

Understanding Financial Statements and Cash Flows

Learning Objectives

 1 Compute a company's profits, as reflected by its income statement.	The Income Statement
 2 Determine a firm's financial position at a point in time based on its balance sheet.	The Balance Sheet
 3 Measure a company's cash flows.	Measuring Cash Flows
 4 Explain the differences between GAAP and IFRS.	GAAP and IFRS
 5 Compute taxable income and income taxes owed.	Income Taxes and Finance
 6 Describe the limitations of financial statements.	Accounting Malpractice and Limitations of Financial Statements
 7 Calculate a firm's free cash flows and financing cash flows.	Free Cash Flows

You have been offered a marketing position at Home Depot. In trying to decide whether or not to accept the offer, you have been searching the Internet for information about the company. Your Uncle Harry told you that he had read in the local newspaper that the firm has been having some financial problems. He could not remember for certain, but thought the article mentioned that the company's problems were tied to the downturn in the economy, particularly from being in the home-improvement industry. He suggested that you acquire a copy of the firm's 10-K. Not wanting to look uninformed, you responded, "great idea," but thought to yourself, "What is a 10-K?"

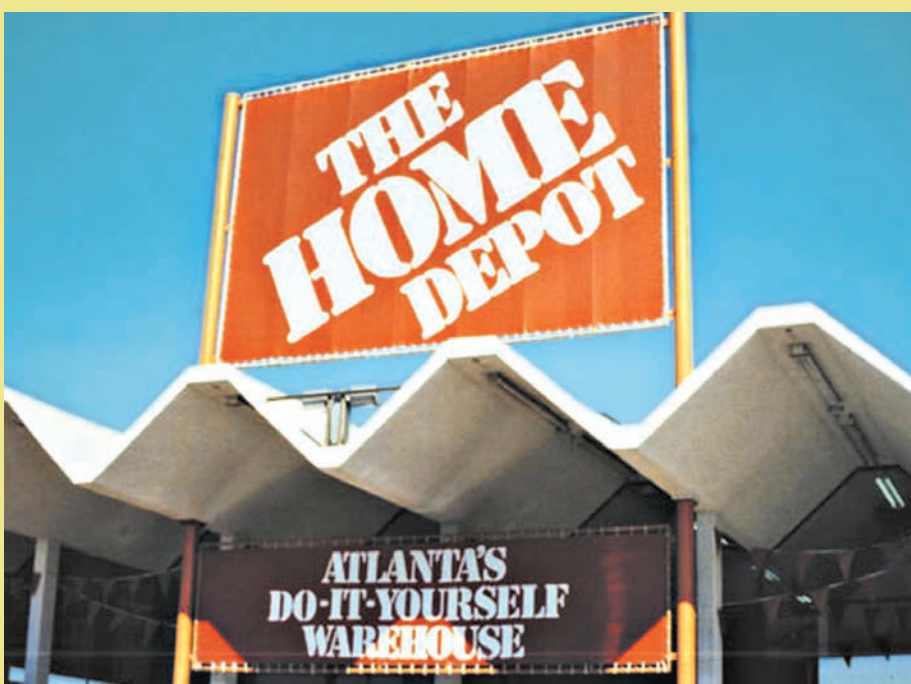
At your first opportunity, you went to the Home Depot Web site (www.homedepot.com), clicked on the *investor relations* link and then selected the Financial Reports link to find both the firm's annual report and the 10-K that your Uncle Harry mentioned. You quickly discovered that the 10-K is an annual report that all publicly traded firms must file with the Securities and Exchange Commission (SEC). Among other things, the report presents the company's financial results, along with commentary about the company's financial

performance, in the section entitled “Management Discussion and Analysis.” As you peruse the annual report for the fiscal year ended January 30, 2011,¹ you read the letter to the shareholders written by Frank S. Blake, the firm’s chairman and CEO, where he comments on the firm’s recent performance (as shown below).

Finally, you begin looking at the firm’s financial statements, where you see an income statement, a balance sheet, and a statement of cash flows. You are not certain exactly how to read these statements, so you try to remember what you learned in your finance course in college. Fortunately, you had saved your finance textbook and began reading the chapter on financial statements.

This chapter and the next chapter provide you with exactly what you need to understand Home Depot’s financial statements, as well as any company’s financial statements. Understanding financial statements is vital for any manager, since in some ways accounting is the “language” of business. To begin, we examine the three basic financial statements that are used to understand how a firm is doing financially: (1) the income statement, or what is sometimes called the profit and loss statement, (2) the balance sheet, which provides a snapshot on a particular date of a firm’s financial position, and (3) the statement of cash flows, which identifies the sources and uses of a company’s cash. In the appendix at the end of the chapter we present another important measure of cash flows called *free cash flows*.

¹The Home Depot, Inc.’s fiscal year is a 52- or 53-week period ending on the Sunday nearest to January 31. Fiscal year 2010 ended January 30, 2011, and fiscal year 2009 ended January 31, 2010.



Dear Shareholders:

In 2010, we achieved our first year of positive sales growth since fiscal year 2006....

Our sales growth occurred against a backdrop of continued weakness in the housing market. In the U.S., private fixed residential investment as a percent of GDP reached a new 60 plus year low of 2.24 percent in the third quarter of 2010. Despite this, we had positive comp sales for all four quarters of 2010, and by the end of 2010, we were seeing strength across the U.S., as 49 of the 50 states had positive “same-store” sales for the fourth quarter. We view this as an indicator that our business can stabilize and improve even as the housing market remains under stress.

Over the course of 2010, we made significant improvements in our merchandising systems, with foundational work on our data warehouse and improved tools for forecasting and replenishment. We will continue on that path in 2011, and we are also continuing our investments in multi-channel—or interconnected—retailing. Through our mobile applications, website and social media presence, we are creating the capability to serve our customers “when, where and how” they want to be served.

At The Home Depot, our goal is to provide the best customer service and the best product values in our market, with an underlying principle of disciplined capital allocation. Our approach to capital allocation is straightforward: after making the necessary investments in our business, we will return excess cash to our shareholders through dividends and share repurchases. We have a goal of achieving a 15 percent return on invested capital, and we have a plan to reach that goal by the end of 2013.

I hope as you spend time in our stores or on our web site or on our mobile applications, you will see continued improvement in our service and our commitment to our customers.

Frank

Frank S. Blake
Chairman & Chief Executive Officer
March 24, 2011



REMEMBER YOUR PRINCIPLES

Principle Two principles are especially important in this chapter. **Principle 1** tells us that **Cash Flow Is What Matters**. At times, cash is more important than profits. Thus, considerable time is devoted to measuring cash flows. **Principle 5** warns us that there may be a conflict when managers and owners have different incentives. That is, **Conflicts of Interest Cause Agency Problems**. Because managers' incentives are at times different from those of owners, the firm's common stockholders, as well as other providers of capital (such as bankers), need information that can be used to monitor the managers' actions. Because the owners of large companies do not have access to internal information about the firm's operations, they must rely on public information from any and all sources. One of the main sources of such information comes from the company's financial statements provided by the firm's accountants. Although this information is by no means perfect, it is an important source used by outsiders to assess a company's activities. In this chapter, we learn how to use data from the firm's public financial statements to monitor management's actions.

Our goal is not to make you an accountant, but instead to provide you with the tools to understand a firm's financial situation. With this knowledge, you will be able to understand the financial consequences of a company's decisions and actions—as well as your own.

The financial performance of a firm matters to a lot of groups—the company's management, its employees, and its investors, just to name a few. If you are an employee, the firm's performance is important to you because it may determine your annual bonus, your job security, and your opportunity to advance your professional career. This is true whether you are in the firm's marketing, finance, or human resources department. Moreover, an employee who can see how decisions affect a firm's finances has a competitive advantage. So regardless of your position in the firm, it is in your own best interest to know the basics of financial statements—even if accounting is not your greatest love.

Let's begin our review of financial statements by looking at the format and content of the income statement.



Compute a company's profits, as reflected by its income statement.

Form 10-K an annual report required by the Securities and Exchange Commission (SEC) that provides such information as the firm's history, audited financial statements, management's analysis of the company's performance, and executive compensation.

income statement (profit and loss statement) a basic accounting statement that measures the results of a firm's operations over a specified period, commonly 1 year. The bottom line of the income statement, net profits (net income), shows the profit or loss for the period that is available for a company's owners (shareholders).

cost of goods sold the cost of producing or acquiring a product or service to be sold in the ordinary course of business.

gross profit sales or revenue minus the cost of goods sold.

operating expenses marketing and selling expenses, general and administrative expenses, and depreciation expense.

operating income (earnings before interest and taxes) sales less the cost of goods sold less operating expenses.

The Income Statement

An **income statement**, or **profit and loss statement**, indicates the amount of profits generated by a firm over a given time period, such as 1 year. In its most basic form, the income statement may be represented as follows:

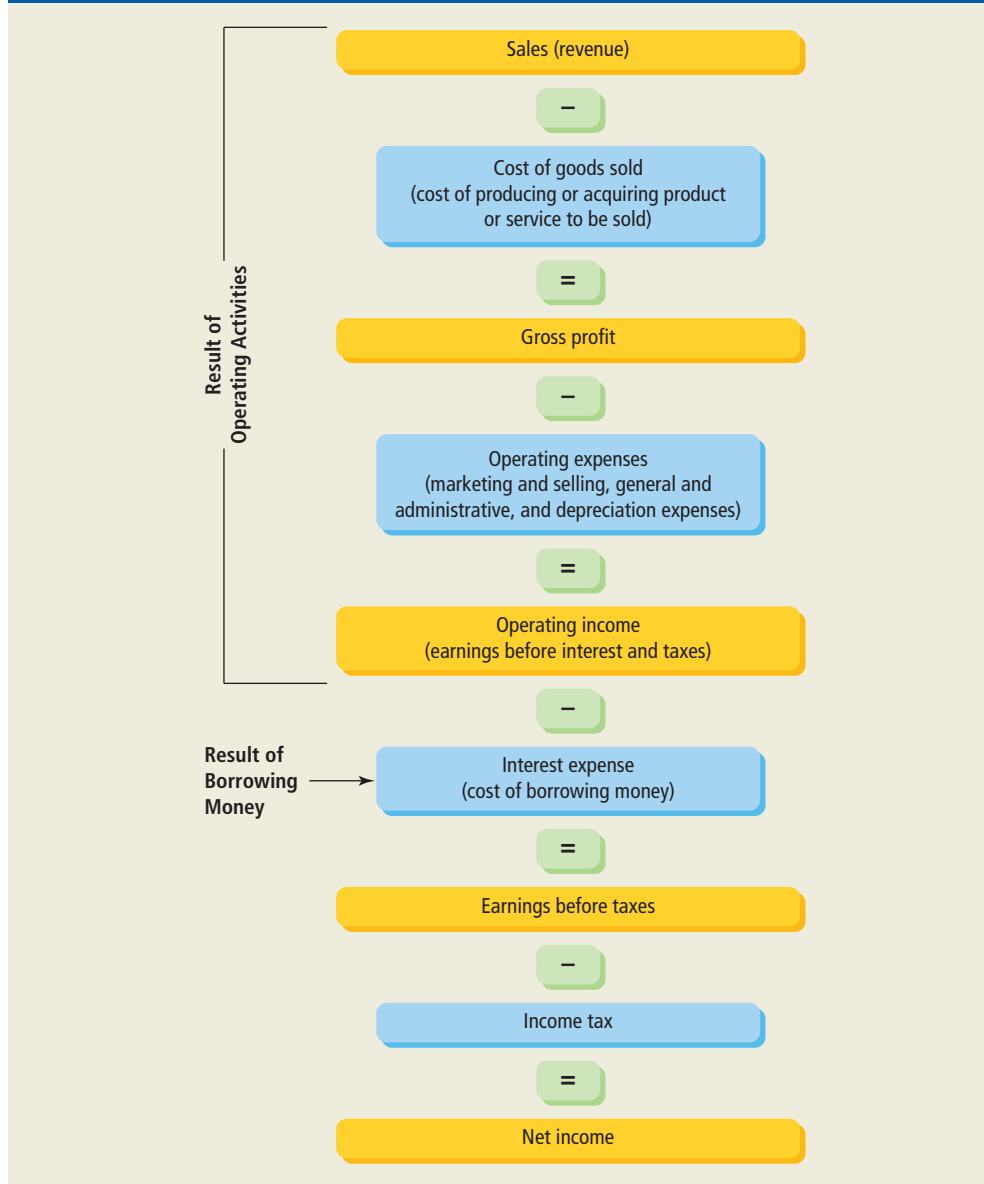
$$\text{Sales} - \text{expenses} = \text{profits} \quad (3-1)$$

The format for an income statement is shown in Figure 3-1. The income statement begins with sales or revenue, from which we subtract the **cost of goods sold** (the cost of producing or acquiring the product or service to be sold) to yield **gross profits**. Next, **operating expenses** are deducted to determine **operating income** (also called **operating profits** or **earnings before interest and taxes** or **EBIT**), where operating expenses consist of:

1. Marketing and selling expenses—the cost of promoting the firm's products or services to customers.
2. General and administrative expenses—the firm's overhead expenses, such as executive salaries and rent expense.
3. Depreciation expense—a noncash expense to allocate the cost of depreciable assets, such as plant and equipment, over the life of the asset.

Take another look at Figure 3-1, and notice something important: In the left margin of the figure we see that operating income is the result of management's decisions relating only to the *operations* of the business and is not affected at all by how much debt the company owes. In other words, the firm's *financing* expenses, its interest expense resulting from borrowing money, have no effect on operating income. Rather, the operating income of a firm reports the results of the following important activities:

1. **Sales (revenues)**, which is equal to the selling price of the products or services to be sold times the number of units sold (selling price $\times$ units sold = total sales).
2. **Cost of goods sold**, which is the cost of producing or acquiring the goods or services that were sold.
3. **Operating expenses**, which include:
 - a. Marketing and selling expenses (the expenses related to marketing, selling, and distributing the products or services).
 - b. The firm's overhead expenses (general and administrative expenses, and depreciation expenses).

FIGURE 3-1 The Income Statement: An Overview

We next determine the **earnings before taxes**, or **taxable income**, by deducting the interest expense paid on the firm's debt. Next, the firm's income taxes are calculated based on its earnings before taxes and the applicable tax rate for the amount of income reported. For instance, if a firm had earnings before taxes of \$100,000, and its tax rate is 28 percent, then it would owe \$28,000 in taxes ($0.28 \times \$100,000 = \$28,000$).

The next and final number in the income statement is the **net income**, or **earnings available to common stockholders**, which represents income that may be reinvested in the firm or distributed to its owners—provided, of course, the cash is available to do so. As you will come to understand, a positive net income on an income statement does not necessarily mean that a firm has generated positive cash flows.

earnings before taxes (taxable income)
operating income minus interest expense.

net income (net profit, or earnings available to common stockholders) the earnings available to the firm's common and preferred stockholders.

Income Statement Illustrated: The Home Depot, Inc.

Let's apply what we have learned by looking at the income statement for Home Depot² for the 12 months ended January 30, 2011, as presented in Table 3-1 (on page 54). When reading

²Publicly traded companies make their financial statements available online. Go to Yahoo! Finance and you can obtain the latest financial statements of most publicly traded businesses. You can also find annual reports (which include financial statements) of publicly traded companies on www.annualreports.com, or you can go to a specific company's Web site to see its financial statements.

Home Depot's financial statements, understand that they are expressed in millions. For example, look at the first line in Home Depot's income statement, which reads \$67,997. That is, the company's sales were \$67,997 million. But realize that \$67,997 million is really \$67.997 billion. (Notice that we use the decimal point when we express a number in billion, instead of a comma when we express the number in millions.) So any time a number in Home Depot's financial statements is \$1,000 million or more, it is actually a billion dollars or more.

So let's begin. In the first line of Table 3-1, we see that Home Depot had *sales* of \$67,997 million for the year, but we understand that the sales were actually \$67.997 billion. The *cost of goods sold* was \$44.693 billion, resulting in *gross profits* of \$23.304 billion. The firm then had \$17.501 billion of operating expenses. After deducting the operating expenses, the firm's *operating income* (*earnings before interest and taxes*) was \$5.803 billion. To this point, we have calculated the profits resulting only from operating the business, without regard for any interest paid on money borrowed.

We next deduct the \$530 million in interest expense (the amount paid for borrowing money) to arrive at the company's *earnings before taxes* (*taxable income*) of \$5.273 billion. We then subtract the income taxes of \$1.935 billion to determine the company's *net income*, or *earnings available to common stockholders*, of \$3.338 billion.

At this point, we have completed the income statement. However, the firm's owners (common stockholders) like to know how much income the firm made on a *per share* basis, or what is called **earnings per share**. We calculate earnings per share as net income divided by the number of common stock shares outstanding. Because Home Depot had 1,623 million shares (1.623 billion) outstanding for the year (see Table 3-1), its earnings per share was \$2.06 ($\$2.06 = \$3.338 \text{ billion net income} \div 1.623 \text{ billion shares}$).

Investors also want to know the amount of dividends a firm pays for each share outstanding, or the **dividends per share**. In Table 3-1 we see that Home Depot paid \$1.569 billion in dividends during the year. We can then determine that the firm paid \$0.97 in dividends per share ($\$0.97 = \$1.569 \text{ billion total dividends} \div 1.623 \text{ billion shares outstanding}$).

earnings per share net income on a per share basis.

dividends per share the amount of dividends a firm pays for each share outstanding.

common-sized income statement an income statement in which a firm's expenses and profits are expressed as a percentage of its sales.

Home Depot's Common-Sized Income Statement

What conclusions can we draw from Home Depot's income statement? To answer this question, it is helpful to look at each item in the income statement as a percentage of sales. Such a revision is called a **common-sized income statement** and is presented in the right column of

TABLE 3.1 The Home Depot, Inc.: Income Statement (expressed in millions, except per share data, and as a percentage of sales) for the Year Ended January 30, 2011³

Sales	\$67,977	100.0%
Cost of goods sold	(44,693)	65.7%
Gross profits	\$23,304	34.3% ← gross profit margin
Operating expenses:		
Marketing, general and administrative expenses	(\$15,885)	23.4%
Depreciation expenses	(1,616)	2.4%
Total operating expenses	(\$17,501)	25.7%
Operating income (earnings before interest and taxes)	\$ 5,803	8.5% ← operating profit margin
Interest expense	(530)	0.8%
Earnings before taxes (taxable income)	\$ 5,273	7.8%
Income taxes	(1,935)	2.8%
Net income (earnings available to common stockholders)	\$ 3,338	4.9% ← net profit margin
Additional information:		
Number of common shares outstanding	1,623	
Earnings per share (net income ÷ number of shares)	\$ 2.06	
Dividends paid to stockholders	\$ 1,569	
Dividends per share (total dividends ÷ number of shares)	\$ 0.97	

Income from operating activities. Also called operating profits, or earnings before interest and taxes (EBIT).

Cost of debt financing

Income from operating and financing activities. Also called net profits or earnings available to common shareholders.

