

Chapter 13

Dividend Policy

Answers to Concept Review Questions

1. What policies and payments does a firm's "dividend policy" consist of? Why is determining dividend policy more difficult today than in decades past?

A firm's dividend policy refers to its choice of whether to pay out cash to shareholders, in what fashion, and in what amount. The most obvious and important aspect of this policy is the firm's decision whether to pay a cash dividend, how large the cash dividend should be, and how frequently it should be distributed. In a broader sense, dividend policy also encompasses decisions such as whether to distribute cash to investors via share repurchases or specially designated dividends rather than regular dividends, and whether to rely on stock rather than cash distributions. Non-traditional forms of dividend payments, especially share repurchases are much more commonly used today, and so the dividend decision is much more complex and difficult than in the past. Also, there are many more important categories of shareholders who must be satisfied today—especially institutional investors—whereas managers once merely had to satisfy individual stockholders.

2. What do you think is the typical stock market reaction to the announcement that a firm will increase its dividend payment? Why?

An increase in the dividend payout is considered to be good news. The firm is demonstrating that it not only has positive cash flows, but these cash flows are increasing enough to justify a higher payout to shareholders. The firm "proves" its cash flow by paying out some of that cash to its shareholders. Higher dividends may signal permanent higher earnings for the firm

3. Assume you are the sole owner of a profitable private U.S. corporation. What do you think would be the most tax-efficient method of receiving ownership income (via salary, perks, retained earnings, or dividends)?

As the sole owner of a corporation, the best method of receiving income would be via retained earnings. These are taxed once at the corporate level. The second most cost efficient method would be salary--these are taxed at the personal level but are a tax-deductible expense to the corporation. Dividends are the least efficient--these are taxed both at the corporate level and at the personal level. With perks, it would depend on the kind of perk. Some may be considered company expenses, and not taxed to the individual. The sole owner would presumably invest in the perks that were most important to him or her.

4. Why should we expect a firm's stock price to decline by approximately the amount of the dividend payment on the ex-dividend date? Why do U.S. stock prices generally fall by less than the amount of the dividend payment?

The firm has removed an amount of cash equal to the amount of the dividend from the firm. It's total assets have declined, so its market capitalization and, in turn, the stock price should decline by this amount as well.

5. How do average dividend payout ratios for companies headquartered in English common law countries compare to those of companies headquartered in civil law countries? What explains this difference?

With the exception of the U.S.-based companies, firms headquartered in English common law countries (Britain, Canada, Australia, New Zealand, etc) tend to pay out significantly higher fractions of their earnings as dividends than do companies headquartered in civil law countries. The “Law and Finance” explanation for this is that common law provides much greater protection to small investors than does civil law, and thus shareholders are able to demand higher dividend payments in common law countries. Firms in civil law countries do not face such effective demand from shareholders and are more able to ignore their preferences for higher dividends.

6. Can you provide an answer to the following question: If high-dividend stocks offer a higher expected (and required) return than low-dividend stocks due to higher personal taxes levied on the former, why don't corporations simply reduce dividend payments and thus lower their cost of capital?"

If the cause and effect were this simple – and this was the only factor – then firms could reduce dividend payments to lower their cost of capital. In reality, the relationship is more complex. First, using return on equity \times retention ratio as an approximation of growth, lower dividend payouts means higher retention and higher growth. A higher growth means a higher, not a lower cost of capital. If firms reduced their dividend they would need positive net present value projects to invest in to satisfy investors. If they took the reduced dividend and invested in treasury securities (negative net present value investment for the corporation), then shareholders would sell their shares and invest in a value-maximizing firm.

7. Which U.S. industries are characterized by relatively high dividend payout ratios? Are these same industry patterns observed in other industrialized countries? What explains these industry patterns?

Utilities, transportation companies, financial institution and companies involved in heavy manufacturing firms tend to have high leverage and high dividend payouts in all countries, while service firms, high-technology companies and firms with highly variable earnings (e.g., mining) tend to have little or no debt and have low dividend payout ratios. This pattern of dividend payouts is explained by the same factors that influence capital structure decisions: regulated companies and firms with stable cash flows and stable asset bases tend to have high leverage and high payouts. Companies operating in a volatile industry or which must make ongoing and high-risk discretionary investments in new technologies have little or no debt and low dividend payouts.

8. What is the basis of the argument that transactions costs provide a reason for firms to pay dividends, and what light has the steep decline in transactions costs in recent years shed on this argument?

