

chapter

2



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In this chapter you will learn:

- 1** Basic definitions of assets, liabilities, and equities
- 2** To analyze transactions in terms of their effects on balance sheet accounts
- 3** To use debits, credits, and T-accounts to analyze transactions and construct balance sheets
- 4** To begin to read real company reports

Balance Sheet Concepts: Assets, Liabilities, and Equities

In one country, as a result of a coup, career military officers with no business experience were placed on the boards of directors of several important corporations. After inspecting the financial statements of several companies, one general became very suspicious.

General: "What are you guys trying to put over on me?"

Executives: "What do you mean?"

General: "Do you expect me to believe that for every one of these companies, the total assets are exactly equal to the liabilities plus equities?"

We imagine that a short lesson in accounting began immediately.

Like the General, this chapter is focused on the balance sheet. It has two goals:

1. To explore the economic concepts of assets, liabilities, and equities that underlie the balance sheet
2. To introduce the accounting techniques of debits and credits that are used to keep track of and to analyze balance sheet items

In Chapter 1 we discussed the importance of economic concepts. They guide the construction of accounting reports. In this chapter we further explain these concepts.

Basic debit/credit bookkeeping techniques are important in their own right, but it is not our main purpose for introducing them. Learning these techniques helps in understanding how financial statements work and, especially, how they are related. They help in discovering and understanding the economic events that underlie financial statements, and they help in forecasting the impact of future economic events and proposed transactions. In combination with an understanding of economic concepts, the mastery of debit and credit techniques provides a powerful tool for financial analysis.

This chapter begins by discussing the entity concept. Both the economic concepts and accounting techniques must have a point of reference, which is defined by the entity for which the accounting is done. We then move on to study assets, liabilities, and equities in detail. Then we formally introduce debits and credits. Finally, we work through a comprehensive example to illustrate the connection of debits and credits with the balance sheet.

Basic Definitions, Theories, and Examples

As we have already seen, an asset is a future benefit. But whose benefit is it? A liability is an obligation to give up resources in the future. But whose obligation is it? Think about getting a loan from a bank. You incur an obligation to repay the loan. The bank will likely insist on a regular schedule of payments. The loan is clearly a liability from your point of view because *you* must give up your resources in the future.

How does the bank view the loan? Your payments in the future will be cash receipts to the bank. From the bank's perspective the loan generates future benefits. Thus, the loan is an asset from the bank's point of view.

The Entity Concept

The first thing to realize about accounting is that it must take a point of view. Accountants refer to this point of view as the **entity** concept. Accounts are compiled for a specified entity, and benefits and obligations are assessed from that entity's point of view.

An **entity** is the person or organization about which accounting's financial history is written.

A specific entity identified in a set of financial statements might be a city, a regulated public utility, a partnership, a taxpayer, a corporation, or any set of activities for which it would be useful to generate an economic history. Once we define an entity, we establish a point of view for the accounts and can begin to know how a transaction affects the composition of the entity's assets and liabilities; that is, does the transaction generate future benefits for the entity, or obligate the entity to give up resources in the future?

Assets: Definition

OBJECTIVE:

Learn basic definitions of assets, liabilities, and equities.

An **asset** is a “probable future economic benefit obtained or controlled by an entity as a result of a past transaction.”

An **asset** is “a probable future economic benefit obtained or controlled by an entity as a result of a past transaction or event.”¹ To an accountant, an asset's economic benefits manifest themselves, one way or another, in future cash flows. Some assets, such as a customer's obligation to pay for merchandise bought on credit, turn directly into cash when the customer pays what is owed. Other assets take a more indirect route to producing a future cash flow. For example, a farmer's tractor is an asset because it is used in the process of growing a crop, which is then sold for cash. A computer may allow clerical work to be done more efficiently, reducing the need for a second secretary. This saving of future wages is a future cash benefit generated by the computer.

Assets: Examples

OBJECTIVE:

Learn to read real company reports.

It is impossible to list every conceivable asset. Entities own or control too many different kinds of items that generate future economic benefits to provide an exhaustive list. Some types of assets are held by almost all entities. For example, consider the assets listed in the OshKosh B'Gosh, Inc. balance sheets in Exhibit 2.1. OshKosh B'Gosh, Inc. is a retailer of children's clothing. Its common stock trades on the New York Stock Exchange under the symbol OSK.

Current assets have benefits that are expected to be realized within one year of the balance sheet date.

Let's begin our examination of OshKosh B'Gosh's assets with some overall observations. The two lists provide values for assets, one at December 30, 2000, and the other at December 29, 2001. (This slight asymmetry of dates is probably because of where weekends and holidays fell in 2001.) OshKosh B'Gosh's total assets at December 29, 2001, were \$161,340 thousand. OshKosh B'Gosh breaks this total down into subcategories. **Current assets** is a major subcategory of assets whose economic benefits are expected to be realized within one year of the balance sheet date. We see that OshKosh B'Gosh's current assets totaled \$125,055 thousand at December 29, 2001. Let's look at the details of the current assets.

As for virtually every entity, cash is also one of OshKosh B'Gosh's current assets. OshKosh B'Gosh holds cash and cash equivalents of \$29,322 thousand at December 29, 2001.

Cash is money in the form of currency or deposits in banks. In today's global marketplace, most large companies hold currencies issued by many different countries. Cash is a future economic benefit because it can be exchanged for goods and services. Therefore, it is an asset. Because its benefits can be used immediately, it is a current asset.

OshKosh B'Gosh lists Investments at zero. These short-term investments, often called **marketable securities**, are investments in financial assets, such as shares of stock and bonds. Entities make these investments to earn the dividends or interest they generate or because the price of the stock or bond is expected to rise.

Investments in stocks or bonds might generate a higher return than putting money in a bank, but they may also carry more risk. Some bonds become worthless because the issuer defaults. In labeling a marketable security an asset, we assert that it can be converted into cash. A market price generated in a rich market would be the best evidence of the possibility of conversion into cash, and marketable securities are often carried on balance sheets at their market values. Because the existence of a rich market enables quick conversion into cash, marketable securities are current assets.

¹FASB Concepts Statement No. 3.

Exhibit 2.1

OshKosh B'Gosh Balance Sheets

OshKosh B'Gosh, Inc. and Subsidiaries
Consolidated Balance Sheets
(dollars in thousands, except per share amounts)

| ASSETS | December 29, 2001 | December 30, 2000 |
|--|------------------------------|------------------------------|
| Current assets | | |
| Cash and cash equivalents | \$ 29,322 | \$ 19,839 |
| Investments | — | 511 |
| Accounts receivable, less allowances of \$7,075 in 2001 and \$5,510 in 2000 | 25,697 | 30,166 |
| Inventories | 55,429 | 53,185 |
| Prepaid expenses and other current assets | 1,507 | 1,882 |
| Deferred income taxes | 12,600 | 13,800 |
| Total current assets | <u>\$123,055</u> | <u>\$119,383</u> |
| Property, plant, and equipment, net | 30,001 | 32,285 |
| Deferred income taxes | 4,300 | 4,950 |
| Other assets | 1,984 | 1,638 |
| Total assets | <u>\$161,340</u> | <u>\$158,256</u> |
| LIABILITIES AND SHAREHOLDERS' EQUITY | | |
| Current liabilities | | |
| Current portion of long-term debt | \$ — | \$ 10,000 |
| Accounts payable | 11,229 | 14,840 |
| Accrued liabilities | 38,403 | 39,942 |
| Total current liabilities | <u>\$ 49,632</u> | <u>\$ 64,782</u> |
| Long-term debt | 24,000 | 34,000 |
| Employee benefit plan liabilities | 14,008 | 15,001 |
| Total liabilities | <u>\$ 87,640</u> | <u>\$113,783</u> |
| Shareholders' equity | | |
| Preferred stock, par value \$.01 per share: | | |
| Authorized—1,000,000 shares; | | |
| Issued and outstanding—None | \$ — | \$ — |
| Common stock, par value \$.01 per share: | | |
| Class A, authorized—30,000,000 shares; | | |
| Issued and outstanding—10,020,226 shares in 2001, 9,943,762 shares in 2000 | 100 | 99 |
| Class B, authorized—3,750,000 shares; | | |
| Issued and outstanding—2,207,394 shares in 2001, 2,228,707 shares in 2000 | 22 | 22 |
| Additional paid-in capital | 5,339 | — |
| Other | (312) | (702) |
| Retained earnings | 68,551 | 112,960 |
| Total shareholders' equity | <u>\$ 73,700</u> | <u>\$ 44,473</u> |
| Total liabilities and shareholders' equity | <u>\$161,340</u> | <u>\$158,256</u> |

