

Dividend Policy and Internal Financing

Learning Objectives

 1 Describe the trade-off between paying dividends and retaining (reinvesting) firm profits.	Key Terms
 2 Does dividend policy affect the company's stock price?	Does a Dividend Policy Matter to Stockholders?
 3 Discuss the constraints on dividend policy, commonly used dividend policies, and payment procedures.	The Dividend Decision in Practice
 4 Describe why firms sometimes pay noncash dividends.	Stock Dividends and Stock Splits
 5 Distinguish between the use of cash dividends and share repurchases.	Stock Repurchases

Technology giant Apple (AAPL) launched a plan to pay a \$2.65 fourth quarter cash dividend in addition to repurchasing \$10 billion of its shares in March 2012. The combined effect of paying the dividends and repurchasing the shares is \$45 billion! Interestingly, this is not Apple's first dividend payment. The firm paid dividends for 8 years, ending in 1995 when a worsening business outlook led the board to discontinue the dividend.¹ At least for the time being the dividend payment looks very secure as Apple expected to add some \$35 billion to its cash holdings during 2011 even after paying dividends and repurchasing shares.

Why should an investor care about a firm's cash distributions? The answer, very simply, is that these cash distributions represent the *return on* the investment made by the stockholders. As such these distributions are tangible evidence of the value created by the firm for its owners. But not all companies distribute cash either as dividends or share repurchases. Apple, for example, did not distribute any cash during the early years of the company's life when it was growing rapidly and needed all its internally generated earnings to support its growth.

¹Casey Newton, Apple to offer quarterly dividend, buy back shares, *SFGate*, March 20, 2012 (<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2012/03/19/BU201NN0EH.DTL&type=business>).

Similarly, rapidly growing technology giant Google Inc. (GOOG) earned \$9.8 billion from its operations in 2011 and had a cash plus marketable securities balance of over \$44 billion but paid no cash dividends. So why did Google's stock price hover around \$650 on March 26, 2012, if it was not distributing any cash? The answer is that it is the investor's expectation that at some point in the future the firm will begin distributing cash just as Apple has done. So it is the anticipated dividends and share repurchases that are the cash flow (Principle 1) that underlies stock valuation.



Because the goal of a firm should be to maximize the value of the firm's common stock, the success or failure of managerial decisions can be evaluated only in light of their impact on the price. We observed that the company's investment (Chapters 10 and 11) and financing decisions (Chapter 12) can increase the value of the firm. As we look at the firm's policies regarding dividends and internal financing (how much of the company's financing comes from cash flows generated internally), we return to the same basic question: Can managers influence the price of the firm's stock through its dividend policies? After addressing this important question, we then look at the practical side of the question: What practices do managers commonly follow when making decisions about paying or not paying a dividend to the firm's stockholders? We conclude with a discussion of the share repurchase decision. Firms have increasingly been repurchasing their shares of stock as an alternative to paying out cash dividends.

Key Terms

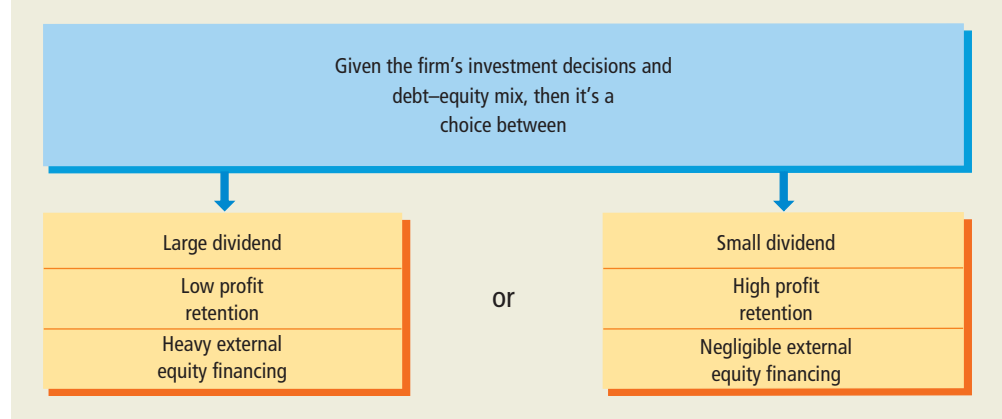
Before taking up the particular issues relating to dividend policy, we must understand several key terms and interrelationships.

A firm's dividend policy includes two basic components. First, the **dividend payout ratio** indicates the *amount of dividends paid relative to the company's earnings*. For instance, if the dividend per share is \$2, and the earnings per share are \$4, the payout ratio is 50 percent (\$2/\$4). The second component is the stability of the dividends over time. As you will learn later in the chapter, dividend stability can be almost as important to the investor as the amount of dividends received.

In formulating a dividend policy, the financial manager faces trade-offs. Assuming that management has already decided how much to invest and has chosen its debt-equity mix for financing the firm's investments, the decision to pay a large dividend means simultaneously deciding to retain less of the firm's profits; this in turn results in a greater reliance on external equity financing. Conversely, given the firm's investment and financing decisions, a small dividend payment corresponds to high profit retention, making it less necessary to generate funds externally. These trade-offs, which are fundamental to our discussion, are illustrated in Figure 13-1.

b¹ Describe the trade-off between paying dividends and retaining (reinvesting) firm profits.

dividend payout ratio the ratio of dividends paid per share divided by earnings per share.

FIGURE 13-1 Dividend-versus-Retention Trade-Offs

Concept Check

1. Provide a financial executive with a useful definition of the term *dividend payout ratio*.
2. How does the firm's actual dividend policy affect its need for externally generated financial capital?

b² Does the dividend policy affect the company's stock price?

Does Dividend Policy Matter to Stockholders?

What is a sound rationale or motivation for dividend payments? Put another way, given the firm's capital-budgeting and borrowing decisions, what is the effect of the firm's dividend policies on the stock price? *Does a high dividend payment decrease a stock's value, increase it, or make no real difference?*

At first glance, we might reasonably conclude that a firm's dividend policy is important. We have already (in Chapter 8) pointed out that the value of a stock is equal to the present value of its expected future dividends. Why else do so many companies pay dividends? Why are dividend announcements like the Apple announcement reported in the introduction to this chapter front-page news? How can we not conclude that dividend policies are important?

Three Basic Views

Some would argue that the amount of a dividend is irrelevant and any time spent on the decision is a waste of energy. Others contend that a high dividend results in a high stock price. Still others take the view that dividends actually hurt the value of the dividend-paying stocks.

Before we delve into the various theories, or "views," on the dividend policy question, we need to be very careful about the conditions under which we pose the question. Specifically, we begin with the basic assumption that the firm plans to undertake all positive *NPV* investment opportunities *regardless* of whether it pays dividends or not. This is critical because if we allow the decision to pay a dividend to interfere with the firm's decision to undertake a good investment, then the policy obviously matters to the firm's stockholders. So, assuming that the firm will make the right set of investment decisions, why might the company's dividend policy matter?

View 1: A Firm's Dividend Policy Is Irrelevant Much of the controversy about the dividend issue is based in time-honored disagreements between the academic and professional communities. Experienced practitioners tend to believe that stock prices change as a result of dividend announcements and, therefore, see dividends as important. Professors often argue that the seemingly apparent relationship between dividends and stock prices may be an illusion.