You could look at companies with high payout ratios, and look at how much external financing they raised, along with the flotation costs of that financing. You would look to see if firms with higher dividend payouts had more or less external financing. Was it lower cost debt financing or higher cost equity financing? If a company's transactions

costs for external financing were higher than average, did they have a lower than average payout ratio to minimize their need for external financing?

9. What does it mean to say that dividends are “irrelevant” in a world without taxes or other market frictions?

Dividend “irrelevance” means that a firm’s decision whether or not to pay a cash dividend cannot impact the value of that firm’s stock in a world without market frictions. Investors can create their own “dividends” (cash income) by selling shares, so they find no benefit in receiving dividends. Likewise the firm can either pay or retain cash, but if it pays dividends out the firm must sell new shares to make up the cash flow difference. Ultimately, the company’s stock price will be based on the stream of profits generated by the firm’s existing assets and its new investments, not on how it finances itself (through retention or new share issuance).

10. Managers of slow-growing, but profitable firms (i.e., tobacco companies) *should* pay out these high earnings as dividends. What might they choose to do instead?

If managers of profitable companies kept their earnings instead of paying them out as dividends, they might invest in negative net present value projects. If they are in a low growth industry, and do not have good uses for their earnings, they might be tempted to increase the size of the company by buying other companies. If there are no particular synergies – benefits of the two companies being together rather than operating separately – then the acquisition is not value increasing and should not be done.

11. How do Miller and Modigliani (M&M) arrive at their conclusion that dividend policy is irrelevant in a world of frictionless capital markets? Why is the assumption of fixed investment policy crucial to this conclusion?

They show that shareholders of a non-dividend-paying firm can duplicate any given pattern of dividend payments made by a company by simply by selling off a fraction of their holdings each period. If one company pays dividends and another comparable firm retains its earnings, then the dividend-paying firm must issue new stock equal to the amount of the dividend in order to continue being truly comparable to the retention firm. Unless one maintains the assumption of equal investment amounts each period, the retention firm will grow steadily larger than the dividend-paying firm over time. These firms are only comparable if they invest the same amount each period, which means that dividend-paying companies must make up the money distributed by selling new shares. Over time the total market value of the firms will stay the same, but an investor’s holding in the dividend firm will be steadily reduced as new shares are sold each period. An investor in the retention firm will see his or her fractional ownership remain the same over time, but the market value will grow by the amount of the investment (plus any positive NPV) each period.

12. During the late 1960s, the top marginal personal income tax rate on dividends received by British investors reached 98 percent, yet dividend payouts actually *increased*. How might you justify this empirical fact?

These punitive tax rates lead investors to “de-capitalize” the corporate sector by paying out large amounts of cash dividends each period, even if these payments were highly

taxed. This was better than allowing their capital to remain trapped in corporations, where it would be heavily taxed each period.

13. In what way may managers use dividends to convey pertinent information about their firms in a world of informational asymmetry? Why would a manager choose to convey information via dividend policy? Does empirical evidence support or refute the informational role of dividends?

Cash dividend payments have an inherent credibility that words do not have. Therefore, investors will be more willing to believe managers who say that their firms have great prospects when the managers back these statements up with high cash dividend payments than when the managers use words alone. In the language of accounting, dividends have “cash validity.” There is some empirical support for the informational role of dividend payments, but it is far from overwhelming. In fact, recent research suggests that dividend payments may convey more information about the past (we are increasing dividends because we had a profitable quarter) rather than the future.

14. Why is it difficult for a firm with weaker cash flows to mimic a dividend increase undertaken by a firm with stronger cash flows?

A firm with weaker cash flows may temporarily be able to mimic a dividend increase undertaken by a firm with stronger cash flows, but in the long run its lesser cash position would catch up with it. If it is not generating sufficient internal funds to pay dividends, it will have to raise money by issuing new debt or equity. If it has weak cash flows, lenders will be reluctant to lend more money. If it has weak cash flows, its stock price may be depressed, making the issuance of new equity costly.

15. According to the residual theory of dividends, how does a firm set its dividend? With which dividend policy is this theory most compatible? Does it appear to be empirically validated?

According to the residual theory of dividends, the actual dividend amount paid out by a firm to shareholders each quarter would be the amount of cash “left over” after the firm’s fixed payments had been paid in full and the firm had financed new investments as desired from retained earnings. Dividends would then truly be a residual, what remains after all fixed charges and positive-NPV investments had been funded, and as such would be highly variable amounts from one quarter to the next. Contrary to this theory’s predictions, cash dividend payments are extremely stable from quarter to quarter, so the theory is empirically refuted.