OshKosh B'Gosh shows Accounts Receivable at December 29, 2001, of \$25,697 thousand. **Accounts receivable** are the amounts due from customers in payment for goods delivered or services performed by the entity. Because accounts receivable are claims to future cash payments, they are assets. One complication is that not everyone pays their bills. Some have bad luck, while others just refuse to pay. Accounts receivable are assets to the extent that it is probable they will be collected.

OshKosh B’Gosh lists accounts receivable at \$25,697 thousand as of December 29, 2001. This figure is net of an “allowance” of \$7,075 thousand. The term *allowance* refers to the amount OshKosh B’Gosh expects to be uncollectible. Therefore, we can deduce that customers owe OshKosh B’Gosh \$32,772 thousand ($\$25,697 + \$7,075$), OshKosh B’Gosh expects to collect \$25,697 thousand, and it expects to be unable to collect the remaining \$7,075 thousand.

In the United States, most accounts receivable are due in 90 days. Therefore, accounts receivable is a current asset.

Inventories are stockpiles of goods to be used in the entity’s operations. OshKosh B’Gosh lists Inventories of \$55,429 thousand at December 29, 2001. There are many different types of inventories. Retailers like OshKosh B’Gosh typically have inventories of merchandise available for sale to customers. The Red Cross maintains an inventory of blood for use in emergencies. Manufacturers have inventories of raw materials used in making products. Products that are in various stages of manufacture are called work-in-process. Finished goods inventory is goods awaiting sale and delivery to customers. Inventories are assets to the extent that it is likely that they will be sold, thus generating a benefit. Inventories that contain damaged goods or items that are or may become obsolete are less likely to generate future economic benefits.

OshKosh B’Gosh lists Prepaid Expenses and Other Current Assets of \$1,607 thousand at December 29, 2001. **Prepaid expenses** are amounts already paid for services or goods to be delivered in the future. For example, a retailer may pay four months’ rent in advance. A manufacturer may pay all the money up front for a fire insurance policy that lasts for many periods. A new business may have to give an attorney a retainer from which future fees will be paid. The acid test of whether any of these prepayments is an asset is whether it entitles the entity to a probable future economic benefit. Prepaid rent entitles

the retailer to use the store space in the future, an economic benefit. Prepaid insurance gives the manufacturer insurance coverage in future periods, an economic benefit. Prepaid attorney’s fees give the new business access to legal services in the future, a probable economic benefit. When the prepayment is for a good or service that is to be used within the next year, the prepayment is a current asset.

Deferred Income Taxes is the last asset that OshKosh B’Gosh lists in the current assets subcategory—\$13,000 thousand at December 29, 2001. Because it is listed under assets, we know that this \$13,000 thousand represents future benefits for OshKosh B’Gosh. In fact, OshKosh B’Gosh expects to reap these tax benefits over the next year. These benefits could come in one

of two forms. The first is a refund of taxes paid in the past. The second is a reduction in future tax payments. We explore deferred income taxes in detail in Chapter 14.

Three more assets appear on OshKosh B’Gosh’s balance sheet: Property, Plant, and Equipment, Deferred Income Taxes, and Other Assets. The fact that these assets are not classified as current assets tells us that OshKosh B’Gosh expects to realize their benefits over a period longer than one year. Sometimes a company will use the label “Noncurrent” or “Long-Term” to separate more clearly its current and **noncurrent assets**. But many companies, like OshKosh B’Gosh, let us infer the category from the presentation.

The first noncurrent asset that OshKosh B’Gosh lists is Property, Plant, and Equipment for \$30,001 thousand. **Property, Plant, and Equipment** represents the land,



OshKosh B’Gosh’s sales create assets in the form of cash and accounts receivable.

Noncurrent assets have benefits that are expected to be realized over periods beyond one year from the balance sheet date.

buildings, manufacturing machines, delivery vehicles, and so on, that entities hold for use in the business over several periods. They are assets to the extent they will be used to an entity's economic advantage. Land may be developed or sold. Buildings may provide office space for administrators, room to display goods, or space to manufacture products. Manufacturing machines make goods to be sold. Delivery vehicles convey goods to customers. However, space provided by buildings can become useless, land polluted, and manufacturing machines outdated. To be considered an asset, Property, Plant, and Equipment must generate a probable economic benefit for the entity. An outdated machine may not be an asset; it may just be junk.

OshKosh B'Gosh next lists Deferred Income Taxes of \$4,300 thousand. This asset originates in the same manner as the deferred taxes already discussed. However, the benefits represented by this amount of \$4,300 thousand are expected to be realized more than one year from December 29, 2001. Therefore, these deferred taxes are not current assets and must be listed separately from the \$13,000 thousand in deferred income taxes listed in the current assets.

Like many firms, OshKosh B'Gosh's balance sheet includes the account **Other Assets**. In practice, most firms carry far too many accounts to list each account separately. Actual individual accounts are added together to form the balance sheet accounts we see. For example, OshKosh B'Gosh likely keeps several different inventory accounts (such as, perhaps, Children's Clothing, Adult Casual Clothing, Work Wear, etc.). For reporting purposes, OshKosh B'Gosh groups these different inventory accounts together and displays the total as Inventories on the balance sheet. The balance sheet item labeled Other Assets is a combination of all the remaining accounts OshKosh B'Gosh management deemed not important enough to disclose separately on the balance sheet. Not surprisingly, compared to many of OshKosh B'Gosh's other displayed assets, Other Assets is a small \$1,984 thousand as of December 29, 2001.

OshKosh B'Gosh's other assets might include patents, copyrights, and trademarks. **Patents** give holders the right to exclude others from using the patented products or processes. **Copyrights** give holders rights to publish original works of artistic or literary expression. **Trademarks** are legal rights to names or symbols. **Licenses** are legal rights to market products, service specified territories, or use patented products or processes, copyrighted material, or trademarked names or symbols. Patents, copyrights, trademarks, and licenses are assets when it is probable that the rights they convey will be used to the entity's economic advantage.

Rights can be extremely valuable. For example, the U.S. government auctioned the rights to use certain frequencies for wireless telecommunications. The rights are represented by licenses granted by the Federal Communications Commission (FCC). The winning bids in the FCC's auction of licenses totaled \$10.2 billion. One company alone, Nextwave Personal Communications, submitted winning bids totaling \$4.2 billion.²

To determine whether a given item is an asset, you must ask whether it generates a probable economic benefit for the entity. You must ask whether it is owned or controlled. And you must ask whether it arose from a past transaction or event. One job of accounting is to identify the major types of an entity's assets. Given the many different types of entities, the widely different activities in which they engage, and the variety of items they hold, a useful categorization of the major assets must be found on a case-by-case basis.

