

Long-Term Financing

An Introduction

In February 2006, Japanese conglomerate Sanyo Electric Co. announced a massive recapitalization plan. An investor group that included Goldman Sachs, Daiwa Securities, and Sumitomo Mitsui Financial Group purchased 429 million shares of new preferred stock worth about 300 billion yen (\$2.6 billion). Each of the shares of preferred stock could later be converted into 10 shares of common stock, which would triple the number of shares of Sanyo Electric stock.

What forms of long-term financing are available to companies, and why would companies like Sanyo choose to engage in transactions such as this one? This chapter introduces the basic sources of long-term financing: common stock, preferred stock, and long-term debt. Subsequent chapters address the optimal mix of these sources. We will also discuss how companies have financed themselves in recent years.

14.1 Common Stock

The term **common stock** has no precise meaning. It is usually applied to stock that has no special preference in either dividends or in bankruptcy. A description of the common stock of Anheuser-Busch in 2005 is presented here:

ANHEUSER-BUSCH Common Stock and Other Shareholders' Equity December 31, 2005 (in millions)	
Common stock, \$1 par value, authorized 1.6 billion shares, issued 1,468.6 million shares	\$1,468.6
Capital in excess of par value	1,601.8
Retained earnings	16,445.6
Treasury stock at cost	(15,258.9)
Accumulated nonowner changes in shareholder equity	(913.8)
Total equity	<u>\$3,343.3</u>

Par and No-Par Stock

Owners of common stock in a corporation are referred to as *shareholders* or *stockholders*. They receive stock certificates for the *shares* they own. There is usually a stated value on

each stock certificate called the *par value*. However, some stocks have no par value. The par value of each share of the common stock of Anheuser-Busch is \$1.

The total par value is the number of shares issued multiplied by the par value of each share and is sometimes referred to as the *dedicated capital* of a corporation. The dedicated capital of Anheuser-Busch is $\$1 \times 1,468.6$ million shares = \$1,468.6 million.

Authorized versus Issued Common Stock

Shares of common stock are the fundamental ownership units of the corporation. The articles of incorporation of a new corporation must state the number of shares of common stock the corporation is authorized to issue.

The board of directors of the corporation, after a vote of the shareholders, can amend the articles of incorporation to increase the number of shares authorized; there is no limit to the number of shares that can be authorized. In 2005, Anheuser-Busch had authorized 1.6 billion shares and had issued 1,468.6 million shares. There is no requirement that all of the authorized shares actually be issued. Although there are no legal limits to authorizing shares of stock, some practical considerations may exist:

1. Some states impose taxes based on the number of authorized shares.
2. Authorizing a large number of shares may create concern on the part of investors because authorized shares can be issued later *with* the approval of the board of directors but *without* a vote of the shareholders.

Capital Surplus

Capital surplus usually refers to amounts of directly contributed equity capital in excess of the par value.

EXAMPLE 14.1

Par Value and Surplus Suppose 100 shares of common stock have a par value of \$2 each and are sold to shareholders for \$10 per share. The capital surplus would be $(\$10 - \$2) \times 100 = \$8 \times 100 = \800 , and the total par value would be $\$2 \times 100 = \200 . What difference does it make if the total capital contribution is reported as par value or capital surplus?

About the only difference is that in most states the par value is locked in and cannot be distributed to stockholders except upon the liquidation of the corporation.

The capital surplus of Anheuser-Busch is \$1,601.8 million. This figure indicates that the price of new shares issued by Anheuser-Busch has exceeded the par value and the difference has been entered as *capital in excess of par value*. In most states shares of stock cannot be issued below par value, implying that capital in excess of par value cannot be negative.

Retained Earnings

Anheuser-Busch usually pays out less than half of its net income as dividends; the rest is retained in the business and is called **retained earnings**. The cumulative amount of retained earnings (since original incorporation) was \$16,445.6 million in 2005.

The sum of the par value, capital surplus, and accumulated retained earnings is the *common equity* of the firm, which is usually referred to as the firm's **book value**. The book value represents the amount contributed directly and indirectly to the corporation by equity investors.

EXAMPLE 14.2

Equity Accounting Suppose Western Redwood Corporation was formed in 1906 with 10,000 shares of stock issued and sold at its \$1 par value. Because the stock was sold for \$1, the first balance sheet showed a zero amount for capital surplus. By 2005, the company had become very profitable and had retained profits of \$100,000. The stockholders' equity of Western Redwood Corporation in 2005 is as follows:

WESTERN REDWOOD CORPORATION	
Equity Accounts	
January 1, 2005	
Common stock, \$1 par, 10,000 shares outstanding	\$ 10,000
Capital surplus	0
Retained earnings	<u>100,000</u>
Total stockholders' equity	<u>\$110,000</u>
Book value per share = $\frac{\$110,000}{10,000} = \11	

Suppose the company has profitable investment opportunities and decides to sell 10,000 shares of new stock. The current market price is \$20 per share. The effect of the sale of stock on the balance sheet at the end of the year will be:

WESTERN REDWOOD CORPORATION	
Equity Accounts	
December 31, 2005	
Common stock, \$1 par, 20,000 shares outstanding	\$ 20,000
Capital surplus $(\$20 - \$1) \times 10,000$ shares	190,000
Retained earnings	<u>100,000</u>
Total stockholders' equity	<u>\$310,000</u>
Book value per share = $\frac{\$310,000}{20,000} = \15.5	

What happened?

1. Because 10,000 shares of new stock were issued with par value of \$1, the par value rose \$10,000.
2. The total amount raised by the new issue was $\$20 \times 10,000 = \$200,000$, and \$190,000 was entered into capital surplus.
3. The book value per share increased because the market price of the new stock was higher than the book value of the old stock.

