Chapter 16

DISTRIBUTIONS TO OWNERS:
BONUSES, DIVIDENDS, AND REPURCHASES

Learning Objectives
After studying this chapter, you will be able to

- Discuss the three theories of dividend policy.
- Describe the information content and clientele effect hypotheses.
- Explain the residual dividend model and how managers use it to help establish dividend policy.
- Explain stock dividends and stock splits and the rationale for their use.
- Discuss stock repurchase programs and the reasons for their current popularity.

Introduction
To begin, note that this chapter is applicable only to for-profit (investor-owned) businesses. Not-for-profit organizations are prohibited from distributing earnings to individuals (other than by salaries or other compensation for work performed).

Successful businesses earn income, which can be reinvested in operating assets, used to acquire securities, used to retire debt, or, in the case of investor-owned businesses, distributed to owners. If the decision is made 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 funds paid out from year to year be stable and dependable, which owners may prefer, or be allowed to vary with the business’s cash flows and investment requirements, which might be better for the business? These three issues are the primary focus of this chapter, but we also consider two related issues: (1) stock dividends and (2) stock splits.
Distributions in Small Businesses

In general, the distribution to owners in small businesses differs 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 form of hybrid (e.g., limited liability company [LLC]). If they are organized as corporations, taxes typically are filed under Chapter S, which means that, like a proprietorship or partnership, the earnings of the business are prorated among the owners and taxed as ordinary income, regardless of whether or not the earnings are reinvested in the business. Second, owners/managers of small businesses can return 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, and hence the only ways to distribute earnings to owners (the stockholders) is 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 cash basis of accounting, as opposed to the accrual basis that is required in large businesses. In the cash method, revenues and costs are reported on the income statement as they occur, rather than when the obligations occur. Furthermore, because the financial statements of small businesses are not presented to outside owners, the statements are used both for control purposes and for tax purposes. For the most part, small businesses have the incentive to report as little net income as possible, unless funds are specifically required to be retained in the business.

To illustrate the situation facing a typical small healthcare provider, consider Exhibit 16.1, which shows the income statements for Bismarck Clinic, a two-physician family practice. The standard format column shows the income statement as it typically would be constructed. However, this format gives the impression that there is no ownership value to the business because the net income is zero. To determine the value of ownership, the physicians/owners must explicitly show any bonuses paid to them on the income statement.
### EXHIBIT 16.1
Bismarck Clinic: Standard and Recast Income Statements

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<thead>
<tr>
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<th>Standard Format</th>
<th>Recast Format</th>
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</thead>
<tbody>
<tr>
<td><strong>Revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional fees</td>
<td>$950,000</td>
<td>$950,000</td>
</tr>
<tr>
<td>Other income</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$1,000,000</strong></td>
</tr>
<tr>
<td><strong>Expenses:</strong></td>
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<tr>
<td>Physician compensation</td>
<td>$400,000</td>
<td>$320,000</td>
</tr>
<tr>
<td>Staff compensation</td>
<td>$220,000</td>
<td>$220,000</td>
</tr>
<tr>
<td>Clinical supplies</td>
<td>$85,000</td>
<td>$85,000</td>
</tr>
<tr>
<td>Office supplies</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Rent</td>
<td>$50,000</td>
<td>$50,000</td>
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<tr>
<td>Insurance</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Telephone and utilities</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Outside laboratory fees</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Other expenses</td>
<td>$120,000</td>
<td>$120,000</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$920,000</strong></td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td><strong>$0</strong></td>
<td><strong>$80,000</strong></td>
</tr>
</tbody>
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Although not an easy task, owners must make some judgments regarding what portion of the $400,000 in physician compensation ($200,000 for each owner/physician) is for actual professional services and what portion is, in reality, a return on owners’ capital. Assume that current studies indicate that the median compensation for salaried primary care physicians in the area is $160,000. Assuming that this amount is the “fair” compensation for the work being done by the two owner/physicians of Bismarck Clinic, their total compensation of $200,000 implies that they are receiving a bonus of $40,000 each, for a total of $80,000 in bonuses.

