CHAPTER

17

DISTRIBUTIONS TO OWNERS: BONUSES, DIVIDENDS, AND REPURCHASES

Learning Objectives

After studying this chapter, readers should be able to

- discuss the three theories of dividend policy,
- describe the information content and clientele effect hypotheses,
- use the residual dividend model to establish dividend policy,
- explain stock dividends and stock splits and the rationale for their use, and
- discuss stock repurchase programs and the reasons for their current popularity.

Introduction

Successful businesses, including not-for-profit healthcare corporations, earn income. That income can then be reinvested in the enterprise or, in the case of investor-owned businesses, distributed to owners. If a business decides to distribute income to owners, three key issues arise: (1) What percentage should be distributed? (2) What form should the distribution take—bonuses, cash dividends, or stock repurchases? (3) How stable should the distribution be—that is, should the annual dollar amount be stable and dependable, which owners may prefer, or should it vary with the business's cash flows and investment opportunities, which might be better for the business? These three issues are the primary focus of this chapter, but we also consider two related issues: stock dividends and stock splits.

Distributions in Small Businesses

In general, income distributions to owners in small businesses differ from that in large businesses. In this section, we focus on small businesses. The remainder of the chapter is devoted to distributions in large, publicly held corporations.

The reason for a separate treatment of small businesses is twofold. First, small businesses often are organized as proprietorships, partnerships, or some hybrid form. If they are organized as corporations, taxes typically are filed under Chapter S, which means that, as in a proprietorship or partnership, the earnings of the business are prorated among the owners and taxed as ordinary income, regardless of whether the earnings are reinvested in the business. Second, as owners/managers of the business, small businesses have the option of returning earnings to owners in the form of increased compensation, either directly as wages or indirectly as perquisites. In large corporations, there is a "firewall" between the managers and the owners (except for the few that are managers), so the only ways to distribute earnings to owners (the outside stockholders) are through dividends and stock repurchases.

These inherent differences between small and large businesses, as well as the limited resources available to devote to the finance and accounting function, create an incentive for small businesses to use the *modified cash basis* of accounting as opposed to the *accrual basis* required of most large businesses. If the cash method is used, revenues and costs are reported on the income statement as they occur (when the cash transaction takes place) rather than when the obligations occur. Furthermore, because the financial statements of small businesses are not presented to outsiders, the statements are used both for control purposes and for tax purposes. For the most part, small businesses report as little taxable income as possible, except for the amounts specifically required as reserves or to replace assets and grow the business.

For an example of a situation facing a typical small healthcare provider, consider Exhibit 17.1, which shows the income statements for Bismarck Clinic, a one-physician family practice. The left column shows the income statement as it would typically be constructed. However, this format suggests that there is no ownership value to the business because the net income is zero. To determine the value of ownership, the clinic must explicitly show on the income statement any bonuses paid to the two owners/physicians.

Although not an easy task, some judgments must be made regarding which portion of the $250,000 in physician compensation is for actual professional services and which portion is, in reality, a return on owner's capital. Assume that current studies indicate that the median compensation for salaried primary care physicians in the area is $200,000. Assuming that this amount is the "fair" compensation for the work the owner/physician of Bismarck Clinic does, the compensation of $250,000 implies that he is receiving a bonus of $50,000. The right column of the income statement does not list the $50,000 bonus as part of physician compensation, but rather shows it as net income. Because the practice is a proprietorship, the $50,000 is taxed at the physician's personal tax rate, regardless of whether it is received as salary (bonuses) or earnings (net income).

EXHIBIT 17.1
Bismarck Clinic: Standard and Recast Income Statements

	Standard Format	*Recast Format*
Revenues		
Professional fees	$ 950,000	$ 950,000
Other income	50,000	50,000
Total revenues	$1,000,000	$1,000,000
Expenses		
Physician compensation	$ 250,000	$ 200,000
Staff compensation	370,000	370,000
Clinical supplies	85,000	85,000
Office supplies	50,000	50,000
Rent	50,000	50,000
Insurance	25,000	25,000
Telephone and utilities	25,000	25,000
Outside laboratory fees	25,000	25,000
Other expenses	120,000	120,000
Total expenses	$1,000,000	$ 950,000
Net income	$ 0	$ 50,000

With no differential tax consequences, the two income statements create the same cash flows to the owner/physician. The value of recasting is that the compensation is broken down into the portion that is a result of employment at the clinic and the portion that is a result of owning the clinic. Indeed, Bismarck Clinic has $500,000 of assets, so its implied return on assets (ROA) is $50,000/$500,000 = 10.0%, as opposed to zero indicated initially. Furthermore, if the clinic has $200,000 in debt financing (with the interest expense shown in the other expenses category), the implied return on equity (ROE) to the owner/physician is $50,000/$300,000 = 16.7%.[1]

Although recasting the income statement as we have done in Exhibit 17.1 seems like much ado about nothing, it is essential in some circumstances. For example, if the clinic is put up for sale, it will be necessary to convince potential buyers that the business has economic value to a new owner by showing that it can generate a positive net income (cash flow). Showing a zero net income will not generate much interest among prospective buyers, especially those who would not practice at the clinic.

SELF-TEST QUESTIONS

1. How can a small business's income statement be recast to show the value of employment versus the value of ownership?
2. Why is such recasting necessary?

Dividends Versus Capital Gains: Does It Matter to Investors?

In the remainder of the chapter, we discuss decisions involving distributions to owners of large businesses in which stockholders and managers are separated. When deciding how much cash to distribute to stockholders, managers must keep in mind that the business's primary financial objective is to maximize shareholder value. Consequently, the *target payout ratio*—defined as the percentage of net income to be paid out as cash dividends—should be based in large part on investors' preferences for dividends versus capital gains: Do investors prefer (1) to have the business distribute income as cash dividends or (2) to have it either repurchase stock or plow the earnings back into the business, both of which should result in capital gains?

This preference can be considered in terms of the constant growth stock valuation model, which was first presented in Chapter 7:

Key Equation 17.1: Constant Growth Model (Valuation)

$$E(P_0) = \frac{E(D_1)}{R(R_S) - E(g)}.$$

If the business increases the payout ratio, it will raise the next expected dividend, $E(D_1)$. This increase in the numerator, taken alone, would cause the stock price, $E(P_0)$, to rise. However, if $E(D_1)$ is raised, less money would be available for reinvestment, which would cause the expected growth rate, $E(g)$, to decline and hence would tend to lower the stock's price, which illustrates that any change in payout policy will have two opposing effects. Thus, the *optimal dividend policy* depends on the relationship between the dividend policy and the required rate of return on (cost of) equity, $R(R_s)$. The policy that produces the lowest cost of equity will maximize stock price.

In this section, we examine three theories of investor preference: (1) the dividend irrelevance theory, (2) the "bird-in-the-hand" theory, and (3) the tax preference theory. In essence, these theories focus on whether or not dividend policy affects the cost of equity. If it does, then, like capital structure policy, the dividend policy that produces the lowest cost of equity will be optimal because it will produce the highest stock price.

Dividend Irrelevance Theory

The principal proponents of the *dividend irrelevance theory* are Merton Miller and Franco Modigliani (MM), who argued that dividend policy has no effect on a business's cost of equity and hence on stock price.[2] If they are correct,

dividend policy is irrelevant. The essence of dividend irrelevance is that a business's value is determined solely by its earning power and its business risk. In other words, MM argued that the value of a business depends only on the income produced by its assets and the riskiness of that income, not on how this income is split between dividends and retained earnings.