Assets: Valuation

After identifying an entity's assets, the accountant must decide what monetary amounts to assign them. Assigning a monetary amount is called a **valuation**. It is important to distinguish carefully among the different forms of valuation. **Market valuation methods** refers to the ways markets assign value. For example, auction markets assign values

²Edmund L. Andrews, "Big Bidders Win Auction for the Small," *The New York Times*, May 7, 1996, pp. D1 and D10.

Asset test:

- economic benefit
- owned or controlled
- result of past transaction or event

A **valuation** is an assignment of a monetary amount.

Market valuation methods are the ways markets assign values.

Accounting, or balance sheet, valuation methods are the ways accountants assign values.

Market value is the value assigned to an item by a market.

Book value is the value assigned to an item by an accountant.

through their rules about who wins an item and how much the winner must pay for it. **Accounting, or balance sheet, valuation** refers to the collection of methods that accountants use to assign the values reported in balance sheets.

A value is the result of a valuation. For example, the price of an auctioned item is its **market value** as determined by the auction market. The **book value** of an item is the result of a balance sheet valuation. Sometimes market values and book values are the same, but most often they are not. One of the keys to really understanding accounting information is to understand the relation between market and book values, and we devote significant attention to that in Part III of this text. There we will learn many of the different accounting valuation methods for particular assets.

Several accounting valuation methods are reflected on OshKosh B’Gosh’s balance sheet. Cash equivalents, such as amounts held in foreign currencies and short-term investments, are carried at market value. Market value is the amount of cash that would be raised by selling an asset at the available market price. Accounts receivable are valued at expected net realizable value. Expected net realizable value is the amount OshKosh B’Gosh expects to collect from the total it is due. Inventories are valued at the lower of cost or market (the cost to replace them). Some long-term investments are valued at the estimated present value of their future cash flows.³ Property and equipment are valued at historical cost, less accumulated depreciation. Historical cost is the market price paid for an item when purchased. Accumulated depreciation is the total deduction from the historical cost that takes approximate account of the use of the plant and equipment over time (more about this topic in Chapter 3).

No one answer can be given to the question of what is represented by the values reported on a balance sheet. The accounting process of recording values, however, always starts from the same place. Assets are recorded at cost at the time the assets are acquired. Subsequent deviations from historical cost are adjustments to the recorded values.

Liabilities: Definition

OBJECTIVE:

Learn basic definitions of assets, liabilities, and equities.

A **liability** is “a probable future sacrifice of economic benefits arising from present obligations of an entity to transfer assets or provide services as a result of a past transaction or event.”

OBJECTIVE:

Learn to read real company reports.

Current liabilities are liabilities whose expected sacrifice will occur within one year.

A **liability** is “a probable future sacrifice of economic benefits arising from present obligations of an entity to transfer assets or provide services as a result of a past transaction or event.”⁴ Like the case of assets, to an accountant, a liability’s economic sacrifices ultimately manifest themselves in future cash flows. Liabilities reduce future cash flows, either directly or indirectly. For example, a bank loan taken out by a business directly reduces future cash flows because it must be repaid with cash. An obligation to fulfill a subscriber’s prepaid magazine subscription implicitly reduces future cash flows, because it requires cash outflows to produce and deliver the magazines.

Liabilities: Examples

Just as we could not list all conceivable assets, it is impossible to list every conceivable liability. Entities enter into too many different kinds of obligations that require the probable future sacrifice of economic benefits to give an exhaustive list. However, some types of liabilities are common to almost all entities. For example, consider the liabilities listed on OshKosh B’Gosh, Inc.’s balance sheet given in Exhibit 2.1. As we did with assets, let’s begin with some overall observations. OshKosh B’Gosh’s total liabilities at December 29, 2001, were \$87,640 thousand. Current liabilities is a major subcategory of liabilities. **Current liabilities** are those liabilities whose economic sacrifice is expected to be made within one year of the balance sheet date. OshKosh B’Gosh has \$49,632 thousand of current liabilities at December 29, 2001.

³A present value calculation weighs interest factors to acknowledge the time value of money (a dollar today has a different economic value than a dollar received sometime in the future). We discuss present values further in Chapter 6.

⁴FASB Concepts Statement No. 3.

OshKosh B’Gosh has three kinds of current liabilities: Current Portion of Long-Term Debt, Accounts Payable, and Accrued Liabilities. **Current Portion of Long-Term Debt** is the amount of long-term debt that must be repaid within one year of the balance sheet date. Oshkosh had no such amounts at December 29, 2001, but at December 30, 2000, it had \$10,000 thousand of long-term debt it had to repay within one year.

Accounts Payable (sometimes called Trade Payables or Trade Accounts Payable) represents amounts owed to suppliers of goods previously delivered. Accounts Payable are usually due within a fairly short period of time (generally between 30 and 90 days) and carry no explicit interest charges. Discounts for prompt payment are often offered. Accounts Payable are liabilities because they obligate the entity to give up cash and because they arise from the transaction of buying goods from suppliers. OshKosh B’Gosh owed \$11,229 thousand to suppliers of goods at December 29, 2001.

Accrued Liabilities, sometimes called Accrued Expenses, are amounts due for taxes, rent, wages, and so forth, that OshKosh B’Gosh owes. Looking at OshKosh B’Gosh’s balance sheet, we see that it owes a total of \$38,403 thousand for these various items. Looking at OshKosh B’Gosh’s various other liabilities, we notice that Accrued Liabilities is the largest liability OshKosh B’Gosh lists on its balance sheet. As such, we might be at least curious as to what sorts of items OshKosh B’Gosh groups together under this name. A skill you will want to become adept at is connecting information you see presented in financial statements with information presented in the **notes to financial statements**. As described in Chapter 1, every set of corporate financial statements is accompanied by a set of explanatory notes. If we seek additional information about something we see in a balance sheet, income statement, or statement of cash flows, a good place to start looking is in the notes.

Looking through OshKosh B’Gosh’s notes, we find Note 5 (Exhibit 2.2) is about Accrued Liabilities. It provides a more detailed decomposition of the items that comprise the \$38,403 thousand in that account. We see that \$7,181 thousand of the \$38,403 thousand is Compensation. This categorization means that, at December 29, 2001, OshKosh B’Gosh owes employees \$7,181 thousand for work they performed but for which they had not been paid. Workers’ Compensation amounts to \$8,900 thousand, which is actually payments due to cover insurance for employees injured on the job. (You would only know what *workers’ compensation* means if you have some experience with payroll terms.) The last component of the \$38,403 thousand is \$17,140 thousand, labeled simply “Other” in Note 5.

Notes to financial statements contain vital information.

Exhibit 2.2

OshKosh B’Gosh, Note 5 to Consolidated Financial Statements

| OshKosh B’Gosh, Inc. and Subsidiaries | | |
|--|-------------------|-------------------|
| Note 5 to Consolidated Financial Statements | | |
| (dollars in thousands) | | |
| Note 5. Accrued liabilities | | |
| A summary of accrued liabilities follows: | | |
| | December 29, 2001 | December 30, 2000 |
| Compensation | \$ 7,181 | \$ 6,648 |
| Workers’ compensation | 8,900 | 9,000 |
| Income taxes | 5,182 | 8,375 |
| Other | 17,140 | 15,919 |
| Total | <u>\$38,403</u> | <u>\$39,942</u> |

Unfortunately, OshKosh B’Gosh’s annual report provides no further information that leads to our understanding the components of OshKosh B’Gosh’s accrued liabilities. This lack of information illustrates the discretion firms have in disclosing information in annual reports. No specific GAAP or SEC rules require that OshKosh B’Gosh provide a

specific level of detail in its disclosures. Some firms provide more detail about the components of accrued liabilities, while other firms provide less. As financial statement readers, we must live with whatever level of detail OshKosh B’Gosh decides to provide.