The notion that dividends are not important rests on two preconditions. First, we must assume that the firm's investment and borrowing decisions have already been made and that these decisions will not be altered by the amount of any dividend payments. Second, **perfect capital markets** must exist, which means that (1) *investors can buy and sell stocks without incurring any transaction costs, such as brokerage commissions*; (2) *companies can issue stocks without any cost of doing so*; (3) *there are no corporate or personal taxes*; (4) *complete information about the firm is readily available*; (5) *there are no conflicts of interest between managers and stockholders*; and (6) *financial distress and bankruptcy costs are nonexistent*.

perfect capital markets markets in which information flows freely and market prices fully reflect all available information.

The first assumption—that the firm has already made its investment and financing decisions—simply keeps us from confusing the issues. We want to know the effect of dividend decisions on a stand-alone basis, without mixing in other decisions. The second assumption, that of perfect markets, also allows us to study the effect of dividend decisions in isolation, much as a physicist studies motion in a vacuum to avoid the influence of friction.

Given these assumptions, the effect of a dividend decision on share price may be stated unequivocally: *There is no relationship between dividend policy and stock value*. One dividend policy is as good as another. In the aggregate, investors are concerned only with *total* returns from investment decisions; they are indifferent to whether these returns come from capital gains or dividend income. They also recognize that the dividend decision is really a choice of financing strategy. That is, to finance growth, the firm (a) may choose to issue stock, allowing internally generated funds (profits) to be used to pay dividends; or (b) may use internally generated funds to finance its growth, paying less in dividends but not having to issue stock. In the first case, shareholders receive dividend income; in the second case, the value of their stocks should increase. Thus, the nature of the return is the only difference; total returns should be about the same.

View 2: High Dividends Increase Stock Values The belief that a firm's dividend policy is unimportant implicitly assumes that an investor is indifferent about whether the increased income comes through capital gains (stock price increase) or comes through dividends. However, dividends are more predictable than capital gains. Managers can control dividends, but they cannot dictate the price of the stock. Investors are less certain of receiving income from capital gains than from dividends. The incremental risk associated with capital gains relative to dividend income implies a higher required rate for discounting a dollar of capital gains than for discounting a dollar of dividends. In other words, we would value a dollar of expected dividends more highly than a dollar of expected capital gains. We might, for example, require a 14 percent rate of return for a stock that pays its entire return from dividends, but a 20 percent return for a high-growth stock that pays no dividends. This view, which says *dividends are more certain than capital gains*, has been called the **bird-in-the-hand dividend theory**.

bird-in-the-hand dividend theory the view that dividends are more certain than capital gains and therefore more valuable.

The position that dividends are less risky than capital gains and should, therefore, be valued differently is not without its critics. If we hold to our basic decision not to let the firm's dividend policy influence its investment and capital-mix decisions, the company's operating cash flows, in both expected amount and variability, are unaffected by its dividend policy. Because the dividend policy has no impact on the volatility of the company's overall cash flows, it has no impact on the riskiness of the firm.

Increasing a firm's dividend does not reduce the basic riskiness of the stock; rather, if a dividend payment requires managers to issue new stock, it only transfers risk *and* ownership from the current owners to new owners. We would have to acknowledge that the current investors who receive the dividend trade an uncertain capital gain for a "safe" asset (the cash dividend). However, if risk reduction is the only goal, the investor could have kept the money in the bank and not bought the stock in the first place.

View 3: Low Dividends Increase Stock Values The third view of how dividends affect stock price argues that dividends actually hurt the investors. This belief has largely been based on the difference in the tax treatment of dividends versus capital gains. Contrary to the perfect-markets assumption of no taxes, most investors do pay income taxes. For these taxpayers, the objective is to maximize the *after-tax* return on an investment relative to the

risk assumed. This is done by *minimizing* the effective tax rate on the income and, whenever possible, by *deferring* the payment of taxes.

Like most tax code complexities, Congress over the years has changed whether capital gains are taxed at a lower or similar rate to “earned income.” Think of a water faucet being randomly turned on and then off. From 1987 through 1992, no federal tax advantage was provided for capital gains income relative to dividend income. A revision in the tax code that took effect beginning in 1993 did provide a preference for capital gains income. Then the Taxpayer Relief Act of 1997 made the difference (preference) even more favorable for capital gains as opposed to cash dividend income. For some taxpayers, if a minimum holding period had been reached, the tax rate applied to capital gains was reduced to 20 percent from the previous level of 28 percent. But wait: In 2003, Congress again felt the need to change the tax code as it pertained to both dividend income and capital gains income. On May 28, President Bush signed into law the Jobs and Growth Tax Relief Reconciliation Act. Part of the impetus for this act was the recession that commenced in 2001 and the slow rate of job creation that followed that recession.

In a nutshell, this 2003 act lowered the top tax rate on dividend income to 15 percent from a previous top rate of 38.6 percent and also lowered the top rate paid on realized long-term capital gains to the same 15 percent from a previous 20 percent. For 2005–2012 the tax rate on both dividends and capital gains was 15 percent. However, as of 2012, dividends are taxed as ordinary income and capital gains are taxed at 20 percent.

Actually, a different benefit exists for capital gains returns relative to dividend income. Taxes on dividend income are paid when the dividend is received, whereas taxes on price appreciation (capital gains) are deferred until the stock is actually sold. Thus, when it comes to tax considerations, many investors prefer the retention of a firm’s earnings—in expectation of a later capital gain—as opposed to the near-term payment of cash dividends. Again, if earnings are retained within the firm, hopefully the stock price increases, but the increase is not taxed until the stock is sold.

Although the majority of investors are subject to taxes, certain investment companies, trusts, and pension plans are not when it comes to their dividend income. Also, for tax purposes, a corporation can generally exclude 70 percent of the dividend income it receives from another corporation. In these cases, investors will prefer dividends over capital gains.

To summarize, when it comes to taxes, we want to maximize our *after*-tax return, as opposed to our *before*-tax return. Investors try to defer taxes whenever possible. Stocks that allow tax deferral (low dividends–high capital gains) will possibly sell at a premium relative to stocks that require current taxation (high dividends–low capital gains). This suggests that a policy of paying low or no dividends will result in a higher stock price. That is, high dividends hurt investors, whereas low dividends and high retention help investors. This is the logic of the advocates of the low-dividend policy. It does presume that the firm’s management has a roster of positive net present value projects that will put the dollars retained to productive use. However, since 2003 the low tax rate on dividends challenges this logic.

Making Sense of Dividend Policy Theory

We have now looked at three views on dividend policy. Which is right? The argument that dividends are irrelevant is difficult to refute, given the perfect-market assumptions. However, in the real world, it is not always easy to feel comfortable with such an argument. Conversely, the high-dividend philosophy, which measures risk by how we split the firm’s cash flows between dividends and retained earnings, is not particularly appealing when studied carefully. The third view, which is essentially a tax argument against high dividends, is persuasive. Even today, although the preferential tax rate for capital gains is limited, the “deferral advantage” of capital gains is still alive and well. However, if low dividends are so advantageous and generous dividends are so hurtful, why do companies continue to pay dividends? It is difficult to believe that managers would forgo such an easy opportunity to benefit their stockholders. What are we missing?

The need to find the missing elements in our “dividend puzzle” has not been ignored. When we need to better understand an issue or phenomenon, we can either improve our

thinking or gather more evidence about the topic. Scholars and practitioners have taken both approaches. Although no single definitive answer has yet been found that is acceptable to all, several plausible explanations have been developed. Some of the more popular explanations include (1) the residual dividend theory, (2) the clientele effect, (3) the information effect, (4) agency costs, and (5) the expectations theory.