To understand MM's argument that dividend policy is irrelevant, recognize that any shareholder can construct her own dividend policy. For example, if a business does not pay dividends, a shareholder who wants a 5 percent dividend can "create" it by selling 5 percent of her stock. Conversely, if a business pays a higher dividend than an investor desires, the investor can use the unwanted dividends to buy additional shares of the business's stock. If investors could buy and sell shares and, thus, create their own dividend policy **without incurring transaction costs**, the business's dividend policy would truly be irrelevant. However, investors who want additional dividends must incur brokerage costs to sell shares and perhaps pay capital gains taxes, and investors who do not want dividends must first pay taxes on the unwanted dividends and then incur brokerage costs to purchase shares with the after-tax dividends.

Because transaction costs do exist, dividend policy may well be relevant. However, the merit of any theory is based on how well it describes reality, not on the number or realism of its assumptions. Therefore, the validity of the dividend irrelevance theory must be judged by empirical testing, the results of which will be discussed in a later section.

Bird-in-the-Hand Theory

The principal conclusion of the dividend irrelevance theory—that dividend policy does not affect the cost of equity—has been hotly debated in academic circles. In particular, Myron Gordon and John Lintner argued that the cost of equity decreases as the dividend payout is increased because investors are more certain of receiving dividends than they are of receiving capital gains, which are supposed to result from profit retentions.[3] Gordon and Lintner said, in effect, that investors value a dollar of expected dividends more highly than a dollar of expected capital gains because the dividend yield component, $E(D_1)/P_0$, is less risky than the capital gains component, $E(g)$, in Key Equation 17.1:

MM disagreed. They argued that the cost of equity is independent of dividend policy, which implies that investors are indifferent between dividends and capital gains. Furthermore, they called the Gordon-Lintner argument the bird-in-the-hand fallacy because, in their view, most investors plan to reinvest their dividends in the stock of the same or similar businesses, and in any event, the riskiness of a business's cash flows to investors in the long run is determined by the riskiness of its operating cash flows rather than by its dividend policy.

Tax Preference Theory

There are three potential tax-related reasons for thinking that investors might prefer a low dividend payout to a high payout. First, long-term capital gains historically have been taxed at lower rates than dividends have been. Therefore, wealthy investors (who own most of the stock and receive most of the dividends) might prefer to have businesses retain and plow earnings back into the business. Earnings growth would presumably lead to higher stock prices, and thus lower-taxed capital gains would be substituted for higher-taxed dividends. Today, however, capital gains and dividends are taxed at the same rate (15 percent or 20 percent for most taxpayers). Second, and most relevant under the current tax code, taxes are not paid on the gain until a stock is sold. Because of time value effects, a dollar of taxes paid in the future has a lower effective cost than a dollar of taxes paid on dividends received today. Third, if a stockholder holds a stock until he dies, no capital gains tax is due at all; the beneficiaries who receive the stock can use the stock's value on the day of death as their cost basis and thus completely escape the capital gains tax on the gain thus far, whereas dividends are taxed as they are received.

Because of these tax advantages, investors may prefer to have businesses retain most of their earnings, which in turn would lead to a lower cost of equity. If so, investors would be willing to pay more for low-payout businesses than for otherwise similar high-payout businesses.

The Empirical Evidence

These three theories offer contradictory advice to the managers of investor-owned corporations, so which, if any, should we believe? The most logical way to proceed is to test the theories empirically. Many such tests have been conducted, but their results have been mixed. There are two reasons for the mixed results: (1) For a valid statistical test, things other than dividend policy must be held constant—that is, the sample businesses must differ only in their dividend policies—and (2) we must be able to measure with a high degree of accuracy each sample business's cost of equity. Neither of these two conditions holds: (1) We cannot find a set of publicly owned businesses that differ only in their dividend policies, and (2) we cannot obtain precise estimates of the cost of equity.

Therefore, the studies have been unable to establish a clear relationship between dividend policy and the cost of equity. In other words, no study has shown that, in the aggregate, investors prefer either higher or lower dividends. Nevertheless, individual investors do have strong preferences. Some prefer high dividends, while others prefer all capital gains. These differences help explain why definitive conclusions regarding the optimal dividend payout are difficult to reach. Even so, evidence and logic suggest that investors prefer businesses that follow a *stable, predictable* dividend policy (regardless

of the payout level). We will consider the issue of dividend stability later in the chapter.

SELF-TEST QUESTIONS

1. What variable must dividend policy affect to have an impact on stock price?
2. Briefly explain the dividend irrelevance, bird-in-the-hand, and tax preference theories.
3. What did MM assume about taxes and brokerage costs when they developed their dividend irrelevance theory?
4. How did the bird-in-the-hand theory get its name?
5. In what sense does MM's theory represent a middle-ground position between the other two theories?
6. What have been the results of empirical tests of the dividend theories?

Other Dividend Policy Issues

Before we discuss how dividend policy is set in practice, we must examine two other issues that could affect investor views toward dividend policy: (1) information content, or signaling, hypothesis and (2) clientele effect hypothesis.

Information Content (Signaling) Hypothesis

When MM set forth their dividend irrelevance theory, they assumed that everyone—investors and managers alike—has identical information regarding the business's future earnings and dividends. In reality, however, different investors have different views on both the level of future dividend payments and the uncertainty inherent in those payments. Furthermore, managers have better information about future prospects than do outside stockholders.

It has been observed that an increase in the dividend payment often is accompanied by an increase in the price of the stock, while a dividend cut generally leads to a stock price decline. This observation could mean that investors, in the aggregate, prefer dividends to capital gains. However, MM argued differently. They noted the well-established fact that corporations are reluctant to cut dividends and will not raise dividends unless they anticipate good earnings in the future and hence be able to sustain the higher dividend. Thus, MM argued that a higher-than-expected dividend increase is a "signal" to investors that the business's management forecasts good future earnings. Conversely, a dividend reduction, or a smaller-than-expected increase, is a signal that management is forecasting poor earnings in the future. Thus, MM argued that investors' reactions to changes in dividend policy do not necessarily show that

investors prefer dividends to retained earnings. Rather, they argued that price changes following dividend actions simply indicate there is important *information (signaling) content* in dividend announcements.

Interestingly, it also has been suggested that managers can use capital structure as well as dividends to signal businesses' future prospects. For example, a business with good earnings prospects can carry more debt than can a similar business with poor earnings prospects. This theory—called *incentive signaling*—rests on the premise that signals with **cash-based variables** (either debt interest or dividends) cannot be mimicked by unsuccessful businesses because such businesses do not have the future cash-generating power to maintain the announced interest or dividend payment. Thus, investors are more likely to believe a glowing verbal report when it is accompanied by a dividend increase or a debt-financed expansion program.[4]

Like most other aspects of dividend policy, empirical studies of the signaling hypothesis have had mixed results. Clearly, some information content exists in dividend announcements. However, it is difficult to tell whether the stock price changes that follow dividend increases and decreases reflect only signaling effects or both signaling effects and dividend preferences. Still, signaling effects should be considered when a business is contemplating changing its dividend policy.

Clientele Effect Hypothesis

As we indicated earlier, different groups, or clienteles, of stockholders prefer different dividend payout policies. For example, retired individuals and university endowment funds generally prefer cash income, so they may want the business to pay out a high percentage of its earnings. Such investors, and pension funds, are often in low or even zero tax brackets, so taxes are of no concern. On the other hand, stockholders in their peak earning years might prefer reinvestment because they have less need for current investment income and would simply reinvest the dividends they receive, after paying income taxes on those dividends.