³This presentation of Home Depot's income statement and later its balance sheet have been simplified for learning purposes. The original statements can be found in Home Depot's annual report at www.homedepot.com. Also, the percentages shown in the right column are subject to rounding errors and may not add up precisely. Data from The Home Depot, Inc., Fiscal Year 2010 Form 10-K.

Table 3-1. The common-sized income statement allows us to express expenses and profits on a relative basis, so that we can more easily compare a firm's income performance across time and with competitors. The profits-to-sales relationships are defined as **profit margins**. In the right-hand margin of Home Depot's income statement (Table 3-1), we see that the firm earned

1. A 34.3 percent **gross profit margin** ($34.3\% = \$23.304 \text{ billion of gross profits} \div \$67.997 \text{ billion of sales}$)
2. An 8.5 percent **operating profit margin** ($8.5\% = \$5.803 \text{ billion of operating income} \div \$67.997 \text{ billion of sales}$)
3. A 4.9 percent **net profit margin** ($4.9\% = \$3.338 \text{ billion of net income} \div \$67.997 \text{ billion of sales}$)

In practice, managers pay close attention to the firm's profit margins. Profit margins are considered to be an important measurement of how well the firm is doing financially. Managers carefully watch for any changes in margins, up or down. They also compare the firm's margins with those of competitors—something we will discuss in Chapter 4. For the time being, simply remember that profit-to-sales relationships, or *profit margins*, are important in assessing a firm's performance.

Finally, in Home Depot's income statement, no mention was made about which expenses are fixed and which are variable. This distinction is extremely important to a manager wanting to know what will happen to profits when sales change. **Fixed costs** are costs and expenses that do not vary at all with sales volume. Examples include property taxes and rent expenses, which must be paid no matter how much a company's sales change, particularly in the short term, such as a year. **Variable costs** are costs and expenses that vary directly and proportionately with changes in sales volume, such as the costs of material used in production and sales commissions. Finally, there are also **semivariable costs** that vary in the direction of, but not proportionately with, changes in the volume of sales. Examples include certain types of payrolls that change as a firm becomes larger but do not change proportionally with sales changes.

Much more will be said in Chapter 12 about the effect that fixed and variable costs and expenses have on a company's income as sales change.

profit margins financial ratios (sometimes simply referred to as margins) that reflect the level of the firm's profits relative to its sales. Examples include the gross profit margin (gross profit divided by sales), operating profit margin (operating income divided by sales), and the net profit margin (net income $\div$ sales).

gross profit margin gross profit divided by net sales. It is a ratio denoting the gross profit earned by the firm as a percentage of its net sales.

operating profit margin operating income divided by sales. This ratio serves as an overall measure of the company's operating effectiveness.

net profit margin net income divided by sales. A ratio that measures the net income of the firm as a percent of sales.

fixed costs costs that remain constant, regardless of any change in a firm's activity.

variable costs costs that change in proportion to changes in a firm's activity.

semivariable costs costs composed of a mixture of fixed and variable components.

EXAMPLE 3.1

Constructing an income statement

Menielle, Inc. is a wholesale distributor of electronics. It sells laptops, cameras, and other electronic gadgets. Use the scrambled information below to construct an income statement, along with a common-sized income statement. Also calculate the firm's earnings per share and dividends per share.

Interest expense	\$ 35,000	Sales	\$400,000
Cost of goods sold	\$150,000	Common stock dividends	\$ 15,000
Selling and marketing expenses	\$ 40,000	Income taxes	\$ 40,000
Administrative expenses	\$ 30,000	Depreciation expense	\$ 20,000
Number of shares outstanding	20,000		

STEP 1: FORMULATE A SOLUTION STRATEGY

The following template provides the format of the income statement:

	Sales
Less:	Cost of goods sold
Equals:	Gross profits
Less:	Operating expenses (selling and marketing expenses + Depreciation expense + Administrative expenses)
Equals:	Operating income
Less:	Interest expense
Equals:	Earnings before taxes
Less:	Income taxes
Equals:	Net income

STEP 2: CRUNCH THE NUMBERS

Your results should be as follows:

	<u>Dollars</u>	<u>Percentage of Sales</u>
Sales	\$400,000	100.0%
Cost of goods sold	(150,000)	37.5%
Gross profit	\$250,000	62.5%
Operating expenses:		
Selling and marketing expenses	(\$ 40,000)	10.0%
Administrative expenses	(30,000)	7.5%
Depreciation expense	(20,000)	5.0%
Total operating expenses	(\$ 90,000)	22.5%
Operating income	\$160,000	40.0%
Interest expense	(35,000)	8.8%
Earnings before taxes	\$125,000	31.3%
Income taxes	(40,000)	10.0%
Net income	\$ 85,000	21.3%
Earnings per share (\$85,000 net income ÷ 20,000 shares)	\$4.25	
Dividends per share (\$15,000 dividends ÷ 20,000 shares)	\$0.75	

STEP 3: ANALYZE YOUR RESULTS

There are some important observations we can make about Menielle's income statement. First, the firm is profitable, earning a net income of \$85,000, or \$4.25 on a per share basis, and then paying \$15,000 in dividends to the shareholders, or \$0.75 per share. Also, for every \$100 of sales, Menielle earned \$62.50 in gross profits, \$40 in operating income, and \$21.30 in net income. Finally, the rate of dividends to earnings, or what is called the **dividend payout ratio**, is $\$15,000 \div \$85,000 = 17.6\%$, indicating that the firm is retaining most of its earnings to grow the business.

dividend-payout ratio percentage of earnings paid out in dividends to the shareholders.

Concept Check

1. What can we learn by reviewing a firm's income statement?
2. What basic relationship can we see in an income statement?
3. How are gross profits, operating income, and net income different as they relate to the areas of business activity reported in the income statement?
4. What are earnings per share and dividends per share?
5. What is a profit margin? What are the different types of profit margins?

b² Determine a firm's financial position at a point in time based on its balance sheet.

balance sheet a statement that shows a firm's assets, liabilities, and shareholder equity at a given point in time. It is a snapshot of the firm's financial position on a particular date.

The Balance Sheet

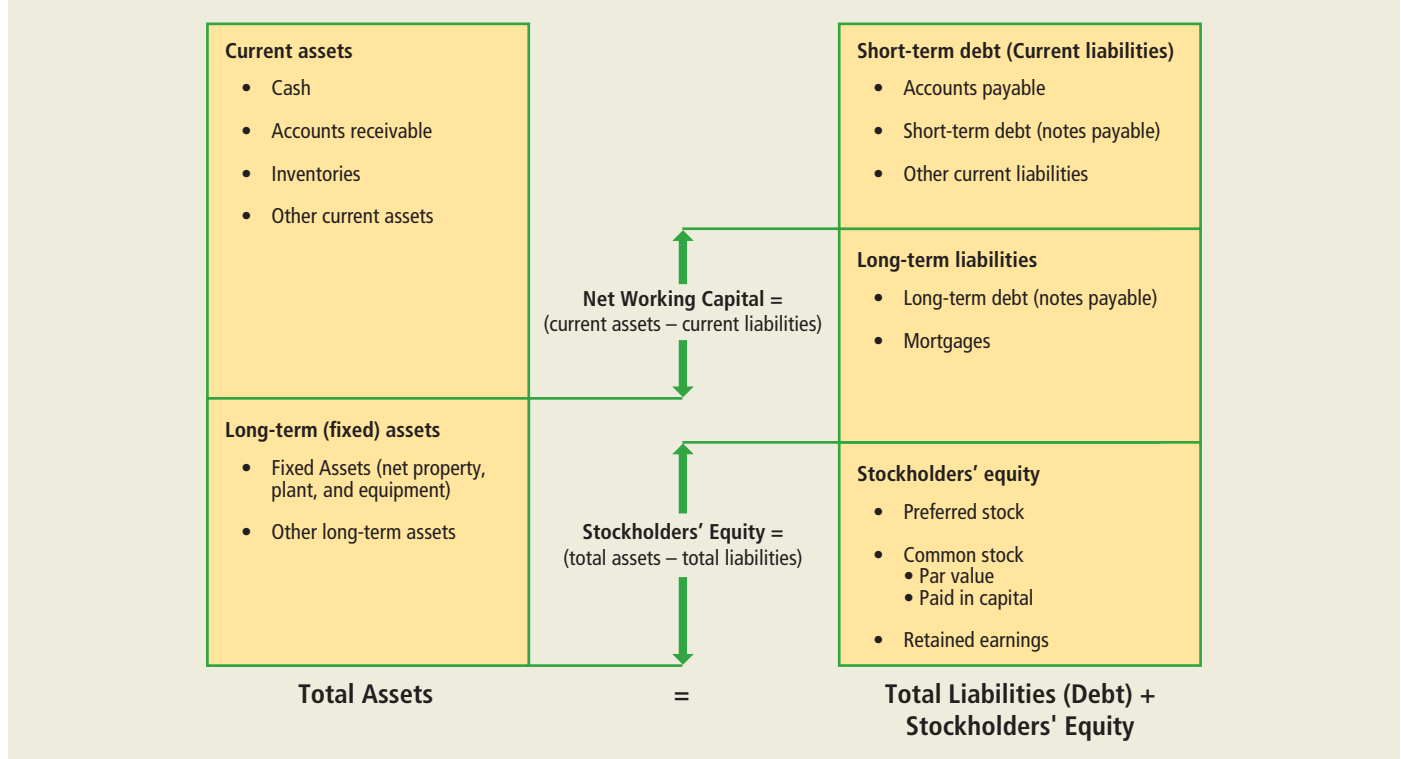
We have observed that a firm's income statement reports the results from operating a business *for a period of time*, such as 1 year. A firm's **balance sheet**, on the other hand, provides a snapshot of the firm's financial position *at a specific point in time*, presenting its asset holdings, liabilities, and owner-supplied capital (stockholders' equity).

In its simplest form, a balance sheet is represented by the following balance sheet equation:

$$\text{Total assets} = \text{total debt (liabilities)} + \text{total shareholders' equity} \quad (3-2)$$

where *total assets* represent the resources owned by the firm, and *total liabilities (debt)* and *total shareholders' equity* indicate how those resources were financed.

The conventional practice is to report the amount of a firm's various assets in the balance sheet by using the actual cost of acquiring them. Thus, the balance sheet does not

FIGURE 3-2 The Balance Sheet: An Overview

represent the current market value of a company's assets and consequently does not reflect the value of the company itself. Rather, *it reports historical transactions at their cost.*⁴

Therefore, the balance sheet reports a company's **accounting book value**, which is simply equal to a firm's total assets as listed in its balance sheet.

Figure 3-2 shows us the basic components of a balance sheet. On the left side of Figure 3-2, assets are listed according to their type; on the right side, we see the different sources of financing that companies frequently use to finance their assets.

Types of Assets

On the balance sheet, assets are listed from the most liquid to the least liquid, that is, in the order of decreasing liquidity. **Liquidity** refers to the ability to quickly convert an asset into cash without lowering the selling price. A highly liquid asset can be sold quickly without causing a decrease in the value of the asset, whereas an illiquid asset either cannot be easily converted to cash or can only be sold quickly at a significant discount. For example, government securities are much more liquid than a building.

Liquidity is important because holding liquid assets reduces the chance that a firm will experience financial distress. However, liquid assets usually generate less return than illiquid assets. For example, holding cash would earn no return at all. Therefore, financial managers have to choose a reasonable percentage of liquid assets so that the company can enjoy the benefits of liquidity without significantly hurting a firm's profitability.

As shown in Figure 3-2, a company's assets fall into two basic categories: (1) current assets and (2) long-term assets, which include fixed assets (property, plant and equipment) and other long-term assets.

Current Assets A company's **current assets**, or **gross working capital** as it is sometimes called, are those assets that are expected to be converted into cash within 12 months. Current assets include a firm's cash, accounts receivable, inventories, and other current assets.

accounting book value the value of an asset as shown on a firm's balance sheet. It represents the depreciated historical cost of the asset rather than its current market value or replacement cost.

liquidity the ability to convert an asset into cash quickly without a significant loss of its value.

current assets (gross working capital) current assets consist primarily of cash, marketable securities, accounts receivable, inventories, and other current assets.

⁴There are exceptions to showing all assets at their historical cost. For example, investments held to be sold will be reported at their current market value.

cash cash on hand, demand deposits, and short-term marketable securities that can quickly be converted into cash.

accounts receivable money owed by customers who purchased goods or services from the firm on credit.

inventories raw materials, work in progress, and finished goods held by the firm for eventual sale.

other current assets other short-term assets that will benefit future time periods, such as prepaid expenses.

fixed assets assets such as equipment, buildings, and land.

depreciation expense a noncash expense to allocate the cost of depreciable assets, such as plant and equipment, over the life of the asset.

accumulated depreciation the sum of all depreciation taken over the entire life of a depreciable asset.

gross fixed assets the original cost of a firm's fixed assets.

net fixed assets gross fixed assets minus the accumulated depreciation taken over the life of the assets.

◆ **Cash.** Every firm must have **cash** to conduct its business operations. A reservoir of cash is needed because of the unequal flow of funds into (cash receipts) and out of (cash expenditures) the business.

◆ **Accounts receivable.** A firm's **accounts receivable** are the amounts owed to the firm by its customers who buy on credit.

◆ **Inventories.** A company's **inventories** consist of raw materials, work in progress, and finished goods held by the firm for eventual sale.

◆ **Other current assets.** **Other current assets** include such items as prepaid expenses. For example, a company's insurance premium might be due before the actual insurance coverage begins; or the firm's rent might have to be paid in advance. These expenditures are considered assets because they represent an investment that's been made by the company. Only when, for example, the insurance premium is used up following the coverage period is the premium considered an expense.

Long-term Assets A company's long-term assets fall into two categories: (1) fixed assets (property, plant, and equipment) and (2) all other long-term assets.

Fixed Assets (Property, Plant, and Equipment) A firm's **fixed assets**, also called property, plant, and equipment, include such assets as machinery and equipment, buildings, and land. These assets will be used over a number of years.

When a firm purchases a fixed asset, it does not immediately report the expenditure for the asset as an expense in its income statement. Instead, it is shown as an asset in the balance sheet. Some of these assets, such as machinery and equipment, will depreciate in value over time due to obsolescence or daily wear and tear; others may not, such as land.

With a depreciable asset, the original cost of the asset is allocated as an expense in the income statement over the asset's expected useful life. The amount allocated as the cost each year is shown as a **depreciation expense** in the income statement. The sum of all depreciation taken over the life of the asset to date is shown as **accumulated depreciation** in the balance sheet.

To illustrate, assume that a truck purchased for \$20,000 is to be evenly depreciated over a 4-year life.⁵ The depreciation expense to be reported in the income statement for each year would be \$5,000 (\$20,000 asset cost ÷ 4 years). When a firm buys the truck, the \$20,000 original cost of the asset is added to the balance sheet as a **gross fixed asset**. The cumulative depreciation taken over the asset's life is reported as *accumulated depreciation*. We subtract the accumulated depreciation each year from the gross fixed assets to determine **net fixed assets**. In this example, the income statements for each year and balance sheets over time would appear as follows:

Depreciation Expense in the Income Statement

	FOR THE YEAR ENDED			
	1	2	3	4
Depreciation expense	\$5,000	\$5,000	\$5,000	\$5,000

Accumulated Depreciation in the Balance Sheet

	END OF YEAR			
	1	2	3	4
Gross fixed assets	\$20,000	\$20,000	\$20,000	\$20,000
Accumulated depreciation	(5,000)	(10,000)	(15,000)	(20,000)
Net fixed assets	\$15,000	\$10,000	\$ 5,000	\$ 0

It is important to understand the distinction between gross fixed assets and net fixed assets and how depreciation expense in the income statement relates to accumulated depreciation in the balance sheet.

Other Long-Term Assets Other long-term assets are all of the firm's assets that are not current assets or fixed assets. They include, for example, long-term investments and intangible assets such as the company's patents, copyrights, and goodwill.

⁵In this instance, we are using a straight-line depreciation method. Other methods allow a firm to accelerate the depreciation expenses in the early years of the asset's life and report less in the later years.

Types of Financing

We now turn to the right side of the balance sheet in Figure 3-2 labeled “Total Liabilities (Debt) + Stockholders’ Equity,” which indicates how the firm finances its assets. **Debt** (liabilities) is money that has been borrowed and must be repaid at some predetermined date.⁶ **Equity**, on the other hand, represents the shareholders’ (owners’) investment in the company.

Debt (Liabilities) Debt capital is financing provided by a creditor. As shown in Figure 3-2, it is divided into (1) current or short-term debt and (2) long-term debt.

Short-Term Debt (Current Liabilities) A firm’s **short-term debt**, or **current liabilities**, includes borrowed money that must be repaid within the next 12 months. The sources of a firm’s current debt include the following:

- ◆ **Accounts payable.** The firm’s **accounts payable** represent the credit that suppliers have extended to the firm when it purchased inventories. The purchasing firm may have 30, 60, or even 90 days to pay for the inventory. This form of credit extension is also called **trade credit**.
- ◆ **Accrued expenses.** **Accrued expenses** are short-term liabilities that have been incurred in the firm’s operations but not yet paid. For example, the company’s employees might have done work for which they will not be paid until the following week or month, and these are recorded as accrued wages.
- ◆ **Short-term notes.** **Short-term notes** represent amounts borrowed from a bank or other lending source that are due and payable within 12 months.

Long-Term Debt The firm’s **long-term debt** includes loans from banks or other sources for longer than 12 months.⁷

A firm might borrow money for 5 years to buy equipment, or it might borrow money for as long as 25 or 30 years to purchase real estate, such as land and buildings. Usually a loan to finance real estate is called a **mortgage**, where the lender has first claim on the property in the event the borrower is unable to repay the loan.

Equity Equity includes the shareholders’ investment—both preferred stockholders and common stockholders—in the firm.

- ◆ **Preferred stockholders** generally receive a dividend that is fixed in amount. In the event of the firm being liquidated, these stockholders are paid after the firm’s creditors but before the common stockholders.
- ◆ **Common stockholders** are the residual owners of a business. They “own” whatever income is left over after paying all expenses. In the event the firm is liquidated, the common stockholders receive only what is left over—good or bad—after the creditors and preferred stockholders are paid. The amount of a firm’s common equity is equal to the sum of two items:

1. **The amount a company receives from selling stock to investors.** This amount may simply be shown as **common stock** in the balance sheet or it may be divided into **par value** (an arbitrary amount a firm puts on each share of stock when it is sold, frequently a penny or a dollar) and **paid-in capital** above par (also called capital surplus). Paid-in capital is the amount of money above par value a firm receives when it issues new shares to investors. For instance, if a company sells a new issue of common stock for \$50 per share and sets the par value of the stock at \$1 per share, then the \$49 (\$50–\$1) would be shown as paid-in capital. So if it sold 1 million shares, the total

debt liabilities consisting of such sources as credit extended by suppliers or a loan from a bank.

equity stockholders’ investment in the firm and the cumulative profits retained in the business up to the date of the balance sheet.

current debt (short-term liabilities) debt due to be paid within 12 months.

accounts payable (trade credit) credit provided by suppliers when a firm purchases inventory on credit.

accrued expenses expenses that have been incurred but not yet paid in cash.

short-term notes (debt) amounts borrowed from lenders, mostly financial institutions such as banks, where the loan is to be repaid within 12 months.

long-term debt loans from banks or other sources that lend money for longer than 12 months.

mortgage a loan to finance real estate where the lender has first claim on the property in the event the borrower is unable to repay the loan.

preferred stockholders stockholders who have claims on the firm’s income and assets after creditors, but before common stockholders.

common stockholders investors who own the firm’s common stock. Common stockholders are the residual owners of the firm.

common stock shares that represent ownership in a corporation.

par value the arbitrary value a firm puts on each share of stock prior to its being offered for sale.

paid-in capital the amount a company receives above par value from selling stock to investors.