Market Value, Book Value, and Replacement Value

The book value of Anheuser-Busch in 2005 was \$3,443.3 million. This figure is based on the number of shares outstanding. The company had issued 1,468.6 million shares and bought back approximately 690.9 million shares, so that the total number of outstanding shares was $1,468.6 \text{ million} - 690.9 \text{ million} = 777.7 \text{ million}$. The shares bought back are called *treasury stock*.

The book value per share was equal to:

$$\frac{\text{Total common shareholders' equity}}{\text{Shares outstanding}} = \frac{\$3,443.3 \text{ million}}{777.7 \text{ million}} = \$4.43$$

Anheuser-Busch is a publicly owned company. Its common stock trades on the New York Stock Exchange (NYSE), and thousands of shares change hands every day. In March 2006, the market price of Anheuser-Busch stock was about \$43. Thus, the market price was above the book value.

Shareholders' Rights

The conceptual structure of the corporation assumes that shareholders elect directors who in turn elect corporate officers—more generally, the management—to carry out their directives. The right to elect the directors of the corporation by vote constitutes the most important control device of shareholders.

Directors are elected each year at an annual meeting by a vote of the holders of a majority of shares who are present and entitled to vote. The exact election mechanism differs among different companies. The most important difference is whether shares must be voted cumulatively or must be voted straight.

EXAMPLE 14.3

Voting Imagine that a corporation has two shareholders: Smith with 25 shares and Marshall with 75 shares. Both want to be on the board of directors. Marshall does not want Smith to be a director. Let us assume that there are four directors to be elected and each shareholder nominates four candidates. As we discuss next, whether Marshall will get her wish depends on whether shares are voted cumulatively or straight.

Cumulative Voting The effect of **cumulative voting** is to permit minority participation. If cumulative voting is permitted, the total number of votes that each shareholder may cast is determined first. That number is usually calculated as the number of shares (owned or controlled) multiplied by the number of directors to be elected. Each shareholder can distribute these votes as he or she wishes over one or more candidates. Smith will get $25 \times 4 = 100$ votes, and Marshall is entitled to $75 \times 4 = 300$ votes. If Smith gives all his votes to himself, he is assured of a directorship. It is not possible for Marshall to divide 300 votes among the four candidates in such a way as to preclude Smith's election to the board.

Straight Voting If **straight voting** is permitted, Smith may cast 25 votes for each candidate and Marshall may cast 75 votes for each. As a consequence, Marshall will elect all of the candidates.

Straight voting can freeze out minority shareholders; that is the reason many states have mandatory cumulative voting. In states where cumulative voting is mandatory, devices have been worked out to minimize its impact. One such device is to *stagger* the voting for the board of directors. Staggering permits a fraction of the directorships to come to a vote at a particular time. It has two basic effects:

1. Staggering makes it more difficult for a minority to elect a director when there is cumulative voting.

2. Staggering makes successful takeover attempts less likely by making the election of new directors more difficult.

Proxy Voting A **proxy** is the legal grant of authority by a shareholder to someone else to vote his or her shares. For convenience, the actual voting in large public corporations usually is done by proxy.

Many companies such as Anheuser-Busch have hundreds of thousands of shareholders. Shareholders can come to the annual meeting and vote in person, or they can transfer their right to vote to another party by proxy.

Obviously, management always tries to get as many proxies transferred to it as possible. However, if shareholders are not satisfied with management, an outside group of shareholders can try to obtain as many votes as possible via proxy. They can vote to replace management by adding enough directors. This is called a *proxy fight*.

Other Rights The value of a share of common stock in a corporation is directly related to the general rights of shareholders. In addition to the right to vote for directors, shareholders usually have the following rights:

1. The right to share proportionally in dividends paid.
2. The right to share proportionally in assets remaining after liabilities have been paid in a liquidation.
3. The right to vote on matters of great importance to stockholders, such as a merger, usually decided at the annual meeting or a special meeting.
4. The right to share proportionally in any new stock sold. This is called the *preemptive right* and will be discussed in detail in later chapters.

Dividends

A distinctive feature of corporations is that they issue shares of stock and are authorized by law to pay dividends to the holders of those shares. **Dividends** paid to shareholders represent a return on the capital directly or indirectly contributed to the corporation by the shareholders. The payment of dividends occurs at the discretion of the board of directors.

Here are some important characteristics of dividends:

1. Unless a dividend is declared by the board of directors of a corporation, it is not a liability of the corporation. A corporation cannot *default* on an undeclared dividend. As a consequence, corporations cannot become *bankrupt* because of nonpayment of dividends. The amount of the dividend—and even whether or not it is paid—are decisions based on the business judgment of the board of directors.
2. The payment of dividends by the corporation is not a business expense. Dividends are not deductible for corporate tax purposes. In short, dividends are paid out of aftertax profits of the corporation.
3. Dividends received by individual shareholders are for the most part considered ordinary income by the IRS and are fully taxable. However, corporations that own stock in other corporations are permitted to exclude 70 percent of the amounts they receive as dividends. In other words, they are taxed only on the remaining 30 percent.

Classes of Stock

Some firms issue more than one class of common stock. The classes are usually created with unequal voting rights. The Ford Motor Company has class B common stock, which is not publicly traded (it is held by Ford family interests and trusts). This class has about

40 percent of the voting power, but these shares comprise only about 15 percent of the total outstanding stock. Another example is Google, the Web search company. Google has two classes of common stock, A and B. Class A shares are held by the public, and each share has one vote. Class B shares are held by company insiders, and each class B share has 10 votes. As a result, Google's founders and management control the company.