If a business retains and reinvests income rather than pays dividends, stockholders who need current income would be disadvantaged. The value of their stock might increase, but they would be forced to go through the trouble and expense of selling some of their shares to obtain cash. Also, some institutional investors, or trustees for individuals, would be legally precluded from selling stock and then "spending capital." On the other hand, stockholders who are saving rather than spending dividends might favor a low-dividend policy because the less the business pays out in dividends, the less these stockholders will have to pay in current taxes and the less trouble and expense they will have reinvesting their after-tax dividends. Therefore, investors who want current investment income should own shares in high-dividend-payout

businesses, while investors with no need for current investment income should own shares in low-dividend-payout businesses.

To the extent that stockholders can switch the stocks that they hold, a business can change from one dividend payout policy to another and then let stockholders who do not like the new policy sell to investors who do. However, frequent switching would be inefficient because of (1) brokerage costs, (2) the likelihood that stockholders who are selling will have to pay capital gains taxes, and (3) a possible shortage of investors who like the business's newly adopted dividend policy. Thus, management should be hesitant to change its dividend policy because a change might cause current shareholders to sell their stock, which would lower the stock price. Such a price decline might be temporary, but it might also be permanent—if the new dividend policy attracts few new investors, the stock price will remain depressed. Of course, the new policy might attract an even larger clientele than the business had before, in which case the stock price would rise.

Evidence from many studies suggests the existence of a *clientele effect*. MM and others have argued that one clientele is as good as another, so the existence of a clientele effect does not necessarily imply that one dividend policy is better than any other. MM may be wrong, though, and neither they nor anyone else can prove that the aggregate makeup of investors makes clientele effects irrelevant. This issue, like most others concerning dividend policy, is still up in the air.

SELF-TEST QUESTION

1. Define information content and clientele effects hypotheses, and explain how they affect dividend policy.

Dividend Stability

The stability of dividends is also important. Profits and cash flows vary over time, as do investment opportunities. Taken alone, this inconsistency suggests that corporations should vary their dividends over time, increase them when cash flows are large and the need for internal funds is low, and lower them when cash is in short supply relative to investment opportunities. However, many stockholders rely on dividends to meet expenses, and they would be seriously inconvenienced if the dividend stream were unstable. Furthermore, reducing dividends to make funds available for capital investment could cause investors to push down the stock price because they interpreted the dividend cut as an indication that the business's future earnings prospects have been diminished. Thus, to maximize its stock price, a business must balance its internal needs for funds against the needs and desires of its stockholders.

How should this balance be struck—that is, how stable and dependable should a business attempt to make its dividends? It is impossible to answer this question definitively, but here are some points to consider. Virtually every publicly owned business makes a five-year to ten-year financial forecast of earnings and dividends. Such forecasts are never made public; they are used for internal planning purposes only. However, security analysts construct similar forecasts and do make them available to investors. Furthermore, the internal five-year to ten-year corporate forecasts for most businesses show a trend of higher earnings and dividends. Both managers and investors know that economic conditions may cause actual results to differ from forecasted results, but most businesses are expected to grow.

Years ago, when inflation was not persistent, the term *stable dividend policy* meant a policy of paying the same dollar dividend year after year. For example, AT&T paid $9 per year ($2.25 per quarter) for 25 straight years. Today, though, most businesses and stockholders expect earnings to grow over time as a result of retentions and inflation, both of which tend to increase future earnings. Thus, dividends are normally expected to grow more or less in line with earnings, and today, a stable dividend policy generally means increasing the dividend at a reasonably steady rate. Indeed, some businesses inform investors of dividend growth expectations in their annual reports. Businesses with volatile earnings and cash flows would be reluctant to make a commitment to increase the dividend each year, so they would not make such announcements. Even so, most businesses would like to be able to exhibit dividend stability, and they try to come as close to it as they can.

Dividend stability has two components: (1) How dependable is the growth rate, and (2) can stockholders count on receiving at least the current dividend in the future? From an investor's standpoint, a business whose dividend growth rate is predictable has the most stable policy; such a business's total return (dividend yield plus capital gains yield) would be relatively stable over the long run, and its stock would be a good hedge against inflation. The second most stable policy is one that reasonably assures stockholders that the current dividend will not be reduced; it may not grow at a steady rate, but management will probably be able to maintain the current dividend amount. The least stable situation is characterized by earnings and cash flows that are so volatile that investors cannot count on the business to maintain the current dividend over a typical business cycle.

Most observers believe that dividend stability is desirable. Assuming this position is correct, investors prefer stocks that pay more predictable dividends to stocks that pay the same average amount of dividends over the long run but in a more erratic manner. The cost of equity is minimized and the stock price maximized if a business stabilizes its dividends as much as possible.

SELF-TEST QUESTIONS

1. What does stable dividend policy mean?
2. What are the two components of dividend stability?

Establishing the Dividend Policy in Practice

In the preceding sections, we discussed that investors may or may not prefer dividends to capital gains but that they do prefer predictable to unpredictable dividends. Given these preferences, how should businesses set their basic dividend policies? In this section, we describe the policy-setting process.

Setting the Target Payout Ratio: The Residual Dividend Model

Before we begin our discussion of the model, note that the term *payout ratio* can be interpreted in two ways: (1) the conventional way, in which the term means the percentage of net income paid out as **cash dividends**, or (2) the global context, in which the term includes both cash dividends and share repurchases. In this section, we assume that no repurchases occur. (Repurchases are discussed in a later section.) Increasingly, though, businesses are using the residual model to determine distributions to shareholders and then making a separate decision regarding the form of that distribution.

When deciding how much cash to distribute to stockholders, two points should be kept in mind: (1) The overriding objective is to maximize shareholder value, and (2) the business's cash flows really belong to its shareholders, so management should refrain from retaining income unless it can be reinvested to produce returns higher than shareholders could earn themselves by investing the cash in investments of similar risk. On the other hand, internal equity (retained earnings) is cheaper than external equity (new common stock) because of the costs associated with new stock sales. This factor encourages businesses to retain earnings because they add to the equity base and thus reduce the likelihood that the business will have to raise external equity at a later date to fund future real-asset investments.

Regarding dividend policy, one size does not fit all. Some businesses produce a lot of cash but have limited investment opportunities—namely businesses in profitable, but mature, industries where few opportunities for growth exist. Such businesses typically distribute a large percentage of their cash to shareholders, thereby attracting investment clienteles that prefer high dividends. Other businesses generate little or no excess cash but have many good investment opportunities—commonly new businesses in rapidly growing industries. These businesses generally distribute little or no cash but enjoy rising earnings and stock prices, thereby attracting investors who prefer capital gains.

Because investor preferences for dividends versus capital gains remain unclear, the optimal payout ratio is a function of three factors: (1) the business's investment opportunities, (2) its target capital structure, and (3) the availability and cost of external capital. When combined, these three factors create the *residual dividend policy*. Under this policy, a business follows four steps when deciding its target payout ratio: (1) It estimates the optimal capital budget; (2) it estimates the amount of equity needed to finance that budget, given its target capital structure; (3) it uses retained earnings to meet equity requirements to the extent possible; and (4) it pays dividends only if more earnings are available than are needed to support the optimal level of new investment. *Residual* implies leftover, so *residual policy* implies that dividends are paid out of "leftover" earnings.