⁶Just for simplicity, we will use the terms *debt* and *liabilities* interchangeably, which is not always done in practice. *Debt* is frequently used to refer to loans that require the borrower to pay interest, such as a bank loan, while *liabilities* may refer to non-interest-bearing liabilities, such as accounts-payable (credit provided by a company’s suppliers.)

⁷Note that any part of long-term debt that must be repaid within 12 months will be shown as short-term debt. For example, if you borrow \$5,000 to be repaid in equal principal payments of \$1,000 per year, the first year’s payment of \$1,000 will be considered to be short-term debt with the remaining \$4,000 reported as long-term debt.

treasury stock the firm's stock that has been issued and then repurchased by the firm.

paid-in capital would be \$49 million ($\49×1 million shares). Finally, the amount of common stock issued will be offset by any stock that has been repurchased by the company from its shareholders, which is shown as **treasury stock**.

To illustrate how a company might record an issuance of common stock, assume that a firm issues 1,000 shares of common stock for \$100 per share. The company has a policy of assigning a \$1 par value to each share of stock. (It could just as easily have chosen a par value of a penny a share. The decision is totally arbitrary.) The remaining \$99 per share would be added to paid-in capital. Thus, the total increase in the common equity in the balance sheet would appear as follows:

Par value ($\$1 \times 1,000$ shares)	\$ 1,000
Paid-in capital ($\$99 \times 1,000$ shares)	<u>99,000</u>
Total increase in common stock	<u><u>\$100,000</u></u>

retained earnings cumulative profits retained in a business up to the date of the balance sheet.

2. The amount of a firm's retained earnings. **Retained earnings** is the net income that has been retained in the business rather than being distributed to the shareholders over the life of the company; in other words, the *cumulative total of all the net income over the firm's life less the common stock dividends that have been paid over these years*. More simply, retained earnings at the end of a given year is determined as follows:⁸

$$\begin{array}{rcccl} \text{Beginning} & & \text{net} & & \text{dividends} & & \text{ending} \\ \text{retained} & + & \text{income} & - & \text{paid during} & = & \text{retained} \\ \text{earnings} & & \text{for the year} & & \text{the year} & & \text{earnings} \end{array} \quad (3-3)$$

But remember, profits and cash are not the same; *do not think of retained earnings as a big bucket of cash*. It is not!

To conclude, the common stockholders' equity can be represented as follows:

$$\begin{array}{rcccl} & & & \text{earnings retained} & \\ & & & \text{within the business} & \\ \text{Common} & = & \text{common} & + & \text{cumulative} & - & \text{cumulative dividends paid} & (3-4) \\ \text{equity} & & \text{shareholders'} & & \text{profits} & & \text{to common stockholders} \\ & & \text{investment} & & & & \end{array}$$

Balance Sheet Illustrated: The Home Depot, Inc.

Let's return to Home Depot to see a live firm's balance sheet. Balance sheets for the company are presented in Table 3-2 as of January 31, 2010 and January 30, 2011. In addition to reporting the two individual balance sheets in columns 1 and 2, we also show in column 3 the changes in the balance sheets between the two years. By looking at these changes, we learn something about what happened to the company during the year that can be observed in no other way. Finally, in columns 4 and 5, we restate the balance sheets for both years on a relative basis by restating all the dollar numbers to percentages of total assets, or what we call a common-sized balance sheet. This restatement allows us to compare the firm's balance sheets across time and against other companies more easily. We will consider both in turn.

Changes in Home Depot's Balance Sheet Looking at the changes in the balance sheets for Home Depot, as presented in column 3 of Table 3-2, we observe the following:

1. The firm's total assets decreased \$752 million, going from \$40.877 billion in assets to \$40.125 billion. Why the decrease? Two primary reasons: the reduction in current assets and in net fixed assets.

a. Decrease in current assets. The most significant reduction in current assets by far came from the company's decrease in cash in the amount of \$876 million. Later

⁸Sometimes retained earnings will be affected by some unusual or extraordinary accounting transactions in addition to the reported net income and the dividends paid to stockholders. However, we are ignoring this possibility when explaining retained earnings.

TABLE 3-2 The Home Depot, Inc. Balance Sheets (\$ millions) for Years Ended January 31, 2010 and January 30, 2011

Year ended	Dollar Value			Common-Sized Balance Sheets	
	(Col. 1) Jan 31, 2010	(Col. 2) Jan 30, 2011	(Col. 3) 2010–2011 Changes (Col. 2 – Col. 1)	(Col. 4) Jan 31, 2010 (Col. 1 ÷ Total Assets)	(Col. 5) Jan 30, 2011 (Col. 2 ÷ Total Assets)
ASSETS					
Cash	\$ 1,421	\$ 545	(\$ 876)	3.5%	1.4%
Accounts receivable	964	1,085	121	2.4%	2.7%
Inventories	10,188	10,625	437	24.9%	26.5%
Other current assets	1,327	1,224	(103)	3.2%	3.1%
Total current assets	\$13,900	\$13,479	(\$ 421)	34.0%	33.6%
Gross fixed assets	\$37,345	\$ 38,471	\$1,126	91.4%	95.9%
Accumulated depreciation	(11,795)	(13,411)	(1,616)	–28.9%	–33.4%
Net fixed assets	\$25,550	\$25,060	(\$ 490)	62.5%	62.5%
Other assets	1,427	1,586	159	3.5%	4.0%
Total assets	<u>\$40,877</u>	<u>\$40,125</u>	<u>(\$ 752)</u>	<u>100.0%</u>	<u>100.0%</u>
LIABILITIES (DEBT) AND EQUITY					
Accounts payable	\$ 9,343	\$ 9,080	(\$ 263)	22.9%	22.6%
Short-term notes payable	1,020	1,042	22	2.5%	2.6%
Total current liabilities	\$10,363	\$10,122	(\$ 241)	25.4%	25.2%
Long-term debt	11,121	11,114	(7)	27.2%	27.7%
Total liabilities	\$21,484	\$21,236	(\$ 248)	52.6%	52.9%
Common stock:					
Par value ⁹	\$ 86	\$ 86	\$ 0	0.2%	0.2%
Additional paid-in capital (capital surplus)	6,666	7,001	335	16.3%	17.4%
Total common stock sold	\$ 6,752	\$ 7,087	\$ 335	16.5%	17.7%
Treasury stock (stock repurchased)	(585)	(3,193)	(2,608)	–1.4%	–8.0%
Total common stock	\$ 6,167	\$ 3,894	(\$2,273)	15.1%	9.7%
Retained earnings	13,226	14,995	1,769	32.4%	37.4%
Total common equity	<u>\$19,393</u>	<u>\$18,889</u>	<u>(\$ 504)</u>	<u>47.4%</u>	<u>47.1%</u>
Total liabilities and equity	<u>\$40,877</u>	<u>\$40,125</u>	<u>(\$ 752)</u>	<u>100.0%</u>	<u>100.0%</u>

Source: Data from The Home Depot, Inc., Fiscal Year 2010 and 2011 Form 10-K.

in this chapter, we will see specifically why this happened, but for now know that it would have been something the lenders and shareholders alike would want to understand. The decrease in cash was offset in part by the increases in accounts receivable, and especially inventories.

b. Decrease in fixed assets. The reduction in the *net* fixed assets in the amount of \$490 million came from two offsetting changes: purchasing new fixed assets (increase in gross fixed assets) in the amount of \$1.126 billion, but taking \$1.616 billion in depreciation of the fixed assets. So we see that the change in a firm's *net* fixed assets is driven by (1) how much the firm spends on new fixed assets and (2) how much depreciation expense it takes on the fixed assets in place.

2. We next review the changes in the firm's debt and equity, which amounts to a \$752 million decrease, exactly the amount of the decrease in total assets—as it must be. (Remember, total assets = total debt + total equity.) Primarily this change is the consequence of the following actions:

- Paying off \$263 million owed to suppliers (reduction in accounts payable).
- Repurchasing stock from its shareholders in the amount of \$2.608 billion (increase in treasury stock) less \$335 million the firm received from issuing new stock.
- Retaining \$1.769 billion of the firm's profits within the business (increase in retained earnings).

⁹Par value of common stock increased from \$85.8 million on January 31, 2010 to \$86.1 million on January 31, 2011. The balance sheet didn't show the change because the amount was negligible when expressed in millions.

Much of what we notice from looking at the changes in the balance sheet will appear again when we study Home Depot's statement of cash flows in the next section of the chapter.

common-sized balance sheet a balance sheet in which a firm's assets and sources of debt and equity are expressed as a percentage of its total assets.

debt ratio a firm's total liabilities divided by its total assets. It is a ratio that measures the extent to which a firm has been financed with debt.

Home Depot's Common-Sized Balance Sheet Finally, we can gain additional perspective on a company's financial position by looking at each item on the balance sheet as a percentage of total assets (and total debt and equity). A balance sheet expressed this way is called a **common-sized balance sheet**. The last two columns (columns 4 and 5) of Table 3-2 show common-sized balance sheets for Home Depot.

Based on the percentages, we can observe that:

1. Inventories make up most of the current assets, amounting to about one-fourth of all the assets owned by the company.
2. The company's total assets consist of about one-third current assets and two-thirds fixed assets.
3. Approximately one-half of Home Depot's financing comes from debt, with the remaining half coming from equity. To be more precise, we can calculate the **debt ratio**, which is the *percentage of a company's assets financed by debt*. For Home Depot, the debt ratios on January 31, 2010 and January 30, 2011, respectively, were 52.6 percent and 52.9 percent:

		FISCAL YEAR ENDED	
		JANUARY 31, 2010	JANUARY 30, 2011
Debt ratio =	$\frac{\text{total debt}}{\text{total assets}}$	$\frac{\$21,484M}{\$40,877M} = 52.6\%$	$\frac{\$21,236M}{\$40,125M} = 52.9\%$

The debt ratio is an important measure to lenders and investors because it indicates the amount of financial risk the company is bearing—the more debt a company uses to finance its assets, the greater is its financial risk. We will discuss this topic in detail in Chapter 12.

Working Capital

Earlier we noted that the term *current assets* is also referred to as *gross working capital*. These two terms are used interchangeably. By contrast, **net working capital** is equal to a company's current assets *less* its current liabilities. That is,

$$\text{Net working capital} = \text{current asset} - \text{current liabilities} \quad (3-5)$$

Thus, net working capital compares the amount of current assets (assets that should convert into cash within the next 12 months) to the current liabilities (debt that must be paid within 12 months). The larger the net working capital a firm has, the more able the firm will be to pay its debt as it comes due. Thus, the amount of net working capital is important to a company's lenders, who are always concerned about a company's ability to repay its loans. For Home Depot, net working capital is computed as follows:

	FISCAL YEAR ENDED	
	JANUARY 31, 2010	JANUARY 30, 2011
Gross working capital	\$13,900	\$13,479
Current liabilities	(10,363)	(10,122)
Net working capital	<u>\$ 3,537</u>	<u>\$ 3,357</u>

Gross working capital is the same as current assets

net working capital the difference between a firm's current assets and its current liabilities. When the term *working capital* is used, it is frequently intended to mean net working capital.

Most firms have a positive amount of net working capital because their current assets are greater than their current debts. There are a few exceptions. For example, Disney actually has almost as much in current liabilities as in current assets. How do you think this could happen? Very simply, a big part of Disney's sales are cash generated in the theme parks, collecting cash immediately from its customers. However, Disney's suppliers have probably granted Disney 30 days or more to pay its bills. In other words, Disney collects early and pays late.

EXAMPLE 3.2**Constructing a balance sheet**

Given the information below for Menielle, Inc., construct a balance sheet and a common-sized balance sheet. As a percent of assets, what are the firm's largest investments and sources of financing?

Gross fixed assets	\$75,000	Accounts receivable	\$ 50,000
Cash	\$10,000	Long-term bank note	\$ 5,000
Other assets	\$15,000	Mortgage	\$ 20,000
Accounts payable	\$40,000	Common stock	\$100,000
Retained earnings	\$15,000	Inventories	\$ 70,000
Accumulated depreciation	\$20,000	Short-term notes	\$ 20,000

STEP 1: FORMULATE A SOLUTION STRATEGY

The balance sheet can be visualized as follows:

Current assets	Current liabilities
+ Long-term (fixed) assets	+ Long-term liabilities
	+ Shareholders' equity
= Total assets	= Total liabilities + Shareholders' equity

STEP 2: CRUNCH THE NUMBERS

Your results should be as follows:

Balance Sheet

Assets:		Liabilities and Equities:	
Cash	\$ 10,000	Accounts payable	\$ 40,000
Accounts receivable	50,000	Short-term notes	<u>20,000</u>
Inventories	<u>70,000</u>	Total short-term debt	\$ 60,000
Total current assets	\$130,000	Long-term bank note	\$ 5,000
Gross fixed assets	\$ 75,000	Mortgage	<u>20,000</u>
Accumulated depreciation	<u>(20,000)</u>	Total long-term debt	\$ <u>25,000</u>
Net fixed assets	\$ 55,000	Total debt	\$ 85,000
Other assets	<u>15,000</u>	Common stock	100,000
Total assets	<u>\$200,000</u>	Retained earnings	<u>15,000</u>
		Total equity	\$115,000
		Total debt and equity	<u>\$200,000</u>

Common-Sized Balance Sheet

Assets:		Liabilities and Equities:	
Cash	5.0%	Accounts payable	20.0%
Accounts receivable	25.0%	Short-term notes	<u>10.0%</u>
Inventories	<u>35.0%</u>	Total short-term debt	30.0%
Total current assets	65.0%	Long-term bank note	2.5%
Gross fixed assets	37.5%	Mortgage	<u>10.0%</u>
Accumulated depreciation	<u>(10.0%)</u>	Total long-term debt	<u>12.5%</u>
Net fixed assets	27.5%	Total debt	42.5%
Other assets	<u>7.5%</u>	Common stock	50.0%
Total assets	<u>100.0%</u>	Retained earnings	<u>7.5%</u>
		Total equity	<u>57.5%</u>
		Total debt and equity	<u>100.0%</u>

STEP 3: ANALYZE YOUR RESULTS

We see that the firm has invested a total of \$200,000 in its assets, comprised of \$130,000 in current assets (65% of total assets), \$55,000 in fixed assets (27.5% of total assets), and \$15,000 in other assets (7.5% of total assets). Second, the firm has \$130,000 tied up in current assets and \$60,000 in current liabilities, leaving the firm with a net working capital position of $\$130,000 - \$60,000 = \$70,000$. Third, the firm uses more equity (57.5% of total assets) than debt (42.5% of total assets) to finance its business.

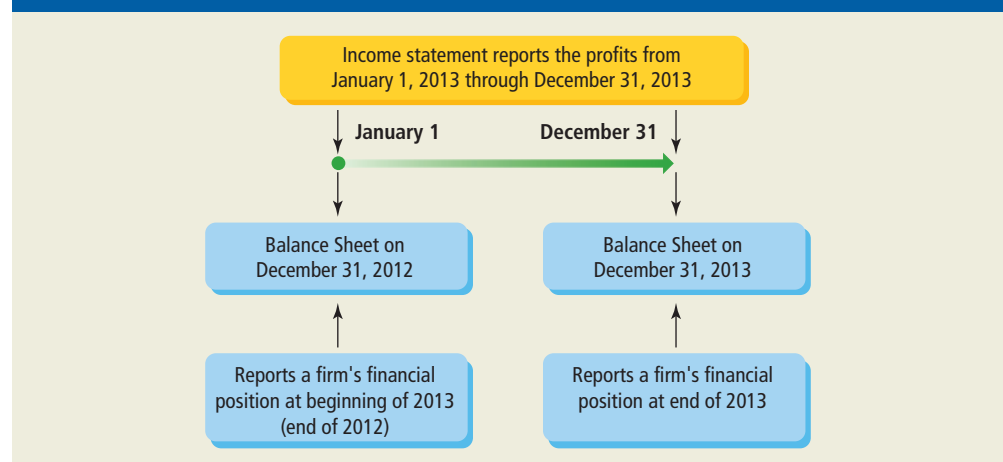
The Balance Sheet and Income Statement—as One Picture

We have already stated that an income statement is for a period of time while a balance sheet is prepared at a specific date in time. Now that we have looked at both an income statement and a balance sheet, let's return to the difference in time perspectives between an income statement and a balance sheet. By examining two balance sheets, one at the beginning of a year and one at the end of the year, along with the income statement for the year, we have a better picture of a firm's operations. For instance, we could see what a company looked like at the beginning of 2013 (by looking at its balance sheet on December 31, 2012), what happened during the year (by looking at its income statement for 2013), and the final outcome at the end of 2013 (by looking at its balance sheet on December 31, 2013). The distinction between an income statement and a balance sheet is represented graphically as Figure 3-3.

Concept Check

1. What does the basic balance sheet equation state, and what does it mean?
2. What is a firm's "accounting book value"?
3. What are a firm's two principal sources of financing? Of what do these sources consist?
4. What is gross working capital? Net working capital?
5. What is a debt ratio?
6. What is the difference between the time frame of the income statement and the balance sheet?

FIGURE 3-3 The Income Statement and Balance Sheet as One Picture



CAN YOU DO IT?

PREPARING AN INCOME STATEMENT AND A BALANCE SHEET

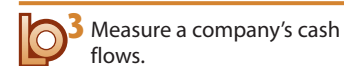
Below is a scrambled list of accounts of Zhong, Inc., an energy company (in \$ thousands). Complete the firm's income statement and balance sheet. Also calculate the earnings per share and dividends per share.

Accounts payable	\$ 4,400
Account receivable	\$ 2,500
Accumulated depreciation	\$ 4,200
Cash	\$ 3,300
Cost of goods sold	\$17,000
Common stock	\$13,800
Depreciation expense	\$ 1,500
Dividends	\$ 40
Gross fixed assets	\$24,500
Income taxes	\$ 150
Interest expense	\$ 1,000
Long-term debt	\$10,000
Number of shares outstanding	\$ 800
Other assets	\$15,600
Inventories	\$ 1,500
Retained earnings	\$ 8,000
Sales	\$30,000
Selling, marketing, and administrative expenses	\$10,000
Short-term notes	\$ 7,000

(The solution to this problem can be found on page 66.)

