Chapter 9: Finance: Acquiring and Using Funds to Maximize Value
(pp. 132-0)

LEARNING OBJECTIVES

After studying this chapter, you will be able to...

LO1 Identify the goal of financial management and explain the issues financial managers confront as they seek to achieve this goal

LO2 Describe the tools financial managers use to evaluate their company's current financial condition and develop financial plans

LO3 Evaluate the major sources of funds available to meet a firm's short term and long-term financial needs
LO4 Identify the key issues involved in determining a firm's capital structure

LO5 Describe how financial managers acquire and manage current assets

LO6 Explain how financial managers evaluate capital budgeting proposals to identify the best long-term investment options for their company

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“The WASTE OF MONEY CURES ITSELF, FOR SOON THERE IS NO MONEY TO WASTE.”

— M. W. HARRISON

LO1 What Motivates Financial Decisions?

Financial capital refers to the funds a firm uses to acquire its assets and finance its operations. Firms use some of their capital to meet short-term obligations, such as paying bills from suppliers, meeting payroll, repaying loans from banks, and paying taxes owed to the government. Other funds are used to finance major long-term investments, such as the purchase of plant and equipment or the launch of a new product line. And, of course, firms need some funds to pay a return to the owners for their investment in the company.

Companies also have a variety of ways to acquire the financial capital they need: direct contributions by owners, reinvestment of earnings, loans from banks, credit provided by suppliers, and (for corporations) newly issued stocks or bonds. This isn't a complete list by any means—in fact, we'll discuss additional sources later in the chapter—but you get the idea: firms often have several ways to raise money.

In a nutshell, finance is the functional area of business that is responsible for finding, among all these alternatives, the best sources of funds and the best way to use them. But which sources and uses are “best” depends on the goals of the financial managers. Historically, the most widely accepted goal of financial management has been to maximize the value of the firm to its owners. For corporations with publicly traded stock, this translates into finding the sources and uses of financial capital that will maximize the market price of the company's common stock.

Financial managers emphasize the goal of maximizing the market price of stock because they have a legal and ethical obligation (called a fiduciary duty) to make decisions consistent with the financial interests of their firm's owners. After all, the stockholders are the ones with their money at risk. The managers who work for the company have a fiduciary responsibility to act in the best interests of the stockholders, and that means increasing the value of their investment in the company.

Another reason for emphasizing shareholder wealth is more pragmatic. Firms that fail to create shareholder wealth are unlikely to be viewed as attractive investments. Thus, in order to continue attracting the financial capital needed to achieve its other goals, a firm must provide value to its existing stockholders.

But finding the mix of sources and uses of funds that maximize shareholder value isn't a simple process. Let's look at two major
issues that confront financial managers as they seek to achieve their primary goal.

Shareholder Value and Social Responsibility: Does Good Behavior Pay Off?

The emphasis that financial managers place on maximizing shareholder value may seem to conflict with the modern view that a socially responsible firm has an obligation to respect the needs of all stakeholders—not just its owners, but also its employees, customers, creditors, suppliers, and even society as a whole. The good news is that being socially responsible can be (and often is) a good strategy for also achieving the goal of shareholder wealth maximization—especially if managers take a long-term perspective.

When a company respects the needs of customers by providing high-quality goods and services at competitive prices, and when it listens and responds fairly to their concerns, those customers are more likely to keep coming back—and to recommend the company to friends and relatives. Similarly, when a firm provides its employees with a good work environment, those employees are likely to have better morale and greater loyalty, resulting in higher productivity and lower employee turnover. And when a company supports its local community through corporate philanthropy or cause-related marketing, the resulting goodwill may boost sales and create a more favorable business climate. All of these outcomes suggest that a commitment to meeting social responsibilities can contribute to a more profitable company and an increase in shareholder value.¹

But things aren't always that simple. Being socially responsible requires a long-term commitment to the needs of many different stakeholders. Unfortunately, the incentives of top executives (in the form of raises, bonuses and other perks) are often tied to their firm's short-term performance. In such cases, some managers focus on policies that make their firm's stock price rise in the short run, but which are unsustainable over the long haul. And when managers fix their attention on raising the market price of the company's stock in the next year (or next quarter) concerns about social responsibility sometimes get lost in the shuffle.

It is also worth noting that responding to the needs of all stakeholders isn't always a simple and straightforward task. Diverse stakeholder groups can have very different goals, and finding the right balance among the competing interests of these groups can be difficult. For example, a firm's managers might believe they can increase its profits (and the value of its stock) by shutting down its existing plant in the United States and outsourcing the work to China. While this might benefit shareholders, it would clearly be devastating to its existing U.S. workforce and the community in which its current plant is located. When conflicts arise between the long-term interests of owners and those of other stakeholders, financial managers generally adopt the policies they believe are most consistent with the interests of ownership.

Risk and Return: A Fundamental Tradeoff in Financial Management

One of the most important lessons in financial management is that there is a tradeoff between risk and return. In financial management risk refers to the degree of uncertainty about the actual outcome of a decision. The risk-return tradeoff suggests that sources and uses of funds that offer the potential for high rates of return tend to be more risky than sources and uses of funds that offer lower returns.

Financial managers want to earn an attractive rate of return for shareholders. But they also must realize that the higher the expected return they seek, the more they expose their company to risk. Our nation's recent economic history illustrates this point. In the years just prior to the Great Recession,

In a 2010 survey of 2,000 executives and investors, over 75% agreed that socially responsible policies create corporate value over the long run.

—Harvard Business Review

many firms in the financial sector invested heavily in the housing market—a strategy that offered the potential for high returns but was very risky. Many of these same firms chose to finance most of their investments by increasing their own debt, which made the risk even greater.

When the housing market faltered, and prices dropped, these firms found themselves in serious trouble; their debts were coming due at the same time the value of their investments was falling. Many of the companies who engaged in these risky strategies went belly-up during the early stages of the financial meltdown. The list of failures included some major banks and Wall Street firms that had been considered icons of free-market capitalism. In fact, firms with almost $1.2 trillion in assets filed for bankruptcy in 2008. To put that in perspective, the total asset value of all of the firms that went bankrupt in the post-9/11
recession of 2001-2002 (a downturn that included the bankruptcies of Enron, WorldCom and several other huge corporations) was less than $500 billion. And it could have been worse; without massive assistance (what some critics called a “bailout”) by the federal government, many other major corporations might have suffered the same fate.²

**LO2 Identifying Financial Needs: Evaluation and Planning**

Before financial managers can determine the best financial strategies for their firm, they must identify its existing strengths and weaknesses. Then they must devise financial plans that provide a roadmap the firm can use to improve its financial performance and acquire the resources it needs to achieve both its short-term and long-term objectives.

**Using Ratio Analysis to Identify Current Strengths and Weaknesses**

One way financial managers evaluate the firm's current strengths and weaknesses is by computing ratios that compare values of key accounts listed on their firm's financial statements—mainly its balance sheet and income statement. This technique is called **financial ratio analysis**. Over the years, financial managers have developed an impressive array of specific ratios. Most of the key ratios fall into one of four basic categories:

1. **Liquidity ratios**: In finance a **liquid asset** is one that can be quickly converted into cash with little risk of loss. **Liquidity ratios** measure the ability of an organization to convert assets into the cash it needs to pay off liabilities that come due in the next year. Liquidity concerns became a major issue for many companies in 2008, when declining sales cut into operating cash flows and credit markets dried up with the onset of the recession.

   One of the simplest and most commonly used liquidity ratios is the **current ratio**, which is computed by dividing a firm's current assets by its current liabilities. Current assets include cash and other assets expected to be converted...

**JUST BECAUSE THEY CAN...**

The housing boom between 2003 and 2007 seemed like a win-win situation for everyone. The surge in housing construction created jobs and stimulated economic growth. Millions of Americans who had never owned a home found themselves moving into their dream house. Even Americans who already owned homes saw the value of their houses soar. And lenders in the mortgage market made huge profits.