The recast format column of the income statement does not list the $80,000 in bonuses from physician compensation and hence shows a net income for the practice of $80,000. Because the practice is a partnership and all earnings would be prorated and reported as taxable income by the partners, the $80,000 would be taxed at each physician’s personal tax rate regardless of whether it is received as salary (bonuses) or earnings (net income).

With no differential tax consequences, the two income statements create the same cash flows to the owners/physicians. The value of recasting the statement 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. Bismarck Clinic has $500,000 of assets, so its implied return on assets...
(ROA) is $80,000 ÷ $500,000 = 16%, 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 owners/physicians is $80,000 ÷ $300,000 = 26.7%.

Although recasting the income statement as we have done in Exhibit 16.1 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 it has economic value to a new owner. This can be done only if the business can generate a positive net income (cash flow) for its new owner. Showing a zero net income to prospective buyers will not generate much interest.

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 a recasting necessary?

Dividends Versus Capital Gains: Does It Matter?

In this section, and in the remainder of the chapter, we discuss the decisions involving distributions to owners of large firms, where stockholders and managers are separated. When deciding how much cash to distribute to stockholders, managers must keep in mind that the firm’s primary 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 to have the firm (1) distribute income as cash dividends, (2) repurchase stock, or (3) plow the earnings back into the business?

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. If this is true, then dividend policy would be 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 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 his or her own dividend policy. For example, if a firm does not pay dividends, a shareholder who wants a 5 percent dividend can “create” it by selling 5 percent of his or her stock. Conversely, if a firm pays a higher dividend than an investor desires, the investor can use the unwanted dividends to buy additional shares of the firm’s stock. If investors could buy and sell shares and, thus, create their own dividend policy *without incurring costs*, then the firm’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 taxes and brokerage costs do exist, dividend policy may well be relevant. However, the merit of any theory is based on how well it describes reality, and 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 the capital gains that are supposed to result from profit retentions. Gordon and Lintner said, in effect, that investors value a dollar of expected dividends more highly than a dollar of expected capital gains because dividends are less risky than the capital gains.
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 firms, and, in any event, the riskiness of a business’s cash flows to investors in the long run is determined by the riskiness of the business’s operating cash flows rather than by its dividend policy.

**Tax Preference Theory**

There are two tax-related reasons for thinking that investors might prefer a low dividend payout to a high payout. First, taxes must be paid on dividends as they are received, but taxes are not paid on capital gains 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 paid today. Second, if a stock is held until the stockholder 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 hence completely escape the capital gains tax on any gains up to that point in time.

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

**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 this: (1) For a valid statistical test, things other than dividend policy must be held constant; that is, the sample firms must differ only in their dividend policies, and (2) we must be able to measure with a high degree of accuracy each sample firm’s cost of equity. Neither of these two conditions holds: (1) We cannot find a set of publicly owned firms 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 among individuals help explain why it is difficult to reach any definitive conclusions regarding the optimal dividend payout. Even so, both evidence and logic suggest that investors prefer firms 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. Briefly, explain the dividend irrelevance, bird-in-the-hand, and tax preference theories.
2. What did Modigliani and Miller assume about taxes and brokerage costs when they developed their dividend irrelevance theory?
3. How did the bird-in-the-hand theory get its name?
4. 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 theoretical issues that could affect our views toward dividend policy: (1) the information content, or signaling, hypothesis and (2) the clientele effect.

**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 firm’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 is often 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 hence will not raise dividends unless they anticipate good earnings in the future. Thus, MM argued that a higher-than-expected dividend increase is a “signal” to investors that the
firm’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 prove that investors prefer dividends to retained earnings. Rather, they argued that price changes following dividend actions simply indicate that 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 give signals concerning firms’ future prospects. For example, a firm with good earnings prospects can carry more debt than a similar firm 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 firms because such firms 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.

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

Clientele Effect Hypothesis
As we indicated earlier, different groups, or clienteles, of stockholders prefer different dividend payout policies. For example, retired individuals generally prefer cash income, so they may want the firm to pay out a high percentage of its earnings. Such investors, as well as pension funds and not-for-profit endowments, often are 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 dividends received, after first having to pay income taxes on those dividends.