Measuring Cash Flows

Despite the fact that cash is the lifeblood of a business—the fuel that keeps the engine running—some managers do not fully understand what drives a firm's cash flows. Poor cash-flow management, especially for smaller firms, can result in a business failing. Managers must understand that profits and cash flows are not the same thing.



Profits Versus Cash Flows

You need to be aware that the profits shown on a company's income statement are not the same as its cash flows! In the words of author Jan Norman, “Even profitable companies can go broke. That’s a difficult truth for start-up business owners to swallow. But the sooner you learn that when you’re out of cash, you’re out of business, the better your chances for survival will be.”¹⁰ Many a profitable business on paper has had to file bankruptcy because the amount of cash coming in did not compare with the amount of cash going out. Without adequate cash flow, little problems become major problems!

An income statement is not a measure of cash flows because it is calculated on an *accrual* basis rather than a *cash* basis. Let’s say it again for emphasis: *An income statement is not a measure of cash flows because it is calculated on an accrual basis rather than a cash basis.* This is an important point to understand. In **accrual basis accounting**, profits are recorded when earned—whether or not the profits have been received in cash—and expenses are recorded when they are incurred—even if money has not actually been paid out. In **cash basis accounting**, profits are reported when cash is received and expenses are recorded when they are paid.

accrual basis accounting a method of accounting whereby revenue is recorded when it is earned, whether or not the revenue has been received in cash. Likewise, expenses are recorded when they are incurred, even if the money has not actually been paid out.

cash basis accounting a method of accounting whereby revenue is recorded when physical cash is actually received. Likewise, expenses are recorded when physical cash is paid out.

¹⁰“How To Manage Your Cash Flow: You’re making sales, but are you making money?” by Jan Norman from *Entrepreneur*, June 1, 1998.

For a number of reasons, profits based on an accrual accounting system will differ from the firm's cash flows. These reasons include the following:

1. Sales reported in an income statement include both *cash* sales and *credit* sales. Thus, total sales do not correspond to the actual cash collected. A company may have had sales of \$1 million for the year but not collected all these sales. If accounts receivable increased \$80,000 from the beginning of the year to the end of the year, then we would know that only \$920,000 of the sales had been collected ($\$920,000 = \$1,000,000 \text{ sales} - \$80,000 \text{ increase in accounts receivable}$).
2. Some inventory purchases are financed by credit, so inventory purchases do not exactly equal cash spent for inventory. Consider a business that purchased \$500,000 in inventories during the year, but the supplier extended credit of \$100,000 for the purchases. The actual cash paid for inventories would only be \$400,000 ($\$400,000 = \$500,000 \text{ total inventory purchases} - \$100,000 \text{ additional credit granted by the supplier}$).
3. The depreciation expense shown in the income statement is a noncash expense. It reflects the costs associated with using an asset that benefits the firm's operations over a period of multiple years, such as a piece of equipment used over 5 years. Thus, if a business had profits of \$250,000 that included depreciation expenses of \$40,000, then the cash flows would be \$290,000 ($\$250,000 \text{ profits} + \$40,000 \text{ depreciation expense}$).

We could give you more examples to show why a firm's profits differ from its cash flows, but the point should be clear: Profits and cash flows are not the same thing. In fact, a business could be profitable but have negative cash flows, even to the point of going

DID YOU GET IT?

PREPARING AN INCOME STATEMENT AND A BALANCE SHEET

On page 65, we provided data for Zhong, Inc. and asked you to prepare an income statement and a balance sheet and to calculate the earnings per share and dividends per share based on the information. Your results should be as follows:

Income statement:

Sales	\$30,000
Cost of goods sold	(17,000)
Gross profit	\$13,000
Operating expenses:	
Selling, marketing, and administrative expenses	(\$10,000)
Depreciation expense	(1,500)
Total operating expenses	\$11,500
Operating income	\$ 1,500
Interest expense	(1,000)
Earnings before tax	\$ 500
Income taxes	(150)
Net income	\$ 350
Earnings per share (\$350 net income ÷ 800 shares)	\$ 0.44
Dividends per share (\$40 dividends ÷ 800 shares)	\$ 0.05

Balance sheet:

Cash	\$ 3,300	Accounts payable	\$ 4,400
Accounts receivable	2,500	Short-term notes	7,000
Inventories	1,500	Total short-term debt	\$11,400
Total current assets	\$ 7,300	Long-term debt	10,000
Gross fixed assets	\$24,500	Total debt	\$21,400
Accumulated depreciation	(4,200)	Common stock	13,800
Net fixed assets	\$20,300	Retained earnings	8,000
Other assets	15,600	Total equity	\$21,800
Total assets	\$43,200	Total debt and equity	\$43,200

Source: Data from The Home Depot, Inc. Fiscal Year 2010 Form 10-K.

bankrupt. So, understanding a firm's cash flows is very important to its managers. Cash flows are also important when applying for a loan. A banker will not make a loan without a clear indication that the firm's cash flows will adequately service the proposed loan. Revenue growth and profits are all fine, but only historical cash flows can demonstrate the ability to collect accounts receivable and properly manage inventory and accounts payable. So you had better understand the ins and outs of your firm's cash flows.

A Beginning Look: Determining Sources and Uses of Cash

To begin, we need to understand that changes in a firm's balance sheets have implications for its cash flows. To determine whether a change in a balance sheet account is a source or a use of cash, you need to understand the following relationships:

Sources of Cash	Uses of Cash
Decrease in an Asset <i>Example: Selling inventories or collecting receivables provides cash.</i>	Increase in an Asset <i>Example: Investing in fixed assets or buying more inventories uses cash.</i>
Increase in Liability or Equity <i>Example: Borrowing funds or selling stock provides the firm with cash.</i>	Decrease in a Liability or Equity <i>Example: Paying off a loan or buying back stock uses cash.</i>

To illustrate the above relationships, return to Home Depot's balance sheets in Table 3-2. Earlier we studied the changes in the balance sheet, but this time we want to determine whether these changes result in sources or uses of cash. In Table 3-3, we list some of the changes in Home Depot's balance sheet and indicate whether the changes are sources or uses of cash. This information is then used in the next section to prepare the company's statement of cash flows. So keep in mind the relationships between changes in the balance sheet and the firm's cash flows, as shown in Table 3-3.

Statement of Cash Flows

There are two common approaches to measuring a firm's cash flows. First, we can use the conventional accountant's presentation called a **statement of cash flows**, which is always included in the financial section of a firm's annual report. This method for presenting cash flows focuses on identifying the sources and uses of cash that explain the change in a firm's cash balance reported in the balance sheet. Alternatively, we can calculate a company's **free cash flows** and **financing cash flows**, which are measurements that managers and investors alike consider critically important. Once a firm has paid all of its operating expenses and taxes and made all of its investments, any remaining cash is free to be distributed to the creditors and shareholders. Alternatively, if the free cash flows are negative, management will have to acquire financing from creditors or shareholders. Understanding and calculating a company's free cash flows is

statement of cash flows a statement that shows how changes in balance sheet accounts and income affect cash and cash equivalents, and breaks the analysis down to operating, investing, and financing activities.

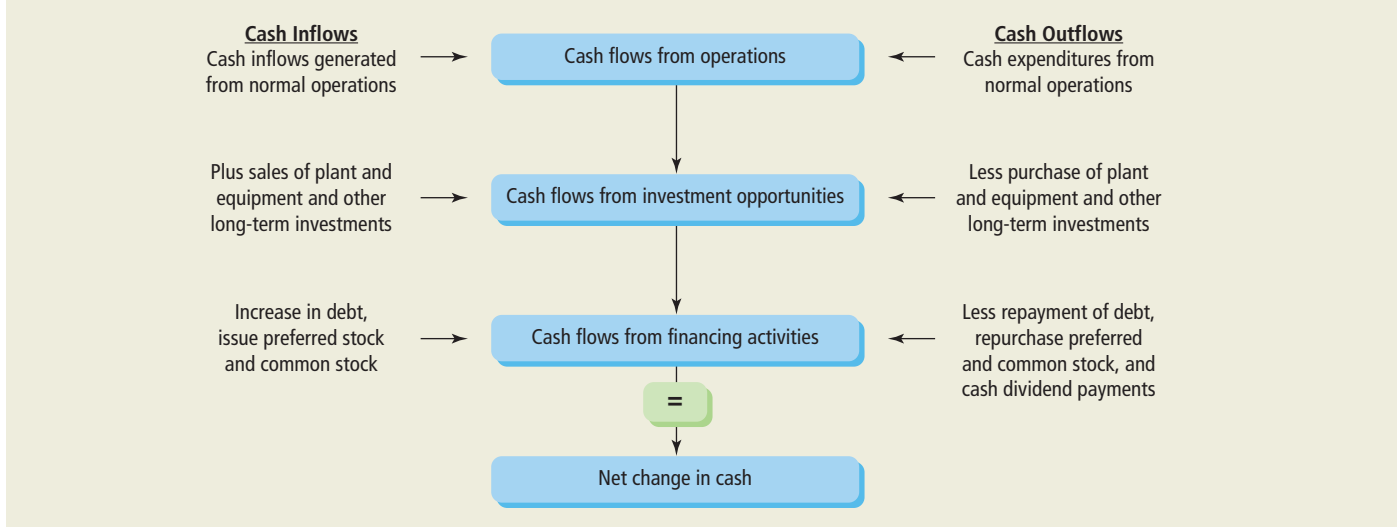
free cash flows the amount of cash available from operations after the firm pays for the investments it has made in operating working capital and fixed assets. This cash is available to distribute to the firm's creditors and owners.

financing cash flows the amount of cash received from or distributed to the firm's investors, usually in the form of interest, dividends, issuance of debt, or issuance or repurchase of stocks.

TABLE 3-3 The Home Depot, Inc.: Sources and Uses of Cash for Year Ending January 30, 2011 (\$ millions)

	Account Balance as of:				
	Jan 31, 2010	Jan 30, 2011	Change	Sources	Use
Balance Sheet Changes					
Accounts receivable	\$ 964	\$ 1,085	\$ 121		\$ 121
Inventories	10,188	10,625	437		437
Other current assets	1,327	1,224	(103)	103	
Gross fixed assets	37,345	38,471	1,126		1,126
Other assets	1,427	1,586	159		159
Accounts payable	9,343	9,080	(263)		263
Short-term notes payable	1,020	1,042	22	22	
Long-term debt	11,121	11,114	(7)		7
Common stock sold	6,752	7,087	335	335	
Stock repurchased (treasury stock)	(585)	(3,193)	(2,608)		2,608

Source: Data from The Home Depot, Inc. Fiscal Year 2010 Form 10-K.

FIGURE 3-4 Statement of Cash Flows: An Overview

explained in the appendix to this chapter. But for now we will focus on the statement of cash flows that all publicly traded firms must provide for their lenders and investors.

As shown in Figure 3-4, there are three key activities that determine the cash inflows and outflows of a business:

- 1. Generating cash flows from day-to-day business operations.** It is informative to know how much cash is being generated in the normal course of operating a business, beginning with purchasing inventories on credit, selling on credit, paying for the inventories, and finally collecting on the sales made on credit.
- 2. Investing in fixed assets and other long-term investments.** When a company purchases or sells fixed assets, like equipment and buildings, there can be significant cash inflows from selling these assets and outflows from purchasing these assets.
- 3. Financing the business.** Cash inflows and outflows occur from borrowing or repaying debt, paying dividends, and from issuing stock (equity) or repurchasing stock from the shareholders.

If we know the cash flows from the activities above, we can combine them to determine a company's change in cash and prepare a statement of cash flows. To understand how this is done, we will once again return to Home Depot's income statement (Table 3-1 on page 54) and balance sheets (Table 3-2 on page 61).

FINANCE AT WORK

MANAGING YOUR CASH FLOWS

If you want to improve cash flows, take a close look at your most recent financial statements. Watch out for:

- Money tied up in excess inventory that could be used to grow your business.
- Expensive office space. Don't spend for a prime location if you don't need it.
- Unpaid invoices from customers. Collect payments promptly.

- Not asking suppliers to extend credit terms. They might give you an extra 15 or even 30 days before you have to pay for purchases, if you simply ask.
- Not closely monitoring cash flows, which can take away money to grow your business.

Source: Adapted from Edward Marram, "6 Weeks to a Better Bottom Line," *Entrepreneur Magazine*, January 2010, <http://www.entrepreneur.com/magazine/entrepreneur/2010/january/204390.html>, accessed June 4, 2012.

Cash Flow Activity 1: Cash Flows from Day-to-Day Operations Here we want to convert the company's income statement from an accrual basis to a cash basis. This conversion can be accomplished in five steps. We begin with the firm's net income and then we:

1. Add back depreciation expense since it is not a cash expense;
2. Subtract (add) any increase (decrease) in accounts receivable;
3. Subtract (add) any increase (decrease) in inventory;
4. Subtract (add) any increase (decrease) in other current assets;
5. Add (subtract) any increase (decrease) in accounts payable and other accrued expenses.

Why we add back depreciation should be clear; it simply is not a cash expense. The changes in accounts receivable, inventories, other current assets, and accounts payable may be less intuitive. Four comments are helpful:

1. A firm's sales are either cash sales or credit sales. If accounts receivable increase, that means customers did not pay for everything they purchased during the year. Thus, any increase in accounts receivable needs to be subtracted from sales to determine the cash that has not been collected from customers. On the other hand, if accounts receivable decrease, then a firm has collected more than it has sold, which indicates a cash inflow. In equation form, we can compute the cash collected from sales as follows:

$$\begin{array}{l} \text{Cash collections} \\ \text{from sales} \end{array} = \text{sales} - \begin{array}{l} \text{change in} \\ \text{accounts receivable} \end{array} \quad (3-6)$$

2. An increase in inventories shows that we bought inventories, and a decrease in inventories shows that we sold inventories.
3. Other current assets include prepaid expenses, like prepaid insurance and prepaid rent. If other current assets increase (decrease), that means there has been a cash outflow (inflow).
4. While an increase in inventories indicates a cash outflow occurred, if accounts payable (credit extended by a supplier) increase as well, then we know that the firm's suppliers provided credit to the firm, which is a source of cash. The firm did not pay for all the inventories purchased. Thus, the net payment for inventories is equal to the change in inventories less the change in accounts payable. If, on the other hand, accounts payable decreased, there has been a cash outflow.

Figure 3-5 (on page 70) shows a graphical presentation of the procedure for computing a firm's cash flows from operations.

Cash Flows from Operations Illustrated: Home Depot Given the basic framework for a statement of cash flows just explained, we can now prepare this section of the cash flow statement for Home Depot. Referring back to the company's income statement and balance sheets, we can compute the cash flows from operations (expressed in \$ millions) as follows:

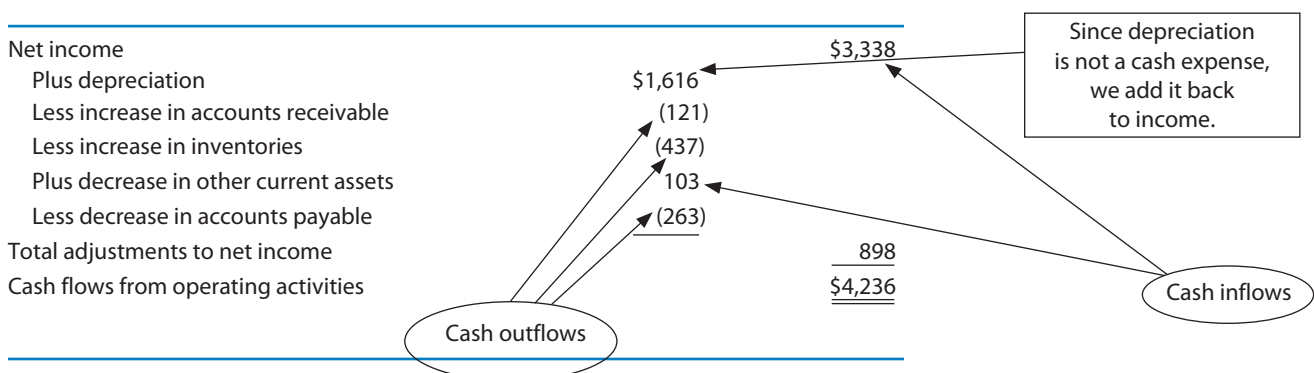
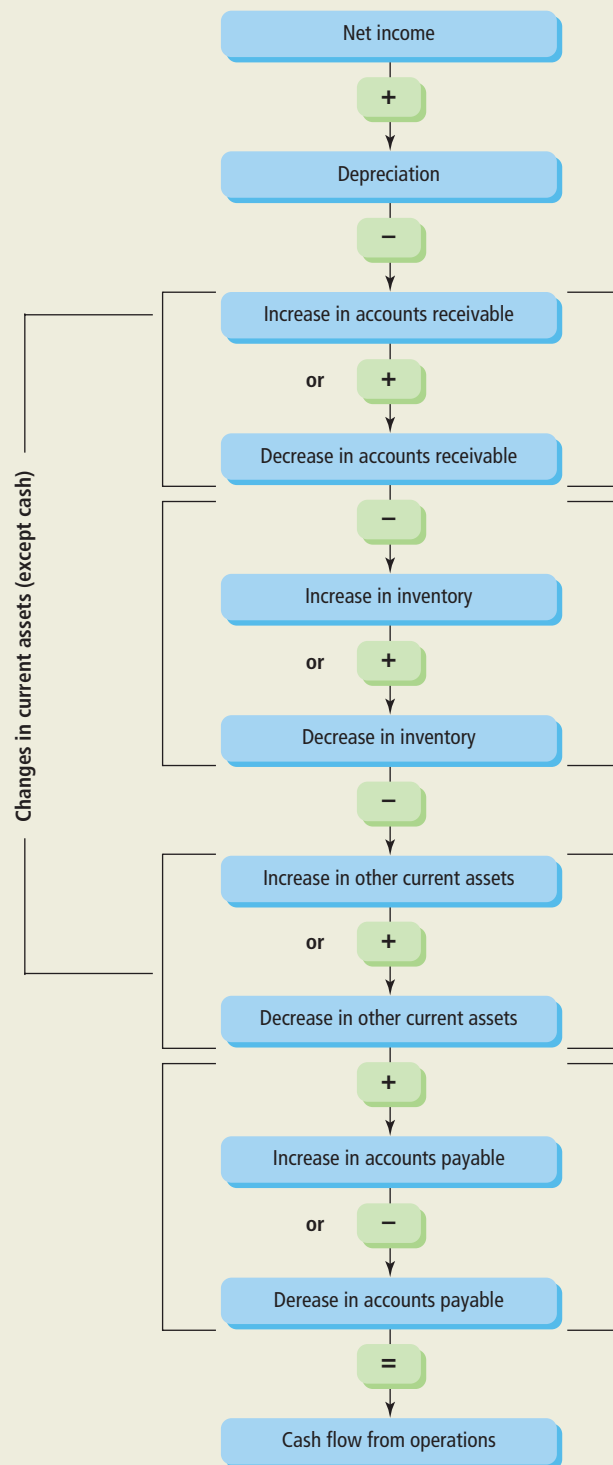


FIGURE 3-5 Cash Flow from Operations

Cash Flow Activity 2: Investing in Long-Term Assets Long-term assets include fixed assets and other long-term assets. For example, when a company purchases (sells) fixed assets, such as equipment or buildings, these activities are shown as an increase (decrease) in *gross fixed assets* in the balance sheet and are cash outflows and cash inflows, respectively.