But in reality, these gains were the result of an unsustainable bubble, due in part to the shortsighted—and sometimes unethical—behavior of mortgage brokers who arranged housing loans and the lenders who provided the funds. These brokers and lenders increasingly tapped the subprime mortgage market, consisting of borrowers who lacked the financial capacity to qualify for conventional loans. To make these loans appear affordable, brokers pushed variable rate mortgages with very low initial rates. They knew that subprime borrowers would be unable to make the higher payments if interest rates rose, but often neglected to explain this fact to the borrowers. They also pushed many unsophisticated borrowers into mortgage agreements that generated high fees, which they folded into the mortgage. The result: more income for the brokers and lenders and higher payments for the borrower.

... DOESN'T MEAN THEY SHOULD.
While such policies increased the profits of brokers and lenders at first, in the long run they were unsustainable. When interest rates on variable rate mortgages increased a huge number of subprime borrowers defaulted on their loans. In many areas, the surge in foreclosures contributed to a steep decline in housing prices. Mortgage lending collapsed, and many of the most aggressive firms in the subprime market were wiped out.

Many observers believe more ethical mortgage lending practices could have resulted in a better outcome. As Nobel Prize winning economist Joseph Stiglitz put it, “Had the designers of these mortgages focused on the ends—what we actually wanted from our mortgage market—rather than how to maximize their revenues, then they might have devised products that permanently increased homeownership. They could have ‘done well by doing good.”

What do YOU think?

- What ethical responsibilities do mortgage brokers and lenders have to their borrowers?
- What responsibility did subprime borrowers have to “read the fine print” in their loan agreements?
- How do the lessons of the mortgage crisis illustrate the need to focus on the long-term consequences of financial decisions?

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into cash in the next year, while current liabilities are the debts that must be repaid in the next year. The larger the current ratio, the easier it should be for a firm to obtain the cash needed to pay its short-term debts. But, as we'll explain when we discuss how a firm manages its cash and other liquid assets, it is also possible to have too much liquidity.

2. Asset management ratios: Asset management ratios (also sometimes called activity ratios) provide measures of how effectively an organization is using its assets to generate net income. For example, the inventory turnover ratio—computed by dividing the firm's cost of goods sold by average inventory—measures how many times a firm's inventory is sold and replaced each year. Up to a point, a high turnover ratio is good because it indicates that the firm's products are moving quickly. On the other hand, a low inventory turnover indicates that goods may be sitting on the firm's shelves or stored in its warehouses for long periods of time—usually not a positive sign. However, it is possible for an inventory turnover ratio to be too high. For instance, a high ratio could mean that the company isn't keeping enough goods in stock, causing frequent stockouts. This can frustrate customers and result in lost sales if they take their business elsewhere.

For firms that sell a lot of goods on credit, the average collection period is another important asset management ratio. This ratio is computed by dividing accounts receivable by average daily credit sales. A value of 45 for this ratio means that customers take 45 days (on average) to pay for their credit purchases. In general, the smaller the ratio the better, since a lower value indicates that the firm's customers are paying for their purchases more quickly. But we'll see in our discussion of working capital management that low collection periods can also have drawbacks.

3. Leverage ratios: Financial leverage is the use of debt to meet a firm's financing needs; a highly leveraged firm is one that relies heavily on debt. While the use of leverage can benefit a firm when times are good, a high degree of leverage is very risky. As we mentioned earlier, the extensive use of debt financing by big banks and major Wall Street firms played a major role in the financial meltdown that began during the latter part of the last decade.

Leverage ratios measure the extent to which a firm uses financial leverage. One common measure of leverage is the debt-to-asset ratio (which is sometimes just called the debt ratio), which is computed by dividing a firm's total liabilities by its total assets. If a firm financed half its assets with debt and half with owners' equity, its debt ratio would be .5 (or 50%). The higher the debt-to-asset ratio, the more heavily leveraged the firm is.

4. Profitability ratios: Firms are in business to earn a profit, and profitability ratios provide measures of how successful they are at achieving this goal. There are many different profitability ratios, but we'll look at just a couple of examples. Return-on-equity (ROE), calculated by dividing net income (profit) by owners' equity, measures the income earned per dollar invested by the stockholders. If a firm issues both common and preferred stock, the computation of this ratio typically measures only the return to the common stockholders, since they are considered to be the true owners of the company. Thus, dividends paid to preferred stockholders are subtracted from net income in the numerator when computing ROE because these dividends aren't available to common stockholders. Similarly, the denominator of this ratio includes only equity provided by common stockholders and retained earnings.

Another profitability ratio, called earnings per share (EPS), indicates how much net income a firm earned per share of common stock outstanding. It is calculated by dividing net income minus preferred dividends by the average number of shares of common stock outstanding.

Exhibit 9.1 defines each of the ratios we've just described and shows how it is computed. As you look at the exhibit, keep in mind that the leverage and profitability ratios we've just discussed are only a sampling of the measures that are used to assess the financial performance of a firm.
mind that it represents only a sample; financial managers have developed many more ratios than we can describe.

**Planning Tools: Creating a Road Map to the Future**

Ratio analysis helps managers identify their firm's current financial strengths and weaknesses. The next step is to develop plans that build on the firm's strengths and correct its weaknesses. Financial planning is an important part of the firm's overall planning process. Assuming that the overall planning process has established appropriate goals and objectives for the firm, financial planning must answer the following questions:

- What specific assets must the firm obtain in order to achieve its goals?
- How much additional financing will the firm need to acquire these assets?
- How much financing will the firm be able to generate internally (through additional earnings), and how much must it obtain from external sources?
- When will the firm need to acquire external financing?
- What is the best way to raise these funds?

The planning process involves input from a variety of areas. In addition to seeking input from managers in various functional areas of their business, financial managers usually work closely with the firm's accountants during the planning process.

**Basic Planning Tools: Budgeted Financial Statements and the Cash Budget**

The budgeting process provides financial managers with much of the information they need for financial planning. In fact, the **budgeted income statement** and **budgeted balance sheet** are two key financial planning tools. Also called **pro forma financial statements**, they provide a framework for analyzing the impact of the firm's plans on the financing needs of the company.

- The budgeted income statement uses information from the sales budget and various cost budgets (as well as other assumptions) to develop a forecast of
### Exhibit 9.1 Key Financial Ratios © Cengage Learning 2013

<table>
<thead>
<tr>
<th>Ratio Name</th>
<th>Type</th>
<th>What It Measures</th>
<th>How It Is Computed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>Liquidity: measures ability to pay short-term liabilities as they come due.</td>
<td>Compares current assets (assets that will provide cash in the next year) to current liabilities (debts that will come due in the next year).</td>
<td>Current Assets / Current Liabilities</td>
</tr>
<tr>
<td>Inventory Turnover</td>
<td>Asset management: measures how effectively a firm is using its assets to generate revenue.</td>
<td>How quickly a firm sells its inventory to generate revenue.</td>
<td>Cost of Goods Sold / Average Inventory</td>
</tr>
<tr>
<td>Average Collection Period</td>
<td>Asset management: measures how effectively a firm is using its assets to generate revenue.</td>
<td>How long it takes for a firm to collect from customers who buy on credit.</td>
<td>Accounts Receivable / (Annual Credit Sales / 365)</td>
</tr>
<tr>
<td>Debt-to-Assets</td>
<td>Leverage: measures the extent to which a firm relies on debt to meet its financing needs.</td>
<td>Similar to debt-to-equity, but compares debt to assets rather than equity. This is another way of measuring the degree of financial leverage, or debt, the firm is using.</td>
<td>Total Debt / Total Assets</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>Profitability: compares the amount of profit to some measure of resources invested.</td>
<td>Indicates earnings per dollar invested by the owners of the company. Since common stockholders are the true owners, preferred stockholders' dividends are deducted from net income before computing this ratio.</td>
<td>(Net Income – Preferred Dividend) / Average Common Stockholders Equity</td>
</tr>
<tr>
<td>Earnings Per Share</td>
<td>Profitability: compares the amount of profit to some measure of resources invested.</td>
<td>Measures the net income per share of common stock outstanding.</td>
<td>(Net Income – Preferred Dividend) / Average Number of Common Share Outstanding</td>
</tr>
</tbody>
</table>

Net income for the planning period. This can help the firm evaluate how much internal financing (funds generated by earnings) will be available.