If a firm retains and reinvests income rather than paying dividends, those stockholders who need current income would be disadvantaged. The value of their stock might increase, but they would be forced to go to the trouble and expense of selling off 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 firm pays out in dividends, the less these stockholders will have to pay in current taxes and the less trouble and expense they will have to go through to reinvest their after-tax dividends. Therefore, investors who want current investment income should own shares in high-dividend-payout firms, while investors with no need for current investment income should own shares in low-dividend-payout firms.

To the extent that stockholders can buy and sell stocks, a firm can change from one dividend payout policy to another and then let stockholders who do not like the new policy sell to other investors who do. However, frequent policy switching would be inefficient because of (1) brokerage costs, (2) the fact that stockholders who are selling will probably have to pay capital gains taxes, and (3) a possible shortage of investors who like the firm’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 force the stock price down. Such a price decline might be temporary, but it might also be permanent—if few new investors are attracted by the new dividend policy, then the stock price would remain depressed. Of course, the new policy might attract an even larger clientele than the firm had before, in which case the stock price would rise.

Evidence from many studies suggests that there is in fact 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 permits firms to disregard clientele effects. This issue, like most others concerning dividend policy, is still undecided.

Self-Test Questions

1. Explain the information content (signaling) hypothesis.
2. Explain the clientele effect hypothesis.
3. How do these hypotheses affect dividend policy?
Dividend Stability

The stability of dividends is an important factor that managers must consider. Profits and cash flows vary over time, as do investment opportunities. Taken alone, this 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 send incorrect signals to investors who might push down the stock price because they interpreted the dividend cut to mean that the firm’s future earnings prospects had diminished. Thus, stock price maximization requires a firm to 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 firm attempt to make its dividends? It is impossible to give a definitive answer to this question, but here are some points to consider. Virtually every publicly owned firm makes a five- 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, almost all internal five- to ten-year corporate forecasts for a “normal” firm 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 “normal” firms expect 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 a $9 per year ($2.25 per quarter) dividend for 25 straight years. Today, though, most firms 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 normally are 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 firms, in their annual reports, inform investors of dividend growth expectations. Firms 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 firms would like to be able to exhibit dividend stability, and they try to come as close to it as they can.
The most stable policy, from an investor’s standpoint, is that of a firm whose dividend growth rate is predictable—such a firm’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 where stockholders can be reasonably sure that the current dividend will not be reduced—it may not grow at a steady rate, but management will probably be able to avoid cutting the dividend. The least stable situation is where earnings and cash flows are so volatile that investors cannot count on the firm to maintain the current dividend.

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 but in a more erratic manner. This means that the cost of equity will be minimized, and the stock price maximized, if a firm 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 Dividend Policy in Practice

In the preceding sections, we saw that investors may or may not prefer dividends to capital gains but that they do prefer predictable to unpredictable dividends. Given this situation, how should firms set their basic dividend policies? In this section, we describe how firms actually set their dividend policies.

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, where the payout ratio means the percentage of net income paid out as *cash dividends*, or (2) in a more global context, in which the ratio includes both cash dividends and share repurchases. In this section, we assume that no repurchases occur. Increasingly, though, firms are using the residual model to determine “distributions to shareholders” and then making a separate decision as to the form of that distribution. (Repurchases are discussed in a later section.)
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 firm’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 themselves earn 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). This encourages firms to retain earnings because they add to the equity base and, thus, reduce the likelihood that the firm will have to raise external equity at a later date to fund future real-asset investments.

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

For a given firm, the optimal payout ratio is a function of four factors: (1) stockholders’ preferences for dividends versus capital gains, (2) the firm’s investment opportunities, (3) its target capital structure, and (4) the availability and cost of external capital. The last three elements are combined in what we call the residual dividend model. Under this model, a firm follows these four steps when deciding its target payout ratio:

1. Determine the optimal capital budget.
2. Determine the amount of equity needed to finance that budget, given the target capital structure.
3. Use retained earnings to meet the equity requirements to the extent possible.
4. Pay dividends only if more earnings are available than are needed to support new investment.