Many companies issue dual classes of common stock. The reason has to do with control of the firm. Management of a firm can raise equity capital by issuing nonvoting common stock while maintaining voting control. Harry and Linda DeAngelo found that managements' holdings of common stock are usually tilted toward the stock with the superior voting rights.¹ Thus, managerial vote ownership is an important element of corporate control structure.

Lease, McConnell, and Mikkelson found the market prices of stocks with superior voting rights to be about 5 percent higher than the prices of otherwise identical stocks with inferior voting rights.² However, DeAngelo and DeAngelo found some evidence that the market value of differences in voting rights may be much higher when control of the firm is involved.

14.2 Corporate Long-Term Debt: The Basics

Securities issued by corporations may be classified roughly as *equity* securities and *debt* securities. The distinction between equity and debt is basic to much of the modern theory and practice of corporate finance.

At its crudest level, debt represents something that must be repaid; it is the result of borrowing money. When corporations borrow, they promise to make regularly scheduled interest payments and to repay the original amount borrowed (that is, the *principal*). The person or firm making the loan is called a *creditor* or *lender*.

Interest versus Dividends

The corporation borrowing the money is called a *debtor* or *borrower*. The amount owed the creditor is a liability of the corporation; however, it is a liability of limited value. The corporation can legally default at any time on its liability.³ This can be a valuable option. The creditors benefit if the assets have a value greater than the value of the liability, but this would happen only if management were foolish. On the other hand, the corporation and the equity investors benefit if the value of the assets is less than the value of the liabilities because equity investors can walk away from the liabilities and default on their payment.

From a financial point of view, the main differences between debt and equity are the following:

1. Debt is not an ownership interest in the firm. Creditors do not usually have voting power. The device used by creditors to protect themselves is the loan contract (that is, the *indenture*).
2. The corporation's payment of interest on debt is considered a cost of doing business and is fully tax deductible. Thus interest expense is paid out to creditors before the

¹H. DeAngelo and L. DeAngelo, "Managerial Ownership of Voting Rights: A Study of Public Corporations with Dual Classes of Common Stock," *Journal of Financial Economics* 14 (1985).

²R. C. Lease, J. J. McConnell, and W. H. Mikkelson, "The Market Value of Control in Publicly Traded Corporations," *Journal of Financial Economics* (April 1983).

³In practice, creditors can make a claim against the assets of the firm and a court will administer the legal remedy.

corporate tax liability is computed. Dividends on common and preferred stock are paid to shareholders after the tax liability has been determined. Dividends are considered a return to shareholders on their contributed capital. Because interest expense can be used to reduce taxes, the government (that is, the IRS) provides a direct tax subsidy on the use of debt when compared to equity. This point is discussed in detail in the next two chapters.

3. Unpaid debt is a liability of the firm. If it is not paid, the creditors can legally claim the assets of the firm. This action may result in *liquidation* and *bankruptcy*. Thus one of the costs of issuing debt is the possibility of *financial failure*, which does not arise when equity is issued.

Is It Debt or Equity?

Sometimes it is not clear whether a particular security is debt or equity. For example, suppose a 50-year bond is issued with interest payable solely from corporate income if and only if earned, and repayment is subordinate to all other debts of the business. Corporations are very adept at creating hybrid securities that look like equity but are called *debt*. Obviously the distinction between debt and equity is important for tax purposes. When corporations try to create a debt security that is really equity, they are trying to obtain the tax benefits of debt while eliminating its bankruptcy costs.

Basic Features of Long-Term Debt

Long-term corporate debt usually is denominated in units of \$1,000 called the *principal* or *face value*.⁴ Long-term debt is a promise by the borrowing firm to repay the principal amount by a certain date, called the *maturity date*. Long-term debt almost always has a par value equal to the face value, and debt price is often expressed as a percentage of the par value. For example, it might be said that General Motors' debt is selling at 90, which means that a bond with a par value of \$1,000 can be purchased for \$900. In this case, the debt is selling at a discount because the market price is less than the par value. Debt can also sell at a premium with respect to par value. The borrower using long-term debt generally pays interest at a rate expressed as a fraction of par value. Thus, at \$1,000 par value, General Motors' 7 percent debt means that \$70 of interest is paid to holders of the debt, usually in semiannual installments (for example, \$35 on June 30 and December 31). These payments are referred to as "coupons," and the 7 percent is called the *coupon rate*.

Different Types of Debt

Typical debt securities are called *notes*, *debentures*, or *bonds*. A debenture is an unsecured corporate debt, whereas a bond is secured by a mortgage on the corporate property. However, in common parlance the word *bond* is used indiscriminately and often refers to both secured and unsecured debt. A note usually refers to an unsecured debt with a maturity shorter than that of a debenture, perhaps under 10 years.

Debentures and bonds are long-term debt. *Long-term debt* is any obligation that is payable more than one year from the date it was originally issued. Sometimes long-term debt—debentures and bonds—is called *funded debt*. Debt that is due in less than one year

⁴Many government bonds have larger principal denominations, up to \$10,000 or \$25,000, and most municipal bonds come in denominations of \$5,000.

is unfunded and is accounted for as a current liability. Some debt is perpetual and has no specific maturity. This type of debt is referred to as a *consol*.

Repayment

Long-term debt is typically repaid in regular amounts over the life of the debt. The payment of long-term debt by installments is called *amortization*. At the end of the amortization the entire indebtedness is said to be *extinguished*. Amortization is typically arranged by a *sinking fund*. Each year the corporation places money into a sinking fund, and the money is used to buy back the bonds.

Debt may be extinguished before maturity by a call. Historically, almost all publicly issued corporate long-term debt has been *callable*. These are debentures or bonds for which the firm has the right to pay a specific amount, the *call price*, to retire (extinguish) the debt before the stated maturity date. The call price is always higher than the par value of the debt. Debt that is callable at 105 is debt that the firm can buy back from the holder at a price of \$1,050 per debenture or bond, regardless of what the market value of the debt might be. Call prices are always specified when the debt is originally issued. As discussed in an earlier chapter, “make-whole” call provisions have become the norm.