If a business rigidly follows the residual dividend policy, dividends paid in any given year can be expressed as follows:

Key Equation 17.2: Residual Dividend Policy

$$\begin{aligned}\text{Dividends} &= \text{Net income} - \text{Retained earnings required for reinvestment}\\ &= \text{Net income} - (\text{Target equity ratio} \times \text{Total capital budget}).\end{aligned}$$

To illustrate, assume a business has a net income of $100,000, a target equity ratio of 60 percent (meaning a target debt ratio of 40 percent), and a $50,000 capital budget. Under the residual model, its dividends would be $100,000 – (0.6 × $50,000) = $100,000 – $30,000 = $70,000. Thus, the business would use the $30,000 retained earnings plus $50,000 – $30,000 = $20,000 of new debt to finance the capital budget and hence would keep its capital structure on target. Note that the amount of equity needed to finance new investments might exceed net income; in this example, the equity needed to finance new investments would exceed net income if the capital budget were $200,000. In such instances, no dividends would be paid and the business would have to raise external equity if it wanted to maintain its target capital structure and undertake all desired projects.

Most businesses have a target capital structure that calls for at least some debt, so businesses finance new investments partly with debt and partly with equity. As long as a business finances with the optimal mix of debt and equity, and provided it uses only internally generated equity (retained earnings), the marginal cost of each new dollar of capital is minimized. Internally generated equity is available for financing a certain amount of new investments, but beyond that amount, the business must turn to more expensive new common stock. At the point where new stock must be sold, the cost of equity—and consequently the marginal cost of capital—rises.

Because investment opportunities and earnings vary from year to year, strict adherence to the residual dividend policy would cause dividends to be

unstable. One year a business might pay zero dividends because it needed the money to finance good investment opportunities, but the next year it might pay a large dividend because investment opportunities were poor and therefore the business did not need to retain a large amount of earnings. Similarly, fluctuating earnings could also lead to variable dividends, even if investment opportunities were stable. Therefore, for most businesses, adherence to the residual dividend policy would lead to fluctuating, unstable dividends. Adherence to it would be optimal only if investors were not bothered by fluctuating dividends. Because investors prefer stable, dependable dividends, the cost of equity would be higher, and the stock price lower, if businesses followed the residual model in a strict sense rather than attempted to stabilize their dividends over time, so instead many businesses use the *managed residual policy*, which consists of the following steps:

- Estimate the earnings and investment opportunities, on average, over the next five or so years.
- Use this forecast to find the residual model average payout ratio during the planning period, which then becomes the business's long-run target payout ratio.

Although the target payout ratio is one input, many other factors need to be considered when setting each year's dollar dividend.

Businesses with stable operations can plan their dividends with a fairly high degree of confidence. Other businesses, especially those in cyclical industries, have difficulty maintaining in bad times a dividend that is really too low in good times. Historically, such businesses have set a low "regular" dividend and then supplemented it with an "extra" dividend when times were good. In essence, they announced a low regular dividend that they were reasonably sure they could maintain, even in bad times, so stockholders could count on receiving this dividend under almost all conditions. When times were good and profits and cash flows were high, the businesses paid a clearly designated extra dividend. Investors recognized that the extra dividend might not be maintained in the future, so they did not interpret it as a signal that the businesses' earnings were going up permanently, nor did they take the elimination of an extra dividend as a negative signal. In recent years, however, many businesses following this *low regular dividend plus extras* policy have replaced the extras with stock repurchases.

Earnings, Cash Flows, and Dividends

We normally think of earnings as the primary determinant of dividends, but cash flows are even more important. This point should be more or less intuitive because dividends clearly depend more on cash flows (which reflect the business's ability to pay dividends) than on current earnings (which are heavily influenced by accounting practices and do not necessarily reflect the

business's ability to pay dividends). Because of this relationship, dividends—or better yet, cash to investors—divided by cash flow is probably a better measure of payout than is dividends divided by net income. Still, the historical precedent was to express the payout ratio on the basis of earnings.

Quarterly Versus Other Payout Periods

Traditionally, US investor-owned corporations have paid dividends quarterly. Until recently, the term *quarterly dividend* was a permanent part of the financial lexicon. However, some corporations pay a single annual dividend while others pay monthly dividends.

There are two reasons to pay annual rather than quarterly dividends. First and foremost, it cuts both administrative and payment costs. Paying only one dividend instead of four saves the printing and distribution costs associated with three dividend payments. These savings can be considerable, especially for businesses that have a large number of shareholders and send out more than a million checks with each declared dividend. Also, there is a time value of money savings. For example, assume a business paid out about $400 million in dividends in 2014. If it paid out this money annually instead of quarterly, it could invest the intra-year (quarterly) payments. At a 5 percent annual rate, the business's savings would total about more than $8 million. Second, businesses have more flexibility in funding annual dividends than in funding quarterly dividends, so those with highly fluctuating income are more comfortable paying annually. Many executives predict that more and more corporations will convert to annual dividends, especially those that pay small dollar amounts to a large number of shareholders.

Some corporations—primarily funds and trusts—pay dividends on a monthly basis. The rationale for paying dividends so frequently is that these corporations appeal mostly to investors seeking steady dividend income, as opposed to capital gains, and monthly payments are more attractive to such investors than are payments at longer intervals.

Changing Dividend Policies

From our discussion thus far, it is obvious that businesses should try to establish a rational dividend policy and stick with it. Businesses can change their dividend policies, but changes can inconvenience their existing stockholders, send unintended signals, and suggest dividend instability—all of which can negatively influence stock price. Still, economic circumstances change, and occasionally such changes dictate that a business should alter its dividend policy.

In general, when a business changes its dividend policy, it must fully inform its stockholders of the rationale for the change. Good communications between the business and investors can mitigate the potential negative consequences of the change. This point is especially critical when dividends

are cut or omitted. Although there may be "good and just" reasons for the change, many stock investors still believe the old adage—"like diamonds, dividends are forever."

SELF-TEST QUESTIONS

1. Explain the logic of the residual dividend policy. Why is the managed dividend policy (as opposed to the strict residual dividend policy) more likely to be used in practice?
2. Which are more critical to the dividend decision—earnings or cash flow? Explain your answer.
3. Why do some businesses pay annual or monthly dividends rather than the more common quarterly dividends?
4. Why do businesses change their dividend policies, and what is the best strategy in such situations?

Summary of the Factors Influencing Dividend Policy

We have described the major theories of investor preference and some issues concerning the effects of dividend policy on the value of a business. We also discussed the managed dividend policy for setting a business's long-run target payout ratio. In this section, we discuss several other factors that affect the dividend decision. These factors may be grouped into three broad categories: (1) constraints on dividend payments, (2) investment opportunities, and (3) alternative sources of capital. Each of these categories has several subparts, which are discussed in the following paragraphs.

Constraints on Dividend Payments

- **Bond indentures**. Debt contracts often contain restrictive covenants that limit dividend payments to earnings generated after the loan is granted. Also, debt contracts often stipulate that no dividends can be paid unless the current ratio, times-interest-earned ratio, or some other measure of financial soundness meets stated minimums.
- **Preferred stock restrictions**. Typically, common dividends cannot be paid if the business has omitted a dividend on any preferred stock that had been issued. Any preferred arrearages must be satisfied before payment of common dividends can resume.
- **Impairment of capital rule**. Dividend payments cannot exceed the amount shown in the retained earnings account on the balance sheet. This legal restriction—known as the *impairment of capital rule*—is designed to protect creditors. Without the rule, a business that is in trouble could sell off most of its assets and distribute the proceeds to stockholders, leaving the creditors holding an "empty bag."