The Residual Dividend Theory In perfect markets, there are no costs to the firm when it issues new securities. However, in reality the process is quite expensive, and the flotation costs associated with a new offering may be as much as 20 percent of the dollar issue size. Thus, if managers choose to issue stock rather than retain profits to finance new investments, a larger amount of securities is required to finance the investment. For example, if \$30 million is needed to finance the investment, more than \$30 million will have to be issued to offset the flotation costs. This means, very simply, that new equity capital raised through the sale of common stock will be more expensive than capital raised via retained earnings.

In effect, flotation costs eliminate our indifference by using internal capital versus issuing new common stock. Given these costs, *dividends should be paid only if the firm's profits are not completely used for investment purposes*. That is, only “residual earnings” should be paid out. This policy is called the **residual dividend theory**.

Given the existence of flotation costs, the firm's dividend policy should therefore be as follows:

1. Accept an investment if the *NPV* is positive, that is, if the expected rate of return exceeds the cost of capital.
2. Finance the equity portion of new investments *first* by using internally generated funds. Only after this capital is fully utilized should the firm issue new common shares.
3. If any internally generated funds still remain after making all acceptable investments, pay dividends to the investors. However, if all of the internal capital is needed to finance acceptable investments, pay no dividends.

Thus, dividend policy is influenced by (1) the company's investment opportunities and (2) the availability of internally generated capital. Dividends are then paid *only* after all acceptable investments have been financed. According to this concept, a dividend policy is totally passive in nature and can't affect the market price of the common stock.

Now, let us consider a dose of corporate reality.

The Clientele Effect What if the investors do not like the dividend policy chosen by managers? In perfect markets, in which we incur no costs when buying or selling stock, there is no problem. Investors can simply satisfy their personal income preferences by purchasing or selling securities when the dividends they receive do not satisfy their current needs. In other words, if an investor does not view the dividends received in any given year to be sufficient, he or she can simply sell a portion of stock, thereby “creating a dividend.” In addition, if the dividend is larger than the investor desired, he or she can simply purchase stock with the “excess cash” created by the dividend.

However, once we remove the assumption of perfect markets, we find that buying or selling stock is not cost free. Brokerage fees are incurred, ranging from approximately 1 percent to 10 percent. Even more costly is the fact that the investor who buys the stock with cash received from a dividend will have to pay taxes before reinvesting the cash. And when a stock is bought or sold, it must first be reevaluated. This can be time-consuming and costly for investors. Finally, some institutional investors, such as investors in university endowment funds, are precluded from selling stock.

As a result of these considerations, investors may not be too inclined to buy stocks that require them to “create” a dividend stream more suitable to their purposes. Rather, if investors do in fact have a preference between dividends and capital gains, we could expect them to invest in firms that have a dividend policy consistent with these preferences. They would, in essence, “sort themselves out” by buying stocks that satisfy their preferences for dividends and capital gains. For example, individuals and institutions that need current income would

residual dividend theory a theory that a company's dividend payment should equal the cash left after financing all the investments that have positive net present values.

clientele effect the belief that individuals and institutions will invest in companies whose dividend payouts match their particular needs for current versus future cash flow. For example, those that need current income will invest in companies that have high dividend payouts.

information asymmetry the notion that investors do not know as much about the firm's operations as the firm's management.

agency costs the lost value a firm's security holders face where there are conflicts of interest between managers and the security holders.

expectations theory the notion that investor reactions to a managerial decision are based on their *assessment* of the effect of the action on stock price. For example, the announcement of a higher dividend not only indicates that more cash will be received by investors this quarter but may also signal to investors that the firm's future prospects have improved.

be drawn to companies that have high dividend payouts. Other investors, such as wealthy individuals, would much prefer to avoid taxes by holding securities that offer no or small dividend income but large capital gains. In other words, there would be a **clientele effect**: *Firms draw a given clientele, depending upon their stated dividend policy.*

The possibility that clienteles of investors exist might lead us to believe that the firm's dividend policy matters. However, unless there is a greater aggregate demand for a particular policy than the market can satisfy, one policy is as good as the other. The clientele effect only warns firms to avoid making capricious changes in their dividend policy. Moreover, given that the firm's investment decisions are already made, the level of the dividend is still unimportant. The change in the policy matters only when it requires clientele to shift to another company.

The Information Effect An investor in a world of perfect markets would argue with considerable persuasion that a firm's value is determined strictly by its investment and financing decisions and that its dividend policy has no impact on value. Yet we know from experience that a large, unexpected change in dividends can have a significant impact on the stock price. For instance, in November 1990, Occidental Petroleum cut its dividend from \$2 to \$1. In response, the firm's stock price went from about \$32 to \$17. How can we suggest that dividend policy matters little when we can cite numerous such examples?

Despite such "evidence," some experts claim we are not looking at the real cause and effect. It may be that investors use a change in dividend policy as a *signal* about the firm's financial condition, especially its earning power. Thus, a dividend increase that is larger than expected might signal to investors that managers expect significantly higher earnings in the future. Conversely, a dividend decrease, or even a less-than-expected increase, might signal that managers are forecasting less-favorable future earnings.

Likewise, some claim that managers frequently have inside information about the firm that cannot be made available to investors. This *difference in accessibility to information*, called **information asymmetry**, *they believe, can result in a lower or higher stock price than would otherwise occur.*

Dividends may, therefore, be important as a communication tool because managers may have no other credible way to inform investors about future earnings, or at least no convincing way that is less costly.

Agency Costs Conflicts often exist between stockholders and a firm's management. As a result, the stock price of a company owned by investors who are separate from management may be less than the stock price of a closely held firm. This potential difference in price is the *cost of the conflict to the owners*, which has come to be called **agency costs**.

Recognizing the possible problem, managers, acting independently or at the insistence of the firm's board of directors, frequently take action to minimize agency costs. Such action, which in itself is costly, includes auditing by independent accountants, assigning supervisory functions to the company's board of directors, creating covenants in lending agreements that restrict managerial powers, and providing incentive compensation plans for managers that help "bond" them with the owners.

A firm's dividend policy may be perceived by owners as a tool to minimize agency costs. Assuming that the payment of a dividend requires managers to issue stock to finance new investments, new investors will be attracted to the company only if they are convinced that the capital will be used profitably. Thus, the payment of dividends indirectly results in a closer monitoring of management's investment activities. In this case, dividends may make a meaningful contribution to the value of the firm.

The Expectations Theory A common thread through much of our discussion of dividend policy, particularly as it relates to information effects, is the word *expected*. We should not overlook the significance of this word when we are making any financial decision within the firm. *No matter what the decision area, how the market price responds to a firm's actions is not determined entirely by the action itself; it is also affected by investors' expectations about the ultimate decision to be made by management.* This concept or idea is called the **expectations theory**.

For example, as the time approaches for managers to announce the amount of the firm's next dividend, investors form expectations about how much that dividend will be. These expectations are based on several factors related to the firm, such as past dividend decisions, current and expected earnings, investment strategies, and financing decisions. Investors also consider such things as the condition of the general economy, the strength or weakness of the industry at the time, and possible changes in government policies.

When the actual dividend decision is announced, the investor compares the actual decision with the expected decision. If the amount of the dividend is as expected, even if it represents an increase from prior years, the market price of the stock will remain unchanged. However, if the dividend is higher or lower than expected, investors will reassess their perceptions of the firm. In short, an actual decision about the firm's dividend policy is not likely to be terribly significant unless it departs from investors' expectations. But if there is a difference between actual and expected dividends, we will more than likely see a movement in the stock price.

What Are We to Conclude?

A firm must develop a dividend policy regardless, so here are some of the things we have learned about the relevance of a firm's dividend policy.