Seniority

In general terms **seniority** indicates preference in position over other lenders. Some debt is **subordinated**. In the event of default, holders of subordinated debt must give preference to other specified creditors. Usually, this means that the subordinated lenders will be paid off only after the specified creditors have been compensated. However, debt cannot be subordinated to equity.

Security

Security is a form of attachment to property; it provides that the property can be sold in the event of default to satisfy the debt for which security is given. A mortgage is used for security in tangible property; for example, debt can be secured by mortgages on plant and equipment. Holders of such debt have prior claim on the mortgaged assets in case of default. Debentures are not secured by a mortgage. Thus, if mortgaged property is sold in the event of default, debenture holders will obtain something only if the mortgage bondholders have been fully satisfied.

Indenture

The written agreement between the corporate debt issuer and the lender, setting forth maturity date, interest rate, and all other terms, is called an *indenture*. We treat this in detail in later chapters. For now, we note that:

1. The indenture completely describes the nature of the indebtedness.
2. It lists all restrictions placed on the firm by the lenders. These restrictions are placed in *restrictive covenants*.

Some typical restrictive covenants are the following:

1. Restrictions on further indebtedness.
2. A maximum on the amount of dividends that can be paid.
3. A minimum level of working capital.

EXAMPLE 14.4

Long-Term Debt The following table shows some of the many debt securities of Anheuser-Busch at the end of 2005 (in millions):

U.S. dollar notes due 2006 to 2023, interest rates from 4.375% to 7.5%	\$3,576.2
U.S. dollar debentures due 2009 to 2043, interest rates from 5.95% to 9.0%	2,600.0
Commercial paper, interest rates of 4.39% and 2.18%, respectively, at year-end	1,102.6
Industrial revenue bonds due 2006 to 2038, interest rates from 4.6% to 7.4%	271.7
Medium-term notes due 2010, interest rate 5.625%	200.0
Chinese renminbi-denominated bank loans due 2006 to 2009, interest rates from 4.7% to 6.7%	75.8
U.S. dollar EuroNotes due 2006, interest rate 4.51%	100.0
Miscellaneous items	66.1
Unamortized debt discounts	(20.3)
Total debt	<u>\$7,972.1</u>

Anheuser-Busch has many different notes and debentures. As can be seen, there is \$1,102.6 million of commercial paper. Commercial paper refers to short-term unsecured notes. It is listed as long-term debt because it will be maintained on a long-term basis by “rolling it over.”

14.3 Preferred Stock

Preferred stock represents equity of a corporation, but it is different from common stock because it has preference over common stock in the payment of dividends and in the assets of the corporation in the event of bankruptcy. *Preference* means only that the holder of the preferred share must receive a dividend (in the case of an ongoing firm) before holders of common shares are entitled to anything.

Stated Value

Preferred shares have a stated liquidating value, usually \$100 per share. The dividend preference is described in terms of dollars per share. For example, General Motors’ “\$5 preferred” translates into a dividend yield of 5 percent of stated value.

Cumulative and Noncumulative Dividends

A preferred dividend is not like interest on a bond. The board of directors may decide not to pay the dividends on preferred shares, and their decision may not have anything to do with current net income of the corporation. Dividends payable on preferred stock are either *cumulative* or *noncumulative*. If preferred dividends are cumulative and are not paid in a particular year, they will be carried forward. Usually both the cumulated (past) preferred dividends plus the current preferred dividends must be paid before the common shareholders can receive anything. Unpaid preferred dividends are *not* debts of the firm. Directors elected by the common shareholders can defer preferred dividends indefinitely. However, if so,

1. Common shareholders must forgo dividends.
2. Though holders of preferred shares do not always have voting rights, they will typically be granted these rights if preferred dividends have not been paid for some time.

Because preferred stockholders receive no interest on the cumulated dividends, some have argued that firms have an incentive to delay paying preferred dividends.

Is Preferred Stock Really Debt?

A good case can be made that preferred stock is really debt in disguise. Preferred shareholders receive a stated dividend only, and if the corporation is liquidated, preferred shareholders get a stated value. In recent years, many new issues of preferred stock have had obligatory sinking funds.

For all these reasons, preferred stock seems like debt; but unlike debt, preferred stock dividends cannot be deducted as interest expense in determining taxable corporate income. From the individual investor's point of view, preferred dividends are ordinary income for tax purposes. For corporate investors, however, 70 percent of the amounts they receive as dividends from preferred stock is exempt from income taxes.

The yields on preferred stock are typically very low. For example, Citigroup has a Series F preferred stock with a stated \$3.18 dividend. This dividend is perpetual—that is, it will be paid each year by Citigroup forever unless called. However, holders of Series F preferred stock have no voting rights. In March 2006, the market price of the Citigroup preferred stock was about \$51. The current dividend yield on the Citigroup preferred of 6.2 percent ($=\$3.18/51$) was slightly more than U.S. government bond yields on the same date, and it was less than the yield on Citigroup's long-term debt.

Corporate investors have an incentive to hold the preferred stock issued by other corporations over holding their debt because of the 70 percent income tax exemption they receive on preferred stock dividends. Because of this tax exclusion, corporate investors pay a premium for preferred stock; as a consequence, the yields are low. Individual investors do not receive this tax break. So most preferred stock in the United States is owned by corporate investors.

Thus, there are two offsetting tax effects to consider in evaluating preferred stock:

1. Dividends are not deducted from corporate income in computing the tax liability of the issuing corporation. This is the bad news.
2. When a corporation purchases preferred stock, 70 percent of the dividends received is exempt from corporate taxation. This is the good news.