Although OshKosh B’Gosh does not list them, we can define some other commonly found current liabilities. **Short-term borrowings** are monetary amounts due for the repayment of bank loans, notes payable, and other commercial paper that must be paid within one year. They are liabilities because they obligate the entity to give up cash and because they arise as part of the transaction of accepting cash from the lender. Bank loans, notes payable (written promises to pay), and commercial paper (notes issued by corporate borrowers) carry interest charges; that is, the total amount that must be repaid exceeds the amount borrowed.

Unearned revenues are the monetary amounts received by an entity that accepts upfront payments of cash in exchange for future delivery of its products. For example, you buy a three-year subscription to *Sports Illustrated*. Acceptance of your subscription obligates *Sports Illustrated* to either deliver magazines to you for the term of the subscription or to refund a portion of the amount you paid. Delivery of magazines requires the sacrifice of economic resources to compile, print, and transport the magazine. Your subscription is a liability to *Sports Illustrated* because it requires a probable future sacrifice of resources and because it arises from the transaction of taking your cash in exchange for promising to deliver a magazine. It is called unearned revenue because it carries an obligation—delivery of the magazine discharges the obligation and converts the liability into recognized revenue. The amount of your subscription becomes earned revenue to *Sports Illustrated* as it fulfills its obligations under the terms of your subscription.⁵

Dividends are payments that corporations make to their shareholders. Corporations are not legally obligated to pay dividends. Most do pay dividends, but some do not. The shareholders of a corporation that pays dividends usually expect the corporation to continue to do so. Dividends are one way that shareholders receive a return on their investments. It involves a past transaction, the purchase of shares in a corporation, and the probable sacrifice of future economic benefits, the payment of cash by the corporation. Dividends do not become a liability, however, until an obligation to pay arises, which occurs when the corporation’s directors vote to pay the dividend. Therefore, **dividends payable** is the amount owed by the corporation to shareholders when dividends declared by the board of directors are yet to be paid. The total future stream of dividends, although expected by shareholders and a probable sacrifice of economic benefits, is not a liability because it is not yet an obligation. It will be one in the future when and if the board of directors formally declares that dividends will be paid.

Noncurrent or long-term liabilities are liabilities whose expected sacrifice will occur after one year.

Returning to OshKosh B’Gosh’s balance sheet, we see that it lists two **noncurrent or long-term liabilities**: **Long-Term Debt** and **Employee Benefit Plan Liabilities**. The \$24 thousand for long-term debt represents amounts borrowed by Oshkosh that will be repaid over a period of years. The \$14,008 thousand obligation for employee benefit plans represents sacrifices that OshKosh B’Gosh must make more than one year from December 29, 2001, for pensions, health care benefits in retirement, and other benefits that its employees earned. For example, OshKosh B’Gosh, like most companies in the United States, offers its employees a pension plan that provides for cash payments during retirement. Depending on the terms of the plan, obligations to make probable future economic sacrifices can arise and must be reported on the balance sheet.⁶

OshKosh B’Gosh lists only two noncurrent liabilities, but many firms have more. For example, many firms accrue liabilities associated with warranties and bonds. **Warranties** are rights held by purchasers of a company’s products to get damaged or malfunctioning

⁵We take up the concept of revenue and the process of measuring it in Chapter 3.

⁶Pensions and postretirement benefits other than pensions (e.g., health care benefits received in retirement) are complicated areas of accounting. Some of the complication stems from the complexity of pension and benefit plans. However, much of the complexity stems from the accounting process itself. GAAP in these areas contain many special features that affect the recording of assets and liabilities. We examine these in greater detail in a later chapter.

products repaired or replaced. Entities usually offer warranties to provide assurance about the quality of their products. Some individual units of product break during the warranty period. Some warranty repairs are more expensive than others. Because warranties arise from the terms of a sales transaction, warranties payable are liabilities to the extent that they will result in the probable future sacrifice of economic resources to fulfill their terms.

Bonds are financial instruments an entity uses to raise money. They promise payment of cash in the future from the issuer. Bonds payable are the amounts due to purchasers of bonds, issued by the entity, under the terms of the bonds. They represent obligations to give up cash (an economic benefit) arising from the past transaction of selling the bonds (a form of borrowing). Bonds payable are liabilities.

To determine whether a given item is a liability, you must ask whether it requires a probable future sacrifice of an economic benefit. You must ask whether it is an obligation. And you must ask whether it arises out of a past transaction or event. As with assets, one job of accounting is to identify the major types of an entity's liabilities. Given the many different types of entities, the widely different activities in which they engage, and the variety of obligations they have, a useful categorization of the major liabilities must be found on a case-by-case basis.

Liability test:

- *probable sacrifice*
- *obligation*
- *result of past transaction or event*

Liabilities: Valuation

As with assets, assigning monetary amounts to identified liabilities is called *valuation*. Markets are available for some liabilities, such as the bonds issued by large corporations. The market values of such liabilities are the prices at which they trade. Fewer accounting, or balance sheet, valuation processes are required for liabilities than for assets. For example, the book value of OshKosh B'Gosh's accounts payable, \$11,229 thousand on December 29, 2001, is the amount that OshKosh B'Gosh expects to pay to settle these obligations. A more complicated process leads to the \$14,008 thousand listed for employee benefit plan liabilities. Because these sacrifices will occur far in the future, consideration of the time value of money is part of the accounting valuation process for these items. We explore the time value of money in Chapter 6.

Equities: Definition

OBJECTIVE:

Learn basic definitions of assets, liabilities, and equities.

Total equity is the difference between total assets and total liabilities.

Total equity is the difference between total assets and total liabilities. To the extent that assets are valued at the present value of future economic benefits and liabilities are valued at the present value of obligations to sacrifice economic benefits in the future, equity is the net benefit left over for the owners of the entity. No owners are involved if the entity is a not-for-profit organization, and the difference between total assets and total liabilities is the net amount of resources available for use in accomplishing the entity's mission. In practice, equity arises from a number of sources. One source is the contributions of owners. Recall the accounting identity:

$$\text{ASSETS} = \text{LIABILITIES} + \text{EQUITY}$$

OBJECTIVE:

Learn to read real company reports.

When owners provide assets to the entity, no obligations are created. To preserve the identity, equity must increase. For instance, if the owners contribute \$100 thousand in the form of stock, then cash (asset) would increase by \$100 thousand and common stock (equity) would increase by \$100 thousand. If the entity's operations generate economic benefits (assets) in excess of the economic obligations incurred (liabilities), equity increases. As we will see in Chapter 3, the income statement is aimed at explaining increases in equity that result from the entity's operation.

Equities: Examples

Classifying different types of equity is a major emphasis of the equity section of the balance sheet. One objective is to separate the equity that arose from contributions

from owners from the equity that arose from net assets generated through the entity's operations.

Owners contribute assets using many different types of equity. For example, **common stock** is the primary financial instrument that corporations use for signifying ownership in the corporation. The owner of common stock is entitled to vote on major corporate decisions, such as whether to sell the firm in a takeover attempt, whether to retain or replace existing management, how to structure executive compensation, and who should serve on the board of directors. The owners of common stock also have a residual claim on the assets of the firm; that is, if the firm is liquidated, the common shareholders receive what is left after all the entity's other obligations are settled.

Some firms, such as OshKosh B'Gosh, establish different classes of common stock, where the different classes can exercise different voting rights and/or different rights regarding the receipt of dividends. OshKosh B'Gosh's \$100 thousand of Class A common stock and \$22 thousand of Class B common stock as of December 29, 2001, indicates that, at some point(s) in the past, OshKosh B'Gosh issued stock with a total par, or stated, value of \$122 thousand ($\$100 + \22). We could look at the notes to the financial statements to learn more about the features that differentiate OshKosh B'Gosh's two classes of common stock.