- The budgeted balance sheet forecasts the types and amounts of assets a firm will need to implement its future plans. It also helps financial managers determine the amount of additional financing (liabilities and owners' equity) the firm must arrange in order to acquire those assets.

The **cash budget** is another important financial planning tool. Cash budgets normally cover a one-year period and show projected cash inflows and outflows for each month. Financial managers use cash budgets to get a better understanding of the timing of cash flows within the planning period. This is important because most firms experience uneven inflows and outflows of cash over the course of a year, which can lead to cash shortages and cash surpluses. Projecting cash flows helps financial managers determine when the firm is likely to need additional funds to meet short-term cash shortages, and when surpluses of cash will be available to pay off loans or to invest in other assets.
Even firms with growing sales can experience cash flow problems, especially if many of their customers buy on credit. To meet increasing sales levels, a growing firm must hire more labor and buy more supplies. These workers and suppliers may expect to be paid well before the company’s credit customers pay their bills, leading to a temporary cash crunch.

Exhibit 9.2 illustrates this type of situation by presenting a partial cash budget for a hypothetical firm called Oze-Moore. The cash budget shows that, despite its increasing sales, Oze-Moore will have cash shortages in March and April. Knowing this in advance gives financial managers time to find the best sources of short-term financing to cover these shortages. The cash budget also shows that Oze-Moore will experience a big cash surplus in May as the credit customers start paying for the purchases they made in March and April. Knowing this ahead of time helps managers forecast when they will be able to repay the loans they took out to cover their previous cash shortages. It also gives them time to evaluate short-term interest-earning investments they could make to temporarily “park” their surplus cash.

### Exhibit 9.2 Cash Budget for Oze-Moore © Cengage Learning 2013

<table>
<thead>
<tr>
<th>Sales</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash balance at beginning of month</td>
<td>$75,000</td>
<td>$100,000</td>
<td>$125,000</td>
<td>$90,000</td>
</tr>
<tr>
<td>Receipts of Cash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash sales</td>
<td>$10,000</td>
<td>$10,000</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Collection of accounts receivable from last month’s sales</td>
<td>$65,750</td>
<td>$93,500</td>
<td>$106,250</td>
<td>$75,750</td>
</tr>
<tr>
<td>Total Cash Available</td>
<td>$95,750</td>
<td>$122,500</td>
<td>$129,250</td>
<td>$75,750</td>
</tr>
</tbody>
</table>

| Disbursements of Cash |          |       |       |       |
| Payment of accounts payable | $60,000  | $65,750 | $49,500 | $49,000 |
| Wages and salaries      | $27,500  | $31,250 | $22,500 | $22,250 |
| Fixed costs (rent, interest on debt, etc) | $8,000   | $8,500  | $8,000  | $8,000  |
| Purchase of new computers | $8,000   | $6,500  | $6,500  | $6,500  |
| Total Cash Payments     | $98,500  | $114,500 | $89,500 | $89,000 |

| Excess or Deficit of Cash for Month |          |       |       |       |
| Loans needed to maintain cash balance of $10,000 | $15,750  | $22,250 | $0    | $39,750 |
| Amount of cash available to repay short-term loans | $0       | $0    | $39,750 | $39,750 |
| Cash balance at end of month | $10,000  | $10,000 | $31,750 | $31,750 |
| Cumulative loans | $15,750  | $18,750 | $0    | $0    |

LO3 Finding Funds: What Are the Options?
Once financial managers have identified the amount of financial capital needed to carry out their firm's plans, the next step is to determine which sources of funds to tap. The most appropriate sources of funds for a business depend on several factors. One of the most important considerations is the firm's stage of development. Start-up firms face different challenges and have different needs than more established firms. Another factor is the reason the funds are needed. Funds used to meet short-term needs, such as meeting payroll, paying suppliers, or paying taxes typically come from different sources than funds used to finance major investments in plant, property, and equipment.

The financing options available to new firms are generally much more limited than those available to more mature firms with an established track record. In fact, for start-up firms the main source of funds is likely to be the personal wealth of the owner (or owners), supplemented by loans from relatives and friends. Given how risky new business ventures are, banks and other established lenders are likely to be hesitant to make loans to an unproven new company. (In some cases, the Small Business Administration may help overcome this reluctance by guaranteeing loans for startups and other small businesses that satisfy its criteria.) As the firm grows and becomes more established, it may be able to obtain financing from other sources.

Some start-ups with the potential for generating rapid growth may be able to attract funds from wealthy individuals, called angel investors, or from venture capital firms. Both angel investors and venture capitalists typically invest in risky opportunities that offer the possibility of high rates of return. Both also typically provide funds in exchange for a share of ownership.

**Sources of Short-Term Financing: Meeting Needs for Cash**

Firms that have survived the start-up phase of the business life cycle often have several sources of short-term financing. Let's take a look at some of the most common options.

**Trade credit**

One of the most important sources of short-term financing for many firms is trade credit, which arises when suppliers ship materials, parts, or goods to a firm without requiring payment at the time of delivery. By allowing the firms to “buy now, pay later,” they help the firm conserve its existing cash, thus avoiding the need to acquire funds from other sources.

**For a Socially Responsible Firm in Need of Funds, There's No Need to Fear...**

Venture capital (VC) firms have long been an important source of financing for hot new companies offering the potential for rapid growth. VCs are limited partnerships or limited liability companies that pool funds from wealthy individuals and institutional investors (such as pension funds and college endowments) and invest those funds in firms with high profit potential. Many of today's best-known corporations, including Staples, Google, Apple, and Starbucks, got their first major funding from venture capitalists.

Traditional venture capital firms focus almost exclusively on the bottom line. They are willing to invest in “green” companies (and often do), but only if the firms offer potentially high (and quick) returns. But beginning around the turn of the new century, a new breed of “green” VC firm emerged. These new firms still seek a solid financial return, but that isn't their only goal. They exist to fund firms that pursue worthy social and environmental goals—and do so even if the expected financial return is a bit lower and they have to wait longer to receive it.

Consider Underdog Ventures, a VC firm whose managing partner, David Berge, was listed in *Inc. Magazine* in 2009 as one of 30 entrepreneurs who were “saving the world.” Underdog invests only in firms that exhibit socially responsible business practices. And it is more patient with its investments, putting less pressure on the firms to create a quick return. Another difference between Underdog and traditional VC firms is that it allows investors to specify the type of firm they want to fund and to target certain demographic or geographic opportunities, such as businesses owned and operated by women or minorities, or those located in depressed areas. Finally, it has set up its own philanthropic organization, called the Underdog Foundation, to support socially responsible projects that cannot be satisfied by profit-seeking investments. Even more impressive: every investor in Underdog Ventures and every firm that has received funds from Underdog has contributed to the foundation.  

In most cases, the terms of trade credit are presented on the invoice the supplier includes with the shipment. For example, the invoice might list the terms as 2/10 net 30. The “net 30” indicates that the supplier allows the buyer 30 days before payment is due. But the “2/10” tells the buyer that the supplier is offering a 2% discount off the invoice price if it pays within 10 days.
At first glance, the 2% discount in our example may not seem like a big deal. But failing to take the discount can be very costly. Consider the terms we mentioned above: 2/10, net 30. If the firm fails to pay within 10 days, it loses the discount and must pay the full amount 20 days later. Paying 2% more for the use of funds for only 20 days is equivalent to an annual finance charge of over 37%.

Suppliers will grant trade credit only after they've evaluated the creditworthiness of the firm. But once they've granted this credit to a company, they generally continue offering it as long as the firm satisfies the terms of the credit arrangements. Trade credit is sometimes called spontaneous financing because it is granted when the company places its orders without requiring any additional paperwork or special arrangements. The level of trade credit automatically adjusts as business conditions change and the company places larger or smaller orders with its suppliers.

Although firms of all sizes use this type of financing, trade credit is a particularly important source of financing for small businesses. The Federal Reserve Board's Survey of Small Business Finances indicates that about 60% of all small firms rely on trade credit as a major source of short-term financial capital.

Factoring

The money that customers owe a firm when they buy on credit shows up in the accounts receivable account on the company's balance sheet. A factor is a company that buys the accounts receivables of other firms. The factor makes a profit by purchasing the receivables at a discount from the firm and collecting the full amount from the credit customer.