Investing in Long-Term Assets Illustrated: Home Depot As shown in their balance sheets (Table 3-2), Home Depot spent \$1.126 billion on new plant and equipment for the year ended January 30, 2011, based on the change in *gross fixed assets* from \$37.345 billion to \$38.471 billion. It also spent \$159 million on other assets.

Cash Flow Activity 3: Financing the Business Cash flows associated with financing a business are as follows:

Cash Inflow:	Cash Outflow:
The firm borrows more money (an increase in short-term and/or long-term debt)	The firm repays debt (a decrease in short-term and/or long-term debt)
Owner(s) invest in the business (an increase in stockholders' equity)	The firm pays dividends to the owner(s) or repurchases the owners' stocks (a decrease in equity)

When we talk about borrowing or repaying debt in financing activities, we do not include accounts payable and any accrued operating expenses. These items were included in cash-flow activity 1 when we computed cash flows from operations. Here in activity 3, we include only debt from such sources as banks in the form of short-term notes and long-term debt.

Financing the Business Illustrated: Home Depot Continuing with Home Depot, we see from the income statement (Table 3-1) that it paid \$1.569 billion in dividends to the shareholders. Then from their balance sheets (Table 3-2), we see that short-term notes increased \$22 million (a source of cash), and long-term debt decreased \$7 million (a use of cash). Also, the firm issued \$335 million in common stock. This increase is reflected in the balance sheets in the combined changes in common stock par value and paid-in capital, which was \$335 million.¹¹ Finally, it repurchased \$2.608 billion in common stock. Thus, in net, Home Depot had \$3.827 billion cash outflows in financing activities, shown as follows:

Cash inflows from borrowing money		
Increase in short-term notes payable		\$ 22
Decrease in long-term debt		(7)
Issued new common stock:		
Increase in par value	0	
Increase in additional paid-in capital	<u>335</u>	\$ 335
Total stock issued		
Less repurchased common stock (treasury stock)		(2,608)
Less dividends paid to owners		(1,569)
Financing cash flows		<u><u>(\$3,827)</u></u>

Using the computations to this point, we can now complete a statement of cash flows for Home Depot, which is shown in Table 3-4 (on page 72). From the table we see that the firm generated \$4.236 billion in cash flows from operations; invested \$1.285 billion in plant and equipment and other assets; and paid out \$3.827 billion in financing activities, for a net decrease in cash of \$876 million. This can be verified from the balance sheets (see Table 3-2), which show that Home Depot's cash decreased \$876 million from January 31, 2010 to January 30, 2011 (from \$1.421 billion to \$545 million). Earlier in the chapter, we commented on the large decrease in cash and wondered about the cause. Now we know: The company generated positive cash flows from operations but used these cash flows and more to purchase fixed assets and make large distributions to creditors and stockholders in the form of interest, dividends, and share repurchases.

¹¹Par value of common stock increased from \$85.8 million on January 31, 2010 to \$86.1 million on January 31, 2011. The balance sheet didn't show the change because the amount rounds to zero when expressed in whole millions.

TABLE 3-4 The Home Depot, Inc. Statement of Cash Flows (\$ millions)
Year Ended January 30, 2011

Operating activities:	
a. Net income	\$3,338
b. Adjustments to net income to compute cash flow from operating activities	
1. Add depreciation expense (Source of cash)	\$1,616
2. Increased accounts receivable (Use of cash)	(121)
3. Increased inventories (Use of cash)	(437)
4. Decreased other current assets (Source of cash)	103
5. Decreased accounts payable (Use of cash)	<u>(263)</u>
Total adjustments to net income	\$ 898
Cash flows from operating activities	\$4,236
Investing activities:	
c. Increased gross fixed assets (Use of cash)	(\$1,126)
d. Increased other assets (Use of cash)	<u>(159)</u>
Cash flows from investing activities	(\$1,285)
Financing activities:	
e. Increased short-term notes payable (Source of cash)	\$ 22
f. Decreased long-term debt (Use of cash)	(7)
g. Increased (issued) new common stock (increase in par value and paid-in capital) (Source of cash)	335
h. Repurchased common stock (increased treasury stock) (Use of cash)	(2,608)
i. Dividends paid to shareholders (Use of cash)	<u>(1,569)</u>
Cash flows from financing activities	(\$3,827)
Summary:	
j. Change in cash and cash equivalents	(\$ 876)
k. Beginning cash (January 31, 2010)	<u>1,421</u>
l. Ending cash (January 30, 2011)	<u>\$ 545</u>

Legend:

Operating Activities

- a. Home Depot had net income of \$3,338.
- b. *Adjustments to net income to compute cash flows from operations:*
1. *Depreciation.* Since Home Depot's depreciation expense is a noncash charge, we add back \$1,616 in depreciation to net income when calculating Home Depot's cash flow.
 2. *Increase in accounts receivable.* Home Depot's accounts receivable rose by \$121 million, which is a use of cash.
 3. *Increase in inventories.* Home Depot increased its inventories by \$437 million, which is a use of cash.
 4. *Decrease in other current assets.* Home Depot's other current assets decreased by \$103 million, which represents a cash inflow.
 5. *Decrease in accounts payable.* Home Depot's accounts payable decreased by \$263 million, which is a cash outflow.
- Cash flows from operating activities** add up to a \$4.236 billion net inflow of cash.

Investing Activities

- c. *Increase in gross fixed assets.* Home Depot spent \$1.126 billion on fixed assets during the current year, resulting in a cash outflow.
- d. *Increase in other assets.* Home Depot spent \$159 million on its other assets, resulting in a cash outflow.

Cash flows from investment activities. The total on this line is the sum of the investments listed above, \$1.285 billion.

Financing Activities

- e. *Increase in short-term notes payable.* Home Depot borrowed an additional \$22 million from its bank, which was a cash inflow.
- f. *Decrease in long-term debt.* Home depot repaid a net \$7 million of its long-term debt, which is a cash outflow.
- g. *Issued new common stock.* Home Depot issued new common stock of \$335 million. Common stock includes both par value and additional paid-in capital. This increase is a cash inflow.
- h. *Repurchased common stock.* Home Depot repurchased \$2.608 billion of its common stock, which is a cash outflow.
- i. *Dividends paid to shareholders.* Home Depot paid out \$1.569 billion in dividends, which is a cash outflow.

Cash flows from financing activities. The sum of the five financing entries equals a negative \$3.827 billion.

Same as the cash balances in Home Depot's balance sheets

Summary:

- j. *Change in cash and cash equivalents.* The net sum of the operating activities, investing activities, and financing activities resulted in an \$876 million net decrease in cash during the fiscal year, mainly caused by stock repurchases, dividends paid, and investments in fixed assets.
- k. *Beginning cash.* Home Depot began the fiscal year with \$1.421 billion of cash.
- l. *Ending cash.* Home Depot ended the 2011 fiscal year with \$545 million of cash, the \$1.421 billion it started with minus the \$876 million net decrease in cash during 2011.

EXAMPLE 3.3**Measuring cash flows**

Given the following information for Menielle, Inc., prepare a statement of cash flows.

Increase in accounts receivable	\$13	Dividends	\$ 5
Increase in inventories	25	Change in common stock	0
Net income	33	Increase in gross fixed assets	55
Beginning cash	15	Depreciation expense	7
Increase in accounts payable	20		
Increase in accrued expenses	5		
Increase in long-term notes payable	28		

STEP 1: FORMULATE A SOLUTION STRATEGY

The cash flow statement uses information from the firm's balance sheets and income statement to identify the net sources and uses of cash for a specific period of time. Moreover, the sources and uses are organized into cash from operating activities, from investing activities, and from financing activities.

	Cash flow from operating activities
Plus/Minus:	Cash flow from investing activities
Plus/Minus:	Cash flow from financing activities
Equals:	Change in cash
Plus:	Beginning cash balance
Equals:	Ending cash balance

STEP 2: CRUNCH THE NUMBERS

Your results should be as follows:

Net income		\$33
Adjustments:		
Depreciation expense	\$ 7	
Less increase in accounts receivable	(13)	
Less increase in inventories	(25)	
Plus increase in accounts payable	20	
Plus increase in accrued expense	<u>5</u>	
Total adjustments		<u>(\$ 6)</u>
Cash flow from operating activities		\$27
Investing activity:		
Increase in gross fixed assets		<u>(\$55)</u>
Financing activities:		
Increase in long-term notes payable	\$28	
Change in common stock	0	
Common stock dividends	<u>(5)</u>	
Total financing activities		<u>\$23</u>
Change in cash		<u>(\$ 5)</u>
Beginning cash		<u>15</u>
Ending cash		<u>\$10</u>

STEP 3: ANALYZE YOUR RESULTS

Menielle's cash decreased \$5 from \$15 to \$10 because of (1) a \$27 cash inflow from operations, (2) less a \$55 cash outflow in investing, and (3) plus a \$23 cash inflow from financing activities. The cash-flow statement portrays a firm that is investing in fixed assets at a pace that is roughly twice the firm's operating cash flows, which requires the firm to finance the difference.

Concluding Suggestions for Computing Cash Flows

When calculating cash flows, there are some little things to remember, which, while small, can be very frustrating if not understood. They are:

1. Don't look at the cash-flow statement as a whole. It can be intimidating. Just work on the three parts of the statement individually, then put it all together to get to the whole. That just helps you focus on what needs to be done without being overwhelmed. After some time, it becomes much more intuitive, especially when it is your money!
2. Depreciation expense and net profits are the only two numbers you need from the income statement.
3. You need to be certain that you have used every change in the company's balance sheet, with two exceptions:
 - a. Ignore accumulated depreciation and net fixed assets since they involve the noncash item of depreciation. Use only the change in *gross* fixed assets.
 - b. Ignore the change in retained earnings since it equals the net profits less dividends paid, two items that are captured elsewhere.

Conclusions About Home Depot's Financial Position

To conclude our discussion on financial statements, consider some of the main things we learned about Home Depot:

- ◆ Home Depot's inventories made up 79 percent of the current assets. Home Depot's total assets consisted of about one-third current assets and two-thirds fixed assets.
- ◆ For every \$1 of sales, Home Depot earned 34 cents in gross profits, 9 cents in operating income, and 5 cents in net income.
- ◆ The firm financed its assets with slightly more debt than equity. It had a debt ratio of 52.9 percent.
- ◆ The firm had \$4.236 billion in cash flows from operations.
- ◆ Management invested \$1.285 billion in long-term assets and paid out \$3.827 billion to lenders and shareholders.
- ◆ The firm's primary investments in 2010 were in additional long-term assets, mostly fixed assets, in the amount of \$1.285 billion, and an increase in inventories amounting to \$437 million.
- ◆ The cash flows received from investors came in the form of newly issued stock for \$335 million.
- ◆ The primary cash flows going to investors were dividends (\$1.569 billion) and stock repurchases (\$2.608 billion). However, the firm also paid \$530 million in interest expense, which can only be seen in the income statement. Since the statement of cash flows as prepared by the accountants begins with net income, interest expense was deducted when computing cash flows from operations. But from a pure finance perspective, it is very much a financing activity and should be recognized as such.

FINANCE AT WORK

WHAT DID HOME DEPOT'S MANAGEMENT HAVE TO SAY?

We have studied Home Depot's financial statements and drawn some conclusions about what we believe the statements told us. Let's now see what the firm's management concluded. Below are a few of management's comments that appeared in the firm's annual report.

About profits?

Our U.S. stores experienced gross profit margin increase in fiscal 2010 as we realized benefits from better product assortment management through our portfolio approach and leveraging of our newly developed merchandising tools. Lower levels of clearance inventory in our stores for fiscal 2010 compared to last year also contributed to this increase. Additionally, we realized gross profit margin increase from our non-U.S. businesses, primarily Canada, due primarily to a change in the mix of products sold.

About the firm's cash position?

As of January 30, 2011, we had \$545 million in cash and cash equivalents. We believe that our current cash position, access to the debt capital markets and cash flow generated from operations should be sufficient to enable us to complete our capital expenditure programs and fund dividend payments, share repurchases and any required long-term debt payments through the next several fiscal years.

About cash flows from operations?

Cash flow generated from operations provides us with a significant source of liquidity. For fiscal 2010, Net Cash

Provided by Operating Activities was approximately \$4.6 billion compared to approximately \$5.1 billion for fiscal 2009. This decrease was primarily a result of changes in inventory levels and other net working capital items partially offset by increased earnings.*

About cash flows from investing?

Net Cash Used in Investing Activities for fiscal 2010 was \$1.0 billion compared to \$755 million for fiscal 2009. This change was primarily due to increased Capital Expenditures and lower Proceeds from Sales of Property and Equipment.

And about cash flows from financing?

Net cash used in financing activities for fiscal 2010 was \$4.5 billion compared to \$3.5 billion for fiscal 2009. This increase was primarily due to \$2.4 billion more in Repurchases of Common Stock than in fiscal 2009, and was partially offset by a \$998 million increase in Proceeds from Long-Term Borrowings and a \$745 million decrease in Repayments of Long-Term Debt in fiscal 2010.

*Because we simplified Home Depot's financial statements for learning purposes, all cash-flow activities (cash flow from operations, cash flow from investing, and cash flow from financing) presented in our example are slightly different from the actual amount given in Home Depot's 10-K.

CAN YOU DO IT?

MEASURING CASH FLOWS

Given the following information for an electronics company, prepare a statement of cash flows.

Increase in accounts receivable	\$ 300	Common stock dividends	\$ 40
Increase in inventories	80	Increase in common stock	10
Increase in long-term debts	80	Increase in gross fixed assets	50
Beginning cash	1,785	Depreciation expense	1,500
Increase in accounts payable	60	Net income	485
Increase in other current assets	150		

(The solution can be found on page 76.)

Concept Check

1. Why doesn't an income statement provide a measure of a firm's cash flows?
2. What are three main parts of a statement of cash flows?
3. What does each part tell us about a company?

4 Explain the differences between GAAP and IFRS.

Generally Accepted Accounting Principles (GAAP) rule-based set of accounting principles, standards, and procedures that companies use to compile their financial statements. These principles are issued by the Financial Accounting Standards Board.

International Financial Reporting Standards (IFRS) a principle-based set of international accounting standards stating how particular types of transactions and other events should be reported in financial statements. The principles are issued by the International Accounting Standards Board.

GAAP and IFRS

The United States follows **Generally Accepted Accounting Principles (GAAP)**. GAAP is a set of rule-based accounting standards established by the Financial Accounting Standards Board (FASB). It sets out the standards, conventions, and rules that accountants must follow when preparing audited financial statements. It is complex, providing more than 150 “pronouncements” as to how to account for different types of transactions.

Most other countries follow the **International Financial Reporting Standards (IFRS)**. IFRS is a set of principle-based accounting standards that were established by the International Accounting Standards Board (IASB). IFRS sets out broad and general principles that accountants should follow when preparing financial statements. It leaves more room for discretion than GAAP does, permitting managers to exercise their own judgment when deciding how to report their financial statements, as long as they follow the spirit of the standards. Thus, IFRS offers simplicity but also possibly more leeway for accounting malpractice than does GAAP.

In 2008, the Securities and Exchange Commission (SEC) announced its plan to convert U.S. companies from GAAP to IFRS, by as early as 2014, even though there is considerable controversy about the switch. The U.S. accounting standard is going to undergo significant changes in the future.

Concept Check

1. What are the differences between GAAP and IFRS?

DID YOU GET IT? MEASURING CASH FLOWS

On page 75 we asked you to calculate an electronics company's cash flows. Your results should be as follows:

Net income	\$ 485
Plus depreciation	1,500
Less increase in accounts receivable	(300)
Less increase in inventories	(80)
Less increase in other current assets	(150)
Plus increase in accounts payable	60
Cash flow from operating activities	\$1,515
Investment activity	
Increase in gross fixed assets	(\$ 50)
Financing activity	
Increase in long-term debts	\$ 80
Increase in common stock	10
Common stock dividends	(40)
Total financing activities	\$ 50
Change in cash	\$1,515
Beginning cash	1,785
Ending cash	<u>\$3,300</u>

5 Compute taxable income and income taxes owed.

Income Taxes and Finance

Income tax is one of the largest expenses that a business encounters, and as a result, it must be considered in making investment and financing decisions. But understanding income taxes is a profession unto itself. Tax accountants spend a lifetime attempting to

TABLE 3-5 J and S Corporation Taxable Income

Sales		\$50,000,000
Cost of goods sold		<u>23,000,000</u>
Gross profits		\$27,000,000
Operating expenses		
Administrative expenses	\$4,000,000	
Depreciation expenses	1,500,000	
Marketing expenses	<u>4,500,000</u>	
Total operating expenses		<u>\$10,000,000</u>
Operating income (earnings before interest and taxes)		\$17,000,000
Other income		0
Interest expense		<u>1,000,000</u>
Taxable Income		<u>\$16,000,000</u>

Dividends paid to common stockholders (\$1,000,000) are not tax-deductible expenses.

remain current with the tax laws. So we will limit our discussion to the basic issue of computing a corporation's income taxes and let the tax accountants provide us counsel on the rest.

For our purposes, we simply need to know that **taxable income** for a corporation consists of two basic components: operating income and capital gains. Operating income, as we have already defined, is essentially gross profits less any operating expenses, such as marketing expenses, administrative expenses, and so forth. We should also remember that while interest expense is a tax-deductible expense, dividends paid to shareholders are not.

Capital gains occur when a firm sells a capital asset, which is any asset that is not part of its ordinary operations. For example, when a company sells a piece of equipment or land, any gain or loss (sales price less the cost of the asset) is treated as a capital gain or loss.

taxable income gross income from all sources, except for allowable exclusions, less any tax-deductible expenses.

capital gains gains from selling any asset that is not part of the ordinary operations.

Computing Taxable Income

To demonstrate how to compute a corporation's taxable income, consider the J and S Corporation, a manufacturer of home accessories. The firm, originally established by Kelly Stites, had sales of \$50 million for the year. The cost of producing the accessories totaled \$23 million. Operating expenses were \$10 million. The corporation has \$12.5 million in debt outstanding, with an 8 percent interest rate, which resulted in \$1 million interest expense ($\$12,500,000 \times 0.08 = \$1,000,000$). Management paid \$1 million in dividends to the firm's common stockholders. No other income, such as interest or dividend income, was received. The taxable income for the J and S Corporation would be \$16 million, as shown in Table 3-5.

Once we know J and S Corporation's taxable income, we can determine the amount of taxes the firm owes.