1. As a firm's investment opportunities increase, its dividend payout ratio should decrease. In other words, an inverse relationship should exist between the amount of money a firm invests with expected rates of return that exceed the cost of capital (positive *NPVs*) and the dividends it remits investors. Because of flotation costs, internally generated equity financing is preferable to selling stock (in terms of the wealth of the current common shareholders).
2. The firm's dividend policy appears to be important; however, appearances can be deceptive. The real issue is the firm's *expected* earning power, and investors will use the dividend payment as a source of information about these earnings. The dividend may carry greater weight than a statement by management that earnings will be increasing or decreasing. (Actions speak louder than words.)
3. If dividends influence the stock price, this is probably based on the investor's desire to minimize or defer taxes and on the fact that dividends can minimize agency costs.
4. If the expectations theory has merit, which we believe it does, the firm should avoid surprising investors when it comes to its dividend decision.
5. The firm's dividend policy should effectively be treated as a *long-term residual*. Rather than project investment requirements for a single year, managers should anticipate financing needs for several years. If internal funds remain after the firm has undertaken all acceptable investments, dividends should be paid. Conversely, if over the long term the entire amount of internally generated capital is needed for reinvestment in the company, then no dividend should be paid.

In setting a firm's dividend policy, financial managers must work in the messy world of reality. This means that our theories do not provide an equation that perfectly explains the key relationships. However, they give us a more complete view of the world, which can only help us make better decisions.

Concept Check

1. Summarize the position that a dividend policy may be irrelevant with regard to the firm's stock price.
2. What is meant by the bird-in-the-hand dividend theory?
3. Why are cash dividend payments thought to be more certain than capital gains?
4. How might personal taxes affect both the firm's dividend policy and its share price?
5. Distinguish between the residual dividend theory and the clientele effect.



Discuss the constraints on dividend policy, commonly used dividend policies, and payment procedures.

The Dividend Decision in Practice

There are a number of practical considerations that will have an impact on a firm's decision to pay dividends. Some of the more obvious ones include the following.

Legal Restrictions

Certain legal restrictions can limit the amount of dividends a firm may pay. These legal constraints fall into two categories. First, *statutory restrictions* may prevent a company from paying dividends. Although the specific limitations vary by state, generally a corporation may not pay a dividend (1) if the firm's liabilities exceed its assets, (2) if the amount of the dividend exceeds the firm's accumulated profits (retained earnings), and (3) if the dividend is being paid from capital invested in the firm.

The second type of legal restriction is unique to each firm and results from the restrictions in debt and preferred stock contracts. To minimize their risk, investors frequently impose restrictive provisions on managers as a condition to their investment in the company. These constraints might include the provision that dividends may not be declared before the debt is repaid. Also, the corporation might be required to maintain a given amount of working capital. Preferred stockholders might stipulate that common dividends may not be paid when any preferred dividends are delinquent.

Liquidity Constraints

Contrary to popular opinion, the mere fact that a company shows a large amount of retained earnings in its balance sheet does not indicate that cash is available for the payment of dividends. The firm's liquid assets, including its cash, are basically independent of its retained earnings account. Generally, retained earnings are either reinvested in the company within a short period or used to pay maturing debt. Thus, a firm can be extremely profitable and still be *cash poor*. Because dividends are paid with cash, *and not with retained earnings*, the firm must have cash available for the dividends to be paid. Hence, the firm's liquidity position has a direct bearing on its ability to pay dividends.

Earnings Predictability

A company's dividend payout ratio depends to some extent on the predictability of a firm's profits over time. If its earnings fluctuate significantly, the firm's managers know they cannot necessarily rely on internally generated funds to meet its future needs. As a result, when profits *are* realized, the firm is likely to retain larger amounts to ensure that money is available when needed. Conversely, a firm with a stable earnings trend will typically pay out a larger portion of its earnings in dividends. This company has less concern about the availability of profits to meet its future capital requirements.

Maintaining Ownership Control

For many large corporations, control through the ownership of common stock is not an important issue. However, for many small and medium-sized companies, maintaining voting control is a high priority. If the current common stockholders are unable to participate in a new offering, issuing new stock is unattractive, in that the control of the current stockholder is diluted. The owners might prefer that managers finance new investments with debt and retained earnings rather than issue new common stock. This firm's growth is then constrained by the amount of debt capital available to it and by the company's ability to generate profits.

Alternative Dividend Policies

Regardless of a firm's long-term dividend policy, most firms choose one of several year-to-year dividend payment patterns.

1. A **constant dividend payout ratio**. Under this policy, the *percentage of earnings paid out in dividends is held constant*. Although the dividend-to-earnings ratio is stable, the dollar amount of the dividend naturally fluctuates from year to year as profits vary.

constant dividend payout ratio a dividend payment policy in which the percentage of earnings paid out in dividends is held constant. The dollar amount fluctuates from year to year as profits vary.

2. A **stable dollar dividend per share**. This policy *maintains a relatively stable dollar dividend over time*. An increase in the dollar dividend usually does not occur until management is convinced that the higher dividend level can be maintained in the future. Conversely, a lower dollar dividend will not be paid until the evidence clearly indicates that a continuation of the current dividend cannot be supported.
3. A **small, regular dividend plus a year-end extra**. A corporation following this policy *pays a small, regular dollar dividend plus a year-end extra dividend in prosperous years*. The extra dividend is declared toward the end of the fiscal year after the company's profits for the period can be estimated. The objective is *to avoid the connotation of a permanent dividend being paid*. However, this purpose may be defeated if *recurring* extra dividends come to be expected by investors.

stable dollar dividend per share a dividend policy that maintains a relatively stable dollar dividend per share over time.

small, regular dividend plus a year-end extra a corporate policy of paying a small regular dollar dividend plus a year-end extra dividend in prosperous years to avoid the connotation of a permanent dividend.

Dividend Payment Procedures

After the firm's dividend policy has been structured, several procedural details must be arranged. For instance, how frequently are dividend payments to be made? If a stockholder sells the shares during the year, who is entitled to the dividend? To answer these questions, we need to understand dividend payment procedures.

Generally, companies pay dividends quarterly. For example, on February 6, 2009, General Electric (GE) announced that it would pay a quarterly dividend of \$0.31 per quarter to its shareholders for 2009. The annual dividend then would be $4 \times \$0.31 = \1.24 per share.

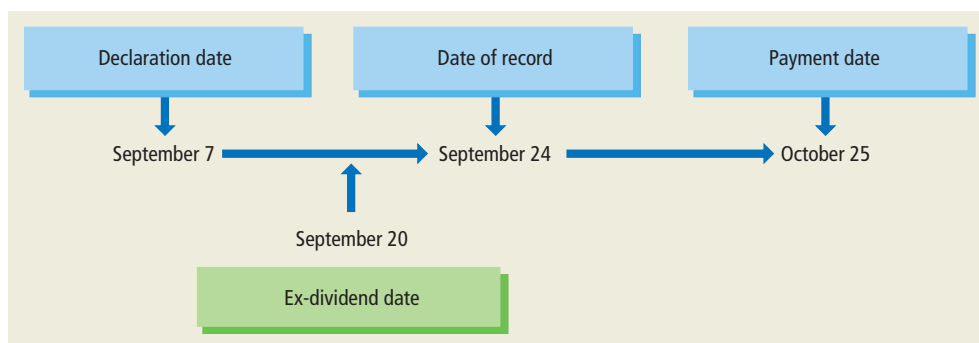
The final approval of a dividend payment comes from the company's board of directors. For example, the announcement or **declaration date** for General Electric's 2012 dividend was September 7, 2012, that holders of record as of September 24, 2012, would receive the dividend on the October 25, 2012, **payment date**. The **date of record**, September 24, 2012, designates when the stock transfer books are to be closed. Investors shown to own the stock on this date receive the dividend. If a notification of a transfer is recorded subsequent to September 24, the new owner is not entitled to the dividend. However, a problem could develop if the stock were sold on September 23, one day prior to the record date. Time would not permit the sale to be reflected on the stockholder list by the date of record. To address this problem, stock brokerage companies have uniformly terminated the right of ownership to the dividend two working days before the record date such that the **ex-dividend date** for the GE dividend is September 20 (note that in this instance September 24 was a Monday so the ex-dividend date was set two business days prior, which was September 20). The dividend declaration and payment process can be summarized as follows:

declaration date the date upon which a dividend is formally declared by the board of directors.

payment date the date on which the company mails a dividend check to each investor of record.

date of record the date at which the stock transfer books are to be closed for determining the investors to receive the next dividend payment.

ex-dividend date the date upon which stock brokerage companies have uniformly decided to terminate the right of ownership to the dividend, which is two days prior to the date of record.