Although firms that use factors don't receive the full amount their customers owe, factoring offers some definite advantages. Instead of having to wait for credit customers to pay, the firm gets its money almost immediately. Also, since the factor is responsible for collection efforts, the firm using the factor may be able to save money by eliminating its own collection department. Finally, the factor typically assumes the risk for bad debts on any receivables it buys. (However, factors typically perform a careful evaluation of the quality of accounts receivable before they buy them and may refuse to buy receivables that are highly risky.) According to the Commercial Finance Association, factoring has typically provided more than $130 billion dollars in short-term funds to American businesses in recent years.

Short-Term Bank Loans

Banks are another common source of short-term business financing. Short-term bank loans are usually due in 30 to 90 days, though they can be up to a year in length. When a firm negotiates a loan with a bank, it signs a promissory note, which specifies the length of the loan, the rate of interest the firm must pay, and other terms and conditions of the loan. Banks sometimes require firms to pledge collateral, such as inventories or accounts receivable, to back the loan. That way, if the borrower fails to make the required payments, the bank has a claim on specific assets that can be used to pay off the amount due.

Rather than going through the hassle of negotiating a separate loan each time they need more funds, many firms work out arrangements with their bankers to obtain pre-approval so that they can draw on funds as needed. One way they do this is by establishing a line of credit. Under this arrangement, a bank agrees to provide the firm with funds up to some specified limit, as long as the borrower's credit situation doesn't deteriorate, and the bank has sufficient funds—conditions that aren't always met, as the recent financial meltdown clearly illustrated.

A revolving credit agreement is similar to a line of credit, except that the bank makes a formal, legally binding commitment to provide the agreed-upon funds. In essence, a revolving credit agreement is a guaranteed line of credit. In exchange for the binding commitment to provide the funds, the bank requires the borrowing firm to pay a commitment fee based on the unused amount of funds. Thus, under the terms of a revolving credit agreement, the firm will pay interest on any funds it borrows, and a commitment fee on any funds it does not borrow. The commitment fee is lower than the interest on the borrowed funds, but it can amount to a fairly hefty charge if the firm has a large unused balance.

Commercial paper

Well-established corporations have some additional sources of short-term financial capital. For instance, many large corporations with strong credit ratings issue commercial paper, which consists of short-term promissory notes (IOUs). Historically, commercial paper issued by corporations has been unsecured—meaning it isn't backed by a pledge of collateral. Because it is normally unsecured, commercial paper is only offered by firms with excellent credit ratings; firms with less-than-stellar financial reputations that tried to issue unsecured commercial paper would be unlikely to find buyers. In recent years, a new class of commercial paper
has emerged, called asset-backed commercial paper, which, as its name implies, is backed by some form of collateral.

Commercial paper can be issued for up to 270 days, but most firms typically issue it for much shorter periods—sometimes for as little as two days. One key reason commercial paper is popular with companies is that it typically carries a lower interest rate than commercial banks charge on short-term loans. By far the biggest issuers of commercial paper are financial institutions, but other large corporations also use this form of financing.

The market for commercial paper normally is huge—often close to $2 trillion—but it can fluctuate dramatically as economic conditions change. Because most commercial paper is unsecured, investors tend to view it as risky when business conditions deteriorate. In fact, when the economy spiraled into the Great Recession of 2008-2009 the market for commercial paper essentially dried up. This put a tremendous strain on many struggling financial institutions that relied on commercial paper to meet their short-term cash needs. The situation became so grim that in October of 2008 the Fed established the Commercial Paper Funding Facility, a limited liability company funded by the Federal Reserve Bank of New York. This facility, which the Fed operated until February 1, 2010, ultimately purchased several hundred billion dollars of commercial paper, providing a crucial infusion of cash into this stressed market.\

Sources of Long-term Funds: Providing a Strong Financial Base

The sources of financial capital we've looked at so far have been appropriate for dealing with cash needs that arise from short-term fluctuations in cash flows. But financial managers typically seek more permanent funding to finance major investments and provide a secure financial base for their company. Let's take a look at some of the more common sources of long-term funds.

Direct Investments from Owners

One key source of long-term funds for a firm is the money the owners themselves invest in their company. For corporations, this occurs when it sells newly issued stock—and it's important to realize that the only time the corporation receives financial capital from the sale of its stock is when it is initially issued. If Google issued some new shares of stock which you bought, the funds would go to Google. But once you own Google's stock, if you decide to sell your shares to another investor Google would get nothing. The money from the sale is all yours—less, of course, the commission you pay to your broker and taxes on any gains you make on the sale.

Another way firms can meet long-term financial needs is by reinvesting their earnings. The profits that a firm reinvests are called retained earnings. This source isn't a pool of cash; it simply reflects the share of the firm's earnings that has been used to finance the purchase of assets and pay off liabilities. If you want to find the amount of cash the firm has, check the figure in the cash account at the top of its balance sheet. You'll typically find that the value in the firm's cash account is quite different from the amount listed in the retained earnings!

Retained earnings are a major source of long-term capital for many corporations, but the extent to which they are used depends on the state of the economy. When the economy is booming and profits are high, retained earnings tend to soar. But when the economy slides into a recession, most corporations find they have few earnings to reinvest. For instance, in 2006 (the last real “boom” year prior to the Great Recession) corporate retained earnings exceeded $430 billion, while in the recession year of 2008 the figure fell to $157 billion—a drop of well over 60%.

The decision to retain earnings involves a tradeoff, because firms have another way to use their earnings: they can pay out some or all of their profits to their owners by declaring a dividend. You might think that stockholders would be unhappy with a firm that retained most of its earnings, since that would mean they would receive a smaller dividend. But many stockholders actually prefer their companies to reinvest earnings—at least if management invests them wisely—because doing so can help finance their firm's growth. And a growing, more profitable firm usually translates into an increase in the market price of the firm's stock.

Apple historically has paid no dividends, choosing instead to reinvest all of its substantial profits. This strategy has paid off handsomely for stockholders. During the ten-year period between March 1, 2001, and February 18, 2011, the value of Apple's stock soared from $9.38 to $353.21 per share. Despite the fact that Apple paid them no dividend, you can bet that most of Apple's shareholders were pleased with the capital gains that resulted from this strategy!

Long Term Debt

In addition to contributions from owners, firms can also raise long term funds by borrowing from banks and other lenders or by issuing bonds.

Term Loans
There are many different types of long-term loans, but the most typical arrangement—sometimes simply called a *term loan*—calls for a regular schedule of fixed payments sufficient to ensure that all interest and principal (the amount initially borrowed) are repaid by the end of the loan’s term.

Lenders often impose requirements on long-term loans to ensure repayment. Most lenders require that the loans to be backed by the pledge of some type of collateral. Banks and other lenders also often include *covenants* in their loan agreements. A *covenant* is a requirement a lender imposes on the borrower as a condition of the loan. One common covenant requires the borrower to carry a specified level of liability insurance. Another requires the borrower to agree not to borrow any *additional* funds until the current loan is paid off. Covenants sometimes even restrict the size of bonuses or pay raises the firm can grant to employees. The purpose of covenants is to protect creditors by preventing the borrower from pursuing policies that might undermine its ability to repay the loan. While covenants are great for the lender, borrowers often view them as highly restrictive.

**Corporate bonds**

Rather than borrow from banks or other lenders, corporations sometimes issue their own formal IOUs, called *corporate bonds*, which they sell to investors. Bonds often have due dates (maturities) of ten or more years after issuance. Like corporate stock, bonds are marketable, meaning that bondholders can sell them to other investors before they mature. But it is important to realize that unlike shares of stock, which represent ownership in a corporation, bonds are certificates of debt.

**LO4 Leverage and Capital Structure: How Much Debt Is Too Much Debt?**

Most firms use a combination of *equity* and *debt financing* to acquire needed assets and to finance their operations. Owners provide equity financing, while creditors (lenders) provide debt requiring managers to weigh the risks and rewards of financial leverage. © Christopher T Stein/Chaos/Digital Vision/Jupiterimages financing. Thus, when a company issues and sells new stock or uses retained earnings to meet its financial needs, it is using equity financing. But when it takes out a bank loan or issues or issues and sells corporate bonds, it is relying on debt financing.