(*Liquidating dividends* can be paid out of capital, but they must be indicated as such and must not reduce capital to amounts that are lesser than the limits stated in debt contracts.)

- **Availability of cash**. Cash dividends can be paid only with cash. Thus, a shortage of cash in the bank can restrict dividend payments. However, the ability to borrow can offset this factor.
- **Penalty tax on improperly accumulated earnings**. To prevent wealthy stockholders from using corporations to elude personal taxes, the tax code imposes a special surtax on improperly accumulated income. A business will be subject to heavy penalties if the Internal Revenue Service (IRS) can demonstrate that the business is deliberately holding down its dividend payout ratio to help its stockholders elude personal taxes. This factor is relevant only to privately owned businesses; we have never heard of a publicly owned business accused of improperly accumulating earnings.

Investment Opportunities

- **Number of profitable investment opportunities**. If a business typically has a large number of profitable investment opportunities, it will tend to have a low target payout ratio—and vice versa if the business has few profitable investment opportunities.
- **Possibility of accelerating or delaying projects**. A business's ability to accelerate or to postpone projects enables it to adhere more closely to a stable dividend policy.

Alternative Sources of Capital

- **Cost of selling new stock**. If a business needs to finance a given level of investment, it can obtain equity by retaining earnings or by issuing new common stock. If flotation costs (which include issuance costs and any negative signaling effects of a stock offering) are high, the cost of new equity is well above the cost of retained earnings, making it better to set a low payout ratio and to finance through retention rather than through a sale of new common stock. On the other hand, a high-dividend payout ratio is more feasible for a business whose flotation costs are low. Flotation costs differ among businesses; for example, the flotation percentage is generally higher for small businesses, so they tend to set low payout ratios.
- **Ability to substitute debt for equity**. A business can finance a given level of investment with debt or equity. As noted in the previous paragraph, business's dividend policy can be more flexible if it has low stock flotation costs because equity can be raised either by retaining earnings or by selling new stock. The same is true for debt policy: If

the business can adjust its debt ratio without raising costs sharply, it can pay the expected dividend, even if earnings fluctuate, by using a variable debt ratio.

- **Control**. If management is concerned about maintaining control, it may be reluctant to sell new stock, and hence the business may retain more earnings than it otherwise would. However, if stockholders want higher dividends and a proxy fight looms, it will increase the dividend.

It should be apparent from this discussion that dividend policy decisions are exercises in informed judgment, not decisions based on quantified rules. Even so, to make rational dividend decisions, financial managers must take into account all the points discussed in the preceding sections.

SELF-TEST QUESTIONS

1. What constraints affect dividend policy?
2. How do investment opportunities affect dividend policy?
3. How do the availability and cost of outside capital affect dividend policy?

The Dividend Policy Decision Process

In many ways, our discussion of dividend policy parallels our discussion of capital structure presented in Chapter 10: We have presented the relevant theories and issues and listed some additional factors that influence dividend policy, but we have not come up with any hard-and-fast guidelines that managers can follow. Dividend policy decisions are exercises in informed judgment, not decisions based on a precise mathematical model. In practice, dividend policy is not an independent decision—the dividend decision is made jointly with capital structure and capital budgeting decisions. The underlying reason for this joint decision process is asymmetric information, which influences managerial actions in two ways:

1. In general, managers do not want to issue new common stock. First, new common stock involves issuance costs—commissions, fees, and so on—that can be avoided by using retained earnings to finance the business's equity needs. Also, asymmetric information causes investors to view new common stock issues by mature businesses as negative signals and, thus, lowers expectations regarding the business's future prospects. As a result, the announcement of a new stock issue usually causes the stock price to drop. Considering the costs involved, including issuance and asymmetric information costs, managers

strongly prefer to use retained earnings as their primary source of new equity.

2. Dividend changes are signals about managers' beliefs regarding their businesses' future prospects. Thus, dividend reductions—or worse yet, omissions—generally have a significant negative effect on a business's stock price. For this reason, managers try to set dollar dividends low enough so that there is only a remote chance that they will have to reduce the dividend in the future. Of course, unexpectedly large dividend increases can be used to signal positive prospects.

The effects of asymmetric information suggest that, to the extent possible, managers should avoid selling new common stock and cutting dividends because both actions tend to lower stock prices. Thus, in setting dividend policy, managers should begin by considering the business's future investment opportunities relative to its projected internal sources of funds. The business's target capital structure also plays a part, but because the optimal capital structure typically is specified as a range, businesses can vary their actual capital structures somewhat from year to year. Because it is best to avoid issuing new common stock, the target long-term payout ratio should be designed so that the business can meet all of its equity capital requirements with retained earnings. In effect, managers should use the residual dividend model to set dividends, but in a long-term framework. Finally, the current dollar dividend should be set so that there is an extremely low probability that the dividend, once set, will ever have to be reduced or eliminated.

Of course, the dividend decision is made during the planning process, so future investment opportunities and operating cash flows are uncertain. Thus, the actual payout ratio in any year will probably be above or below the business's long-range target. However, the dollar dividend should be maintained, or increased as planned, unless the business's financial condition deteriorates to the point where it cannot maintain the planned policy or the basic nature of the business changes. A steady or increasing stream of dividends over the long run signals that the business's financial condition is under control. Furthermore, stable dividends reduce investor uncertainty, so a steady dividend stream would reduce the negative effect of a new stock issue if one became absolutely necessary.

In general, businesses with superior investment opportunities should set lower payouts, and hence retain more earnings, than should businesses with poor investment opportunities. The degree of uncertainty also influences the decision. If there is a great deal of uncertainty in the forecasts of free cash flows, it is best to be conservative and set a lower current dollar dividend. Also, businesses with investment opportunities that can be delayed can afford to set a higher dollar dividend because, in times of stress, businesses can postpone investments for a year or two, thereby increasing the

cash available for dividends. Finally, businesses whose cost of capital is largely unaffected by changes in the debt ratio can also afford to set a higher payout ratio because they can, in times of stress, issue additional debt to maintain the capital budgeting program without having to cut dividends or issue stock.

Businesses have only one opportunity to set the dividend payment from scratch. Today's dividend decisions are constrained by policies that were set in the past; hence, policy setting for the next five years necessarily begins with a review of the current situation.

Although we have outlined a rational process for managers to use when setting their businesses' dividend policies, dividend policy remains one of the most judgmental decisions businesses must make. For this reason, dividend policy is always set by the board of directors. The financial staff analyzes the situation and makes a recommendation, but the board makes the final decision. Finally, before we close our discussion of dividend policy, note that many businesses have *dividend reinvestment plans (DRIPs)*, which allow stockholders to buy more stock instead of receiving a cash dividend. DRIPs are discussed in Chapter 7.

SELF-TEST QUESTION

1. Describe the dividend policy decision process. Be sure to discuss all the factors that influence the decision.

Stock Dividends and Stock Splits

Stock dividends and stock splits are related to the business's cash dividend policy. The rationale for stock dividends and splits can best be explained through an example. We will use Porter Surgical, a $700 million medical equipment manufacturer, for this purpose.