OshKosh B'Gosh issued common stock for more than its par value. The excess of the amount raised over par value is the \$5,339 thousand in **Additional Paid-In Capital (APIC)**. The par value, and therefore the additional paid-in capital, presents no real significance in the United States. In some countries, such as Norway, the par value plays a role in determining whether dividends to common shareholders can be legally paid.

Preferred stock is another instrument that corporations use to raise contributions from owners. The owner of preferred stock typically is not entitled to vote on corporate decisions. If the firm is liquidated, preferred shareholders receive the stated value of their shares. In addition, the preferred stock may contain a variety of dividend provisions. OshKosh B'Gosh's balance sheets tell us that OshKosh B'Gosh completed the legal and regulatory requirements necessary to issue preferred stock, but had not actually issued any as of December 29, 2001.

The preferred stock, common stock, and additional paid-in-capital accounts reflect the contributions of owners. The final account on OshKosh B'Gosh's balance sheet is **Retained Earnings**, which reflects equity generated from operations. The qualifier *Retained* tells us that Retained Earnings represents net assets generated from operations but not yet distributed to owners. The balance in OshKosh B'Gosh's Retained Earnings was \$68,551 thousand at December 29, 2001.

Examples: Concluding Remarks

We presented several examples of assets, liabilities, and equities. Be aware that the discussion so far by no means provides a complete list of the assets, liabilities, and equities you will encounter on balance sheets. Firms in other industries, by the nature of their business, generate assets and liabilities that don't exist for OshKosh B'Gosh. Also, not all firms refer to the same assets, liabilities, and equities by exactly the same name. For example, *short-term investments* might be labeled *securities held* by another firm. However, the structure of the balance sheet provides a thread of reporting commonality. All balance sheets are structured with an asset section. We can rest assured that someone decided, be it management or the FASB, that the items we see listed as assets generate future cash inflows, either by themselves or in combination with other assets. Similarly, all balance sheets, provided the firm has liabilities, contain a liability section, which includes items expected to generate future cash outflows. It is left to financial statement readers to make their own assessments about the magnitude and probability of these future cash inflows and outflows. We take up this subject in considerable detail in later chapters, but for now offer Figure 2.1 as a general overview of the structure of a balance sheet.

Figure 2.1

Balance Sheet Classifications

| | |
|-----------------------------|--|
| Assets: | |
| Current | Cash |
| | Marketable securities |
| | Accounts receivable |
| | Inventories |
| | ⋮ |
| Noncurrent (long-term) | Property, plant, and equipment |
| | Patents |
| | ⋮ |
| Liabilities: | |
| Current | Accounts payable |
| | Accrued expenses |
| | ⋮ |
| Noncurrent (long-term) | Mortgage payable |
| | Bonds payable |
| | ⋮ |
| Shareholders' equity | |
| Contributed | Preferred stock, Series A |
| | Preferred stock, Series B |
| | Common stock |
| | Additional paid-in capital |
| | ⋮ |
| Earned and retained | Retained earnings (accumulated deficit) |

Balance Sheet Construction: Using the Accounting Identity

OBJECTIVE:

Learn to analyze transactions in terms of their effects on balance sheet accounts.

The basic structure of balance sheets and the examples of assets, liabilities, and equities we saw in the previous section give us the foundation we need to go deeper into the construction of balance sheets. Our primary aim is to enable you to better understand and analyze financial statements. Understanding and analyzing financial statements involves making inferences—basically working backward from financial statements into what economic events led to them. Experience indicates that it is best to begin learning this process by working through some examples “front to back,” which means starting from some transactions and events and constructing the resultant financial statements. In this section, we illustrate the basics of the construction and interpretation of balance sheets through a series of hypothetical transactions and events. It also serves to identify more commonly used balance sheet accounts and terms.

An Example: Websell

Bob and his cousin, Betsy, form Websell Corporation to develop and market software over the Internet and supply Internet consulting services. Bob and Betsy realize they must have office space, some computers, and other miscellaneous items before operations can begin. At this point, however, the *entity*, Websell, has no cash. In fact, we can prepare a simple initial balance sheet for Websell relying on the accounting identity.

$$\begin{array}{rcccc} \text{ASSETS} & = & \text{LIABILITIES} & + & \text{EQUITY} \\ 0 & = & 0 & + & 0 \end{array}$$

As an entity, Websell has nothing yet. Even though Bob and Betsy, as individuals, may have bank accounts, cars, car loans, and other assets, the entity Websell does not.

The legal and tax systems may not make a distinction between Websell and Bob and Betsy, but for financial reporting purposes, they are to be distinguished. We will prepare the balance sheet, and other financial statements, from the perspective of the separate entity, Websell, which will be *owned* by Bob and Betsy.

Bob and Betsy decide to **incorporate** Websell. This move establishes Websell as a separate entity recognized by the U.S. legal system. Incorporation comes with a number of implications. Among the most important is that, as a separate legal entity, Websell's owners cannot be held legally liable for its debts. In other words, Bob and Betsy cannot be held financially responsible for money borrowed by the entity Websell. They decide to split ownership of Websell equally. On January 1, 2004, they each contribute \$500,000 cash to the business.

In the United States, ownership rights to business entities are referred to as **stock**. Bob and Betsy now each own half of the stock of Websell. When no special ownership rights (such as special voting privileges) are attached to stock, it is referred to as common stock. As already discussed, owners of common stock hold residual claims on the assets of the firm; that is, if the firm is liquidated, the common shareholders receive what is left after all the entity's other obligations are settled. In this example, Bob and Betsy own this residual claim.

Equity holders, shareholders, stakeholders, stockholders, residual owners, and residual claimants all refer to the holders of the common stock of a corporation.

Now the entity, Websell, has \$1,000,000 cash at its disposal. That \$1,000,000 came from somewhere, specifically, from Bob and Betsy, the owners. They are Websell's **equity holders (shareholders, stockholders, residual owners, residual claimants, stakeholders)**. It simply means they own the rights to whatever Websell has. The accounting identity reflects both Websell's \$1,000,000 in cash and that owners contributed it.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$1,000,000 & = & 0 + \$1,000,000 \end{array}$$

At this point, we can construct a simple balance sheet (shown in Exhibit 2.3).

Exhibit 2.3

Websell, Inc. Balance Sheet

| Websell, Inc. | | | |
|--|----------------|----------------------------|----------------|
| Statement of Financial Position as of January 1, 2004 | | | |
| (amounts in thousands) | | | |
| ASSETS | | LIABILITIES | |
| Cash | \$1,000 | Total liabilities | \$ 0 |
| | | EQUITY | |
| | | Common stock | \$1,000 |
| | | Total equity | \$1,000 |
| Total assets | <u>\$1,000</u> | Total liabilities & equity | <u>\$1,000</u> |

It is important to note two things at this point. First, "Cash" and "Common Stock" are both referred to as **accounts**. The term *account* is not synonymous with a bank account. For accounting purposes, an account is simply a dollar amount that represents something. For example, Websell's account Common Stock represents the dollar amount contributed to Websell by the owners. Websell's account Cash represents the \$1,000,000 cash owned by Websell. That \$1,000,000 might be distributed across several different bank accounts at several different banks. It might also be one thousand \$1,000 bills stuffed in a drawer. The point is, balance sheet accounts are essentially mental constructs used to organize an entity's resources and obligations.

Second, notice that the heading on Websell's statement of financial position, or balance sheet, includes the phrase, "as of January 1, 2004," because Websell has \$1,000,000 cash on January 1, 2004. Other transactions and events can cause Websell to have a different amount of cash at a different date. Balance sheets are essentially lists of an entity's resources and obligations. By their nature, resources and obligations exist at a point in time. Thus, accountants carefully identify at what point in time the entity's resources and obligations were measured.