Both equity and debt financing have advantages and drawbacks. The extent to which a firm relies on various forms of debt and equity to satisfy its financing needs is called that firm’s *capital structure*. To simplify our discussion, we’ll focus mainly on the capital structure of corporations, but many of the basic principles apply to other forms of ownership.

**Pros and Cons of Debt Financing**

When a firm borrows funds, it enters into a contractual agreement with the lenders. This arrangement creates a legally binding requirement to repay the money borrowed (called the principal) plus interest. These payments take precedence over any payments to owners. In fact, lenders often require the firm to pledge collateral, such as real estate, financial securities, or...
equipment, to back the loan. Should the firm be unable to make the required payments, the lenders can use this collateral to recover what they are owed.

Debt financing offers some advantages to firms. For instance, the interest payments a firm makes on debt are a tax-deductible expense. So Uncle Sam (in the form of the IRS) subsidizes the interest payments. For example, if the corporation's tax rate is 30%, then each dollar of interest expense reduces the firm's taxes by $0.30—meaning the true cost to the firm of each dollar of interest is only $0.70.

Another advantage of debt is that it enables the firm to acquire additional funds without requiring existing stockholders to invest more of their own money or the sale of stock to new investors (which would dilute the ownership of existing owners). Moreover, if the firm invests the borrowed funds profitably, the use of debt can substantially improve the return on equity to the shareholders. We'll illustrate this result in our discussion of financial leverage.

One obvious disadvantage of debt is the requirement to make fixed payments. This can create real problems when the firm finds itself in an unexpectedly tight financial situation. In bad times, required interest payments can eat up most (or all) of the earnings, leaving little or no return to the firm's owners. And if the firm is unable to meet these payments, its creditors can force it into bankruptcy.

As we mentioned earlier, another disadvantage of debt financing is that creditors often impose covenants on the borrower. These covenants can hamper the firm's flexibility and might result in unintended problems. For example, a covenant that restricts bonuses and pay raises to employees might undermine the morale of key workers and tempt them to seek employment elsewhere. Similarly, restrictions on dividends or on the ability of the firm to borrow additional funds may make it difficult for the firm to raise more money.

Pros and Cons of Equity Financing

For corporations, equity financing comes from two major sources: retained earnings and money directly invested by stockholders who purchase newly issued stock. Equity financing is more flexible and less risky than debt financing. Unlike debt, equity imposes no required payments. A firm can skip dividend payments to stockholders without having to worry that it will be pushed into bankruptcy. And a firm doesn't have to agree to burdensome covenants to acquire equity funds.

On the other hand, equity financing doesn't yield the same tax benefits as debt financing. In addition, existing owners might not want a firm to issue more stock, since doing so might dilute their share of ownership. Finally, a company that relies mainly on equity financing forges the opportunity to use financial leverage. But as we've already noted, leverage can be a two-edged sword. We'll illustrate the risks and rewards of leverage in our next section.

Financial Leverage: Using Debt to Magnify Gains (And Losses)

As mentioned in our discussion of ratios, firms that rely on a lot of debt in their capital structure are said to be highly leveraged. The main advantage of financial leverage is that it magnifies the return on the stockholders' investment when times are good. Its main disadvantage is that it also reduces the financial return to stockholders when times are bad.

Let's illustrate both the advantages and disadvantages of financial leverage with a simple example. Exhibit 9.3 shows the revenues, expenses, and earnings that two firms—Eck-Witty Corporation and Oze-Moore International—would experience for two different levels of sales, one representing a strong year and the other a weak year. To make the impact of leverage easy to see, we'll assume that Eck-Witty and Oze-Moore are identical in all respects except their capital structure. In particular, our example assumes that the two companies have the same amount of assets and experienced exactly the same earnings before interest and taxes (abbreviated as EBIT). Thus, any differences in the net income of these firms results from differences in their use of debt and equity financing. We'll use return on equity (ROE) to measure the financial return each firm offers its stockholders. (See Exhibit 9.1 if you need a reminder about how to interpret or compute this ratio.)

Note that both firms have a total of $1 million of assets, but they've financed the purchase of their assets in very different ways. Eck-Witty used only common stock and retained earnings in its capital structure, so it has $1 million in equity financing and no debt. Oze-Moore's capital structure consists of $200,000 in owners' equity and $800,000 in debt, so it is highly leveraged. The interest rate on its debt is 10%, so Oze-Moore has to make required interest payments of $80,000 per year to its lenders. Both companies must pay taxes equal to 25% of their earnings, but Oze-Moore's total tax bill will be lower than Eck-Witty's because its interest payments are tax deductible.

As Exhibit 9.3 shows, when sales are strong Oze-Moore's use of leverage really pays off. Eck-Witty's ROE of 12% under
Is Too Big to Fail a Thing of the Past?

At the onset of the Great Recession, government officials quickly concluded that they couldn’t allow financial giants such as Citigroup, Goldman Sachs, AIG and Bank of America to go under. They reasoned that these firms were so huge and so interdependent that the collapse of one of them could bring down the entire U.S. financial system, plunging the already fragile economy into a full-fledged depression. In other words, these firms were deemed “too big to fail.” This line of reasoning led the government to hastily create a huge bailout program for the financial sector.

While most experts agreed that the government’s bailout was necessary, they also agreed that it sent the wrong message for the future. As long as financial institutions are too big to fail, they will continue to make excessively risky decisions, believing that the government will protect them from any negative consequences of these risks. In other words, “Heads we win, tails the taxpayers lose.”

But the days of “too big to fail” may be over. One key goal of the Dodd-Frank Act was to eliminate the problem of “too big to fail.” Among the law’s key provisions:

- Establishment of a Financial Stability Oversight Council (FSOC): One goal of this council will be to track the risks associated with big financial firms and propose restrictions that may limit their growth and complexity.
- Tighter restrictions on financial leverage: The FSOC will establish rules requiring larger financial institutions to hold larger amounts of capital against their debts, effectively limiting their use of risky financial leverage.
- Requirement for funeral plans: Large financial institutions are required to develop and periodically update plans for their rapid and orderly shutdown should they go under.
- Prohibition of government bailouts for individual banks: While the Fed can still engage in broad-based emergency lending during a future crisis, bailouts that target specific companies are now prohibited.\(^12\)

EXHIBIT 9.3 How Financial Leverage Affects the Return on Equity © Cengage Learning 2013

the strong sales scenario isn’t bad, but it pales in comparison to the 30% return Oze-Moore generates for its owners under the same scenario. Oze-Moore’s higher ROE occurs because its interest payments are fixed. It pays its creditors $80,000—no more, no less—whether EBIT is high or low. When Oze-Moore can borrow funds at an interest rate of 10% and invest them in assets that earn more than 10% (as it does in the strong sales scenario), the extra return goes to the owners even though creditors provided the funds. This clearly adds a significant boost to the returns enjoyed by the stockholders!
But in the weak sales scenario, the results are quite different. In this case, the $80,000 of required interest payments eats up all of Oze-Moore's earnings, leaving it with no net income for its owners, so its ROE is zero. If EBIT had been anything less than $80,000, Oze-Moore wouldn't have had enough earnings to cover the interest—and if it failed to come up with the money to pay its creditors they could force it into bankruptcy. This illustrates the risk associated with financial leverage. In comparison, notice that Eck-Witty still earns a positive ROE for its owners in the weak sales scenario; granted an ROE of 6% isn't spectacular, but it sure beats the 0% return Oze-Moore experienced!

Our leverage example contains important lessons for the real world—lessons that recent financial history clearly illustrates. During the economic boom between 2003 and early 2007, many companies found that the use of leverage magnified their ROEs. When the economy slowed, the required interest and principal payments on their debt became a heavy burden on highly leveraged firms. As we mentioned at the beginning of this chapter, many of these firms ended up in bankruptcy.

By late 2008, many of the highly leveraged firms that survived the initial carnage were frantically looking for ways to replace much of the debt in their capital structure with more equity—a strategy known as deleveraging.

In 2007 Citigroup held $48 in debt for every $1 in equity, making it the most highly leveraged major U.S. financial institution.