Since Porter's inception, its markets have expanded and it has enjoyed strong sales and earnings growth. Some of its earnings have been paid out in cash dividends, but most have been retained, causing earnings per share and stock price to grow. Because the business had only a few million shares outstanding, each of Porter's shares had a high stock price, so many potential investors could not afford to buy a *round lot* of 100 shares. This high price limited the demand for the stock and thus kept the total market value of the business below what it would have been if more shares, at a lower price, had been outstanding. To correct this situation, Porter "split its stock," as described in the next section.

Stock Splits

Although little empirical evidence exists to support the contention, the widespread belief in financial circles is that an *optimal price range* exists for

stocks. *Optimal* means that if the price is within this range, the price/earnings ratio—and hence the business's value—is maximized. Many observers, including Porter's management, believe that the best range for most stocks is from $20 to $80 per share. Accordingly, if the price of Porter's stock rose to $80, management would probably declare a two-for-one *stock split*, which would double the number of shares outstanding and halve the earnings and dividends per share, thereby lowering the stock price. Each stockholder would have more shares, but each share would be worth less. If the post-split price were $40, Porter's stockholders would be exactly as well off as they were before the split. However, if the stock price were to stabilize above $40, stockholders would be better off. Stock splits can be any size; for example, the stock could be split two-for-one, three-for-one, or one-and-a-half-for-one. Note that *reverse splits*, which reduce the number of shares outstanding, can also be used. For example, a firm whose stock sells for $5 might employ a one-for-five reverse split, exchanging one new share for five old ones and raising the value of the shares to about $25, which is within the optimal price range.

Stock Dividends

Stock dividends are similar to stock splits in that they "divide the pie into smaller slices" without affecting the fundamental position of current stockholders. On a 5 percent stock dividend, the holder of 100 shares would receive an additional 5 shares (without cost); on a 20 percent stock dividend, the same holder would receive 20 new shares; and so on. Again, the total number of shares is increased, so earnings, dividends, and price per share all decline.

If a business wants to reduce the price of its stock, should it use a stock split or a stock dividend? Stock splits are generally used after a sharp price run-up to produce a large price reduction. Stock dividends used on a regular annual basis will keep the stock price more or less constrained. For example, if a business's earnings and dividends were growing at about 10 percent per year, its stock price would tend to go up at about that same rate and it would soon be outside the desired trading range. A 10 percent annual stock dividend would maintain the stock price within the optimal trading range. Note, though, that small stock dividends create bookkeeping problems and unnecessary expenses, so businesses today use stock splits far more often than they use stock dividends.

Price Effects

If a business splits its stock or declares a stock dividend, will it increase the market value of its stock? Several empirical studies have sought to answer this question. Here is a summary of their findings:

- On average, the price of a business's stock rises shortly after it announces a stock split or dividend.
- However, the price probably increases because investors take stock splits/dividends as signals of higher future earnings and dividends. Because only businesses whose managers are optimistic about the future tend to split their stocks, the announcement of a stock split is taken as a signal that earnings and cash dividends are likely to increase, which then causes the stock price to rise.
- However, if the business does not announce an increase in earnings and dividends within a few months of the stock split or dividend, its stock price will drop back to the earlier level.
- As noted earlier, brokerage commissions are generally higher in percentage terms on lower-priced stocks. In other words, it is more expensive to trade low-priced stocks than high-priced stocks, which means that stock splits may reduce the liquidity of a business's shares. This particular piece of evidence suggests that stock splits or dividends might actually be harmful, although a lower price does mean that more investors can afford to trade in round lots (100 shares), which carry lower commissions than do odd lots (fewer than 100 shares).

Warren Buffet and Berkshire Hathaway Stock

It is interesting to note that Berkshire Hathaway—which is controlled by billionaire Warren Buffett, one of the most successful financiers of the twentieth century—has never had a stock split with its original (Class A) shares. In early November 2014, these shares were selling on the New York Stock Exchange for roughly $210,000 per share. However, in response to investment trusts that were formed to sell fractional units of the stock, and to allow the stock to be gifted in increments of less than $10,000 to meet IRS requirements for tax-free gifts to individuals, Buffett created a new class of shares (Class B). The Class B shares were initially structured to be worth about 1/30 of a Class A share. However, in 2010, the Class B stock split 50 to 1, so all else the same, the Class A shares should be worth 1,500 times as much as the Class B shares. At the same time the Class A shares were selling for about $210,000, the Class B shares sold for about $140.

What do we conclude from this discussion? From a purely economic standpoint, stock dividends and splits are just additional pieces of paper that do not create value. They can be likened to a story about Yogi Berra ordering pizza. When the counterman asked him whether he wanted the pizza cut into six or eight slices, he reportedly said, "Make it eight, I'm feeling hungry tonight."

Despite the lack of inherent value in stock splits and dividends, they do provide management with a relatively low-cost way of signaling that the business's prospects look good. Furthermore, because few large, publicly owned stocks sell at prices greater than several hundred dollars, we simply do not know what the effect would be if highly successful businesses had never split their stocks and had sold at prices in the thousands or even tens of

thousands of dollars. All in all, it probably makes sense for a business to employ stock splits when its prospects are favorable, especially if the price of its stock has gone beyond the normal trading range.

SELF-TEST QUESTIONS

1. What are stock dividends and stock splits?
2. What impact do stock dividends and splits have on stock prices? Why?
3. In what situations should managers consider the use of stock dividends?
4. In what situations should they consider the use of stock splits?

Stock Repurchases

Stock (share) repurchases have become a major part of many corporations' distribution of earnings, including health services businesses. For example, in 2015, National HealthCare Corporation (NHC), a long-term care company, announced that its board of directors, at a regularly scheduled meeting, authorized two new stock repurchase programs. One of the programs authorizes the repurchase of up to $25 million of its common stock, and the other program will allow for the repurchase of up to $25 million of its preferred stock. Both of the stock repurchase plans expire on August 31, 2016. Under both programs, NHC may repurchase its stock from time to time, in amounts and at prices deemed appropriate, subject to market conditions and other considerations. The repurchases may be executed using open-market purchases, privately negotiated agreements, or other transactions. NHC intends to fund the repurchases from cash on hand, available borrowings, or proceeds from potential debt or other capital market sources. The repurchase programs may be suspended or discontinued at any time without prior notice. In the remainder of this section, we explain what a stock repurchase is, how it is carried out, and how managers should analyze a possible repurchase program.

Types of Repurchases

There are two principal types of repurchases: (1) *non-capital-structure related*, meaning the business has cash from operations available for distribution to its stockholders, and it distributes this cash by repurchasing shares rather than by paying cash dividends; and (2) *capital-structure related*, meaning the business concludes that its capital structure is too heavily weighted with equity, so it sells debt and uses the proceeds to buy back its stock. Stock that has been repurchased by a business is called *treasury stock*. If some of the outstanding stock is repurchased, fewer shares will remain outstanding. Assuming that

the repurchase does not adversely affect the business's future earnings, the earnings per share on the remaining shares will increase, and presumably the stock price will also increase. As a result, for those stockholders who retain their shares, capital gains are substituted for dividends.