Concept Check

1. Identify some practical considerations that affect a firm's payout policy.
2. Identify and explain three different dividend policies. (*Hint: One of these is a constant dividend payout ratio.*)
3. What is the typical frequency with which cash dividends are paid to investors?
4. Distinguish among the (a) declaration date, (b) date of record, and (c) ex-dividend date.

b4 Describe why firms sometimes pay noncash dividends.

stock split a stock dividend exceeding 25 percent of the number of shares currently outstanding.

stock dividend a distribution of shares of up to 25 percent of the number of shares currently outstanding, issued on a pro rata basis to the current stockholders.

Stock Dividends and Stock Splits

A stock dividend entails the distribution of additional shares of stock in lieu of a cash payment. A stock split involves exchanging more (or less in the case of a “reverse” split) shares of stock for the firm’s outstanding shares. In both cases the number of common shares outstanding changes but the firm’s investments and future earnings prospects do not. In essence, the ownership pie is simply cut into more pieces (or fewer pieces in the case of a reverse split).

The only difference between a stock dividend and a stock split relates to their respective accounting treatments. Both represent a proportionate distribution of additional shares to the current stockholders. However, *for accounting purposes* the **stock split** has been defined as a *stock dividend exceeding 25 percent*. Thus, a **stock dividend** is conventionally defined as a *distribution of shares up to 25 percent of the number of shares currently outstanding*.

Although stock dividends and splits occur far less frequently than cash dividends, a significant number of companies choose to use these share distributions either with or in lieu of cash dividends. The extent of stock splits and stock dividends over the years can be made clear by a little price comparison. In 1926, a ticket to the movies cost 25¢—and even much less in the rural communities. At the same time, the average share price on the New York Stock Exchange was \$35. Today, if we want to go to a new movie, we pay \$7 or more. However, the average share price is still about \$35. The relatively constant share price is the result of the shares being split over and over again. We can only conclude that investors apparently like it that way. But why do they, if no economic benefit results to the investor from doing so?

Proponents of stock dividends and splits frequently maintain that stockholders receive a key benefit because the price of the stock will not fall precisely in proportion to the share increase. For a two-for-one split, the price of the stock might not decrease a full 50 percent, so the stockholder is left with a higher total value. There are two reasons for this disequilibrium. First, many financial executives believe that an optimal price range exists. Within this range, the total market value of the common stockholders is thought to be maximized. As the price exceeds this range, fewer investors can purchase the stock, thereby restraining demand for the shares. Consequently, downward pressure is placed on its price. For example, Apple (AAPL) has engaged in multiple stock splits each time its share price rose above \$100. It had 2-for-1 splits in 1987, 2000, and 2005. Rumors abounded in 2007 prior to the onset of the current recession that the company would split again as its stock price passed \$160 in October of that year.

The second explanation relates to the *informational content* of the dividend-split announcement. Stock dividends and splits have generally been associated with companies with growing earnings. The announcement of a stock dividend or split has therefore been perceived as favorable news. The empirical evidence, however, fails to verify these conclusions. Most studies indicate that investors are perceptive in identifying the true meaning of such a distribution. If the stock dividend or split is not accompanied by a positive trend in earnings and increases in cash dividends, price increases surrounding the stock dividend or split are insignificant. Therefore, we should be suspicious of the assertion that a stock dividend or split can help increase investors’ net worth.

A second reason for stock dividends or splits is the conservation of corporate cash. If a company is encountering cash problems, it may substitute a stock dividend for a cash dividend. However, as before, investors will probably look beyond the dividend to ascertain the underlying reason for conserving cash. If the stock dividend is an effort to conserve cash for attractive investment opportunities, shareholders might bid up the stock price. If the move to conserve cash relates to financial difficulties within the firm, the market price will most likely react adversely.

Concept Check

1. What is the difference between a stock split and a stock dividend?
2. What managerial logic might lie behind a stock split or a stock dividend?

Stock Repurchases

A **stock repurchase (stock buyback)** occurs when a *firm repurchases its own stock*. This results in a reduction in the number of shares outstanding. For well over three decades, corporations have been actively repurchasing their own equity securities. In the introduction we noted that Apple planned to repurchase up to \$10 billion in company shares in March 2013. This new repurchase program follows the completion of a previous \$40 billion in share repurchases. Note the use of the word *plan* in the announcement. This is important for it provides Apple leeway as to whether it carries out the planned repurchases in light of the uncertainties faced in the economic downturn that began with the financial crisis of 2007. However, uncertain economic times did not influence Walmart (WMT), which announced on June 5, 2009, that it planned to repurchase \$15 billion of its shares. This follows a period of 5 years during which time the firm repurchased approximately \$21 billion of shares.

Also, if you were to look at the balance sheet of almost any publicly held firm, you would see that the firm's treasury stock—the amount paid for repurchasing its own stock—is often-times severalfold the total amount originally invested by the stockholders. This situation is not unusual for many large companies. Several reasons have been given for stock repurchases. The benefits include:

1. A means for providing an internal investment opportunity
2. An approach for modifying the firm's capital structure
3. A favorable impact on earnings per share
4. The elimination of a minority ownership group of stockholders
5. The minimization of the dilution in earnings per share associated with mergers
6. The reduction in the firm's costs associated with servicing small stockholders

Also, from the shareholders' perspective, a stock repurchase, as opposed to a cash dividend, has a potential tax advantage.

A Share Repurchase as a Dividend Decision

Clearly, the payment of a common stock dividend is the conventional method for distributing a firm's profits to its owners. However, it need not be the only way. Another approach is to repurchase the firm's stock. The concept may best be explained by an example.

EXAMPLE 13.1

Dividends vs. Share Repurchase

Telink, Inc. is planning to pay \$4 million (\$4 per share) in dividends to its common stockholders. The following earnings and market price information is provided for Telink:

Net income	\$7,500,000
Number of shares	1,000,000
Earnings per share	\$7.50
Price/earnings ratio	8
Expected market price per share after the dividend payment	\$60

In a recent meeting, several board members, who are also major stockholders, questioned the need for the dividend payment. They maintained that they did not need the dividend income and suggested that the firm simply reinvest the earnings to fund future investments. In response to the question Telink's management argued that the firm's investment opportunities were not sufficiently profitable to justify retention of the income. Specifically, the required rate of return from the capital market was higher than the rate of return the firm thought it could earn by reinvesting the money in the firm.



Distinguish between the use of cash dividends and share repurchases.

stock repurchase (stock buyback) the purchase of outstanding common stock by the issuing firm.

As an alternative to paying dividends or reinvesting the earnings, the company's chief financial officer suggested that the firm repurchase company stock. This way the directors who did not want income from dividends could refrain from selling their shares and avoid current income.