Computing the Taxes Owed

The taxes to be paid by the corporation on its taxable income are based on the corporate tax rate structure. The specific rates for corporations, as of 2012, are given in Table 3-6.

TABLE 3-6 Corporate Tax Rates

15%	\$0–\$50,000
25%	\$50,001–\$75,000
34%	\$75,001–\$10,000,000
35%	over \$10,000,000
Additional surtax:	
• 5% on income between \$100,000 and \$335,000	
• 3% on income between \$15,000,000 and \$18,333,333	

marginal tax rate the tax rate that would be applied to the next dollar of income.

The tax rates shown in Table 3-6 are the **marginal tax rates**, or *rates applicable to the next dollar of income*. For instance, if a firm has earnings of \$60,000 and is contemplating an investment that would yield \$10,000 in additional profits, the tax rate to be used in calculating the taxes on this added income is 25 percent; that is, the marginal tax rate is 25 percent.

The rates in Table 3-6 go up to a top marginal corporate tax rate of 35 percent for taxable income in excess of \$10 million, and a surtax of 3 percent on taxable income between \$15 million and \$18,333,333. This means the corporation's marginal tax rate on income between \$15 million and \$18,333,333 is 38 percent (the 35 percent rate plus the 3 percent surtax). There is also a 5-percent surtax on taxable income between \$100,000 and \$335,000, which means the marginal rate on income between \$100,000 and \$335,000 is 39 percent (the 34 percent rate plus the 5 percent surtax). For example, the tax liability for J and S Corporation, which had \$16 million in taxable earnings, would be \$5,530,000, calculated as follows:

EARNINGS	×	MARGINAL TAX RATE	=	TAXES
\$ 50,000	×	15%	=	\$ 7,500
25,000	×	25%	=	6,250
9,925,000	×	34%	=	3,374,500
<u>6,000,000</u>	×	35%	=	<u>2,100,000</u>
Total income \$16,000,000				\$5,488,250
Additional surtaxes:				
• Add 5% surtax on income between \$100,000 and \$335,000 (5% × [\$335,000 − \$100,000])				11,750
• Add 3% surtax on income between \$15,000,000 and \$18,333,333 (3% × [\$16,000,000 − \$15,000,000])				<u>30,000</u>
Total tax liability				<u><u>\$5,530,000</u></u>

average tax rate the tax rate on average that a company pays on its total taxable income.

Given that the J and S Corporation owes \$5,530,000 in taxes on \$16 million taxable income, the firm's **average tax rate**, computed as taxes owed divided by taxable income, is 34.56 percent ($34.56\% = \$5,530,000 \div \$16,000,000$). However, J and S Corporation's marginal tax rate is 38 percent (this is because \$16 million falls into the 35 percent tax bracket with a 3 percent surtax); that is, the next dollar of any income will be taxed at a rate of 38 percent. However, after taxable income exceeds \$18,333,333, the marginal tax rate declines to 35 percent, since the 3 percent surtax no longer applies.

For financial decision making, it's the marginal tax rate rather than the average tax rate that we are concerned with. Why? Because, generally speaking, the marginal rate is the rate that a corporation pays on the next dollar that is earned. We always want to consider the tax consequences of any financial decision. The marginal tax rate is the rate that will be applicable for any changes in earnings that occur as a result of the decision being made. Thus, when making financial decisions involving taxes, always use the marginal tax rate in your calculations.¹²

¹²On taxable income between \$335,000 and \$10 million, both the marginal and average tax rates equal 34 percent because of the imposition of the 5 percent surtax that applies to taxable income between \$100,000 and \$335,000. This surtax eliminates the benefit of having the first \$75,000 of taxable income taxed at the rates lower than 34 percent. After the company's taxable income exceeds \$18,333,333, both the marginal and average tax rates equal 35 percent because the 3 percent surtax on income between \$15 million and \$18,333,333 eliminates the benefits of having the first \$10 million of income taxed at 34 percent rather than 35 percent.

EXAMPLE 3.3**Computing a corporation's income taxes**

Assume that the Griggs Corporation had sales during the past year of \$5 million; its cost of goods sold was \$3 million; and it incurred operating expenses of \$950,000. In addition, it received \$185,000 in interest income. In turn, it paid \$40,000 in interest and \$75,000 in common stock dividends. Compute the tax due for the Griggs Corporation.

STEP 1: FORMULATE A SOLUTION STRATEGY

The following template provides us a useful guide for computing the taxable income:

	Sales
Less:	Cost of goods sold
Equals:	Gross profits
Less:	Operating expenses
Equals:	Operating income
Less:	Interest expense
Plus:	Interest income
Equals:	Taxable income

Use Table 3-6 to find the appropriate tax rate. Don't forget the additional surtax.

STEP 2: CRUNCH THE NUMBERS

Sales			\$ 5,000,000
Cost of goods sold			<u>(\$ 3,000,000)</u>
Gross profit			\$ 2,000,000
Operating expenses			<u>(\$ 950,000)</u>
Operating income			\$ 1,050,000
Other taxable income and expenses:			
Interest income		\$185,000	
Interest expense		<u>(40,000)</u>	\$ 145,000
Taxable income			<u>\$ 1,195,000</u>
Tax computation			
	15% ×	\$ 50,000 =	\$ 7,500
	25% ×	25,000 =	6,250
	34% ×	<u>1,120,000 =</u>	<u>380,800</u>
		<u>\$1,195,000</u>	<u>\$394,550</u>
Add 5% surtax for income between \$100,000 and \$335,000			<u>11,750</u>
Tax liability			<u>\$406,300</u>

STEP 3: ANALYZE YOUR RESULTS

Note that the \$75,000 Griggs paid in common stock dividends is not tax deductible. The marginal tax rate and the average tax rate both equal 34 percent; thus, we could have computed Griggs's tax liability as 34 percent of \$1,195,000, or \$406,300.

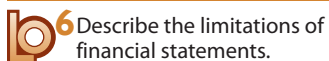
Concept Check

1. How is taxable income computed?
2. How are taxes owed computed?
3. Why should we be more concerned with the marginal tax rate rather than the average tax rate?

CAN YOU DO IT?**COMPUTING A CORPORATION'S INCOME TAXES**

A manufacturing company had sales during the past year of \$32 million; its cost of goods sold was \$17 million; and it incurred operating expenses of \$12 million. In addition, it received \$0.8 million in interest income. In turn, it paid \$1 million in interest and \$0.5 million in common stock dividends. Compute the company's taxes.

(The solution can be found on page 80.)



Accounting Malpractice and Limitations of Financial Statements

Financial statements are prepared following the Financial Accounting Standards Board's generally accepted accounting principles (GAAP). When reviewing financial statements, keep in mind that accounting rules give managers discretion; thus they may take advantage of the leeway, as long as it doesn't violate GAAP to produce the high or stable earnings that investors are looking for. In other words, if two companies have the same financial performance, their financial statements can be different, depending on how and when the managers choose to report certain transactions.

Sometimes, managers may even break the rules, which results in accounting malpractice/accounting fraud. There have been many cases of accounting fraud, and the managers involved have faced criminal charges for their illegal acts. In 2010, it was revealed in a report by the bankruptcy court examiner that Lehman Brothers used Repo 105 three times and didn't disclose it to investors. Repo 105 is a repurchase agreement that results in an "accounting gimmick" where a short-term loan is classified as a sale. The cash obtained through this "sale" is then used to pay down debt, allowing the company to appear to be paying down liabilities—just long enough to reflect on the company's published balance sheet. After the company's financial reports are published, the company borrows cash and repurchases its original assets.

Concept Check

1. What are the limitations of financial statements?

This chapter has provided a basic understanding of financial statements, as demonstrated using Home Depot's financial data. In the next chapter, we will dig even deeper by conducting what is called *financial analysis*. We will continue using Home Depot to illustrate the use of this financial tool.

DID YOU GET IT?

COMPUTING A CORPORATION'S INCOME TAXES

Sales		\$32,000,000
Cost of goods sold		(17,000,000)
Gross profit		\$15,000,000
Operating expenses		(12,000,000)
Operating income		\$ 3,000,000
Other taxable income and expenses:		
Interest income	\$ 800,000	
Interest expense	(1,000,000)	(\$ 200,000)
Taxable income		<u>\$ 2,800,000</u>
Tax computation		
	15% × \$ 50,000 =	\$ 7,500
	25% × 25,000 =	6,250
	34% × <u>2,725,000</u> =	<u>926,500</u>
	<u>\$2,800,000</u>	\$ 940,250
Add 5% surtax for income between \$100,000 and \$335,000		
		<u>11,750</u>
Tax liability		<u>\$ 952,000</u>

Chapter Summaries

Compute a company's profits, as reflected by its income statement.

(pgs. 52–56)



SUMMARY:

1. A firm's profits may be viewed as follows:

Gross profit = sales – cost of goods sold

Earnings before interest and taxes (operating profits) = gross profit – operating expenses

Net profit (net income) = earnings before interest and taxes (operating profits) – interest expense – taxes

2. The following five activities determine a company's net income:
 - a. The revenue derived from selling the company's product or service
 - b. The cost of producing or acquiring the goods or services to be sold
 - c. The operating expenses related to (1) marketing and distributing the product or service to the customer and (2) administering the business
 - d. The financing costs of doing business—namely, the interest paid to the firm's creditors
 - e. The payment of taxes

KEY TERMS

Income statement (profit and loss statement), page 52 a basic accounting statement that measures the results of a firm's operations over a specified period, commonly 1 year. The bottom line of the income statement, net profits (net income), shows the profit or loss for the period that is available for a company's owners (shareholders).

Cost of goods sold, page 52 the cost of producing or acquiring a product or service to be sold in the ordinary course of business.

Gross profit, page 52 sales or revenue minus the cost of goods sold.

Operating expenses, page 52 marketing and selling expenses, general and administrative expenses, and depreciation expense.

Operating income (earnings before interest and taxes), page 52 sales less the cost of goods sold less operating expenses.

Earnings before taxes (taxable income), page 53 operating income minus interest expense.

Net income (net profit, or earnings available to common stockholders), page 53 the earnings available to the firm's common and preferred stockholders.

Earnings per share, page 54 net income on a per share basis.

Dividends per share, page 54 the amount of dividends a firm pays for each share outstanding.

Common-sized income statement, page 55 an income statement in which a firm's expenses and profits are expressed as a percentage of its sales.

Profit margins, page 55 financial ratios (sometimes simply referred to as margins) that reflect the level of the firm's profits relative to its sales. Examples include the gross profit margin (gross profit divided by sales), operating profit margin (operating income divided by sales), and the net profit margin (net income divided by sales).

Gross profit margin, page 55 gross profit divided by net sales. It is a ratio denoting the gross profit earned by the firm as a percentage of its net sales.

Operating profit margin, page 55 operating income divided by sales. This ratio serves as an overall measure of the company's operating effectiveness.

Net profit margin, page 55 net income divided by sales. A ratio that measures the net income of the firm as a percent of sales.

Fixed costs, page 55 costs that remain constant, regardless of any change in a firm's activity.

Variable costs, page 55 costs that change in proportion to changes in a firm's activity.

Semivariable costs, page 55 costs composed of a mixture of fixed and variable components.

KEY EQUATION

Sales – expenses = profits



Determine a firm's financial position at a point in time based on its balance sheet. (pgs. 56–64)

SUMMARY: The balance sheet presents a company's assets, liabilities, and equity on a specific date. Its total assets represent all the investments that the firm has made in the business. The total assets must equal the firm's total debt and equity because every dollar of assets has been financed by the firm's lenders or stockholders. The firm's assets include its current assets, fixed assets, and other assets. Its debt includes both its short-term and long-term debt. The firm's equity includes (1) common stock, which may be shown as par value plus paid-in capital, and (2) retained earnings. All the numbers in a balance sheet are based on historical costs, rather than current market values.

KEY TERMS

Balance sheet, page 56 a statement that shows a firm's assets, liabilities, and shareholder equity at a given point in time. It is a snapshot of the firm's financial position on a particular date.

Accounting book value, page 57 the value of an asset as shown on a firm's balance sheet. It represents the depreciated historical cost of the asset rather than its current market value or replacement cost.

Liquidity, page 57 the ability to convert an asset into cash quickly without a significant loss of its value.

Current assets (gross working capital), page 57 current assets consist primarily of cash, marketable securities, accounts receivable, inventories, and prepaid expenses.

Cash, page 58 cash on hand, demand deposits, and short-term marketable securities that can quickly be converted into cash.

Accounts receivable, page 58 money owed by customers who purchased goods or services from the firm on credit.

Inventories, page 58 raw materials, work in progress, and finished goods held by the firm for eventual sale.

Other current assets, page 58 other short-term assets that will benefit future time periods, such as prepaid expenses.

Fixed assets, page 58 assets such as equipment, buildings, and land.

Depreciation expense, page 58 a noncash expense to allocate the cost of depreciable assets, such as plant and equipment, over the life of the asset.

Accumulated depreciation, page 58 the sum of all depreciation taken over the entire life of a depreciable asset.

Gross fixed assets, page 58 the original cost of a firm's fixed assets.

Net fixed assets, page 58 gross fixed assets minus the accumulated depreciation taken over the life to date of the assets.

Debt, page 59 liabilities consisting of such sources as credit extended by suppliers or a loan from a bank.

Equity, page 59 stockholders' investment in the firm and the cumulative profits retained in the business up to the date of the balance sheet.

Current debt (short-term liabilities), page 59 debt due to be paid within 12 months.

Accounts payable (trade credit), page 59 credit provided by suppliers when a firm purchases inventory on credit.

Accrued expenses, page 59 expenses that have been incurred but not yet paid in cash.

Short-term notes (debt), page 59 amounts borrowed from lenders, mostly financial institutions such as banks, where the loan is to be repaid within 12 months.

Long-term debt, page 59 loans from banks or other sources that lend money for longer than 12 months.

Mortgage, page 59 a loan to finance real estate where the lender has first claim on the property in the event the borrower is unable to repay the loan.

Preferred stockholders, page 59 stockholders who have claims on the firm's income and assets after creditors, but before common stockholders.

Common stockholders, page 59 investors who own the firm's common stock. Common stockholders are the residual owners of the firm.

Common stock, page 59 shares that represent ownership in a corporation.

Par value, page 59 the arbitrary value a firm puts on each share of stock prior to its being offered for sale.

Paid-in capital, page 59 the amount a company receives above par value from selling stock to investors.

Treasury stock, page 60 the firm's stock that has been issued and then repurchased by the firm.

Retained earnings, page 60 cumulative profits retained in a business up to the date of the balance sheet.

Common-sized balance sheet, page 62 a balance sheet in which a firm's assets and sources of debt and equity are expressed as a percentage of its total assets.

Debt ratio, page 62 a firm's total liabilities divided by its total assets. It is a ratio that

measures the extent to which a firm has been financed with debt.

Net working capital, page 62 the difference between a firm's current assets and its current liabilities. When the term *working capital* is used, it is frequently intended to mean net working capital.

KEY EQUATIONS

Total assets = total liabilities (debt) + total shareholders' equity

Beginning retained earnings + net income for the year – dividends paid during the year = ending retained earnings

Common equity = common shareholders' investment + cumulative profits – cumulative dividends paid to common stockholders

Net working capital = current assets – current liabilities

Measure a company's cash flows. (pgs. 65–75)



SUMMARY: A firm's profits are not an adequate measure of its cash flows. To measure a company's cash flows requires that we look both at the income statement and the changes in the balance sheet. There are three main parts of a statement of cash flows: cash flows from operations, investment cash flows, and financing cash flows. Examining these three parts of the statement of cash flows helps us understand where cash came from and how it was used.

KEY TERMS

Accrual basis accounting, page 65 a method of accounting whereby revenue is recorded when it is earned, whether or not the revenue has been received in cash. Likewise, expenses are recorded when they are incurred, even if the money has not actually been paid out.

Cash basis accounting, page 65 a method of accounting whereby revenue is recorded when cash is actually received. Likewise, expenses are recorded when physical cash is paid out.

Statement of cash flows, page 67 a statement that shows how changes in balance sheet accounts and income affect cash and cash

equivalents, and breaks the analysis down to operating, investing, and financing activities.

Free cash flows, page 67 the amount of cash available from operations after the firm pays for the investments it has made in operating working capital and fixed assets. This cash is available to distribute to the firm's creditors and owners.

Financing cash flows, page 67 the amount of cash received from or distributed to the firm's investors, usually in the form of interest, dividends, issuance of debt, or issuance or repurchase of stocks.

KEY EQUATIONS

Cash collections = sales – change in accounts receivable from sales

Explain the differences between GAAP and IFRS. (pg. 76)



SUMMARY: GAAP is rules-based and sets out rules that accountants must follow when preparing financial statements. IFRS is principles-based and sets out general principles. IFRS leaves more room for discretion than GAAP does, permitting managers to exercise their own judgment when deciding how to report in their financial statements, as long as they follow the spirit of the standards.

KEY TERMS

Generally Accepted Accounting Principles (GAAP), page 76 rules-based accounting principles, standards, and procedures that companies use to compile their financial statements. These principles are issued by the Financial Accounting Standards Board (FASB).

International Financial Reporting Standards (IFRS), page 76 principles-based set of international accounting standards stating how particular types of transactions and other events should be reported in financial statements. IFRS are issued by the International Accounting Standards Board (IASB).

**5 Compute taxable income and income taxes owed.** (pgs. 76–79)

SUMMARY: For the most part, taxable income for the corporation is equal to the firm's operating income plus capital gains less any interest expense. Tax consequences, particularly marginal tax rates, have a direct bearing on the decisions of the financial manager.

KEY TERMS

Taxable income, page 77 income from all sources, except for allowable exclusions, less any tax-deductible expenses.

Capital gains, page 77 gains from selling any asset that is not part of the ordinary operations.

Marginal tax rate, page 78 the tax rate that would be applied to the next dollar of income.

Average tax rate, page 78 the tax rate on average that a company pays on its total taxable income.

**6 Describe the limitations of financial statements.** (pg. 80)

SUMMARY: Accounting rules give managers discretion. Therefore what we see in financial statements may not exactly reflect the company's financial situation. Sometimes, managers may even break the rules, which results in accounting malpractice/accounting fraud.

Review Questions

All Review Questions are available in [MyFinanceLab](#).

- 3-1.** A company's financial statements consist of the balance sheet, income statement, and statement of cash flows. Describe what each statement tells us.
- 3-2.** How do gross profits, operating profits, and net income differ?
- 3-3.** How do dividends and interest expense differ?
- 3-4.** Why is it that the preferred stockholders' equity section of the balance sheet changes only when new shares are sold or repurchased, whereas the common stockholders' equity section changes from year to year regardless of whether new shares are bought or sold?
- 3-5.** What is net working capital?
- 3-6.** Why might one firm have positive cash flows and be headed for financial trouble, whereas another firm with negative cash flows could actually be in a good financial position?
- 3-7.** Why is the examination of only the balance sheet and income statement not adequate in evaluating a firm?
- 3-8.** What are the differences between GAAP and IFRS?
- 3-9.** Why are dividends paid to a firm's owners not a tax-deductible expense?
- 3-10.** What are the limitations of financial statements?
- 3-11.** See the annual report for the Dell Corporation by going to www.dell.com. Scroll to the bottom of the page, click, "About Dell," then "Investors," then "Financial Reporting," and finally the link "Annual Reports." Scan the list to determine which year you would like to review. Alternatively, select one of the other links (such as "Financial History") to learn additional financial information about Dell, Inc.
- 3-12.** Go to www.homedepot.com for the home page of the Home Depot Corporation. Scroll to the bottom of the page and select "Investor Relations," and then "Financial Reports." Look for keywords in the income statement that appear in this chapter, such as sales, gross profits, and net income. What do you learn about the firm from its financial statements that you find interesting?