Continuing, Bob and Betsy decide Websell will borrow some money. As we explained earlier, borrowing, or obtaining **credit financing**, takes on many forms. In this particular instance, on January 2, 2004, Websell opts to issue bonds, receiving \$2,000,000 cash. The bonds pay 6% interest annually (on January 2 of each year). They fall due on January 2, 2010.

Let us reexamine the accounting equation and construct a balance sheet as of January 2, 2004.

$$\begin{aligned} \text{ASSETS} &= \text{LIABILITIES} + \text{EQUITY} \\ \$3,000,000 &= \$2,000,000 + \$1,000,000 \end{aligned}$$

The new balance sheet is shown in Exhibit 2.4.

Exhibit 2.4

Websell, Inc. Balance Sheet

| Websell, Inc. Statement of Financial Position as of January 2, 2004 (amounts in thousands) | | | |
|--|----------------|----------------------------|----------------|
| ASSETS | | LIABILITIES | |
| Cash | \$3,000 | Bonds payable | <u>\$2,000</u> |
| | | Total liabilities | <u>\$2,000</u> |
| | | EQUITY | |
| | | Common stock | <u>\$1,000</u> |
| | | Total equity | <u>\$1,000</u> |
| Total assets | <u>\$3,000</u> | Total liabilities & equity | <u>\$3,000</u> |

Notice that the \$2,000,000 borrowed affected Websell's balance sheet in two ways. First, the cash account increased by \$2,000,000. Second, because the \$2,000,000 must be repaid in the future, liabilities (Bonds Payable) increased by \$2,000,000. Websell now has \$3,000,000 cash, as indicated by the left side of the accounting identity. The right side tells us where that \$3,000,000 came from. Creditors contributed \$2,000,000. Owners contributed \$1,000,000.

Liquidation is the selling of all of an entity's assets and distributing them to debtors and residual claimants.

The notion of the owners as residual claimants is more apparent now. The owners claim Websell's residual assets. In other words, if Websell were **liquidated** (i.e., broken up and appropriate amounts distributed to creditors and owners) on January 2, 2004, bondholders would receive \$2,000,000. Anything left (in this case, \$1,000,000) would go to the equity holders, Bob and Betsy.

Websell begins acquiring productive assets. We place each event in the context of the accounting identity. Consistent with common accounting practice, we show negative numbers in parentheses. We also show the incremental effect of each transaction on the balance sheet identity; that is, we indicate which assets, liabilities, and equities change as a result of the particular transaction. (Change will be denoted by delta, Δ .)

On January 3, Websell buys computers and office equipment for \$300,000. Computers and office equipment are considered assets (property, plant, and equipment) because they will be used to generate cash flows in future periods.

On January 3, 2004, Websell purchases computers and equipment for \$300,000 cash.

| ΔAssets | = | ΔLiabilities | + | ΔEquities |
|--------------------------------|---|---------------------|---|------------------|
| Cash | | \$(300,000) | | |
| Property, Plant, and Equipment | | 300,000 | | |
| | | 0 | = | 0 |
| | | | + | 0 |

On January 3, Websell prepays \$75,000 for one year's rent on office space. Prepaid items are considered assets. Essentially, Websell is buying the right to use the office space for one year. Again, the office space will be used to generate cash flows during that year. Thus, prepaid rent is an asset to Websell.

On January 3, 2004, Websell prepays \$75,000 rent for one year.

| ΔAssets | = | ΔLiabilities | + | ΔEquities |
|----------------|---|---------------------|---|------------------|
| Cash | | \$(75,000) | | |
| Prepaid Rent | | 75,000 | | |
| | | 0 | = | 0 |
| | | | + | 0 |

On January 4, 2004, Websell establishes a business account at OfficeMax™. The account allows Websell to buy up to \$10,000 of merchandise on credit. Websell has 90 days to pay any purchases on account. Websell buys \$2,000 of office supplies on account on January 5, 2004.

On January 5, 2004, Websell purchases \$2,000 of merchandise on credit.

| ΔAssets | = | ΔLiabilities | + | ΔEquities |
|----------------|---|---------------------|---|------------------|
| Supplies | | Accounts Payable | | |
| | | \$2,000 | | |
| | | \$2,000 | = | \$2,000 |
| | | | + | 0 |

Notice that we made no balance sheet recognition of the \$10,000 credit line, because gaining approval for \$10,000 of credit does not closely enough match our definition of a liability. Recall that our definition of a liability is a future cash outflow resulting from a past event. As of January 4, Websell has no obligation to surrender cash in the future. The agreement simply allows Websell to purchase up to \$10,000 worth of supplies without paying cash immediately. Thus, it incurs no liability as of January 4, 2004. On the fifth, however, Websell gets some supplies under the agreement. Now Websell has an obligation to surrender cash in the future, \$2,000 within 90 days to be exact. Assets increase by \$2,000 because Websell hopes to use those supplies to generate cash (i.e., the supplies are an asset).

On January 7, 2004, Websell pays \$1,000 on its account at OfficeMax. This payment satisfies part of Websell's obligation to OfficeMax. Thus, the liability for Accounts Payable declines. The transaction also reduces Cash.

On January 7, 2004, Websell pays \$1,000 of the account payable.

| ΔAssets | = | ΔLiabilities | + | ΔEquities |
|----------------|---|---------------------|---|------------------|
| Cash | | Accounts Payable | | |
| | | \$(1,000) | | |
| | | \$(1,000) | = | \$(1,000) |
| | | | + | 0 |

At this point, it is useful to construct a new balance sheet (Exhibit 2.5). We add new asset and liability accounts since the last balance sheet, but the accounting identity remains intact.

The balance sheet captures the cumulative effect of all transactions up to the date of the balance sheet. For instance, the cash balance of \$2,624,000 can be explained as follows: \$1,000,000 from common stock investment of owners + \$2,000,000 from sale of bonds –

Exhibit 2.5

Websell, Inc. Balance Sheet

| Websell, Inc. | | | |
|--|----------------|----------------------------|----------------|
| Statement of Financial Position as of January 7, 2004 | | | |
| (amounts in thousands) | | | |
| ASSETS | | LIABILITIES | |
| Cash | \$2,624 | Accounts payable | \$ 1 |
| Supplies | 2 | Total current liabilities | \$ 1 |
| Prepaid rent | 75 | | |
| Total current assets | <u>\$2,701</u> | Bond payable | 2,000 |
| | | Total liabilities | <u>\$2,001</u> |
| Property, plant, and equipment | <u>300</u> | | |
| | | EQUITY | |
| | | Common stock | \$1,000 |
| | | Total equity | <u>\$1,000</u> |
| Total assets | <u>\$3,001</u> | Total liabilities & equity | <u>\$3,001</u> |

\$300,000 used to purchase equipment – \$75,000 to pay for prepaid rent – \$1,000 paid to supplier. Similarly, the Accounts Payable total of \$1,000 is the \$2,000 original obligation reduced by the \$1,000 payment. All other accounts include only the effect of one transaction. As expected, the balance sheet is still in balance (assets of \$3,001,000 equal liabilities of \$2,001,000 plus equity of \$1,000,000).

Websell now has several assets. They total \$3,001,000. Websell obtained \$2,001,000 of financing for these assets from creditors (which means Websell owes \$2,001,000). The remaining \$1,000,000 of financing was obtained from owners. Put another way, if Websell were liquidated on January 7, 2004, \$2,001,000 of its assets would be distributed to creditors, and the remaining \$1,000,000 would be distributed to Bob and Betsy.

The format clearly separates probable future economic benefits (assets) from probable future economic sacrifices (liabilities). Short-term (current) and long-term assets and liabilities are clearly distinguished. These distinctions should help the reader see important facts about the economic status of Websell.⁷

In this section, we looked at how balance sheets reflect basic transactions. To this point, we only considered transactions where the entity either obtains financing or acquires productive resources. In the next chapter, we consider how balance sheets are affected by transactions and/or events that use productive resources. In the next section of this chapter, we discuss some techniques accountants use to aid in the preparation of balance sheets and other financial statements. However, you will also likely find these techniques invaluable in analyzing and interpreting financial statement information.