To illustrate the effects of a share repurchase the company CFO suggested that the firm repurchase shares at a price of \$64, which is the current market price plus the value of the proposed \$4 dividend. He then said that the effect of the share repurchase would be the same as paying the dividend? Is this right?

STEP 1: FORMULATE A SOLUTION STRATEGY

If a \$4 dividend is paid then each shareholder will end up with a share of stock valued at \$60 plus the dividend or a value of \$64. The question then is, will the value of each share of stock be \$64 if the share repurchase is carried out?

STEP 2: CRUNCH THE NUMBERS

Note first that for \$4 million the firm can repurchase 62,500 shares of stock at the \$64 price (\$4,000,000/\$64). Now we can evaluate the price of the firm's shares after the repurchase by computing firm earnings per share:

$$\begin{aligned}\text{Earnings per share} &= \text{net income/shares outstanding after the share repurchase} \\ &= (\$7,500,000 / (1,000,000 - 62,500)) \\ &= \$8 \text{ per share}\end{aligned}$$

Next we compute the estimated share price per share using the price/earnings multiple of 8 times, that is

$$\begin{aligned}\text{Price per share} &= \text{earnings per share} \times \text{price/earnings ratio} \\ &= \$8.00 \times 8 \text{ times} \\ &= \$64.00\end{aligned}$$

STEP 3: ANALYZE YOUR RESULTS

In the CFO's example Telink's stockholders are provided with the same \$64.00 value whether a dividend is paid or shares are repurchased. Note, however, for the stockholders to be truly indifferent that the tax treatment of the \$4 dividend must be the same as the \$4 increase in the value of the firm's shares. This is not the case as the price appreciation realized by the stockholders that sell their shares may well be taxed at a lower capital gains tax rate than dividends, which are taxed as ordinary income. Moreover, if the stockholders do not sell into the repurchase there is no taxable event such that the gain in share price will be deferred until shares are actually sold.

The Investor's Choice

Given the choice between a stock repurchase and a dividend payment, which should an investor prefer? If there are no taxes, no commissions when buying and selling stock, and no informational content assigned to a dividend, the investor should be indifferent with regard to the choices. For example, if the investor wants cash flow and the stock he owns does not pay a dividend, he can create a dividend by simply selling a portion of his shares. Note that these sales will not necessarily deplete the value of his investment as the value of the firm's shares should be growing because the firm's earnings are not being paid in dividends but are being reinvested.

There are certainly drawbacks related to repurchasing stock that investors should care about. First, the firm may have to pay too high a price for the repurchased stock, which is to the detriment of the remaining stockholders. If a relatively large number of shares are being bought, the price may be bid up too high, only to fall after the repurchase operation. Second, as a result of the repurchase, the market may perceive the riskiness of the corporation as increasing, which would lower the price/earnings ratio and the value of the stock.

FINANCE AT WORK

COMPANIES INCREASINGLY USE SHARE REPURCHASES TO DISTRIBUTE CASH TO THEIR STOCKHOLDERS

There has been a fundamental shift away from paying dividends and toward the buyback of company shares of stock. This change is at least partially due to changes in the U.S. tax code, which charges an additional 15% tax on dividends paid out to shareholders (before the Bush administration, this tax was as high as the graduated income tax—in some cases exceeding 35% on the federal level alone).

Evidence supporting the growth in share repurchases is found in the fact that the firms in the Standard & Poor's 500 repurchased \$349 billion of their shares in 2005 alone. In fact, firms spent 73% more on buybacks than they did on dividends. On average, stock repurchases represented 61% of company earnings and dividends were only 32%. Clearly, there is a strong preference for share repurchases.*

Obviously firms are finding share repurchases a preferred way to distribute cash, but is this always best for the investor? Asked somewhat differently, are there reasons to prefer dividends over share repurchases? The answer is yes. For example, investors who need cash from their investments to live on may prefer dividends rather than being forced to sell shares and incur

brokerage fees. Also, there's something comforting about receiving a regular check in the mail and not having to worry so much about fluctuations in the value of your shares from day to day.

Some companies now recognize the varied interests of their stockholders and attempt to blend share repurchases with cash dividends. For example, Home Depot has paid out about 65% of its earnings in a mix of share repurchases and dividend payments. For example, for the year ended January 29, 2006, the firm reported total net income of \$5.838 billion, paid \$0.857 billion in dividends, and repurchased \$2.626 billion in company shares. This represents a total distribution of 59.7% of company earnings with 45% being distributed via share repurchase and 14.7% via dividends.**

*Matt Krantz, "More companies go for stock buybacks," *USA Today* (March 23, 2006).

**<http://finance.yahoo.com/q/cf?s=HD&annual>.

Source: Leslie Schism, "Many Companies Use Excess Cash to Repurchase Their Shares," September 2, 1993, the *Wall Street Journal*, Eastern edition.

A Financing or Investment Decision?

Repurchasing stock when the firm has excess cash can be regarded as a dividend decision. However, a stock repurchase can also be viewed as a financing decision. By issuing debt and then repurchasing stock, a firm can immediately alter its debt–equity mix toward a higher proportion of debt. Essentially, rather than choose how to distribute cash to the stockholders, managers are using stock repurchases as a means to change the corporation's capital structure.

In addition to dividend and financing decisions, many managers consider a stock repurchase to be an investment decision. When equity prices are depressed in the marketplace, they may view the firm's own stock as being materially undervalued and therefore a good investment opportunity. Although this may be a wise move, the decision cannot and should not be viewed in the context of an investment decision. Buying its own stock cannot provide expected returns as other investments do. No company can survive, much less prosper, by investing only in its own stock.

Practical Considerations—The Stock Repurchase Procedure

If management intends to repurchase a block of the firm's outstanding shares, it should make this information public. All investors should be given the opportunity to work with complete information. They should be told the purpose of the repurchase as well as the method to be used to acquire the stock.

Three methods for stock repurchase are available. First, the shares can be bought in the open market. Here the firm acquires the stock through a stockbroker at the going market price. This approach can put upward pressure on the stock price. Also, commissions must be paid to the stockbrokers as a fee for their services.

The second method is to make a tender offer to the firm's shareholders. A **tender offer** is a formal offer by the company to buy a specified number of shares at a predetermined and stated price. The tender price is set above the current market price in order to attract sellers. A tender offer is best when a relatively large number of shares are to be bought because the company's intentions are clearly known and each shareholder has the opportunity to sell the stock at the tendered price.

tender offer a formal offer by the company to buy a specified number of shares at a predetermined and stated price. The tender price is set above the current market price in order to attract sellers.

The third and final method for repurchasing stock entails the purchase of the stock from one or more major stockholders. These purchases are made on a negotiated basis. Care should be taken to ensure a fair and equitable price. Otherwise, the remaining stockholders may be hurt as a result of the sale.

Concept Check

1. Identify three reasons why a firm might buy back its own common stock shares.
2. What financial relationships must hold for a stock repurchase to be a perfect substitute for a cash dividend payment to stockholders?
3. Within the context of a stock repurchase, what is meant by a tender offer?

Chapter Summaries



Describe the trade-off between paying dividends and retaining (reinvesting) firm profits. (pgs. 417–418)

SUMMARY: When firms decide to pay cash dividends this is a use of cash. That is, cash that otherwise would be sitting in a bank account or be invested in a short-term money market investment. For example, in the introduction we noted that Apple announced plans to pay out about \$45 billion in dividends and stock repurchases during 2012. This means that this cash will not be available for Apple to reinvest in new projects.

KEY TERM

Dividend payout ratio, page 417, The ratio of dividends paid per share divided by earnings per share.