3-13. Go to the *Wall Street Journal* home page at www.wsj.com. Search for Barnes & Noble (ticker symbol BKS). Find the firm's earnings announcements. What did you learn about the company from the announcements? Also, search www.barnesandnoble.com to find the same information.

Study Problems

All Study Problems are available in [MyFinanceLab](#).

3-1. (*Computing earnings per share*) If ABC Company earned \$280,000 in net income and paid cash dividends of \$40,000, what are ABC's earnings per share if it has 80,000 shares outstanding?



3-2. (*Preparing an income statement*) Prepare an income statement and a common-sized income statement from the following information.

Sales	\$525,000
Cost of goods sold	200,000
General and administrative expenses	62,000
Depreciation expenses	8,000
Interest expense	12,000
Income taxes	97,200

3-3. (*Preparing a balance sheet*) Prepare a balance sheet from the following information. What is the net working capital and debt ratio?



Cash	\$ 50,000
Accounts receivable	42,700
Accounts payable	23,000
Short-term notes payable	10,500
Inventories	40,000
Gross fixed assets	1,280,000
Other current assets	5,000
Long-term debt	200,000
Common stock	490,000
Other assets	15,000
Accumulated depreciation	312,000
Retained earnings	?

3-4. (*Preparing a balance sheet*) Prepare a balance sheet and a common-sized balance sheet from the following information.

Cash	\$ 30,000
Accounts receivable	63,800
Accounts payable	52,500
Short-term notes payable	11,000
Inventories	66,000
Gross fixed assets	1,061,000
Accumulated depreciation	86,000
Long-term debt	210,000
Common stock	480,000
Other assets	25,000
Retained earnings	?

3-5. (*Working with an income statement and balance sheet*) Prepare a balance sheet and income statement for Belmond, Inc. from the following information.

Inventory	\$ 6,500
Common stock	45,000
Cash	16,550
Operating expenses	1,350
Short-term notes payable	600
Interest expense	900
Depreciation expense	500
Sales	12,800
Accounts receivable	9,600
Accounts payable	4,800
Long-term debt	55,000
Cost of goods sold	5,750
Buildings and equipment	122,000
Accumulated depreciation	34,000
Taxes	1,440
General and administrative expenses	850
Retained earnings	?

3-6. (*Working with an income statement and balance sheet*) Prepare a balance sheet and income statement for the Warner Company from the following scrambled list of items.

- What is the firm's net working capital and debt ratio?
- Complete a common-sized income statement and a common-sized balance sheet.
- Interpret your findings.

Depreciation expense	\$ 66,000
Cash	225,000
Long-term debt	334,000
Sales	573,000
Accounts payable	102,000
General and administrative expenses	79,000
Buildings and equipment	895,000
Notes payable	75,000
Accounts receivable	153,000
Interest expense	4,750
Accrued operating expenses	7,900
Common stock	289,000
Cost of goods sold	297,000
Inventory	99,300
Taxes	50,500
Accumulated depreciation	263,000
Prepaid expenses	14,500
Taxes payable	53,000
Retained earnings	262,900

3-7. (*Working with an income statement and balance sheet*) Prepare an income statement and a balance sheet from the following scrambled list of items. What is the firm's net working capital and debt ratio?

Sales	\$550,000
Accumulated depreciation	190,000
Cash	?
Cost of goods sold	320,000
Accounts receivable	73,000
Depreciation expenses	38,000
Accounts payable	65,000
Interest expense	26,000
Short-term notes payable	29,000
Income taxes	59,850
Inventories	47,000
Marketing, general, and administrative expenses	45,000
Gross fixed assets	648,000
Long-term debt	360,000
Common stock	120,000
Other assets	15,000
Retained earnings	138,500

In addition, the firm has 10,000 shares outstanding and paid \$15,000 in common stock dividends during the year.

3-8. (*Working with a statement of cash flows*) Given the following information, prepare a statement of cash flows.



Increase in accounts receivable	\$25
Increase in inventories	30
Operating income	75
Interest expense	25
Increase in accounts payable	25
Dividends	15
Increase in common stock	20
Increase in net fixed assets	23
Depreciation expense	12
Income taxes	17
Beginning cash	20

3-9. (*Analyzing a statement of cash flows*) Interpret the following information regarding Westlake Corporation's cash flows.

Net income	\$ 680
Depreciation expense	<u>125</u>
Profits before depreciation	805
Increase in accounts receivable	(200)
Increase in inventories	(240)
Increase in accounts payable	120
Increase in accrued expenses	<u>81</u>
Cash flow from operations	\$ 566
Investment activity	
Change in fixed assets	(1,064)
Financing activity	
Increase in long-term debt	\$ 640
Common stock dividends	<u>(120)</u>
Total financing activities	\$ 520
Change in cash	\$ 22
Beginning cash	<u>500</u>
Ending cash	<u>\$ 522</u>

3-10. (*Working with a statement of cash flows*) Given the following information, prepare a statement of cash flows.

Beginning Cash	\$ 20
Dividends	25
Increase in common stock	27
Increase in accounts receivable	65
Increase in inventories	5
Operating income	215
Increase in accounts payable	40
Interest expense	50
Depreciation expense	20
Increase in bank debt	48
Increase in accrued expenses	15
Increase in gross fixed assets	55
Income taxes	45

3-11. (*Analyzing a statement of cash flows*) Interpret the following information regarding Maness Corporation's statement of cash flows.

Net income	\$ 370
Depreciation expense	60
Profits before depreciation	430
Increase in accounts receivable	(300)
Increase in inventories	(400)
Increase in accounts payable	200
Increase in accrued expenses	40
Cash flow from operations	(\$ 30)
Investment activity	
Change in fixed assets	(\$1,500)
Financing activity	
Increase in short-term notes	\$ 100
Repayment of long-term debt	(250)
Repurchase common stock	(125)
Common stock dividends	(75)
Total financing activities	(\$ 350)
Change in cash	(\$1,880)
Beginning cash	3,750
Ending cash	\$1,870

3-12. (*Working with a statement of cash flows*) Prepare a statement of cash flows for Abrahams Manufacturing Company for the year ended December 31, 2012. Interpret your results.

Abrahams Manufacturing Company Balance Sheet for 12/31/2011 and 12/31/2012

	2011	2012
Cash	\$ 89,000	\$100,000
Accounts receivable	64,000	70,000
Inventory	112,000	100,000
Prepaid expenses	10,000	10,000
Total current assets	275,000	280,000
Gross plant and equipment	238,000	311,000
Accumulated depreciation	(40,000)	(66,000)
Total assets	\$473,000	\$525,000
Accounts payable	\$ 85,000	\$ 90,000
Accrued liabilities	68,000	63,000

Total current debt	153,000	153,000
Mortgage payable	70,000	0
Preferred stock	0	120,000
Common stock	205,000	205,000
Retained earnings	45,000	47,000
Total debt and equity	<u>\$473,000</u>	<u>\$525,000</u>

Abrahams Manufacturing Company Income Statement for the Year Ended 12/31/2012

	2012
Sales	\$184,000
Cost of goods sold	<u>60,000</u>
Gross profit	\$124,000
Selling, general, and administrative expenses	44,000
Depreciation expense	<u>26,000</u>
Operating income	\$ 54,000
Interest expense	<u>4,000</u>
Earnings before taxes	\$ 50,000
Taxes	16,000
Preferred stock dividends	<u>10,000</u>
Earnings available to common shareholders	<u>\$ 24,000</u>

Additional Information

1. The only entry in the accumulated depreciation account is for 2012 depreciation.
2. The firm paid \$22,000 in common stock dividends during 2012.

3-13. (*Working with a statement of cash flows*) Prepare a statement of cash flows from the following scrambled list of items.

Increase in inventories	\$ 7,000
Operating income	219,000
Dividends	29,000
Increase in accounts payable	43,000
Interest expense	45,000
Increase in common stock (par)	5,000
Depreciation expense	17,000
Increase in accounts receivable	69,000
Increase in long-term debt	53,000
Increase in short-term notes payable	15,000
Increase in gross fixed assets	54,000
Increase in paid in capital	20,000
Income taxes	45,000
Beginning cash	250,000

3-14. (*Working with financial statements*) Given the information on page 90 for Pamplin Inc.:

- a. How much is the firm's net working capital and what is the debt ratio?
- b. Complete a common-sized income statement, a common-sized balance sheet, and a statement of cash flows for 2012. Interpret your results.

Pamplin Inc. Balance Sheet at 12/31/2011 and 12/31/2012

ASSETS		
	2011	2012
Cash	\$ 200	\$ 150
Accounts receivable	450	425
Inventory	550	625
Current assets	<u>\$1,200</u>	<u>\$1,200</u>
Plant and equipment	\$2,200	\$2,600
Less accumulated depreciation	(1,000)	(1,200)
Net plant and equipment	<u>\$1,200</u>	<u>\$1,400</u>
Total assets	<u><u>\$2,400</u></u>	<u><u>\$2,600</u></u>
LIABILITIES AND OWNERS' EQUITY		
	2011	2012
Accounts payable	\$ 200	\$ 150
Notes payable—current (9%)	0	150
Current liabilities	<u>\$ 200</u>	<u>\$ 300</u>
Bonds	<u>\$ 600</u>	<u>\$ 600</u>
Owners' equity		
Common stock	\$ 900	\$ 900
Retained earnings	<u>700</u>	<u>800</u>
Total owners' equity	<u>\$1,600</u>	<u>\$1,700</u>
Total liabilities and owners' equity	<u><u>\$2,400</u></u>	<u><u>\$2,600</u></u>

Pamplin Inc. Income Statement for Years Ended 12/31/2011 and 12/31/2012

	2011	2012
Sales	\$1,200	\$1,450
Cost of goods sold	<u>700</u>	<u>850</u>
Gross profit	<u>\$ 500</u>	<u>\$ 600</u>
Selling, general, and administrative expenses	\$ 30	\$ 40
Depreciation	<u>220</u>	<u>250</u>
Operating income	<u>\$ 250</u>	<u>\$ 360</u>
Interest expense	<u>\$ 50</u>	<u>64</u>
Net income before taxes	<u>\$ 200</u>	<u>\$ 296</u>
Taxes (40%)	<u>80</u>	<u>118</u>
Net income	<u><u>\$ 120</u></u>	<u><u>\$ 178</u></u>

3-15. (*Working with financial statements*) Based on the information for T. P. Jarmon Company for the year ended December 31, 2012:

- How much is the firm's net working capital and what is the debt ratio?
- Complete a statement of cash flows for the period. Interpret your results.
- Compute the changes in the balance sheets from 2011 to 2012. What do you learn about T. P. Jarmon from these computations? How do these numbers relate to the statement of cash flows?

T. P. Jarmon Company Balance Sheet for 12/31/2011 and 12/31/2012

ASSETS		
	2011	2012
Cash	\$ 15,000	\$ 14,000
Marketable securities	6,000	6,200
Accounts receivable	42,000	33,000
Inventory	51,000	84,000
Prepaid rent	\$ 1,200	\$ 1,100
Total current assets	\$115,200	\$138,300
Net plant and equipment	286,000	270,000
Total assets	\$401,200	\$408,300
LIABILITIES AND EQUITY		
	2011	2012
Accounts payable	\$ 48,000	\$ 57,000
Accruals	6,000	5,000
Notes payable	15,000	13,000
Total current liabilities	\$ 69,000	\$ 75,000
Long-term debt	\$160,000	\$150,000
Common stockholders' equity	\$172,200	\$183,300
Total liabilities and equity	\$401,200	\$408,300

T. P. Jarmon Company Income Statement for the Year Ended 12/31/2012

Sales	\$600,000
Less cost of goods sold	460,000
Gross profit	\$140,000
Operating and interest expenses	
General and administrative	\$30,000
Interest	10,000
Depreciation	30,000
Total operating and interest expenses	\$ 70,000
Earnings before taxes	\$ 70,000
Taxes	27,100
Net income available to common stockholders	\$ 42,900
Cash dividends	31,800
Change in retained earnings	\$ 11,100

3-16. (*Computing income taxes*) The William B. Waugh Corporation is a regional Toyota dealer. The firm sells new and used trucks and is actively involved in the parts business. During the most recent year, the company generated sales of \$3 million. The combined cost of goods sold and the operating expenses were \$2.1 million. Also, \$400,000 in interest expense was paid during the year. Calculate the corporation's tax liability.



3-17. (*Computing income taxes*) Sales for L. B. Menielle Inc. during the past year amounted to \$5 million. The firm provides parts and supplies for oil field service companies. Gross profits for the year were \$3 million. Operating expenses totaled \$1 million. The interest income from the securities it owned was \$20,000. The firm's interest expense was \$100,000. Compute the corporation's tax liability.

3-18. (*Computing income taxes*) Sandersen Inc. sells minicomputers. During the past year, the company's sales were \$3 million. The cost of its merchandise sold came to \$2 million, and cash

operating expenses were \$400,000; depreciation expense was \$100,000, and the firm paid \$150,000 in interest on its bank loans. Also, the corporation paid \$25,000 in the form of dividends to its own common stockholders. Calculate the corporation's tax liability.

Mini Case

This Mini Case is available in [MyFinanceLab](#).

In July 2011, the finale to the Harry Potter movie series, *Harry Potter and the Deathly Hallows—Part 2*, from Time Warner Inc.'s Warner Bros. Pictures, earned an estimated \$307 million in 59 countries overseas for the opening week, topping the previous best international debut of \$260.4 million set in May 2011 by Disney's *Pirates of the Caribbean: On Stranger Tides*. Time Warner Inc. and Walt Disney Co. both run diversified lines of entertainment and are major competitors with each other in many areas. According to Disney's annual report of fiscal 2010: "The Walt Disney Company, together with its subsidiaries, is a diversified worldwide entertainment company with operations in five business segments: Media Networks, Parks and Resorts, Studio Entertainment, Consumer Products and Interactive Media." And in the annual report of Time Warner: "Time Warner Inc., a Delaware corporation, is a leading media and entertainment company. The Company classifies its businesses into the following three reporting segments: Networks, Filmed Entertainment, and Publishing." Except for parks and resorts, Time Warner runs almost the same business lines as Disney.¹³

Below are the financial statements for the two firms. Time Warner's fiscal year ends on December 31; thus, the statements are for end-of-year 2009 and 2010. Disney, on the other hand, has a fiscal year ending on the Saturday closest to September 30; fiscal year 2009 ended on October 3, 2009, and fiscal year 2010 ended on October 2, 2010. As a result, Disney's financials are 3 months earlier than the financials for Time Warner.

- How did Time Warner's profit margins change from 2009 to 2010? To what would you attribute the differences? Answer the same questions for Disney.
- Compare the profit margins between Time Warner and Disney. How are they different? How would you explain these differences?
- What differences do you notice in the common-sized balance sheets that might indicate that one of the firms is doing better than the other?
- Conduct an Internet search on the two firms to gain additional insights as to causes of the financial differences between the firms in 2010 and continuing into 2011.
- How are the two companies doing financially today?

Time Warner Inc. Annual Income Statement and Common-Sized Income Statement for Years Ending December 31, 2009 and 2010 (in \$ millions except earnings per share)

	2009		2010	
	Dollar value	Percentage of sales	Dollar value	Percentage of sales
Sales	\$25,388	100.0%	\$26,888	100.0%
Cost of goods sold	14,235	56.1%	15,023	55.9%
Gross profits	\$11,153	43.9%	\$11,865	44.1%
Selling, general, and administrative expenses	6,073	23.9%	6,126	22.8%
Depreciation and amortization	280	1.1%	264	1.0%
Other operating expenses	330	1.3%	47	0.2%
Operating income	\$ 4,470	17.6%	\$ 5,428	20.2%
Interest expense	1,166	4.6%	1,178	4.4%
Nonoperating income (expenses)	(67)	−0.3%	(331)	−1.2%
Earnings before tax	\$ 3,237	12.8%	\$ 3,919	14.6%
Income taxes	1,153	4.5%	1,348	5.0%
Net income (loss)	\$ 2,084	8.2%	\$ 2,571	9.6%
Common shares outstanding	1,184.0		1,128.4	
Earnings per share	\$ 1.76		\$ 2.28	

Source: The Time Warner Cable 2010 Annual Report.

¹³Time Warner classifies its interactive media business as a part of the "Filmed Entertainment," and for Disney, publishing is a part of its "Consumer Products." Source: The Walt Disney Co. Fiscal Year 2010 Form 10-K.

Time Warner Inc. Balance Sheet and Common-Sized Balance Sheet for Years Ending December 31, 2009 and 2010 (\$ millions)

	DECEMBER 31, 2009		DECEMBER 31, 2010	
	Dollar value	Percentage of total assets	Dollar value	Percentage of total assets
ASSETS				
Cash and short-term investments	\$ 4,733	7.2%	\$ 3,663	5.5%
Receivables	5,875	8.9%	6,413	9.6%
Inventories	1,769	2.7%	1,920	2.9%
Other current assets	1,315	2.0%	1,142	1.7%
Total current assets	\$ 13,692	20.7%	\$ 13,138	19.7%
Gross fixed assets	\$ 14,950	22.6%	\$ 15,824	23.8%
Accumulated depreciation and amortization	(3,732)	−5.6%	(4,169)	−6.3%
Net fixed assets	\$ 11,218	17.0%	\$ 11,655	17.5%
Other assets	41,149	62.3%	41,731	62.7%
TOTAL ASSETS	\$ 66,059	100.0%	\$ 66,524	100.0%
LIABILITIES				
Accounts payable and accruals	\$ 7,807	11.8%	\$ 7,733	11.6%
Short-term notes payable	862	1.3%	26	0.0%
Other current liabilities	804	1.2%	884	1.3%
Total current liabilities	\$ 9,473	14.3%	\$ 8,643	13.0%
Long-term debt	15,346	23.2%	16,523	24.8%
Deferred taxes	1,607	2.4%	1,950	2.9%
Other liabilities	6,236	9.4%	6,463	9.7%
TOTAL LIABILITIES	\$ 32,662	49.4%	\$ 33,579	50.5%
EQUITY				
Common equity:				
Common stock:				
Par value	\$ 16	0.0%	\$ 16	0.0%
Capital surplus	158,129	239.4%	157,146	236.2%
Total common stock sold	\$158,145	239.4%	\$157,162	236.2%
Less: Treasury stock—total dollar amount	(27,034)	−40.9%	(29,033)	−43.6%
Total common stock	\$131,111	198.5%	\$128,129	192.6%
Retained earnings	(97,714)	(147.9%)	(95,184)	(143.1%)
Total common equity	\$ 33,397	50.6%	\$ 32,945	49.5%
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 66,059	100.0%	\$ 66,524	100.0%

Source: The Time Warner Cable 2010 Annual Report.