The word residual implies leftover, and the residual policy implies that dividends are paid out of “leftover” earnings.
If a firm rigidly follows the residual dividend policy, then dividends paid in any given year can be expressed as follows:

\[
\text{Dividends} = \text{Net income} - \text{Retained earnings required for new investments} = \text{Net income} - (\text{Target equity ratio} \times \text{Total capital budget}).
\]

For example, if net income is $100, the target equity ratio is 60 percent (meaning a target debt ratio of 40 percent), and the firm plans to spend $50 on capital projects, then its dividends under the residual model would be $100 – (0.6 \times 50) = $100 – $30 = $70. So, with $100 of earnings and a capital budget of $50, it could use $30 of retained earnings plus $50 – $30 = $20 of new debt to finance the capital budget, and this would keep its capital structure on target. Note that the amount of equity needed to finance new investments might exceed the net income; in our example, this would happen if the capital budget were $200. In such instances, no dividends would be paid, and the firm would have to raise external equity if it wanted to maintain its target capital structure and undertake all desired projects.

Because investment opportunities and earnings will surely vary from year to year, strict adherence to the residual dividend policy would result in unstable dividends. One year the firm 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 it, therefore, did not need to retain many earnings. Similarly, fluctuating earnings could also lead to variable dividends, even if investment opportunities were stable.

Therefore, for most businesses the residual dividend policy would lead to fluctuating dividends and the residual policy would be optimal only if investors were not bothered by an unstable dividend stream. However, because investors prefer stable dividends, the cost of equity would be higher, and the stock price lower, if the firm followed the residual model in a strict sense rather than attempted to stabilize its dividends over time. Therefore, many firms use this modified residual model:

1. Estimate the earnings and investment opportunities, on average, over the next five or so years.
2. Use this forecasted information to find the residual model average payout ratio during the planning period, which then becomes the firm’s target long-run payout ratio. The target
payout ratio then becomes one input to the dividend decision—many other factors also are considered.

Firms with very stable operations can plan their dividends with a fairly high degree of confidence. Other firms, especially those in cyclical industries, have difficulty maintaining a dividend in bad times that is really too low in good times. Historically, such firms have set a very low “regular” dividend and then supplemented it with an “extra” dividend when times were good. In essence, such firms announced a low regular dividend that it was reasonably sure could be maintained, even in bad times, so stockholders could count on receiving this dividend under almost all conditions. Then when times were good and profits and cash flows were high, the firms paid a clearly designated extra dividend.

Investors recognized that the extra dividend might not be maintained in the future, so they did not interpret them as a signal that the firms’ earnings were going up permanently, nor did they take the elimination of an extra dividend as a negative signal. In recent years, however, many firms that were 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 being the primary determinant of dividends, but, in reality, 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 firm’s ability to pay dividends, than on current earnings, which are heavily influenced by accounting practices and which do not necessarily reflect the 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, historical precedent is to express the payout ratio on the basis of earnings.

**Quarterly Versus Annual Dividends**

Traditionally, US investor-owned corporations have paid dividends quarterly. In fact, the term quarterly dividend is a permanent part of the financial lexicon—that is, up until recently. Over the last few years, firms have been throwing historical precedent out and changing to a single annual
dividend. In 2000, Baxter International, a medical supplies firm, jointed the ranks, which already included such blue-chip firms as Disney and McDonald’s.

The reason for the move from quarterly to annual dividends is simple: It cuts costs. First, 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 firms with large numbers of small shareholders, many of which send out over a million checks with each declared dividend. Second, there is a time value of money savings. To illustrate the concept, assume that about $400 billion in total was paid out as dividends in 2012. If this money were paid out annually, instead of quarterly, shareholders would lose the opportunity to invest the intra-year (quarterly) payments. At a 4 percent annual rate, the loss, which represents a savings to issuing firms, would total over $6 billion.

Although the incentive to switch to an annual dividend payment is strong, many firms are reluctant to switch because of shareholder resistance. When Baxter switched, there were many unhappy shareholders, but, according to a firm spokesman, “they were calmed by the $1.5 million in annual savings to the company.”