— FINANCIAL CRISIS INQUIRY REPORT

Unfortunately, most companies found deleveraging to be a slow and painful process. Their poor financial performance during the financial meltdown meant their earnings were low (or even negative), so they couldn't use retained earnings to build their equity capital. And the plummeting stock market and lack of investor confidence made it difficult to sell new stock. The moral of the story: if the financial returns of leverage seem too good to be true, over the long run they probably are. Sound financial management requires keeping a level head and considering the riskiness of financial decisions as well as their return.¹³

In the wake of the financial crisis, the federal government enacted new legislation designed to reduce the likelihood of similar meltdowns in the future. The Dodd-Frank Act included requirements for large firms in the financial sector to hold more equity and less debt in their capital structures and established a Financial Stability Oversight Council to monitor financial markets and to identify and respond to emerging risks. It also created a Consumer Financial Protection Bureau to protect consumers from predatory lending practices by financial institutions.¹⁴

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LO5 Acquiring and Managing Current Assets

Let's turn our attention to how a firm determines the amount and type of current assets to hold. As we'll see, holding current assets involves trade-offs; either too much or too little of these assets can spell trouble.

Managing Cash: Is It Possible to Have Too Much Money?

A company must have cash to pay its workers, suppliers, creditors, and taxes. Many firms also need cash to pay dividends. And most firms also want to hold enough cash to meet unexpected contingencies. But cash has one serious shortcoming compared to other assets: it earns little or no return. If a firm holds a lot more cash than necessary to meet its required payments, stockholders are likely to ask why the excess cash isn't being invested in more profitable assets. And if the firm can't find a profitable way to invest the money, the stockholders are likely to ask management why it doesn't use the excess cash to pay them a higher dividend—most shareholders can think of plenty of ways they'd like to use the cash!

In the narrowest sense, a firm's cash refers to its holdings of currency (paper money and coins issued by the government) plus demand deposits (the balance in its checking account). However, when most firms report their cash holdings on their balance sheet, they take a broader view, including cash equivalents along with their actual cash. Cash equivalents are very safe and highly liquid assets that can be converted into cash quickly and easily. Commercial paper, U.S. Treasury Bills (T-bills), and money market mutual funds are among the most popular cash equivalents. The advantage of these cash equivalents is that they offer a better financial return (in the form of interest) than currency or demand deposits.
As we explained in our discussion of short-term sources of funds, major corporations with strong credit ratings often sell commercial paper to raise needed short-term funds. On the other side of such transactions are firms that buy commercial paper as part of their portfolio of cash equivalents because—at least under normal economic conditions—it is a safe and liquid way to earn some interest. But during economic downturns the appeal of commercial paper as a cash equivalent plummets due to increased risk.

**U.S. Treasury bills, or “T-bills,”** are short-term IOUs issued by the U.S. government. Most T-bills mature (come due) in 4, 13, or 26 weeks. There is a very active secondary market for T-bills, meaning that their owners can sell them to other investors before they mature. Thus, T-bills are highly liquid. And, unlike commercial paper, T-bills are backed by the U.S. government, so they are essentially risk-free. The safety and liquidity of T-bills make them very attractive cash equivalents even in times of economic distress.

**Money market mutual funds** raise money by selling shares to large numbers of investors. They then pool these funds to purchase a portfolio of short-term, liquid securities. (In fact, money market mutual funds often include large holdings of commercial paper and T-bills.) Money market mutual funds are an affordable way for small investors to get into the market for securities, which would otherwise be beyond their means. This affordability also makes these funds a particularly attractive cash equivalent for smaller firms.

**Managing Accounts Receivable: Pay Me Now or Pay Me Later**

Accounts receivable represents what customers who buy on credit owe the firm. Allowing customers to buy on credit can significantly increase sales. However, as our discussion of the cash budget showed, credit sales can create cash flow problems because they delay the receipt of cash the firm needs to meet its financial obligations. Credit customers who pay late or don't pay at all only exacerbate the problem. So it's important for firms to have a well-thought-out policy that balances the advantages of offering credit with the costs. The key elements of this policy should include:

- Setting credit terms: For how long should the firm extend credit? What type of cash discount should the firm offer to encourage early payments?
- Establishing credit standards: How should the firm decide which customers qualify for credit? What type of credit information should it require? How strict should its standards be?
- Deciding on an appropriate collection policy: How aggressive should the firm be at collecting past-due accounts? At what point does it make sense to take (or at least threaten to take) legal action against late-paying customers, or to turn over the accounts to collection agencies? When does it make sense to work out compromises?

In each area, financial managers face trade-offs. For example, a firm that extends credit for only 30 days will receive its payments sooner than a firm that allows customers 90 days. But setting short credit periods may also result in lost sales. Similarly, setting high credit standards reduces the likelihood a firm will have problems with customers who pay late (or not at all). However, strict standards may prevent many good customers from getting credit, resulting in lower sales. Finally, an aggressive collection policy may help the firm collect payments that it would otherwise lose. But an aggressive policy is costly, and it might alienate
customers who make honest mistakes, causing them to take future business to competitors.

Some small businesses have found that being flexible and creative about the form of payment can help them get at least some of what they are owed. Barter arrangements sometimes work better than demanding cash—especially in troubled times such as the recent recession. For example, a health spa took payments from one of its customers in the form of hundreds of granola bars. Similarly, the owner of a bookkeeping firm agreed to accept payment from a veterinarian in the form of emergency surgery on her pet cat!  

**Managing Inventories: Taking Stock of the Situation**

Inventories are stocks of finished goods, work-in-process, parts and materials that firms hold as a part of doing business. Clearly, businesses must hold inventories to operate. For example, you'd probably be disappointed if you visited a Best Buy store and were confronted with empty shelves rather than with a wide array of electronic gadgets to compare and try out. Similarly, a manufacturing firm wouldn't be able to assemble its products without an inventory of parts and materials.

But for many firms, the costs of storing, handling, and insuring inventory items are significant expenses. In recent years, many manufacturing firms have become very aggressive about keeping inventories as low as possible in an attempt to reduce costs and improve efficiency. Such “lean” inventory policies can be very effective, but they leave the firm vulnerable to supply disruptions. For instance, both General Motors and Mazda had to shut down some of their assembly lines in early 2011 soon after a fire at one of their key suppliers delayed shipments of dashboard assemblies for their cars. Had the two automakers held larger inventories, they might have been able to continue operating their assembly lines until the supplier could resume its shipments.

**T-Bills: Why Lots of Investor Interest Meant Earning Zero Interest**

When most people lend money, they expect to get back that money plus interest, right? But in late 2008, investors actually paid the federal government for the privilege of lending them money!

First, some background: Each week the U.S. Treasury “sells” newly issued T-bills via competitive auction. When investors “buy” T-bills, they essentially lend the government the amount of money determined by the auction. When the bills come due, the Treasury pays the investor an amount called the par value. The spread between what investors pay and par value represents the interest on the T-bill. Thus, in order to receive interest on their T-bills investors must bid less than the par value.

But on December 8, 2008, investors bid the price of 4-week T-bills all the way up to par value, meaning that those who bought these bonds were essentially making a loan to the Treasury at zero interest! The outcome in the secondary market for 13-week T-bills during the same week was even stranger—the price of these bills briefly rose above their par value resulting in a negative rate of interest. Standard and Poor's chief economist, David Wyss, declared the bidding behavior of investors in these markets to be “totally insane.” While the negative rates soon vanished, T-bill interest rates remained extremely low through late 2008 and into 2009.

On the bright side, taxpayers had to be pleased by these results. T-bills are government debt, and it is taxpayers who ultimately stand behind this debt. Low-interest rates on T-bills have the effect of reducing the interest burden on the money the federal government borrowed to deal with the economic downturn.
LO6 Capital Budgeting: In It for the Long Haul

We'll conclude the chapter with a look at how firms evaluate proposals to invest in long-term assets or undertake major new projects. Capital budgeting refers to the procedure a firm uses to plan for investments in assets or projects that it expects will yield benefits for more than a year. The capital budgeting process evaluates proposals such as:

- Replacing old machinery and equipment with new models to reduce cost and improve the efficiency of current operations;
- Buying additional plant, machinery and equipment to expand production capacity in existing markets;
- Investing in plant, property and equipment needed to expand into new markets;
- Installing new, or modifying existing, plant and equipment to achieve goals not directly related to expanding production, such as reducing pollution or improving worker safety.