Walt Disney Co. Annual Income Statement and Common-Sized Income Statement for Years Ending October 3, 2009 and October 2, 2010 (in \$ millions except earnings per share)

	2009		2010	
	Dollar value	Percentage of sales	Dollar value	Percentage of sales
Sales	\$36,149	100.0%	\$38,063	100.0%
Cost of goods sold	<u>28,821</u>	<u>79.7%</u>	<u>29,624</u>	<u>77.8%</u>
Gross profits	\$ 7,328	20.3%	\$ 8,439	22.2%
Selling, general, and administrative expenses	<u>2,123</u>	<u>5.9%</u>	<u>1,983</u>	<u>5.2%</u>
Operating income	\$ 5,205	14.4%	\$ 6,456	17.0%
Interest expense	466	1.3%	409	1.1%
Nonoperating income (expenses)	<u>919</u>	<u>2.5%</u>	<u>580</u>	<u>1.5%</u>
Earnings before tax	\$ 5,658	15.7%	\$ 6,627	17.4%
Income taxes	<u>2,049</u>	<u>5.7%</u>	<u>2,314</u>	<u>6.1%</u>
Net income (loss)	<u>\$ 3,609</u>	<u>10.0%</u>	<u>\$ 4,313</u>	<u>11.3%</u>
Common shares outstanding	1,875		1,948	
Earnings per share	\$ 1.92		\$ 2.21	

Source: Data from The Walt Disney Company's 2010 Annual Financial Report.

Walt Disney Co. Balance Sheet and Common-Sized Balance Sheet for Years Ending October 3, 2009 and October 2, 2010 (\$ millions)

	OCTOBER 3, 2009		OCTOBER 2, 2010	
	Dollar value	Percentage of total assets	Dollar value	Percentage of total assets
ASSETS				
Cash and cash equivalents	\$ 3,417	5.4%	\$ 2,722	3.9%
Receivables	4,854	7.7%	5,784	8.4%
Inventories	1,271	2.0%	1,442	2.1%
Other current assets	<u>2,347</u>	<u>3.7%</u>	<u>2,277</u>	<u>3.3%</u>
Total current assets	\$11,889	18.8%	\$12,225	17.7%
Gross fixed assets	\$32,475	51.5%	\$32,875	47.5%
Accumulated depreciation and amortization	<u>(17,395)</u>	<u>-27.6%</u>	<u>(18,373)</u>	<u>-26.5%</u>
Net fixed assets	\$15,080	23.9%	\$14,502	21.0%
Other assets	<u>36,148</u>	<u>57.3%</u>	<u>42,479</u>	<u>61.4%</u>
TOTAL ASSETS	<u>\$63,117</u>	<u>100.0%</u>	<u>\$69,206</u>	<u>100.0%</u>
LIABILITIES				
Accounts payable and accruals	\$ 5,616	8.9%	\$ 6,109	8.8%
Short-term notes payable	1,206	1.9%	2,350	3.4%
Other current liabilities	<u>2,112</u>	<u>3.3%</u>	<u>2,541</u>	<u>3.7%</u>
Total current liabilities	\$ 8,934	14.2%	\$11,000	15.9%
Long-term debt	11,495	18.2%	10,130	14.6%
Deferred taxes	1,819	2.9%	2,630	3.8%
Other liabilities	<u>5,444</u>	<u>8.6%</u>	<u>6,104</u>	<u>8.8%</u>
TOTAL LIABILITIES	<u>\$27,692</u>	<u>43.9%</u>	<u>\$29,864</u>	<u>43.2%</u>
EQUITY				
Common equity:				
Total common stock sold	\$27,038	42.8%	\$28,736	41.5%
Less: Treasury stock—total dollar amount	<u>(22,693)</u>	<u>-36.0%</u>	<u>(23,663)</u>	<u>-34.2%</u>
Total common stock	\$ 4,345	6.9%	\$ 5,073	7.3%
Retained earnings	31,033	49.2%	34,327	49.6%
Other equity	<u>47</u>	<u>0.1%</u>	<u>(58)</u>	<u>-0.1%</u>
Total common equity	<u>\$35,425</u>	<u>56.1%</u>	<u>\$39,342</u>	<u>56.8%</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$63,117</u>	<u>100.0%</u>	<u>\$69,206</u>	<u>100.0%</u>

Source: Data from The Walt Disney Company's 2010 Annual Financial Report.

Appendix 3A

 Calculate a firm's free cash flows and financing cash flows.

Free Cash Flows

During recent years, free cash flow has come to be viewed by many executives as an important measure of a firm's performance. Jack Welch, the former CEO of General Electric, explains the importance of free cash flows to management in these words:

[T]here's cash flow, which is valuable because it just does not lie. All your other profit-and-loss numbers, like net income, have some art to them. They've been massaged through the accounting process, which is filled with assumptions. But free cash flow tells you the true condition of the business.¹⁴

What Is a Free Cash Flow?

We can think of a firm as a group of assets that produce cash flow. Once the firm has paid all its operating expenses and made all its investments, the remaining cash flows are *free* to be distributed to the firm's creditors and shareholders—thus, the term *free cash flows*. Being more specific, a company's *free* cash flows result from two activities:

1. *After-tax cash flows from operations* are the cash flows a firm generates from day-to-day operations after taxes are paid but before any investments in working capital or long-term assets are made. While not exactly true, you may think of it as the cash flows of a business if it were not getting larger or smaller in size. (You should note that when computing free cash flows, the term *cash flows from operations* is not the same as in the statement of cash flows presented earlier in the chapter.)
2. *Asset investments*, which include investments in (1) a company's *net operating working capital* and (2) its long-term assets. For the first item, *net operating working capital*, understand that this term is not exactly the same as *net working capital* described earlier in the chapter. The insertion of the word *operating* will change the meaning of the term. So watch for the subtle difference as you learn to compute free cash flows.

Computing Free Cash Flow

Simply stated, free cash flows are calculated as follows:

$$\begin{aligned} \text{Free cash flow} &= \left[\begin{array}{c} \text{after-tax} \\ \text{cash flows from operations} \end{array} \right] \\ &\text{less } \left[\begin{array}{c} \text{increase in} \\ \text{net operating} \\ \text{working capital} \end{array} \right] \text{ or plus } \left[\begin{array}{c} \text{decrease in} \\ \text{net operating} \\ \text{working capital} \end{array} \right] \end{aligned} \quad (3-1A)$$

and

$$\text{less } \left[\begin{array}{c} \text{increase in} \\ \text{long-term assets} \end{array} \right] \text{ or plus } \left[\begin{array}{c} \text{decrease in} \\ \text{long-term assets} \end{array} \right]$$

¹⁴Source: "How Healthy Is Your Company?" by Jack and Suzy Welch from *Bloomberg Businessweek*, May 8, 2006.

So the procedure for computing a firm's free cash flows involves three steps:

1. Compute the after-tax cash flows from operations by converting the income statement from an accrual basis to a cash basis. But be aware that when computing free cash flows, the term *cash flows from operations* is not the same as in the statement of cash flows.
2. Calculate the increase or decrease in the firm's investment in **net operating working capital**. As already mentioned, net working capital is now called *net operating working capital*, which we will explain shortly.
3. Compute the increase or decrease in investments made in long-term assets, including fixed assets and other long-term assets (such as intangible assets).

Let's look at each of the steps involved in calculating free cash flows.

STEP 1 *Determine the after-tax cash flows from operations*, computed as follows:

Operating income (earnings before interest and taxes, or EBIT)
+ depreciation expense
– income tax expense ¹⁵
= after-tax cash flows from operations

Thus, we compute after-tax cash flows from operations by adding back depreciation expense to operating income, because depreciation expense is not a cash expense, and then subtracting taxes to get the cash flows on an after-tax basis.

To illustrate how to compute a firm's after-tax cash flows from operations, return to the Home Depot's income statement in Table 3-1 on page 54, where we find the following information expressed in \$ millions:

Operating income (EBIT)	\$ 5,803
Depreciation expense	1,616
Income tax expense	1,935

Given this information, we find Home Depot's after-tax cash flows from operations to be \$5.484 billion, computed as follows:

Operating income (EBIT)	\$ 5,803
Plus depreciation	1,616
Less income tax expense	(1,935)
After-tax cash flows from operations	<u>\$ 5,484</u>

STEP 2 *Calculate the change in the net operating working capital*. For the second step, the change in net operating working capital is equal to the:

$$\left[\begin{array}{c} \text{change in} \\ \text{current assets} \end{array} \right] - \left[\begin{array}{c} \text{change in} \\ \text{non-interest-bearing} \\ \text{current liabilities} \end{array} \right]$$

¹⁵We should be subtracting actual taxes paid, which is frequently different from the income-tax expense shown in the income statement. But let's just keep things simple and assume they are the same for Home Depot.

where non-interest-bearing current liabilities are any short-term liabilities that do not require the firm to pay interest. This typically includes accounts payable (credit provided by the firm's suppliers) and any accrued operating expenses, such as accrued wages.

For Home Depot, the increase or decrease in *net operating working capital* is found by looking at the firm's balance sheets on January 31, 2010 and January 30, 2011 in Table 3-2, where we see that:

	JAN 31, 2010	JAN 30, 2011	CHANGES
Current assets	\$13,900	\$13,479	(\$421)
Accounts payable*	9,343	9,080	(263)
Net operating working capital	<u>\$ 4,557</u>	<u>\$ 4,399</u>	<u>(\$158)</u>

*Accounts payable is Home Depot's non-interest-bearing debt.

Thus, Home Depot reduced its investments in current assets by \$421 million and decreased (paid off) \$263 million in accounts payable. *It is important to remember that a decrease in an asset is a cash inflow and a decrease in a liability is a cash outflow.* So, in net, there was a reduction in net operating working capital, resulting in a cash inflow of \$158 million (\$158 million net cash inflow = \$421 million cash inflow from reducing current assets – \$263 million outflow from payments to creditors).

STEP 3 *Compute the change in long-term assets.* The final step involves computing the change in *gross* fixed assets (not *net* fixed assets) and other long-term assets. Again returning to the Home Depot's balance sheets, we see that there was an increase in gross fixed assets of \$1.126 billion from \$37.345 to \$38.471 billion and an increase in other assets of \$159 million from \$1.427 to \$1.586 billion. So Home Depot invested a total of \$1.285 billion in long-term assets, the total of \$1.126 billion and \$159 million.

Wrapping up. We now have the three pieces to compute Home Depot's free cash flows: (1) after-tax cash flows from operations, (2) changes (investments) in net operating working capital, and (3) changes (investments) in long-term assets. As shown below (expressed in millions), the firm's free cash flows are \$4.357 billion.

	\$ MILLIONS
After-tax cash flows from operations	\$5,484
Less investments in net operating working capital	(158)
Investment in long-term assets:	
Investment in fixed assets	(\$1,126)
Investment in other assets	<u>(159)</u>
Total investments in long-term assets	(\$1,285)
Free cash flows	<u>\$4,357</u>

Given these computations, we see that the firm's free cash flows were *positive* in the amount of \$4.357 billion, as a result of:

1. Generating \$5.484 billion in after-tax cash flows from operations,
2. Reducing its investments in net working capital by \$158 million, and
3. Investing \$1.285 billion in plant and equipment and other long-term assets.

The Other Side of the Coin: Financing Cash Flows

In the previous section, we saw that Home Depot's operations generated more than enough to finance its growth. So the question becomes, "What did Home Depot do with all the extra cash?" The answer: Positive free cash flows are distributed to the firm's investors. Negative free cash flows require that investors infuse money into the business. As we explain in the next section, any money coming from or paid to investors is called financing cash flows.

Financing Cash Flows

A firm can either receive money from or distribute money to its investors, or some of both. In general, cash flows between investors and the firm, which we will call *financing cash flows*, occur in one of four ways. The firm can:

1. Pay interest to lenders.
2. Pay dividends to stockholders.
3. Increase or decrease interest-bearing debt.
4. Issue new stock to shareholders or repurchase stock from current investors.

When we speak of *investors* in this context, we include both lenders and shareholders. However, we do *not* include financing provided by non-interest-bearing current liabilities, such as accounts payable, which were recognized earlier as part of the firm's net operating working capital.

We will now return to Home Depot to illustrate the process for calculating the firm's financing cash flows, which will also let us determine how the \$4.357 billion free cash flows that Home Depot experienced were distributed.

To compute the financing cash flows for Home Depot, we first determine the interest expense paid to lenders and the dividends paid to shareholders, which are provided in the firm's income statement (Table 3-1). We then refer to the balance sheet (Table 3-2) to see the changes in interest-bearing debt (both short-term and long-term) and common stock. The results are as follows:

Interest paid to lenders	\$ (530)	Use of cash
Common stock dividends	(1,569)	Use of cash
Change in interest-bearing debt:		
Increase in short-term debt	22	Source of cash
Decrease in long-term debt	(7)	Use of cash
Change in equity:		
Increase in common stock (par value + paid-in capital)	335	Source of cash
Repurchased common stock (treasury stock)	(2,608)	Use of cash
Financing cash flows	<u>\$ (4,357)</u>	

So, the firm:

- ◆ Paid \$530 million in interest and \$1.569 billion in dividends.
- ◆ Spent \$2.608 billion to repurchase outstanding common stock.
- ◆ Borrowed (increased) \$22 million in short-term interest-bearing debt and paid back (reduced) \$7 million of its long-term interest-bearing debt.
- ◆ Received \$335 million by issuing new common stock.

Add it all up and Home Depot distributed a net amount of \$4.357 billion to its creditors and shareholders. You should take a minute to compare this amount with the \$3.827 billion shown as financing activities in Home Depot's statement of cash flows on page 72. By doing so, you will see that the difference is \$530 million, which is exactly the amount of interest paid to lenders. Again, in the statement of cash flows, interest expense is included in operating cash flows, which is not the case here.

A Concluding Thought

It is not a coincidence that Home Depot's free cash flows exactly equal its financing cash flows. They will always be equal. The firm's free cash flows, if positive, will be the amount distributed to the investors; and if the free cash flow is negative, it will be the amount that the investors provide to the firm to cover the shortage in free cash flows.

Based on our review of Home Depot's free cash flows and financing cash flows, we know that the company had significant positive cash flows from operations, more than enough to cover its investments and distribute large sums of money to its investors.

Appendix Summary

Calculate a firm's free cash flows and financing cash flows. (pgs. 95–101)



SUMMARY: Free cash flows and financing cash flows are important measurements in making financial decisions. Only by understanding these cash flows can managers truly know how well a company is doing.

KEY EQUATION

$$\begin{aligned} \text{Free cash flow} &= \left[\begin{array}{c} \text{after-tax} \\ \text{cash flows from operations} \end{array} \right] \\ &\text{less } \left[\begin{array}{c} \text{increase in} \\ \text{net operating} \\ \text{working capital} \end{array} \right] \text{ or plus } \left[\begin{array}{c} \text{decrease in} \\ \text{net operating} \\ \text{working capital} \end{array} \right] \text{ and} \\ &\text{less } \left[\begin{array}{c} \text{increase in} \\ \text{long-term assets} \end{array} \right] \text{ or plus } \left[\begin{array}{c} \text{decrease in} \\ \text{long-term assets} \end{array} \right] \end{aligned}$$

Study Problems

All Study Problems are available in [MyFinanceLab](#).

3A-1 (*Computing free cash flows*) Given the following information, compute the firm's free cash flows and the financing cash flows.

Dividends	\$ 25
Change in common stock	\$ 27
Change in inventories	\$ 32
Change in accounts receivable	\$ 78
Change in other current assets	\$ 25
Operating income	\$215
Interest expense	\$ 50
Depreciation expense	\$ 20
Increase in accounts payable	\$ 48
Increase in gross fixed assets	\$ 55
Income taxes	\$ 45

3A-2 (*Free cash flow analysis*) Interpret the following information regarding Bates Corporation's free cash flows and financing cash flows.

Maness Corporation Free Cash Flows and Financing Cash Flows

FREE CASH FLOWS

Operating income (EBIT)	\$ 954
Depreciation expense	60
Tax expense	(320)
After-tax cash flows from operations	\$ 694
Increase in net working capital:	
Increase in current assets	(\$899)
Increase in accounts payable	175
Increase in net working capital	(\$ 724)
Change in long-term assets:	
Decrease in fixed assets	2,161
Free cash flows	<u>\$2,131</u>

FINANCING CASH FLOWS

Interest paid to lenders	(\$ 364)
Repayment of long-term debt	(850)
Repurchase of common stock	(1,024)
Common stock dividends	(1,341)
Financing cash flows	<u>(\$3,579)</u>

3A-3 (*Computing free cash flows and financing cash flows*) In Problem 3-12, you were asked to prepare a statement of cash flows for Abrahams Manufacturing Company. Use the information given in the problem to compute the firm's free cash flows and the financing cash flows, and interpret your results.

3A-4 (*Computing free cash flows and financing cash flows*) In Problem 3-14, you were asked to prepare a statement of cash flows for Pamplin Inc. Pamplin's financial statements are provided again below. Using this information, compute the firm's free cash flows and the financing cash flows, and interpret your results.

Pamplin Inc. Balance Sheet at 12/31/2011 and 12/31/2012

ASSETS		
	2011	2012
Cash	\$ 200	\$ 150
Accounts receivable	450	425
Inventory	550	625
Current assets	<u>\$1,200</u>	<u>\$1,200</u>
Plant and equipment	\$2,200	\$2,600
Less accumulated depreciation	(1,000)	(1,200)
Net plant and equipment	<u>\$1,200</u>	<u>\$1,400</u>
Total assets	<u>\$2,400</u>	<u>\$2,600</u>

LIABILITIES AND OWNERS' EQUITY		
	2011	2012
Accounts payable	\$ 200	\$ 150
Notes payable—current (9%)	0	150
Current liabilities	\$ 200	\$ 300
Bonds	\$ 600	\$ 600
Owners' equity		
Common stock	\$ 900	\$ 900
Retained earnings	700	800
Total owners' equity	\$1,600	\$1,700
Total liabilities and owners' equity	\$2,400	\$2,600

Pamplin Inc. Income Statement for Years Ended 12/31/2011 and 12/31/2012

	2011	2012
Sales	\$1,200	\$1,450
Cost of goods sold	700	850
Gross profit	\$ 500	\$ 600
Selling, general, and administrative expenses	\$ 30	\$ 40
Depreciation	220	250
Operating income	\$ 250	\$ 360
Interest expense	\$ 50	64
Net income before taxes	\$ 200	\$ 296
Taxes (40%)	80	118
Net income	\$ 120	\$ 178