Repurchase Methods

Stock repurchases are generally made in one of three ways:

1. A publicly owned business can buy its own stock through a broker on the open market.
2. A business can make a *tender offer*, which means it can ask stockholders to tender (give) their shares to the business in exchange for a specified price per share. In a tender offer, the business generally indicates that it will buy up to a specified number of shares within a particular period (usually about two weeks); if more shares are tendered than the business wishes to purchase, purchases are made on a pro rata basis.
3. A business can purchase a block of its shares from one large holder on a negotiated basis. In a negotiated purchase, care must be taken to ensure that this one stockholder does not receive preferential treatment over other stockholders or that any preference given can be justified by "sound business reasons." Historically, this method has been used to pay *greenmail*, which is a premium a business pays when buying shares of its stock from a potential "raider" who had expressed interest in taking over the business to encourage him to drop the takeover attempt. However, such deals, which often were made at prices well above the current market price, were followed by a spate of lawsuits that have dampened managerial enthusiasm for the practice.

The Effects of Stock Repurchases

The effects of a repurchase can be illustrated with data on Atlanta Diabetes Counselors (ADC), Inc. The business expects to earn $4.4 million in 2016, and 50 percent of this amount, or $2.2 million, has been allocated for distribution to common shareholders. There are 1.1 million shares outstanding, and the market price is $20 per share. ADC believes that it can either use the $2.2 million to repurchase 100,000 of its shares through a tender offer at $22 per share or pay a cash dividend of $2 per share.

The effect of a cash dividend is obvious—investors receive $2 per share with no change in the number of shares outstanding. The effect of the repurchase can be analyzed in the following way:

$$\text{Current EPS} = \frac{\text{Total earnings}}{\text{Number of shares}} = \frac{\$4.4 \text{ million}}{1.1 \text{ million}} = \$4 \text{ per share.}$$

$$\text{P/E ratio} = \frac{\$20}{\$4} = 5\times.$$

$$\text{EPS after repurchasing 100,000 shares} = \frac{\$4.4 \text{ million}}{1.0 \text{ million}} = \$4.40 \text{ per share.}$$

$$\text{Expected market price after repurchase} = \text{EPS} \times \text{P/E ratio} = \$4.40 \times 5 = \$22 \text{ per share.}$$

This example proves that investors would receive the same before-tax benefits regardless of the distribution choice, in the form of either a $2 cash dividend or a $2 increase in the stock price. However, this result occurs because we assumed (1) that shares could be repurchased at exactly $22 a share and (2) that the P/E ratio would remain constant. If shares could be bought for less than $22, the repurchase would be even better for remaining stockholders, but the reverse would hold if ADC had to pay more than $22 a share. Furthermore, the P/E ratio might change as a result of the repurchase, rising if investors viewed it favorably and falling if they viewed it unfavorably. Some factors that might affect P/E ratios are considered next.

Although it may appear that ADC's stockholders would be indifferent between the two distribution methods, there are clear advantages and disadvantages to stock repurchases, which we examine in the next sections.

Advantages of Repurchases

- Repurchase announcements generally are viewed as positive signals by investors because the repurchase is often motivated by management's belief that the business's shares are undervalued.
- Stockholders have a choice when the business distributes cash by repurchasing stock—they can sell or not sell. With a cash dividend, on the other hand, stockholders must accept a dividend payment and pay the tax. Thus, stockholders who need cash can sell back some of their shares, while those who do not want additional cash can retain their stock. From a tax standpoint, a repurchase satisfies both types of stockholders.
- A repurchase can remove a large block of stock that is "overhanging" the market and keeping the price per share down.
- Dividends are "sticky" in the short run because managers are reluctant to raise the dividend if the increase cannot be maintained in the future—managers dislike cutting cash dividends because cuts are negative signals. Thus, if the excess cash flow is thought to be only temporary, management may prefer to make the distribution in the form of a share repurchase rather than to declare an increased cash dividend that the business cannot maintain.

- Businesses can use the residual model to set a *target cash distribution* level and then divide the distribution into a *dividend component* and a *repurchase component*. The dividend payout ratio will be relatively low, but the dividend itself will be relatively secure and will grow as the number of shares outstanding declines. The business will have more flexibility in adjusting the total distribution than it would if the entire distribution were in the form of cash dividends because repurchases can vary from year to year without sending negative signals.
- Repurchases can be used to produce large-scale changes in capital structures. For example, several years ago Consolidated Healthcare repurchased $400 million of its common stock to increase its debt ratio. The repurchase was necessary because even if the business financed its capital budget only with debt, it would still take several years to raise the debt ratio to the target level. With a repurchase, a capital structure change can be almost instantaneous.
- Many businesses grant large numbers of stock options to employees. If these businesses have repurchased stock, these shares can be reissued when options are exercised. This practice stops the dilution that would occur if new shares were sold to cover exercised options.

Disadvantages of Repurchases

- Stockholders may view the repurchase as a signal that the business has limited investment opportunities and hence a sign of slow growth ahead.
- Stockholders may not be indifferent between dividends and capital gains, and the price of the stock might benefit more from cash dividends than from repurchases. Cash dividends are generally dependable, but repurchases are not.
- Stockholders selling their shares may not be fully aware of all the implications of a repurchase, or they may not have all pertinent information about the corporation's present and future activities. However, businesses generally announce repurchase programs before embarking on them to avoid stockholder suits.
- A business may pay too high a price for the repurchased stock, to the disadvantage of remaining stockholders. If its shares are not actively traded, and if the business seeks to acquire a relatively large amount of its stock, the price may be bid up to an amount greater than the equilibrium level and then fall after the business ceases its repurchase operations.

Conclusions on Stock Repurchases

When we consider all the pros and cons of stock repurchases, where do we stand? Our conclusions may be summarized as follows:

- Because of the lower capital gains tax rate and the deferred tax on capital gains, repurchases have a significant tax advantage over dividends as a way to distribute income to stockholders. This advantage is reinforced by the fact that repurchases provide cash to stockholders who want cash but allow those who do not currently need cash to retain their shares. On the other hand, dividends are more dependable and thus better suited for those who need a steady source of income.
- Because of signaling effects, businesses should not vary their dividends—doing so would lower investors' confidence in them and adversely affect their cost of equity and stock price. However, cash flows vary over time, as do investment opportunities, so the "proper" dividend in the residual model sense varies. To circumvent this problem, a business can set its dividend at a level low enough to keep dividend payments from constraining operations and then use repurchases on a more or less regular basis to distribute excess cash. Such a procedure would provide regular, dependable dividends plus additional cash flow to stockholders who want it.
- Repurchases are also useful when a business wants to significantly change its capital structure within a short time or when it wants to distribute cash from a onetime event, such as the sale of a subsidiary.

Increases in the size and frequency of stock repurchases in recent years suggest that managers believe the advantages outweigh the disadvantages.

SELF-TEST QUESTIONS

1. Explain how repurchases can (1) help stockholders reduce taxes and (2) help businesses change their capital structures.
2. What is treasury stock?
3. What are three ways a business can repurchase its stock?
4. What are some advantages and disadvantages of stock repurchases?
5. How can stock repurchases help a business operate in accordance with the residual dividend model?

Key Concepts

This chapter explores dividend policy—the decision to return earnings to shareholders versus retaining them for reinvestment in the business. Here are its key concepts:

- *Dividend policy* involves three decisions: (1) What fraction of earnings should be distributed, on average, over time? (2) Should

the distribution take the form of cash dividends or stock repurchases? (3) Should the business maintain a steady, stable dividend growth rate?