The Preferred Stock Puzzle

Effect (1) just listed represents a clear tax disadvantage to the issuance of preferred stock. Although (2) represents a tax advantage, both academics and practitioners generally agree that (2) does *not* fully offset (1). In addition, preferred stock requires a regular dividend payment and thus lacks the flexibility of common stock. For these reasons, some have argued that preferred stock should not exist.

Why then do firms issue preferred stock? While the nondeductibility of dividends from taxable corporate income is the most serious obstacle to issuing preferred stock, there are several reasons why preferred stock is issued:

1. Because of the way utility rates are determined in regulatory environments, regulated public utilities can pass the tax disadvantage of issuing preferred stock on to their customers. Consequently, a substantial amount of straight preferred stock is issued by utilities.
2. Companies reporting losses to the IRS may issue preferred stock. Because they have no taxable income from which interest on debt can be deducted, preferred stock imposes no tax penalty relative to debt. In other words, (1) does not apply.
3. Firms issuing preferred stock can avoid the threat of bankruptcy that exists with debt financing. Unpaid preferred dividends are not debts of a corporation, and preferred shareholders cannot force a corporation into bankruptcy because of unpaid dividends.

Equity versus Debt

Feature	Equity	Debt
Income	Dividends	Interest
Tax status	Dividends are taxed as personal income. Dividends are not a business expense.	Interest is taxed as personal income. Interest is a business expense, and corporations can deduct interest when computing corporate tax liability.
Control	Common stock usually has voting rights.	Control is exercised with loan agreement.
Default	Firms cannot be forced into bankruptcy for nonpayment of dividends.	Unpaid debt is a liability of the firm. Nonpayment results in bankruptcy.
Bottom line: Tax status favors debt, but default favors equity. Control features of debt and equity are different, but one is not better than the other.		

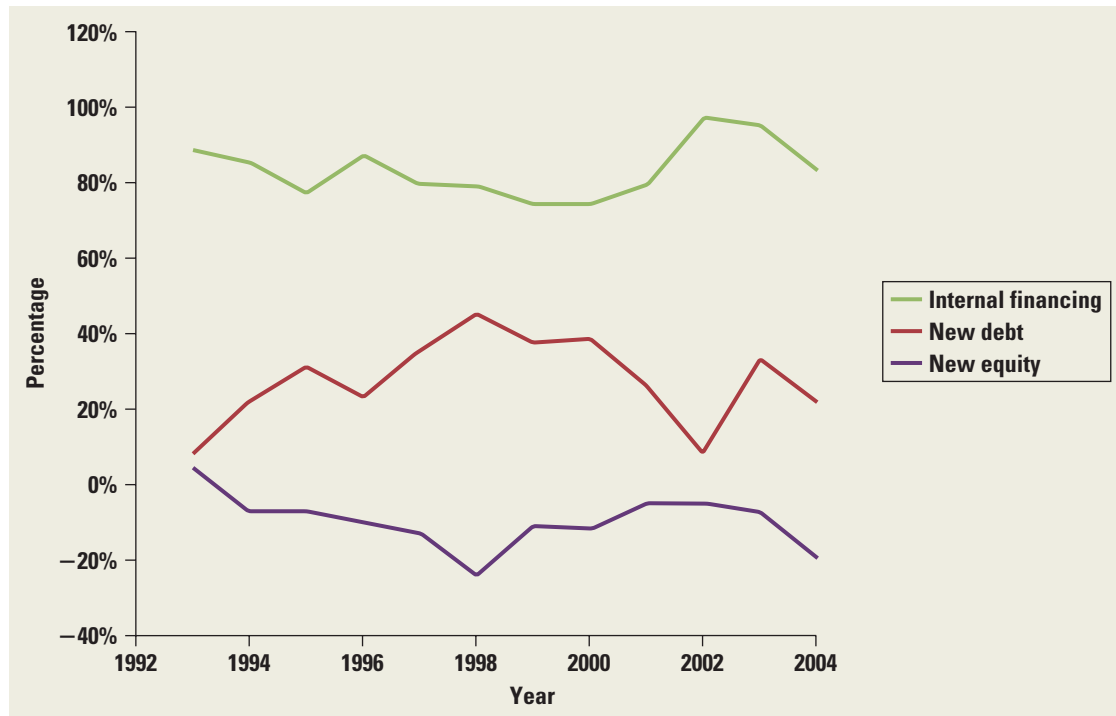
14.4 Patterns of Financing

Firms use cash flow for capital spending and net working capital. Historically, U.S. firms have spent about 80 percent of cash flow on capital spending and 20 percent on net working capital. Table 14.1 summarizes the patterns of long-term financing for U.S. industrial firms from 1993 to 2004. Here we observe internal financing, debt financing, and external equity financing as a percentage of total financing. For example, in 2004, gross capital spending by U.S. industrial firms was \$900 billion and increases in net working capital were \$187 billion. In other words, total business investment spending was \$1,087 ($=\$900 + 187$) billion. Capital spending was $\$900/\$1,087 = 82.8\%$ of the total, whereas net working capital was $\$187/\$1,087 = 17.2\%$ of the total.

Table 14.1 Historical U.S. Financing Patterns (percent), 1993 to 2004

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Uses of funds (investments)												
Capital spending	74%	72%	66%	80%	71%	83%	81%	89%	87%	98%	95%	83%
Net working capital and other	26%	28%	34%	20%	29%	17%	19%	11%	13%	2%	5%	17%
Total uses %	100	100	100	100	100	100	100	100	100	100	100	100
Sources of funds												
Internal financing	88%	85%	77%	87%	79%	79%	74%	74%	79%	97%	74%	97%
External financing	12	15	23	13	21	21	26	26	21	3	26	3
New debt	8	22	31	23	35	45	37	38	26	8	33	22
New equity	4	-7	-7	-10	-13	-24	-11	-12	-5	-5	-7	-19

SOURCE: Board of Governors of the Federal Reserve System, *Flow of Funds Accounts*. www.federalreserve.gov/release/21/current/data.htm.