The number of capital budgeting proposals a firm considers each year can be quite large. But it's unlikely that all proposals will be worth pursuing. How do financial managers decide whether or not to accept a proposal?

Evaluating Capital Budgeting Proposals

Financial managers measure the benefits and costs of long-term investment proposals in terms of the cash flows they generate. These cash flows are likely to be negative at the start of a project because money must be spent to get a long-term investment project up and running before it begins generating positive cash flows. But a project must eventually generate enough positive cash flows to more than offset these negative initial cash outflows if it is to benefit the company.

Accounting for the Time Value of Money

One of the most challenging aspects of the evaluation of a long-term project's cash flows is that they are spread out over a number of years. When financial managers compare cash flows that occur at different times, they must take the time value of money into account. The time value of money reflects the fact that, from a financial manager's perspective, a dollar received today is worth more than a dollar received in the future because the sooner you receive a sum of money, the sooner you can put that money to work to earn even more money.

Suppose, for example, that you were given the choice of receiving $1,000 either today or the same amount one year from today. If you think like a financial manager, this choice is a no-brainer! Let's be conservative and say that if you receive the money today you can deposit it in an insured one-year certificate of deposit (CD) at your local bank that pays 4% interest. (A CD is similar to a savings account, except that it requires the funds to remain on deposit for a fixed term; in our example the term is one year. You would incur a penalty if you withdrew your funds early.) Investing your 4% CD means that a year from today you would have $1,040 (the $1,000 you deposited plus $40 in interest). But if you wait until next year to receive the $1,000, you'll lose the opportunity to earn that $40 in interest. Clearly, receiving the cash today is the better option.

Because money has a time value, a cash flow's value depends not only on the amount of cash received, but also on when it is received. Financial managers compare cash flows occurring at different times by converting them to their present values. The present value of a cash flow received in a future time period is the amount of money that, if invested today at an assumed rate of interest (called the discount rate), would grow to become that future amount of money. For example, take a look at Exhibit 9.4. It shows that $1,000 invested today at 6% grows to a future value of $1,262.48 in four years. Thus, $1,000 is the present value of $1,262.48 received in four years.

The Risk-Return Tradeoff Revisited
9/21/13

Unfortunately, financial managers don't have crystal balls, so they don't know the actual cash flows a proposed project will generate. Instead, they base their analysis on the cash flows the proposal is expected to generate. Once a company actually invests in a project, it may find that the actual cash flows are quite different than these estimated flows. This uncertainty means that capital budgeting decisions must consider risk.

In general, projects with the potential for high return are also the projects with a high degree of uncertainty and risk. This is another example of the risk-return tradeoff we introduced at the beginning of this chapter. Clearly, financial managers must take this tradeoff into account when they compare different capital budgeting proposals; they must determine whether riskier proposals generate a high enough expected return to justify their greater risk.

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One common way financial managers try to do this is to use a higher discount rate when they compute the present values of cash flows for risky projects than when they compute present values for less risky projects. This reflects the idea that a higher return is required to compensate for the greater risk.

Net Present Value: A Decision Rule for Capital Budgeting

The most common method financial managers use to evaluate capital budgeting proposals is to compute their net present value (NPV). The NPV of an investment proposal is found by adding the present values of all of its estimated future cash flows and subtracting the initial cost of the investment from the sum. A positive NPV means that the present value of the expected cash flows from the project is greater than the cost of the project. In other words, the benefits from the project exceed its cost even after accounting for the time value of money. Financial managers approve projects with positive NPVs. A negative NPV means that the present value of the expected future cash flows from the project is less than the cost of the investment. This would indicate that the cost of the project outweighs its cash flow benefits. Financial managers would reject proposals with negative NPVs. (See Exhibit 9.5.)

Are “Minsky Moments” Inevitable?

As the U.S. economy began to slow in late 2007, a small but influential group of economists began voicing concerns that the
U.S. economy was about to experience a “Minsky Moment.” Their fears were based on a theory first developed in the 1970s by Washington University economics professor Hyman Minsky (1919–1996), who suggested that free market economies would periodically experience financial meltdowns that would lead to severe and prolonged recessions. Minsky laid the blame for these crises squarely on the decisions made by financial managers.

Minsky’s theory was based on the notion that as an economic boom continues, financial managers become less worried about risk. This overconfidence, coupled with the desire to “cash in” on the good times, encourages them to engage in overly aggressive and risky financial strategies. Eventually, a combination of speculative investment decisions combined with extensive use of leverage makes the financial system vulnerable to even minor disruptions. Minsky believed that once these vulnerabilities became apparent, panic would set in, leading to behavior that would make the problems even worse. With 20-20 hindsight, the events leading to the Great Recession certainly seem to be consistent with Minsky’s views.

One of the most controversial implications of Minsky’s theory is that the recent financial meltdown wasn’t an isolated event, but rather the result of a fundamental characteristic of a free market economy. If Minsky and his followers are right—and not all economists believe that they are—then we should recognize the possibility of another crisis soon after the next boom tempts financial managers to once again ignore risk.18

The Big Picture

In this chapter, we described the tasks financial managers perform as they attempt to find the “best” sources and uses of financial resources—meaning those that will maximize the value of the firm to its owners. We saw that in their attempt to achieve this goal financial managers face two challenges. The first is to balance the needs of owners against those of the other stakeholders; the second is to balance the potential rewards of their decisions against the risks.

Recent history illustrates how important sound financial management is to the success of a firm—and how devastating poor financial decisions can be. Indeed, the recent decline and fall of some of the biggest and best-known U.S. corporations can be traced in large measure to poor financial decisions—especially decisions that failed to adequately take risk into account, resulting in the use of too much leverage.

These lessons from the recent past will probably result in a different approach to financial management over the next several years. While memories of the Great Recession are still relatively fresh, firms may be more conservative in their view of what constitutes the best sources and uses of funds. In particular, they are likely to shy away from excessive debt and put more emphasis on equity financing. They also are less likely to use their funds to invest in highly risky or speculative assets. These more conservative tendencies are likely to be reinforced by the major regulatory reforms designed to curb aggressive (and risky) behavior introduced by the Dodd-Frank Act.
Careers in Financial Management

Financial managers are employed by firms in every sector of the economy, but the greatest numbers are in the insurance, banking, and financial services sectors. About 550,000 financial managers were employed in the United States in 2010. Financial managers need strong computer and analytical skills. The work often involves long hours, can be mentally challenging, and is sometimes stressful. But salaries and other compensation tend to be attractive. The median salary in 2008 was $99,330—a figure that doesn't include bonuses or stock options, which, for many financial managers, have been a significant source of additional income. However, bonuses may be less generous in the wake of the financial crisis.

The Bureau of Labor Statistics (BLS) projects that job growth in financial management will grow by 8% between 2008 and 2018, which is about as fast as the average rate of growth for all occupations. However the BLS also projects that the competition for these jobs is likely to be intense, because the number of applicants may increase even faster than the number of jobs. Thus, even though the minimum requirements for most financial management positions is a bachelor's degree in finance, economics, or business administration, an advanced degree in one of these fields, such as a masters in business administration (MBA), may be necessary to be considered for the more desirable jobs.

What else?

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Finance: Acquiring and Using Funds to Maximize Value: Rip and Review 9

LO1 Identify the goal of financial management and explain the issues financial managers confront as they seek to achieve this goal

Historically, the goal of financial management has been to maximize the value of the firm to its owners. But many of today's businesses have adopted a broader perspective, believing that they have responsibilities not just to stockholders but also to customers, employees, and other stakeholders. Treating these other stakeholders well often builds value, which benefits stockholders, but other stakeholder groups also sometimes have goals that conflict with those of stockholders. When this happens, financial managers generally adopt the policies they believe are most consistent with the interests of ownership. Another challenge that financial managers face is the need to find the appropriate balance between risk and return. The risk-return tradeoff suggests that sources and uses of funds that offer the potential for high rates of return tend to be riskier than...
those that offer lower returns.