Payment Procedures
In spite of the discussion in the previous section, dividends today typically are paid quarterly. For example, For Profit Healthcare (FPH) paid $0.06 per quarter in 2012, for an annual dividend rate of $0.24. The actual payment procedure is as follows:

Declaration date. On the declaration date—say, on November 9—the directors meet and declare the regular dividend, issuing a statement similar to the following: “On November 9, 2012, the directors of FPH met and declared the regular quarterly dividend of 6 cents per share, payable to holders of record on December 10, payment to be made on January 4, 2013.” For accounting purposes, the declared dividend becomes an actual liability on the declaration date. If a balance sheet were constructed, the total amount of the dividend would appear as a current liability, and retained earnings would be reduced by a like amount.

Holder-of-record date. At the close of business on the holder-of-record date, December 10, FPH closes its stock transfer books and makes up a list of shareholders as of that date. If FPH is notified
of a stock sale before 5 p.m. on December 10, then the new owner receives the dividend. However, if notification is received on or after December 11, the previous owner gets the dividend check.

**Ex-dividend date.** Suppose Jean Buyer buys 100 shares of FPH stock from John Seller on December 6. Will the firm be notified of the transfer in time to list Buyer as the new owner and, thus, pay the dividend to her? To avoid conflict, the securities industry has set up a convention under which the right to the dividend remains with the stock until four business days prior to the holder-of-record date; on the fourth day before that date, the right to the dividend no longer goes with the shares. The date when the right to the dividend leaves the stock is called the *ex-dividend date*. In our example, the ex-dividend date is four business days prior to December 10, or December 4 (December 8 and 9 are nonbusiness days). Therefore, if Buyer is to receive the dividend, she must buy the stock on or before December 3. If she buys it on December 4 or later, Seller will receive the dividend because he will be the official holder of record. Although the FPH dividend is only $0.06 per share, the ex-dividend date is still important. Barring fluctuations in the stock market, one would normally expect the price of the stock to drop by approximately the amount of the dividend on the ex-dividend date.

**Payment date.** The firm actually mails the checks to the holders of record on January 4, the *payment date*.

**Changing Dividend Policies**

From our previous discussion, it is obvious that firms should try to establish a rational dividend policy and then stick with it. Dividend policy can be changed, but this change can cause problems because such changes can inconvenience the firm’s existing stockholders, send unintended signals, and convey the impression of dividend instability, all of which can have negative implications for stock prices. Still, economic circumstances do change, and, occasionally, such changes dictate that a firm should alter its dividend policy.

In general, when a change in dividend policy occurs, it is essential that the firm fully inform stockholders of the rationale for the change. Good communications between the firm and investors can mitigate the potential negative consequences of the change. This point is especially critical.
when dividends are being 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 model and why it is more likely to be used to establish a long-run payout target than to set the actual year-by-year dollar payment.
2. Which are more critical to the dividend decision, earnings or cash flow? Explain your answer.
3. Why are some firms changing from quarterly to annual dividend payments?
4. Explain the procedures used to actually pay the dividend.
5. Why do firms change their dividend policies, and what is the best strategy in such situations?

Other Factors That Influence Dividend Policy
In earlier sections, we described both the major theories of investor preference and some issues concerning the effects of dividend policy on the value of a firm. We also discussed the residual dividend model for setting a firm’s long-run target payout ratio. In this section, we discuss some 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) availability and cost of alternative sources of capital. Each of these categories has several subparts, which we discuss in the following paragraphs.

Constraints
Bond indentures. Debt contracts often contain restrictive covenants that limit dividend payments to earnings generated after the loan was 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 firm has omitted a dividend on any preferred stock that had been issued. Any preferred arrearages must be satisfied before common dividends can be resumed.
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 firm 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 they must not reduce capital below 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 individuals from using corporations to avoid personal taxes, the tax code provides for a special surtax on improperly accumulated income. Thus, if the IRS can demonstrate that a firm’s dividend payout ratio is being deliberately held down to help its stockholders avoid personal taxes, the firm is subject to heavy penalties. This factor is relevant only to privately owned firms—we have never heard of a publicly owned firm being accused of improperly accumulating earnings.