Review Questions

1. Define assets, liabilities, and equities. Give an example of each. How are assets valued? How are liabilities valued?

⁷For example, it is readily apparent that Websell has a lot of cash, few long-term assets, and generated most of its assets through borrowing and issuing common stock. Websell is liquid, meaning it can quickly generate cash in excess of that required to pay its debts, but has not established that it will be profitable. Profitability depends on the ability to generate assets in excess of resources consumed through operations.

2. Explain what is meant by the entity concept.
3. A company signs a 10-year employee contract with a vice president. The salary is \$500,000 per year, guaranteed. Is this contract an asset? Would it appear on the balance sheet? Explain.
4. A company purchased a parcel of land 10 years ago at a cost of \$300,000. The land was recently appraised at \$900,000. At what value is the land carried in the balance sheet? How does the appraisal affect the carrying value in the balance sheet?

OBJECTIVE:

Learn to use debits, credits, and T-accounts to analyze transactions and construct balance sheets.

T-Accounts, Debits, and Credits

The operations of an entity that required only a few transactions would probably present no reason to look beyond the basic accounting identity to keep track of the transactions and balances in various accounts. Even moderate-sized entities, however, engage in millions of transactions per year involving hundreds of accounts.⁸

For purposes of recording the effects of a transaction on the balance sheet accounts, accountants derived a system of **T-accounts** and rules to make entries to the accounts so that the basic accounting identity is preserved. For example, consider the asset cash. Graphically, the cash account can be represented as a large T with the name Cash written on the top. When analyzing transactions, the convention we will adopt is to always show increases in Cash on the left-hand side of the T-account, and to show decreases in Cash on the right-hand side of the T-account. That way we don't have to worry about minus signs or brackets to show decreases.

| Cash | |
|-----------|-----------|
| Increases | Decreases |

Accountants call entries on the left side **debits** and entries on the right side **credits**. In the recording of accounting transactions there is no meaning for debit (abbreviated Dr.), other than left, or for credit (abbreviated Cr), other than right. If we use the following rules to record changes in T-accounts, we will get a handy result:

| Assets | | Liabilities/Equities | |
|-----------|-----------|----------------------|-----------|
| Increases | Decreases | Decreases | Increases |
| (Dr.) | (Cr.) | (Dr.) | (Cr.) |

That is

Debits (left-side entries) increase assets and decrease liabilities and equities.

Credits (right-side entries) increase liabilities and equities and decrease assets.

These rules imply that any entry with debits equal to credits preserves the balance sheet identity. Also, in any entry that preserves the balance sheet identity debits equal credits. This redundancy gives us an easy way to preserve the accounting identity. For every transaction, we make sure the debits (entries to left-side columns) equal the credits (entries to right-side columns). Total debits must equal total credits for every transaction and for every period. This rule of accounting provides a check on our accuracy.⁹

$$\text{DEBITS} = \text{CREDITS}$$

and

$$\text{ASSETS} = \text{LIABILITIES} + \text{EQUITY}$$

⁸Almost all of these accounts are aggregated into larger groups for purposes of presenting balance sheets, income statements, and statements of cash flows. Good management of the entity's resources and good accounting usually require keeping far more detailed records than are ultimately conveyed in public financial reports.

⁹Unfortunately, these techniques do not catch all possible errors. For example, if we erroneously credit a liability instead of an asset, we preserve the accounting identity and have debits equal credits, but we misstate assets and liabilities. In this case, both assets and liabilities are too high, which means that accountants can never make one mistake, but they can make two!

Both must hold.

You might think, “This method provides a reasonable way to compile accounting information, but I just want to read and analyze financial statements.” Do not underestimate the power of these simple techniques. Many times you may wish to determine how a firm’s financial statements will change if the firm engages in a particular transaction. Many people find the easiest way to solve this problem is to write down T-accounts for the affected accounts and then enter the appropriate dollar amounts to determine the new balances in those accounts. Many times you may wish to use financial statements to determine the dollar amount of a particular transaction. Many people find that using T-accounts offers the easiest way to solve this problem. Many financial analysts, investment managers, consultants, project directors, budget analysts, and others find T-account analysis to be an important skill.

To illustrate how debits and credits are entered into T-accounts, let’s go back and record Websell’s previous transactions.

- (1) The owners invest \$1,000,000 in Websell by purchasing 1,000,000 shares of \$1 par common stock. (If the owners paid more than \$1,000,000, we would create an account called Paid-In Capital in Excess of Par.)

On January 1, 2004, Bob and Betsy invest \$1,000,000 in Websell.

| Cash | | Common Stock | |
|-------------|-----------|---------------------|-----------|
| Dr. | Cr. | Dr. | Cr. |
| | 1,000,000 | | 1,000,000 |
| (1) | | | (1) |

- (2) Websell sells \$2,000,000 in bonds.

On January 2, 2004, Websell sells \$2,000,000 of bonds.

| Cash | | Bonds Payable | |
|-------------|-----------|----------------------|-----------|
| Dr. | Cr. | Dr. | Cr. |
| | 1,000,000 | | 2,000,000 |
| (1) | | | (2) |
| | 2,000,000 | | |
| (2) | | | |

- (3) Websell purchases computer and office equipment for \$300,000 cash.

On January 3, 2004, Websell purchases computers and equipment for \$300,000 cash.

| Cash | | Equipment | |
|-------------|-----------|------------------|-----|
| Dr. | Cr. | Dr. | Cr. |
| | 1,000,000 | 300,000 | |
| (1) | | (3) | |
| | 2,000,000 | | |
| (2) | | | |

- (4) Websell prepays rent in the amount of \$75,000.

On January 3, 2004, Websell prepays \$75,000 rent for one year.

| Cash | | Prepaid Rent | |
|-------------|-----------|---------------------|-----|
| Dr. | Cr. | Dr. | Cr. |
| | 1,000,000 | 300,000 | |
| (1) | | (3) | |
| | 2,000,000 | 75,000 | |
| (2) | | (4) | |

- (5) Websell purchases \$2,000 of supplies on credit.

On January 3, 2004, Websell purchases \$2,000 of merchandise on credit.

| Supplies | | Accounts Payable | |
|-----------------|-------|-------------------------|-------|
| Dr. | Cr. | Dr. | Cr. |
| | 2,000 | | 2,000 |
| (5) | | | (5) |

- (6) Websell pays \$1,000 of the account payable.

On January 7, 2004, Websell pays \$1,000 of the account payable.

| Cash | | Accounts Payable | |
|-------------|-----------|-------------------------|-------|
| Dr. | Cr. | Dr. | Cr. |
| | 1,000,000 | 300,000 | |
| (1) | | (3) | |
| | 2,000,000 | 75,000 | |
| (2) | | (4) | |
| | | 1,000 | |
| | | | 2,000 |
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Websell T-Accounts (amounts in thousands)

| Cash | | Supplies | | Prepaid Rent | | Equipment | |
|------------------|-----|---------------|-------|--------------|-------|-----------|-----|
| Dr. | Cr. | Dr. | Cr. | Dr. | Cr. | Dr. | Cr. |
| (1) 1,000 | 300 | (3)(5) 2 | | (4) 75 | | (3) 300 | |
| (2) 2,000 | 75 | (4) | | | | | |
| | 1 | (6) 2 | | 75 | | 300 | |
| 2,624 | | | | | | | |
| | | | | | | | |
| Accounts Payable | | Bonds Payable | | Common Stock | | | |
| Dr. | Cr. | Dr. | Cr. | Dr. | Cr. | | |
| (6) 1 | 2 | (5) | 2,000 | (2) | 1,000 | (1) | |
| | 1 | | 2,000 | | 1,000 | | |
| | | | | | | | |
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Exhibit 2.6
Websell T-Accounts

After all transactions are entered into the T-accounts, the balances in the accounts are totaled and a balance sheet is constructed. Exhibit 2.6 summarizes all of the entries in the T-accounts. The ending balance in individual accounts appears below the double line. In each instance the debits and credits are netted against each other.