**LO2 Describe the tools financial managers use to evaluate their company’s current financial condition and to develop financial plans**

One way financial managers evaluate the firm’s current financial condition is by computing ratios based on key accounts listed on their firm’s financial statements. Financial managers look at four basic types of ratios. *Liquidity ratios* indicate whether the firm will have enough cash to pay its short-term liabilities as they come due. *Asset management ratios* tell financial managers how effectively a firm is using various assets to generate revenues for their firm. *Leverage ratios* measure the extent to which a firm relies on debt in its capital structure. *Profitability ratios* measure the firm’s overall success at using resources to create a profit for its owners.

The budgeted income statement, the budgeted balance sheet, and the cash budget are the key tools that financial managers use to develop and present their financial plans. The budgeted income statement develops a forecast of net income for the planning period. The budgeted balance sheet forecasts the types and amounts of assets the firm will need to implement its plans, and the amount of additional financing necessary to obtain those assets. The cash budget identifies the timing of cash inflows and outflows to help the firm identify when it will have shortages and surpluses of cash.

**LO3 Evaluate the major sources of funds available to meet a firm’s short-term and long-term financial needs**

Established firms have several sources of short-term funds, including bank loans, trade credit, factoring, and commercial paper. Trade credit arises when suppliers ship materials, parts, or goods to a firm without requiring immediate payment. Banks extend short-term loans to firms with good credit ratings. Factoring provide immediate cash to firms by purchasing their accounts receivable at a discount. Major corporations sometimes raise funds by selling commercial paper, which are short-term IOUs. Firms that want to build up their permanent financial base have two basic options. First, they can rely on equity financing, which consists of funds provided by owners. The second option is long-term debt financing.

### Major Financial Planning Tools

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<th>TOOL</th>
<th>PURPOSE</th>
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<tr>
<td>BUDGETED INCOME STATEMENT</td>
<td>Forecasts the sales, expenses, and revenue for a firm in some future time period.</td>
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<tr>
<td>BUDGETED BALANCE SHEET</td>
<td>Projects the types and amounts of assets a firm will need in order to carry out its plans, and shows the amount of additional financing the firm will need to acquire these assets.</td>
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<tr>
<td>CASH BUDGET</td>
<td>Projects the timing and amount of cash flows so that management can determine when it will need to arrange for external financing, and when it will have extra cash to pay off loans or invest in other assets.</td>
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**financial capital** The funds a firm uses to acquire its assets and finance its operations.

**finance** The functional area of business that is concerned with finding the best sources and uses of financial capital.

**risk** The degree of uncertainty regarding the outcome of a decision.

**risk-return tradeoff** The observation that financial opportunities that offer high rates of return are generally riskier than opportunities that offer lower rates of return.

**financial ratio analysis** Computing ratios that compare values of key accounts listed on a firm’s financial statements.

**liquid asset** An asset that can quickly be converted into cash with little risk of loss.

**liquidity ratios** Financial ratios that measure the ability of a firm to obtain the cash it needs to pay its short-term debt obligations as they come due.

**asset management ratios** Financial ratios that measure how effectively a firm is using its assets to generate revenues or cash.

**financial leverage** The use of debt in a firm’s capital structure.

**leverage ratios** Ratios that measure the extent to which a firm relies on debt financing in its capital structure.

**profitability ratios** Ratios that measure the rate of return a firm is earning on various measures of investment.
budgeted income statement A projection showing how a firm’s budgeted sales and costs will affect expected net income. (Also called a pro forma income statement.)

budgeted balance sheet A projected financial statement that forecasts the types and amounts of assets a firm will need to implement its future plans and how the firm will finance those assets. (Also called a pro forma balance sheet.)

cash budget A detailed forecast of future cash flows that helps financial managers identify when their firm is likely to experience temporary shortages or surpluses of cash.

trade credit Spontaneous financing granted by sellers when they deliver goods and services to customers without requiring immediate payment.

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spontaneous financing Financing that arises during the natural course of business without the need for special arrangements.

factor A company that provides short-term financing to firms by purchasing their accounts receivable at a discount.

line of credit A financial arrangement between a firm and a bank in which the bank pre-approves credit up to a specified limit, provided that the firm maintains an acceptable credit rating.

revolving credit agreement A guaranteed line of credit in which a bank makes a binding commitment to provide a business with funds up to a specified credit limit at any time during the term of the agreement.

commercial paper Short-term (and usually unsecured) promissory notes issued by large corporations.

retained earnings The part of a firm’s net income it reinvests.

covenant A restriction lenders impose on borrowers as a condition of providing long-term debt financing.

equity financing Funds provided by the owners of a company.

debt financing Funds provided by lenders (creditors).

capital structure The mix of equity and debt financing a firm uses to meet its permanent financing needs.

Dodd-Frank Act A law enacted in the aftermath of the financial crisis of 2008-2009 that strengthened government oversight of financial markets and placed limitations on risky financial strategies such as heavy reliance on leverage.

cash equivalents Safe and highly liquid assets that many firms list with their cash holdings on their balance sheet.

U.S. Treasury bills (T-bills) Short-term marketable IOUs issued by the U.S. federal government.

money market mutual funds A mutual fund that pools funds from many investors and uses these funds to purchase very safe, highly liquid securities.

capital budgeting The process a firm uses to evaluate long-term investment proposals.

time value of money The principle that a dollar received today is worth more than a dollar received in the future.

certificate of deposit (CD) An interest-earning deposit that requires the funds to remain deposited for a fixed term. Withdrawal of the funds before the term expires results in a financial penalty.

present value The amount of money that, if invested today at a given rate of interest (called the discount rate), would grow to become some future amount in a specified number of time periods.

net present value (NPV) The sum of the present values of expected future cash flows from an investment, minus the cost of that investment.

LO4 Identify the key issues involved in determining a firm’s capital structure

Capital structure refers to the mix of equity and debt financing a firm uses to meet its financing needs. Debt financing enables the firm to finance activities without requiring the owners to put up more money. When the firm earns more on borrowed funds than it pays in interest, the excess goes to the owners, thus magnifying the return on their investment. And the interest
payments on debt are tax deductible. However, the interest payments and the requirement to repay the amount borrowed can put a strain on companies when business conditions are poor. Equity financing is safer and more flexible than debt financing. But dividend payments are not tax deductible. And issuing new stock can dilute the ownership share of existing stockholders.

**LO5 Describe how financial managers acquire and manage current assets**

Firms must have cash, but cash earns little or no interest. Firms with a surplus of cash often hold cash equivalents such as T-bills, commercial paper, and money market mutual funds to earn interest. Accounts receivable are what customers who buy on credit owe to a firm. Firms must establish credit policies that balance the higher sales generated by accounts receivable against the risks that credit customers might not make their payments. Inventories are the stocks of materials, work in process and finished goods a firm holds. For many firms, the costs of storing, handling, and insuring inventory items are significant. In recent years, many firms have become very aggressive about keeping inventories as low as possible.

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**LO6 Explain how financial managers evaluate capital budgeting proposals to identify the best long-term investment options for their company**

Capital budgeting is the process financial managers use to evaluate major long-term investment opportunities. Capital budgeting investments are expected to generate cash flows for many years, so financial managers must take the time value of money into account. The time value of money recognizes that the sooner a cash flow is received, the sooner it can be reinvested to earn more money. Financial managers take the time value of money into account by computing the present values of all cash flows the proposal will generate. The present value of a sum of money received in the future is the amount of money today that will become that future amount if it is invested at a specified rate of interest. The net present value (NPV) of the project is the sum of the present values of all the estimated future cash flows, minus the initial cost of the investment. If the NPV of a project is positive, it will increase the value of the firm. If the NPV is negative, it will decrease the value of the firm.

**Footnotes**

5. The approximate “finance charge” of not taking the discount on credit can be computed using the following formula: Cost of Not taking discount = % discount/(100 – % discount) × 365/(Credit_Period – Discount_Period) where % discount is the discount the buyer receives for paying on or before the last day the discount is available, the Credit Discount Period is the number of days before payment of full invoice amount is due.

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