Investment Opportunities

Number of profitable investment opportunities. If a firm typically has a large number of profitable investment opportunities, this will tend to produce a low target payout ratio, and vice versa if the firm’s profitable investment opportunities are few in number.

Possibility of accelerating or delaying projects. The ability to accelerate or to postpone projects will permit a firm to adhere more closely to a stable dividend policy.

Alternative Sources of Capital

Cost of selling new stock. If a firm 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 both issuance costs and any negative signaling effects of a stock offering) are high, the cost of new equity will be well above the cost of retained earnings, making it better to set a low payout ratio and to finance through retention rather than through sale of new common stock. On the other hand,
A high dividend payout ratio is more feasible for a firm whose flotation costs are low. Flotation costs differ among firms; for example, the flotation percentage is generally higher for small firms, so they tend to set low payout ratios.

_Ability to substitute debt for equity._ A firm can finance a given level of investment with either debt or equity. As noted above, low stock flotation costs permit a more flexible dividend policy because equity can be raised either by retaining earnings or by selling new stock. A similar situation holds for debt policy: If the firm 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 firm may retain more earnings than it otherwise would. However, if stockholders want higher dividends and a proxy fight looms, then the dividend will be increased. It should be apparent from our discussion that dividend policy decisions are truly 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?

_Final Thoughts on the Dividend Policy Decision_

We have presented the relevant theories and issues, and we have 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.
In general, managers do not want to issue new common stock. First, new common stock involves issuance costs—commissions, fees, and so on—and those costs can be avoided by using retained earnings to finance the firm’s equity needs. Also, asymmetric information causes investors to view new common stock issues as negative signals and, thus, lowers expectations regarding the firm’s future prospects. The end result is that the announcement of a new stock issue usually leads to a decrease in the stock price. Considering the total costs involved, including both issuance and asymmetric information costs, managers strongly prefer to use retained earnings as their primary source of new equity.

Dividend changes provide signals about managers’ beliefs as to their firms’ future prospects. Thus, dividend reductions, or worse yet, omissions, generally have a significant negative effect on a firm’s stock price. Because managers recognize this, they try to set dollar dividends low enough so that there is only a remote chance that the dividend will have to be reduced in the future. Of course, unexpectedly large dividend increases can be used to provide positive signals.

The effects of asymmetric information suggest that, to the extent possible, managers should avoid both new common stock sales and dividend cuts because both actions tend to lower stock prices. Thus, in setting dividend policy, managers should begin by considering the firm’s future investment opportunities relative to its projected internal sources of funds. The firm’s target capital structure also plays a part, but because the optimal capital structure is a range, firms 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 to permit the firm to 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 lowered or omitted.

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

In general, firms with superior investment opportunities should set lower payouts, and hence retain more earnings, than firms 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, then it is best to be conservative and to set a lower current dollar dividend. Also, firms with investment opportunities that can be delayed can afford to set a higher dollar dividend because, in times of stress, investments can be postponed for a year or two, thus increasing the cash available for dividends. Finally, firms 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, more easily issue additional debt to maintain the capital budgeting program without having to cut dividends or issue stock.

Firms have only one opportunity to set the dividend payment from scratch. Therefore, today’s dividend decisions are constrained by policies that were set in the past; hence, setting a policy 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 firms’ dividend policies, dividend policy still remains one of the most judgmental decisions that firms 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.

**Self-Test Question**

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

**Stock Splits and Stock Dividends**

Stock splits and stock dividends are related to the firm’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 its inception, Porter’s markets have been expanding, and the firm 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 firm had only a few million shares outstanding, each
of Porter’s shares had a very high stock price, so many potential investors could not afford to buy a round lot of 100 shares. (Transactions costs are generally less when stock is bought and sold in increments of 100 shares.) This high price limited the demand for the stock and, thus, kept the total market value of the firm 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 paragraph.