Does dividend policy affect the company's stock price? (pgs. 418–423)

SUMMARY: A company's dividend decision has an immediate impact on the firm's financial mix. If the dividend payment is increased, fewer funds are available internally for financing investments. Consequently, if additional equity capital is needed, the company has to issue new common stock. In perfect markets, the choice between paying or not paying a dividend does not matter. However, when we realize that in the real world there are costs of issuing stock, we have a preference to use internal equity to finance our investment opportunities. Here the dividend decision is simply a residual factor, in which the dividend payment should equal the remaining internal capital after the firm finances all of its investments.

Other market imperfections that may cause a company's dividend policy to affect the firm's stock price include (1) the deferred tax benefit of capital gains, (2) agency costs, (3) the clientele effect, and (4) the informational content of a given policy. Other practical considerations that may affect a firm's dividend payment decision include

- Legal restrictions
- The firm's liquidity position
- The accessibility of capital markets to the company
- The stability of the firm's earnings
- The desire of investors to maintain control of the company

KEY TERMS

Perfect capital markets, page 419 are markets in which information flows freely and market prices fully reflect all available information.

Bird-in-the-hand dividend theory, page 419 The view that dividends are more certain than capital gains and therefore more valuable.

Residual dividend theory, page 421 A theory that a company's dividend payment should equal the cash left after financing all the investments that have positive net present values.

Clientele effect, page 422 The belief that individuals and institutions will invest in companies whose dividend payouts match their particular needs for current versus future cash flow. For example, those that need current income will invest in companies that have high dividend payouts.

Information asymmetry, page 422 The notion that investors do not know as much about the firm's operations as the firm's management.

Agency costs, page 422 The lost value a firm's security holders face where there are conflicts of interest between managers and the security holders.

Expectations theory, page 422, The notion that investor reactions to corporate actions is based on their *assessment* of the effect of the action on stock price which can incorporate their interpretation of what the action means. For example, the announcement of a higher dividend may signal to investors that the firm's future prospects have improved.

Discuss the constraints on dividend policy, commonly used dividend policies, and payment procedures. (pgs. 424–425)



SUMMARY: Companies typically pay dividends on a quarterly basis. The final approval of a dividend payment comes from the board of directors. The critical dates in this process are as follows:

- Declaration date—the date when the dividend is formally declared by the board of directors
- Date of record—the date when the stock transfer books are closed to determine who owns the stock
- Ex-dividend date—two working days before the date of record, after which the right to receive the dividend no longer goes with the stock
- Payment date—the date the dividend check is mailed to the stockholders

In practice, managers have generally followed one of three dividend policies:

- A constant dividend payout ratio, whereby the percentage of dividends to earnings is held constant
- A stable dollar dividend per share, whereby a relatively stable dollar dividend is maintained over time
- A small, regular dividend plus a year-end extra, whereby the firm pays a small, regular dollar dividend plus a year-end extra dividend in prosperous years

Of the three dividend policies, the stable dollar dividend is by far the most common. The Jobs and Growth Tax Relief Reconciliation Act of 2003 reduced the top tax rate on dividend income to 15 percent and placed the top tax rate on realized long-term capital gains at this same 15 percent rate. This helped level the investment landscape for dividend income relative to qualifying capital gains. Taxes paid on capital gains, however, are still deferred until realized, but dividend income is taxed in the year that it is received by the investing taxpayer.

KEY TERMS

Constant dividend payout ratio, page 424 A dividend payment policy in which the percentage of earnings paid out in dividends is held constant. The dollar amount fluctuates from year to year as profits vary.

Stable dollar dividend per share, page 425 A dividend policy that maintains a relatively stable dollar dividend per share over time.

Small, regular dividend plus a year-end extra, page 425 a corporate policy of paying a small regular dollar dividend plus a year-end extra dividend in prosperous years to avoid the connotation of a permanent dividend.

Declaration date, page 425 The date upon which a dividend is formally declared by the board of directors.

Payment date, page 425 The date on which the company mails a dividend check to each investor of record.

Date of record, page 425 The date at which the stock transfer books are to be closed for determining the investors to receive the next dividend payment.

Ex-dividend date, page 425 The date upon which stock brokerage firms have uniformly decided to terminate the right of ownership to the dividend, which is two days prior to the date of record.

4 Describe why firms sometimes pay noncash dividends. (pg. 426)

SUMMARY: Stock dividends and stock splits have been used by corporations either in lieu of or to supplement cash dividends. At present, no empirical evidence identifies a relationship between stock dividends and splits and the market price of the stock. Yet a stock dividend or split could conceivably be used to keep the stock price within an optimal trading range. Also, if investors perceive that the stock dividend contains favorable information about the firm's operations, the price of the stock could increase.

KEY TERMS

Stock split, page 426 a stock dividend exceeding 25 percent of the number of shares currently outstanding.

Stock dividend, page 426 A distribution of shares of up to 25 percent of the number of shares currently outstanding, issued on a pro rata basis to the current stockholders.

5 Distinguish between the use of cash dividends and share repurchases. (pgs. 427–430)

SUMMARY: As an alternative to paying a dividend, the firm can repurchase stock. In perfect markets, an investor would be indifferent between receiving a dividend or a share repurchase. The investor could simply create a dividend stream by selling stock when income is needed. If, however, market imperfections exist, the investor may have a preference for one of the two methods of distributing the corporate income.

A stock repurchase can also be viewed as a financing decision. By issuing debt and then repurchasing stock, a firm can immediately alter its debt–equity mix toward a higher proportion of debt.

Also, many managers consider a stock repurchase an investment decision—buying the stock when they believe it to be undervalued.

KEY TERMS

Stock repurchase (stock buyback), page 427
The purchase of outstanding common stock by the issuing firm.

Review Questions

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

- 13-1. What is meant by the term *dividend payout ratio*?
- 13-2. Explain the trade-off between retaining internally generated funds and paying cash dividends.
- 13-3. a. What is the *residual dividend theory*?
b. Why is this theory operational only in the long term?
- 13-4. What legal restrictions may limit the amount of dividends to be paid?
- 13-5. In the introduction to the chapter we learned that Apple Computer (AAPL) recently reinstated the payment of cash dividends, which had been suspended since the 1990s. What are some reasons that might have influenced the firm's decision to begin paying dividends again?
- 13-6. How does a firm's liquidity position affect the payment of dividends?
- 13-7. How can ownership control constrain the growth of a firm?
- 13-8. Explain what a dividend's declaration date, date of record, and ex-dividend date are.
- 13-9. What are the advantages of a stock split or dividend over a cash dividend?
- 13-10. Why would a firm repurchase its own stock?

Study Problems

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

-  **13-1. (Dividend payout ratio)** Carson Electronics earned \$2.4 million in net income last year and for the first time ever paid its common stockholders a cash dividend of \$0.02 per share. The firm has 10 million shareholders. What was Carson's dividend payout ratio?

13-2. (*Dividend policy and the issue of new shares of common stock*) Your firm needs to raise \$10 million to finance its capital expenditures for the coming year. The firm earned \$4 million last year and will pay out half this amount in dividends. If the firm's CFO wants to finance new investments using no more than 40 percent debt financing, how much common stock will the firm have to issue to raise the needed \$10 million?

13-3. (*Dividend policy and stock prices*) Explain in your own words the notion of a perfect capital market.



13-4. (*Dividend policy and stock prices*) The question as to whether dividend policy has an effect on share prices raises a question as to whether dividends paid out to stockholders are any more “certain” than the expected future dividends the stockholders hope to receive from the retention of firm earnings. This is known as the “bird-in-the-hand” theory of dividend policy. Do you agree with this theory? Explain.