Figure 14.1 Financing Decisions by U.S. Nonfinancial Corporations

In 2004, U.S. industrial firms generated \$1,057 billion of internal cash flow. Because total business spending exceeded internally generated cash flow (i.e., $1,087 > 1,057$), there was a *financial gap*. This is very typical of U.S. business finance. The financial gap is made up by external financing.

One of the challenges of the financial manager is to finance the gap. In 2004, this meant issuing \$240 billion of new debt because net new equity actually shrank (by \$210 billion) due to stock buybacks. Figure 14.1 charts these patterns of finance.

Internal financing comes from internally generated cash flow and is defined as net income plus depreciation minus dividends. External financing is net new debt and new shares of equity net of buybacks.

Several features of long-term financing seem clear from Table 14.1:

1. Internally generated cash flow has dominated as a source of financing. Typically, between 70 and 90 percent of long-term financing comes from cash flows that corporations generate internally.
2. Typically, total firm spending is greater than internally generated cash flow. A financial deficit is created by the difference between total firm spending and internally generated cash flow. For example, 79 percent of financing came from internal cash flow in 2001, implying a financial deficit in that year of 21 percent ($= 100\% - 79\%$). Debt was 26 percent of total financing, and -5 percent was financed from new stock issues. This financial deficit has averaged about 20 percent in recent years (Figure 14.2).
3. In general, the financial deficit is covered by borrowing and issuing new equity, the two sources of external financing. However, one of the most prominent aspects of

Figure 14.2
The Long-Term
Financial Deficit

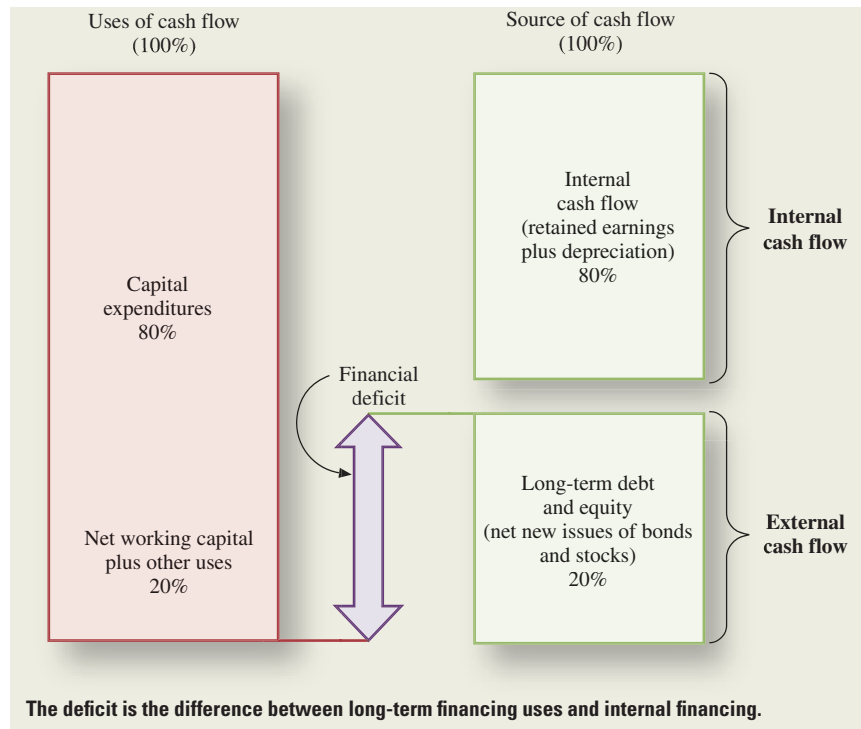


Table 14.2
Recent International
Financing Patterns:
Sources of Funds as
a Percentage of Total
Sources

	United States	Japan	Canada
Internally generated funds	76.9	56.1	56.9
Externally generated funds	23.1	43.9	43.1
Increase in long-term debt	7.1	16.7	13.9
Increase in short-term debt	20.8	21.7	15.8
Increase in stock	-4.9	5.6	13.4

SOURCE: OECD, *Financial Statements of Non-financial Enterprises*, 1993–1995

external financing is that new issues of equity (both common stock and preferred stock) in the aggregate seem to be unimportant. Net new issues of equity typically account for a small part of total financing; in the late 1980s and very recently this figure has been negative.

- Table 14.2 shows that firms in the United States generate more financing from internally generated cash than firms in other countries. Firms in other countries rely to a greater extent than U.S. firms on external equity.

These data are consistent with the results of a survey conducted by Gordon Donaldson on the way firms establish long-term financing strategies.⁵ He found that:

⁵G. G. Donaldson, *Corporate Debt Capacity: A Study of Corporate Debt Policy and Determination of Corporate Debt Capacity* (Boston: Harvard Graduate School of Business Administration, 1961). See also S. C. Myers, "The Capital Structure Puzzle," *Journal of Finance* (July 1984).