Stock Splits
Although there is little empirical evidence to support the contention, there is nevertheless a widespread belief in financial circles that an optimal price range exists for stocks. Optimal means that if the price is within this range, the firm’s value will be 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, thus doubling the number of shares outstanding and halving the earnings and dividends per share and thereby lowering the stock price. Each stockholder would have more shares, but each share would be worth less. If the price after the split was $40, Porter’s stockholders would be exactly as well off as they were before the split (twice as many shares at half the price). However, if the stock price were to stabilize above $40, stockholders would be better off. Stock splits can be of any size; for example, the stock could be split two-for-one, three-for-one, one and a half–for-one, or in any other way.

Stock Dividends
Stock dividends are similar to stock splits in that they “divide the pie into smaller slices” without affecting the fundamental position of the 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 firm 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 firm’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 firms today use stock splits far more often than stock dividends.

**Price Effects**

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

On average, the price of a firm’s stock rises shortly after the firm announces a stock split or dividend. However, these price increases probably result from the fact that investors take stock splits/dividends as signals of higher future earnings and dividends. Because only firms 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 rise, which then causes the stock price to rise. However, if the firm does not announce an increase in earnings and dividends within a few months of the stock split or dividend, then its stock price will drop back to the earlier level.

As we noted earlier, brokerage commissions are generally higher in percentage terms on lower-priced stocks. This means that it is more expensive to trade low-priced than high-priced stocks, and this, in turn, means that stock splits may reduce the liquidity of a firm’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* (less than 100 shares).

What do we conclude from all this? From a pure economic standpoint, stock dividends and splits are just additional pieces of paper that do not themselves 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 pieces, he reportedly said, “Make it eight, I’m feeling hungry tonight.”

In spite of the lack of inherent value in stock splits and dividends, they do provide management with a relatively low-cost way of signaling that the firm’s prospects look good. Furthermore, we should note that since few large, publicly owned stocks sell at prices above several hundred dollars, we simply do not know what the effect would be if highly successful firms had never split their stocks and, consequently, had sold at prices in the thousands or even tens of thousands of dollars. All in all, it probably makes sense to employ stock splits when a firm’s
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
Several years ago, a Fortune article titled “Beating the Market by Buying Back Stock” discussed the fact that during a one-year period, more than 600 major corporations repurchased significant amounts of their own stock. It also gave illustrations of some specific firms’ repurchase programs and their effects on stock prices. The article’s conclusion was that “buy-backs have made a mint for shareholders who stay with the firms carrying them out.” Since then, research on stock repurchases has shown that the dramatic gains to stockholders trumpeted in the article are not universal.

Still, it is clear that stock repurchases are now playing a much more important role in how firms distribute earnings to shareholders. For example, in 2011 alone, $34 billion of planned repurchases were announced. However, not all repurchase plans are fully implemented, so there is no assurance that $34 billion of stock will actually be repurchased. 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, where the firm has cash from operations available for distribution to its stockholders and distributes this cash by repurchasing shares rather than by paying cash dividends, and (2) capital-structure related, where the firm concludes that its capital structure is too heavily weighted with equity and then it sells debt and uses the proceeds to buy back its stock. Stock that has been repurchased by a firm 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 firm’s future earnings, the
earnings per share on the remaining shares will increase, presumably resulting in a higher stock price. As a result, capital gains are substituted for dividends.

**Repurchase Methods**

Stock repurchases are generally made in one of three ways:

1. A publicly owned firm can simply buy its own stock through a broker on the open market.
2. The firm can make a tender offer, under which it permits stockholders to tender (send in) their shares to the firm in exchange for a specified price per share. In this case, it generally indicates that it will buy up to a specified number of shares within a particular time period (usually about two weeks); if more shares are tendered than the firm wishes to purchase, purchases are made on a pro rata basis.
3. The firm can purchase a block of shares from one large holder on a negotiated basis. If a negotiated purchase is employed, 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 the act of buying the stock owned by a potential “raider” who had expressed interest in taking over the firm. However, such deals, which often were at prices well above the current market price, were followed by a spate of lawsuits that have dampened managerial enthusiasm for the practice.