- The *optimal dividend policy* strikes a balance between current dividends and future growth to maximize the business's stock price.
- Miller and Modigliani (MM) developed the *dividend irrelevance theory*, which holds that a business's dividend policy has no effect on either the value of its stock or its cost of capital.
- The *bird-in-the-hand theory* holds that a business's value is maximized by a high-dividend payout ratio because cash dividends are less risky than potential capital gains.
- The *tax preference theory* states that because long-term capital gains are subject to lower taxes than are dividends, investors prefer to have businesses retain earnings rather than pay them out as dividends.
- *Empirical tests* of the three theories have been inconclusive. Therefore, theory cannot tell corporate managers how a given dividend policy will affect stock prices and capital costs.
- Dividend policy should take account of the *information content (signaling)* and the *clientele effect* hypotheses. The information content hypothesis relates to the fact that investors regard an unexpected dividend change as a signal of management's forecast of future earnings. The clientele effect hypothesis suggests that a business will attract investors who like the business's dividend payout policy. Both factors should be considered by businesses that are considering a change of dividend policy.
- In practice, most businesses try to follow a policy of paying a *steadily increasing dividend*. This policy provides investors with stable, dependable income, and departures from it signal to investors management's expectations for future earnings.
- Most businesses use the *managed dividend policy* to set the long-run target payout ratio at a level that will permit the business to satisfy its equity requirements with retained earnings. This policy is a form of the *dividend residual policy*, which advises managers to use the portion of earnings not needed for reinvestment to pay dividends.
- *Constraints on dividend payments*, *investment opportunities*, and *alternative sources of capital* are also considered when businesses establish dividend policies.

(continued)

(continued from previous page)

- Although most corporations pay dividends on a quarterly basis, some pay dividends annually while others pay dividends monthly.
- A *stock split* increases the number of shares outstanding. In theory, splits should reduce the price per share in proportion to the increase in shares because splits merely "divide the pie into smaller slices." However, businesses generally split their stocks only if (1) the price is high and (2) management thinks the future is bright. Therefore, stock splits often are taken as positive signals and, thus, boost stock prices.
- A *stock dividend* is a dividend paid in additional shares of stock rather than in cash. Stock dividends and stock splits both are used to keep stock prices within an "optimal" trading range.

Selected Bibliography

Baker, M., and J. Wurgler. 2004. "Appearing and Disappearing Dividends: The Link to Catering Incentives." *Journal of Financial Economics* 73 (2): 271–88.

Brav, A., J. R. Graham, C. R. Harvey, and R. Michaely. 2005. "Payout Policy in the 21st Century." *Journal of Financial Economics* 77 (3): 483–527.

DeAngelo, H., L. DeAngelo, and D. J. Skinner. 2004. "Are Dividends Disappearing? Dividend Concentration and the Consolidation of Earnings." *Journal of Financial Economics* 72 (3): 425–56.

Denis, D. J., and I. Osobov. 2008. "Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy." *Journal of Financial Economics* 89 (1): 62–82.

Fama, E. F., and K. R. French. 2001. "Disappearing Dividends: Changing Firm Characteristics of Lower Propensity to Pay?" *Journal of Finance* 60 (1): 3–43.

Li, W., and E. Lie. 2006. "Dividend Changes and Catering Incentives." *Journal of Financial Economics* 80 (2): 293–308.

Skinner, D. J. 2008. "The Evolving Relationship Between Earnings, Dividends, and Stock Repurchases." *Journal of Financial Economics* 87 (3): 582–609.

Selected Websites

- For an illustration of a corporate dividend policy, see the following:
  - www.shell.com/global/aboutshell/investor/dividend-information/dividend-policy.html

  - www.annualreport2013.philips.com/content/en/investor_relations/key_financials_and_dividend_policy.html
- To read Apple's initial dividend and share repurchase announcement, see www.apple.com/pr/library/2012/03/19Apple-Announces-Plans-to-Initiate-Dividend-and-Share-Repurchase-Program.html.

Notes

1. Although ROE is leveraged up by the use of debt financing, so is the riskiness to the owner/physician. Because he can shelter the income of the business by giving himself bonuses, there is no true economic advantage to the use of debt financing; that is, the increase in ROE is exactly offset by the increase in riskiness. Note, however, that the use of debt financing permits the redeployment of a portion of the equity investment in the practice and hence improves the physicians' personal portfolio diversification. See Chapter 10 for a more complete discussion.
2. See this classis article: Miller, M. H., and F. Modigliani. 1961. "Dividend Policy, Growth, and the Valuation of Shares." *Journal of Business* 34 (4): 411–33.
3. See these classic articles: (1) Gordon, M. J. 1963. "Optimal Investment and Financing Policy." *Journal of Finance* 18 (2): 264–72. (2) Lintner, J. 1962. "Dividends, Earnings, Leverage, Stock Prices, and the Supply of Capital to Corporations." *Review of Economics and Statistics* 44 (3): 243–69.
4. See Ross, S. A. 1977. "The Determination of Financial Structure: The Incentive-Signaling Approach." *Bell Journal of Economics* 8 (1): 23–40.

Integrative Application

The Problem

In 2014, American Healthcare, Incorporated (AHI)—a for-profit hospital management company—paid dividends totaling $3.6 million on net income of $10.8 million. The year 2014 was a normal year for AHI, whose dividends have grown at an average constant rate of 10 percent for the past eight years. However, in 2015, earnings are expected to jump to $14.4 million, with reinvestment needs forecasted at $8.4 million for the year, 40 percent of which would be financed with debt. Several one-time events are driving the high 2015 earnings forecast, and earnings are expected to return to their historical 10 percent growth rate in 2016.

AHI is considering four different approaches to its 2015 dividend payment:

1. Set the dividend payment at 10 percent more than 2014 to be consistent with the historical growth rate.
2. Use the 2014 dividend payout ratio to set the dividend.
3. Use the residual dividend policy to set the dividend.
4. Use the regular-dividend-plus-extras policy, with the regular dividend based on the historical growth rate and the extra dividend based on the residual model.

Now, AHI's managers must make a decision regarding the company's 2015 dividend.

The Analysis

Here is the dividend payment under each proposal:

1. Assuming a dividend growth rate of 10 percent, the 2015 dividend would be $\$3.6 \times 1.10 = \$3.96$ million.
2. For 2014, the dividend payout ratio was $\$3.6/\$10.8 = 0.3333 = 33.33\%$, or one-third. Applying this ratio to 2015 forecasted earnings gives a dividend payment of $1/3 \times \$14.4 = \$4.8$ million.
3. If the residual policy is used, the amount of the dividend would be the difference between earnings and equity retentions. If 40 percent of the reinvestment requirement of $8.4 million would be financed with debt, 60 percent would be financed with equity, for a dollar amount of $0.60 \times \$8.4 = \$5.04$ million. Thus, the dividend amount would be $\$14.4 - \$5.04 = \$9.36$ million.

4. Under the regular-dividend-plus-extras policy, the regular dividend would follow the constant growth model, so it would be $3.96 million as calculated in Proposal 1 above. Then, the extra dividend would be the difference between the dividend under the residual policy and the dividend under the constant growth policy, or $9.36 – $3.96 = $5.4 million.

The Decision

After reviewing the four alternatives, AHI's managers decided to adopt proposal 4. With a regular dividend consistent with the constant growth model ($3.96 million), the company sends a signal that its current and future growth prospects continue to be excellent. With the extra dividend ($5.4 million), AHI's stockholders know that the company is willing to distribute its "excess" earnings to owners rather than risk using them in a less productive way. Thus, this decision should boost investor confidence and lead to a higher stock price. ■