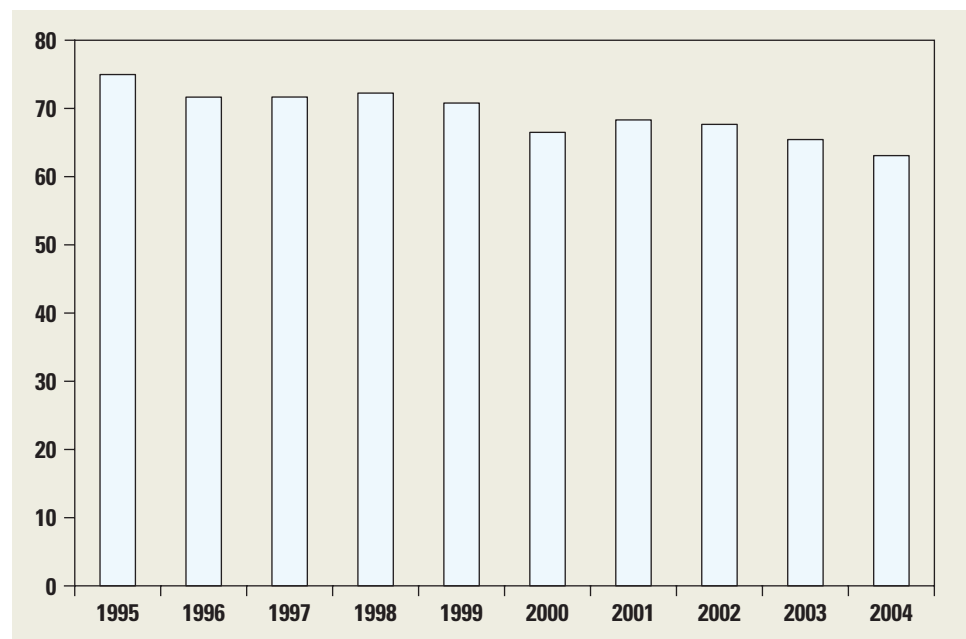
1. The first form of financing used by firms for positive NPV projects is internally generated cash flow: net income plus depreciation minus dividends.
2. As a last resort a firm will use externally generated cash flow. First, debt is used. Common stock is used last.

These observations, when taken together, suggest a **pecking order** to long-term financing strategy. At the top of the pecking order is using internally generated cash flow, and at the bottom is issuing new equity.

14.5 Recent Trends in Capital Structure

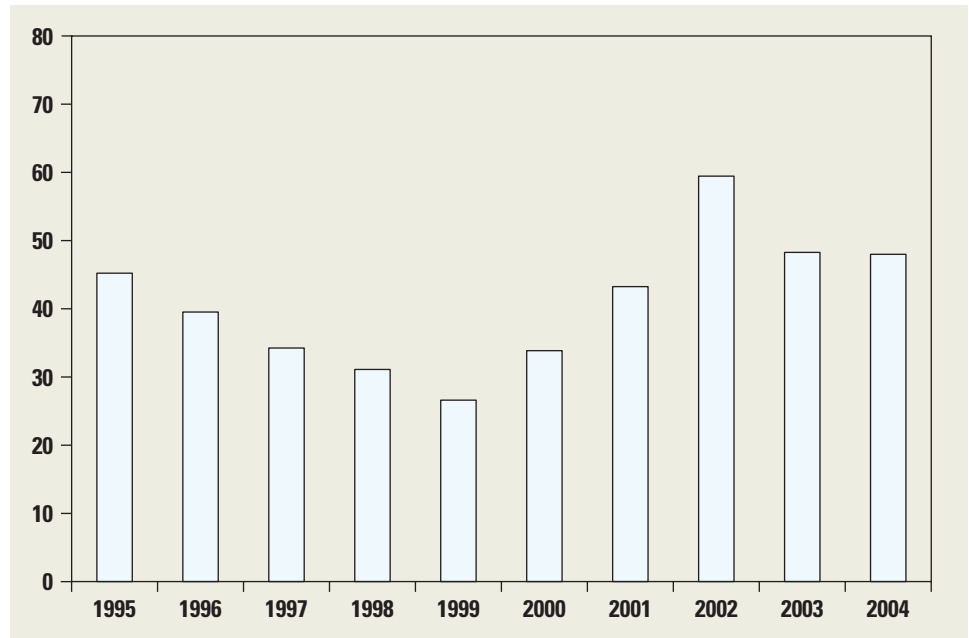
The previous section of this chapter established that U.S. firms after 1993 issued large amounts of new debt to finance the retirement of shares of stock. This pattern of financing suggests the question: Did the capital structure of firms change significantly in the mid-1990s? Unfortunately there is no precise answer to this important question. If we used book values (i.e., balance sheet values) the answer would be less dramatic than if we used market values. Figure 14.3 charts the book value of debt to the book value of equity for U.S. nonfinancial firms. There is a slightly downward trend throughout the 1990s and then an upward trend starting in 2000. However, if we use market values instead of book values, a more dramatic picture emerges. As can be seen in Figure 14.4, when we use market values this trend is much more pronounced, reflecting the sharp rise in stock market values in the 1990s and the crash starting in 2000. Therefore, when observing the capital structures of firms, it is important to distinguish between market values and book values. For example,

Figure 14.3
Book Debt Ratio:
Total Debt as a
Percentage of Equity
for U.S. Nonfarm,
Nonfinancial Firms
from 1995 to 2004



SOURCE: Board of Governors of the Federal Reserve System, *Flow of Accounts*.

Figure 14.4
Market Debt Ratio: Total Debt as a Percentage of the Market Value of Equity for U.S. Nonfarm, Nonfinancial Firms from 1995 to 2004



SOURCE: Board of Governors of the Federal Reserve System, *Flow of Funds*.

suppose a firm buys back shares of its own stock and finances the purchase with new debt. This would seem to suggest that the firm's reliance on debt should go up and its reliance on equity should go down. After all, the firm has fewer shares of stock outstanding and more debt. The analysis is more complicated than it seems because the market value of the firm's remaining shares of stock may go up and offset the effect of the increased debt. This is exactly what happened in the 1990s.

