assets.



ETHICS, FRAUD, & CORPORATE GOVERNANCE

A learning objective for this chapter is to distinguish between capital expenditures and revenue expenditures (a revenue expenditure is an operating expense). A capital expenditure is charged to an asset account rather than to an expense account. The largest instance of fraudulent financial reporting in U.S. history was primarily due to improper capitalization of operating expenditures. WorldCom Inc. (WorldCom) from as early as 1999 through the first quarter of 2002 overstated its reported income by approximately \$11 billion, including approximately \$7 billion of ordinary operating expenses that were improperly capitalized. The revelation of the fraud led to WorldCom's filing for protection from its creditors under the provisions of the U.S. Bankruptcy Code. Although the fraud at Enron had prompted congressional interest in auditing, financial reporting, and corporate governance, by the spring of 2002 congressional efforts to draft a law in response to the Enron fraud had stalled due to disagreements between the two houses of Congress. The fraud at WorldCom broke this congressional logjam and resulted in the passage of the Sarbanes-Oxley Act less than two months after the revelation of the WorldCom fraud.

Almost immediately after the revelation of the WorldCom fraud—in June 2002—the Securities and Exchange Commission (SEC) brought an enforcement action against WorldCom. WorldCom was a major global telecommunications provider, providing services in more than 65 countries. At the time of the fraud, WorldCom was traded on NASDAQ.

As the economy began to cool in 1999, demand for WorldCom's telecommunications services was reduced, leading to a

decline in profits. The slowing economy made it difficult for WorldCom to continue to meet the expectations of Wall Street analysts for reported profitability.

WorldCom's senior management directed subordinates to take steps to hide the deterioration in WorldCom's profitability from analysts and other external parties. A primary means of carrying out the fraud was to transfer ordinary operating expenses, line costs, to a capital asset account, fixed assets. This accounting treatment resulted in the overstatement of assets, the understatement of operating expenses, and an increase in income.

The fraud at WorldCom has numerous ethical and corporate governance implications. Although the fraud at WorldCom was directed by top management, much of the implementation was carried out by midlevel finance and accounting personnel.

WorldCom did not have a code of ethics. Attempts to develop such a code were met by the CEO's description of a code of ethics as a "colossal waste of time." The Sarbanes-Oxley Act and related SEC interpretations now require public companies to disclose whether they have a code of ethics that applies to the CEO, CFO, and chief accounting officer and, if not, why not. Moreover, the NYSE and NASDAQ now require companies listed on these exchanges to have a code of ethics. Although these requirements are a step in the right direction, they will fail to have their intended effect if senior management doesn't fully embrace the written code.

Concluding Remarks

This chapter completes our discussion of accounting for various types of assets. To briefly review, we have seen that cash is reported in the financial statements at its face value, marketable securities at their market value, accounts receivable at their net realizable value (i.e., net amount of cash expected to be collected), inventories at the lower-of-cost-or-market, and plant assets at cost less accumulated depreciation.

Two ideas that have been consistently reflected in each of these valuation bases are the matching principle and conservatism. A major determinant of the amount at which many assets are accounted for in the balance sheet is the future amount to be released as an expense into the income statement. Closely related to this is the objective of not overstating the current and future expectations of a company's financial activities by overstating assets and understating current expenses.

In the next chapter, we turn our attention to the measurement and presentation of liabilities.