The final step, listing and adding the total debits and credits in all of the T-accounts, is called making a **trial balance** (Exhibit 2.7).

Exhibit 2.7
Websell Trial Balance

Websell, Inc.
Trial Balance as of January 7, 2004
(amounts in thousands)

| ACCOUNT | DR. | CR. |
|------------------|---------|---------|
| Cash | \$2,624 | |
| Supplies | 2 | |
| Prepaid rent | 75 | |
| Equipment | 300 | |
| Accounts payable | | \$ 1 |
| Bonds payable | | 2,000 |
| Common stock | | 1,000 |
| Totals | \$3,001 | \$3,001 |

Notice that total debits equal the total credits in the trial balance. The account balances can then be copied, in proper format, to generate the balance sheet in Exhibit 2.5. By using debits and credits, we are assured we will end up satisfying the fundamental accounting identity. *This result is true no matter how we define assets and liabilities;* that is, the system of debits and credits can be used with any set of economic definitions and accounting conventions. This accounting identity makes it handy to all users of accounting reports, not just to accountants. For example, we will see that U.S. GAAP typically do not recognize expenditures on research and development as assets, which holds true even though the managers who authorized these expenditures are likely to believe they create future economic benefits. An analyst may use debits and credits to recast U.S. financial statements, assuming expenditures on research and development create assets.

Review Questions

1. Define debit and credit. What kind of balance, debit or credit, would you expect to find in the Inventory T-account? In the Bonds Payable T-account? In the Common Stock T-account?
2. If the trial balance balances, it means that you analyzed all the effects of transactions correctly. True or false? Explain.
3. Suppose Websell leases a portion of its space to another company. Websell receives \$5,000 in advance for the first year's rent. Which of Websell's accounts are debited and credited to record this transaction?

Analyses Using Balance Sheet Information

We can learn some commonly used financial indicators based on what we know about balance sheets at this point. Consider, again, OshKosh B'Gosh's balance sheet (Exhibit 2.1). We know that OshKosh B'Gosh has \$161,340 thousand in total assets at December 29, 2001. Because total shareholders' equity is \$73,700 thousand, the financing for \$87,640 thousand of those assets came from equity holders. The remaining \$87,640 thousand (\$161,340 – \$73,700) came from creditors; it was borrowed, which immediately tells us that OshKosh B'Gosh relies on creditors for most of its financing. In fact, of the total of \$161,340 thousand of financing needed, 54.3% comes from borrowing. Using a slightly different take on the same inference, analysts often speak of the ratio of debt financing to equity financing as the **debt-to-equity ratio**. For OshKosh B'Gosh, this ratio is 1.19 (87,640/73,700), meaning that for every dollar of financing supplied by owners, an additional \$1.19 is supplied by creditors.

Debt-to-equity ratio = Total liabilities/Total equities

Another question we might ask is, what is OshKosh B'Gosh's ability to meet its short-term credit obligations? History provides many examples of firms that, because of insufficient attention to cash management, found they were unable to pay their immediate bills, even though their long-term prospects were quite positive. The current versus noncurrent balance sheet classifications are useful in this regard. Recall that current liabilities are ones that (generally) will be due within one year of the balance sheet date. OshKosh B'Gosh has \$49,632 thousand of such obligations. Current assets are those expected to be converted to cash or some other asset within one year. So a rough guide to OshKosh B'Gosh's ability to pay the \$49,632 thousand it owes in the next year is whether it has an equal or greater amount of current assets. OshKosh B'Gosh has \$125,055 thousand in current assets.

Working capital = Current assets – Current liabilities

Current ratio = Current assets/Current liabilities

Analysts use at least two ways to combine current assets and current liabilities into indicators of the ability to meet commitments in the near term. The first is to determine their difference: current assets – current liabilities. This difference is called **working capital**. The second is to determine their ratio: current assets/current liabilities. This ratio is called the **current ratio**.

OshKosh B'Gosh has working capital of \$75,423 thousand (\$125,055 – \$49,632) at December 29, 2001. Its current ratio at that date is 2.52 (\$125,055/\$49,632). The working capital of \$75,423 thousand gives us a dollar measure of OshKosh B'Gosh's ability to meet its current liabilities. The current ratio of 2.52 tells us that OshKosh B'Gosh has \$2.52 of current assets for every dollar of current liabilities.

These examples show what kinds of information the balance sheet provides us. More information can be gleaned by comparing balance sheet information across time and across companies. We will conduct such exercises later.

Conclusion

This chapter introduced basic economic concepts, used them in creating a balance sheet, and showed how a system of debits and credits can be used to implement them on a

transaction-by-transaction basis. We purposely focused our attention on a few simple transactions. The real power of linking the economic concepts with debits and credits comes in other ways. For the accountant, the power comes when a great many transactions must be recorded. For the analyst, the power comes when the transactions become complex. When faced with a complex transaction, you can ask, “What accounting entry should be made to record this transaction?” The accounting entry calls for a set of debits and credits to a specified set of accounts, which in turn requires you to think about the whole of the transaction. If resources were acquired, what was the source? Were obligations also acquired, or was equity increased? If a resource was given up, what was gained? Was another resource increased? Was an obligation lessened? Was equity decreased?

Every transaction always has two sides: what is given and what is received. The accounting identity and the technique of debits and credits always prompt us to think about both sides. To the manager or the analyst, this discipline is important.

In the next chapter, we extend our economic definitions and the system of debits and credits to the income statement. Aside from the concepts we must develop, you will see how the system developed thus far is helpful in keeping the additional records needed to go beyond the balance sheet. The balance sheet is a snapshot. It is a picture of the economic resources and obligations of an entity at a point in time. To get the balance sheet, we look only at the ending balance in each account. The income statement tells us something about how we get from one balance sheet to the next. It is concerned with the trip, not just the destination. Therefore, it is not enough for us just to know the ending balance in our accounts. We must know something about the process of getting from the beginning to the end. Fortunately, the system of debits and credits can help us accomplish this job, too.

Key Terms

| | | |
|--------------------------------------|---|--|
| accounting valuation methods 27 | current ratio 40 | marketable securities 23 |
| accounts 33 | debits (left-side entries) 37 | noncurrent or long-term liabilities 29 |
| accounts payable 28 | debt-to-equity ratio 40 | patents 26 |
| accounts receivable 24 | deferred income taxes 25 | preferred stock 31 |
| accrued liabilities 28 | dividends 29 | prepaid expenses 25 |
| additional paid-in capital (APIC) 31 | dividends payable 29 | property, plant, and equipment 25 |
| asset 23 | employee benefit plan liabilities 29 | retained earnings 31 |
| balance sheet valuation methods 27 | entity 22 | short-term borrowings 29 |
| bonds 30 | equity holders (shareholders, stakeholders, stockholders, residual owners, residual claimants) 33 | stock 33 |
| book value 27 | incorporate 33 | T-accounts 37 |
| cash 23 | inventories 25 | total equity 30 |
| common stock 31 | liability 27 | trademarks 26 |
| copyrights 26 | licenses 26 | trial balance 39 |
| credit financing 34 | liquidation 34 | unearned revenues 29 |
| credits (right-side entries) 37 | market valuation methods 26 | valuation 26 |
| current assets 23 | market value 27 | warranties 29 |
| current liabilities 27 | | working capital 40 |