Which Are Best: Book or Market Values?

In general, financial economists prefer the use of market values when measuring debt ratios. This is true because market values reflect current rather than historical values. Most financial economists believe that current market values better reflect true intrinsic values than do historically based values. However, the use of market values contrasts with the perspective of many corporate practitioners.

Our conversations with corporate treasurers suggest to us that the use of book values is popular because of the volatility of the stock market. It is frequently claimed that the inherent volatility of the stock market makes market-based debt ratios move around too much. It is also true that restrictions of debt in bond covenants are usually expressed in book values rather than market values. Moreover, firms such as Standard & Poor's and Moody's use debt ratios expressed in book values to measure creditworthiness.

A key fact is that whether we use book or market values, debt ratios for U.S. nonfinancial firms generally have been well below 100 percent of total equity in recent years; that is, firms generally use less debt than equity.

Summary and Conclusions

The basic sources of long-term financing are long-term debt, preferred stock, and common stock. This chapter described the essential features of each.

1. We emphasized that common shareholders have
 - a. Residual risk and return in a corporation.
 - b. Voting rights.
 - c. Limited liability if the corporation elects to default on its debt and must transfer some or all of its assets to the creditors.
2. Long-term debt involves contractual obligations set out in indentures. There are many kinds of debt, but the essential feature is that debt involves a stated amount that must be repaid. Interest payments on debt are considered a business expense and are tax deductible.
3. Preferred stock has some of the features of debt and some of the features of common equity. Holders of preferred stock have preference in liquidation and in dividend payments compared to holders of common equity.
4. Firms need financing for capital expenditures, working capital, and other long-term uses. Most of the financing is provided from internally generated cash flow. In the United States only about 25 percent of financing comes from new debt and new equity. Only firms in Japan have historically relied more on external financing than on internal financing.
5. In the 1980s and recently, U.S. firms retired massive amounts of equity. These share buybacks have been financed with new debt.

Concept Questions

1. **Preferred Stock and Debt** What are the differences between preferred stock and debt?
2. **Preferred Stock** Preferred stock doesn't offer a corporate tax shield on the dividends paid. Why do we still observe some firms issuing preferred stock?
3. **Preferred Stock and Bond Yields** The yields on nonconvertible preferred stock are lower than the yields on corporate bonds. Why is there a difference? Which investors are the primary holders of preferred stock? Why?
4. **Corporate Financing** What are the main differences between corporate debt and equity? Why do some firms try to issue equity in the guise of debt?
5. **Corporate Financing** The Cable Company has \$1 million of positive NPV projects it would like to accept. If Cable's managers follow the historical pattern of long-term financing for U.S. industrial firms, what will their financing strategy be?
6. **Proxy** What is a proxy?
7. **Preferred Stock** Do you think preferred stock is more like debt or equity? Why?
8. **Long-Term Financing** As was mentioned in the chapter, new equity issues are generally only a small portion of all new issues. At the same time, companies continue to issue new debt. Why do companies tend to issue little new equity but continue to issue new debt?
9. **Internal versus External Financing** What is the difference between internal financing and external financing?
10. **Internal versus External Financing** What factors influence a firm's choices of external versus internal equity financing?

Questions and Problems

BASIC
(Questions 1–7)

1. **Equity Accounts** Following are the equity accounts for Kerch Manufacturing:

Common stock, \$0.50 par value	\$ 165,320
Capital surplus	2,876,145
Retained earnings	2,370,025
Total	<u>\$5,411,490</u>

- a. How many shares are outstanding?
 - b. At what average price were the shares sold?
 - c. What is the book value per share?
2. **Equity Accounts** The Eastern Spruce equity accounts for last year are as follows:

Common stock, \$2 par value	
500 shares outstanding	?
Capital surplus	250,000
Retained earnings	<u>750,000</u>
Total	?

- a. What are the common stock and total equity values for the equity account?
 - b. The company has decided to issue 5,000 shares of stock at a price of \$30 per share. Show the effects of the new issue on the equity accounts.
3. **Equity Accounts** Ulrich Inc.'s articles of incorporation authorize the firm to issue 500,000 shares of \$5 par value common stock, of which 410,000 shares have been issued. Those shares were sold at an average of 30 percent over par. In the quarter that ended last week, net income was \$650,000; 30 percent of that income was paid as a dividend. The previous balance sheet showed a retained earnings balance of \$3,545,000.
- a. Create the equity statement for the company.
 - b. Suppose the company sells 25,000 of the authorized but unissued shares at the price of \$4 per share. What will the new equity statement look like?
4. **Corporate Voting** The shareholders of the Unicorn Company need to elect seven new directors. There are 500,000 shares outstanding currently trading at \$34 per share. You would like to serve on the board of directors; unfortunately no one else will be voting for you. How much will it cost you to be certain that you can be elected if the company uses straight voting? How much will it cost you if the company uses cumulative voting?
5. **Cumulative Voting** An election is being held to fill three seats on the board of directors of a firm in which you hold stock. The company has 2,500 shares outstanding. If the election is conducted under cumulative voting and you own 300 shares, how many more shares must you buy to be assured of earning a seat on the board?
6. **Cumulative Voting** The shareholders of Motive Power Corp. need to elect three new directors to the board. There are 2,000,000 shares of common stock outstanding, and the current share price is \$5. If the company uses cumulative voting procedures, how much will it cost to guarantee yourself one seat on the board of directors?
7. **Corporate Voting** Power Inc. is going to elect eight board members next month. Betty Brown owns 17.3 percent of the total shares outstanding. How confident can she be of having one of her candidate friends elected under the cumulative voting rule? Will her friend be elected for certain if the voting procedure is changed to the staggering rule, under which shareholders vote on four board members at a time?