**Effects of Stock Repurchases**

The effects of a repurchase can be illustrated with data on Atlanta Diabetes Counselors (ADC), Inc. The firm expects to earn $4.4 million in 2012, 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 a 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 a share or else pay a cash dividend of $2 a share. The effect of a cash dividend is obvious—investors get $2 per share with no change in the number of shares outstanding.

The effect of the repurchase can be analyzed in the following way:
Total earnings = $4.4 million
Current EPS = $4 per share.
Number of shares = 1.1 million

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

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

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

Note that this example proves that shareholders would receive the same before-tax benefits regardless of the distribution choice, either in the form of 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.

**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 firm’s shares are undervalued.

The stockholders have a choice when the firm 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, those stockholders who need cash can sell back some of their shares, while those who do not want additional cash can simply retain their stock. From a tax standpoint, a repurchase permits both types of stockholders to get what they want.

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 of the negative signal a cut gives. 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 cannot be maintained.

Firms can use the residual model to set a target cash distribution level, 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 it will grow as a result of the declining number of shares outstanding. The firm has more flexibility in adjusting the total distribution than it would if the entire distribution were in the form of cash dividends because repurchases can be varied 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 firm financed its capital budget only with debt, it would still take several years to get the debt ratio up to the target level. With a repurchase, a capital structure change can be almost instantaneous.

Many firms grant large numbers of stock options to employees. If these firms have repurchased stock, these shares can be reissued when options are exercised. This practice avoids 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 firm 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.

The selling stockholders 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, firms generally announce repurchase programs before embarking on them to avoid potential stockholder suits.
The corporation 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 firm seeks to acquire a relatively large amount of its stock, then the price may be bid above its equilibrium level and then fall after the firm ceases its repurchase operations.

**Conclusions on Stock Repurchases**

When all the pros and cons on stock repurchases have been totaled, where do we stand? Our conclusions may be summarized as follows.

Because of 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 need current cash to delay its receipt. On the other hand, dividends are more dependable and are, thus, better suited for those who need a steady source of income.

Because of signaling effects, firms should not vary their dividends—this would lower investors’ confidence in a firm and adversely affect its cost of equity and its stock price. However, cash flows vary over time, as do investment opportunities, so the “proper” dividend in the residual model sense varies. To get around this problem, a firm 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 those stockholders who want it.

Repurchases are also useful when a firm wants to make a large shift in its capital structure within a short period of time, or when it wants to distribute cash from a one-time event such as the sale of a subsidiary.

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

**Self-Test Questions**

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

Key Concepts

Dividend policy involves the decision to return earnings to shareholders versus retaining them for reinvestment in the firm. Here are this chapter’s key concepts:

- **Dividend policy** involves three issues: (1) What fraction of earnings should be distributed, on average, over time? (2) Should the distribution be in the form of cash dividends or stock repurchases? (3) Should the firm maintain a steady, stable dividend growth rate?
- The **optimal dividend policy** strikes a balance between current dividends and future growth to maximize the firm’s stock price.
- Miller and Modigliani (MM) developed the **dividend irrelevance theory**, which holds that a firm’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 firm’s value will be 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 firms 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 of dividends (signaling)** and the **clientele effect** hypotheses. The information content effect relates to the fact that investors regard an unexpected dividend change as a signal of management’s forecast of future earnings. The clientele effect suggests that a firm will attract investors who like the firm’s dividend payout policy. Both factors should be considered by firms that are considering a change in dividend policy.
- In practice, most firms try to follow a policy of paying a **steadily increasing dividend**. This policy provides investors with stable, dependable income, and departures from it give investors signals about management’s expectations for future earnings.
• Most firms use the *residual dividend model* to set the long-run target payout ratio at a level that will permit the firm to satisfy its equity requirements with retained earnings.

• *Legal constraints, investment opportunities, availability and cost of funds from other sources,* and *taxes* are also considered when firms establish dividend policies.

• 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, firms generally split their stocks only if (1) the price is quite 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. Both stock dividends and splits are used to keep stock prices within an “optimal” trading range.

• Under a *stock repurchase plan*, a firm buys back some of its outstanding stock, thereby decreasing the number of shares, which should increase both EPS and the stock price. Repurchases are useful for making major changes in capital structure and for distributing temporary excess cash.