13-5. (*Residual dividend policy*) FarmCo, Inc. follows a policy of paying out cash dividends equal to the residual amount that remains after funding 60 percent of its planned capital expenditures. The firm tries to maintain a 40 percent debt and 60 percent equity capital structure and does not plan on issuing more stock in the coming year. FarmCo's CFO has estimated that the firm will earn \$12 million in the current year.

- If the firm maintains its target financing mix and does not issue any equity next year, what is the most it could spend on capital expenditures next year given its earnings estimate?
- If FarmCo's capital budget for next year is \$10 million, how much will the firm pay in dividends and what is the resulting dividend payout percentage?

13-6. (*Legal restrictions on dividend payments*) Describe the types of limitations firms can face from legal restrictions on dividend payments.



13-7. (*Practical considerations in setting dividend policy*) The board of directors of Kensington Enterprises has decided to pay cash dividends totaling \$5 million in the first quarter of the year. This payment represents the initiation of a cash dividend for the first time in company history, and your company CFO has asked you to look into any restrictions or constraints the firm might have in carrying out the plan. Write a brief report outlining the types of restrictions Kensington might face.

13-8. (*Dividend policies*) Final earnings estimates for Chilean Health Spa & Fitness Center have been prepared for the CFO of the company and are shown in the following table. The firm has 7,500,000 shares of common stock outstanding. As assistant to the CFO, you are asked to determine the yearly dividend per share to be paid depending on the following possible policies:

- A stable dollar dividend targeted at 40 percent of earnings over a 5-year period.
- A small, regular dividend of \$0.60 per share plus a year-end extra when the profits in any year exceed \$20,000,000. The year-end extra dividend will equal 50 percent of profits exceeding \$20,000,000.
- A constant dividend payout ratio of 40 percent.

YEAR	PROFITS AFTER TAXES
1	\$18,000,000
2	21,000,000
3	19,000,000
4	23,000,000
5	25,000,000

13-9. (*Constant dividend payout ratio policy*) The Patterson-Hale Trucking Company (PHT) needs to expand its fleet by 50 percent to meet the demands of two major contracts it just received to transport military equipment from manufacturing facilities scattered across the United States to various military bases. The cost of the expansion is estimated to be \$14 million. PHT maintains a 30 percent debt ratio and pays out 50 percent of its earnings in common stock dividends each year.

- If PHT earns \$4 million in 2013, how much common stock will the firm need to sell in order to maintain its target capital structure?
- If PHT wants to avoid selling any new stock but wants to maintain a constant dividend payout percentage of 50 percent, how much can the firm spend on new capital expenditures?

13-10. (*Constant dollar dividend payout policy*) Parker Prints is in negotiation with two of its largest customers to increase the firm's sales dramatically. The increase will require that Parker expand its production facilities at a cost of \$30 million. Parker expects to pay out \$8 million in dividends to its shareholders next year. Parker maintains a 40 percent debt ratio in its capital structure.

- If Parker earns \$12 million in 2013, how much common stock will the firm need to sell in order to maintain its target capital structure?
- If Parker wants to avoid selling any new stock, how much can the firm spend on new capital expenditures?

13-11. (*Terminology*) Define each of the following dates and place them in their proper order with respect to the payment and receipt of cash dividends: date of record, ex-dividend date, declaration date, and payment date.



13-12. (*Stock dividends*) In the spring of 2014 the CFO of Placebo Pharmaceuticals, Inc. took a proposal to the firm's board of directors to distribute a noncash dividend to the firm's shareholders in the form of new shares of common stock. Specifically, the CFO proposed that the company pay 0.025 shares of stock to the holders of each share of common stock such that the holder of 1,000 shares of stock would receive an additional 25 shares of common stock.

- If Placebo had total net income for the year of \$10,000,000 and 20,000,000 shares of common stock outstanding before the stock dividend, what are firm earnings per share?
- After paying the stock dividend, what is the firm's earnings per share?
- If you owned 1,000 shares of stock before the stock dividend, how many dollars of earnings did the firm earn on your 1,000 share investment? After the stock dividend is paid, how many dollars of earnings did the firm earn on your larger share holdings? What effect would you expect from the payment of the stock dividend on your total investment in the firm?

13-13. (*Stock splits and large stock dividends*) Marston Mfg. recently declared a 4-for-1 stock split for its common shares. Before the split the firm's share price had risen to \$600 per share and the firm's CFO felt that this high stock price inhibited trading in the firm's shares. Prior to the split the firm had 10 million shares of stock outstanding and had net income of \$40 million.

- Before the stock split what is Marston's earnings per share?
- Following the stock split, how many shares of common stock will Marston have outstanding?
- What are the firm's earnings per share after the stock split?
- If you owned 100 shares of stock before the split, how much are the total earnings for your shares? How much are the total earnings on your post-split shares?
- Were you better off financially as the holder of 100 shares of pre-split stock after the 4-for-1 split? Explain.

13-14. (*Stock splits*) The debt and equity section of the Robson Corporation balance sheet is shown here. The current market price of the common shares is \$20. Reconstruct the financial statement assuming that (a) a 15 percent stock dividend is issued and (b) a 2-for-1 stock split is declared.

Debt	\$1,800,000
Common equity	
Par (\$2; 100,000 shares)	200,000
Paid-in capital	400,000
Retained earnings	900,000
	<u>\$3,300,000</u>



13-15. (*Repurchase of stock*) The Dunn Corporation is planning to pay dividends of \$500,000. There are 250,000 shares outstanding, and earnings per share are \$5. The stock should sell for \$50 after the ex-dividend date. If, instead of paying a dividend, the firm decides to repurchase stock,

- What should be the repurchase price?
- How many shares should be repurchased?
- What if the repurchase price is set below or above your suggested price in part (a)?
- If you own 100 shares, would you prefer that the company pay the dividend or repurchase stock?

13-16. (*Stock repurchases and earnings per share*) CareMore, Inc. provides in-home medical assistance to the elderly and earned net income of \$5 million that it plans to use to repurchase shares of the firm's common stock, which is currently selling for \$50 a share. CareMore has 20 million shares of stock outstanding.

- What fraction of the firm's shares can the firm repurchase for \$5 million?
- If the share repurchase has no impact on the firm's net income, what will be its earnings per share after the repurchase?

Mini Case

This Mini Case is available in MyFinanceLab.

Assume that you write a column for a very widely followed financial blog titled, "Finance Questions: Ask the Expert." Your job is to field readers' questions that deal with finance. This week you are going to address two questions from your readers that have to do with dividends.

Question 1: I own 8 percent of the Standlee Corporation's 30,000 shares of common stock, which most recently traded for a price of \$98 per share. The company has since declared its plans to engage in a two-for-one stock split.

- What will my financial position be after the stock split, compared to my current position? (*Hint:* Assume the stock price falls proportionately.)
- The executive vice-president in charge of finance believes the price will not fall in proportion to the size of the split and will only fall 45 percent because she thinks the pre-split price is above the optimal price range. If she is correct, what will be my net gain from the split?

Question 2: You are on the board of directors of the B. Phillips Corporation, and Phillips has announced its plan to pay dividends of \$550,000. Presently there are 275,000 shares outstanding, and the earnings per share is \$6. It looks to you like the stock should sell for \$45 after the ex-dividend date. If instead of paying a dividend, the management decides to repurchase stock

- What should be the repurchase price that is equivalent to the proposed dividend? (*Hint:* Ignore any tax effects.)
- How many shares should the company repurchase?
- You want to look out for the small shareholders. If someone owns 100 shares, do you think he would prefer that the company pay the dividend or repurchase stock?