Answers to Self-Test Questions

- ST-1. What do record date, ex-dividend date, and payment date mean with regard to dividends? Why would you expect the price of a stock to drop by the amount of the dividend on the ex-dividend date? What rationale has been offered for why this does not actually occur?

When corporations announce dividend payments, they state that the dividend will be paid to shareholders of record on a certain date, with payment to be made several days later. This means the check will be made out to shareholders on the corporation’s registry as of, say July 5, with payment actually being made on July 15. About three days before the record date, the company’s stock will trade ex dividend, meaning that someone who

purchases the stock before this ex dividend date will be recorded on the company's books before the record date and will receive the dividend payment. Someone who purchases the stock on or after the ex dividend date will not receive the dividend payment (it will go to the previous owner), as there will be insufficient time to record the new owner on the shareholders' registry before payment is made. The stock price should therefore drop by about the amount of the dividend payment on the ex-dividend date, because the new purchaser must be compensated for the fact that the upcoming cash payment will be made to the previous owner. Historically, the average price drop on the ex-dividend day for U.S. companies has been 50-65% of the amount of the dividend paid, and this has been interpreted as a personal income tax effect. Since personal tax rates on dividend income have traditionally been taxed at a higher rate than on realized capital gains, most individual investors eager to sell shares would prefer to sell before the ex-dividend date--receiving their return as capital gains—rather than wait to receive the highly taxed cash dividend. For some expected ex-dividend day price drop investors will be indifferent between receiving \$1 worth of capital gains rather than \$0.50-\$0.65 worth of cash dividends.

- ST-2.** What has happened to the total volume of share repurchases announced by U.S. public companies since 1992? Why did that year mark such an important milestone in the history of share repurchase programs in the United States?

The total value of share repurchases in the United States increased dramatically after 1992. During that year, the U.S. Securities and Exchange Commission (SEC) spelled out the legal rules covering share repurchases, and this “safe harbor” ruling clarified when corporate managers could execute repurchases without fear of being charged with insider trading by the SEC.

- ST-3.** What has happened to the average cash dividend payout ratio of U.S. corporations over time? What explains this trend? How would your answer change if share repurchases were included in calculating U.S. dividend payout ratios?

Not only has the fraction of U.S. firms that pay dividends been declining steadily for the past 50 years, those companies that do pay regular cash dividends tend to pay out lower fractions of their earnings today than in the past. A relative handful of 200 or so NYSE listed firms account for over half of the value of dividend payments in the United States, though these companies are truly enormous and also account for the bulk of corporate profits each year. Several factors seem to account for this decline in the “propensity to pay” among dividend-paying firms, including the rise of institutional investors in U.S. markets (who presumably have less need for a regular cash payment than individual investors) and the increasing importance of technology and entrepreneurship in American business. These factors suggest both that corporate managers would have greater need to retain earnings for investment and that investors would have less desire to receive dividends. On the other hand, if share repurchases are included with regular cash dividends, then the picture of declining dividend payments reverses itself. By this measure, the aggregate “payout ratio” of large US businesses has been steadily (if slightly) increasing over time, though it is still the same relative handful of companies that pay dividend and execute share repurchase programs.

- ST-4.** What does it mean to say that corporate managers “smooth” cash dividend payments? Why do managers do this?

Most firms will maintain a constant nominal dividend payment until the company’s managers are convinced that corporate earnings have permanently changed. If the firm’s “permanent earnings” increase, then managers will increase the nominal dividend payment a little each quarter or year until a new equilibrium level of dividend payments close to the target payout ratio is reached. The company will then maintain the quarterly or annual dividend at this nominal level until the firm’s permanent earnings change again. This pattern of stable nominal dividend payments, followed by slow and steady increases as the firm’s managers adjust to new levels of permanent earnings, gives the observed dividend series a smooth pattern, so managers are said to smooth dividends if they follow a constant nominal dividend payment policy with a partial adjustment strategy—as most do.

- ST-5.** What are the key assumptions and predictions of the Signaling Model of Dividends? Are these predictions supported by empirical research findings?

The signaling model of dividends predicts that managers will begin paying dividends in order to differentiate their “strong” firms from weaker firms (with lower cash flows) in a market characterized by information asymmetries between managers and shareholders. In such an environment, investors cannot distinguish strong from weak companies, so managers of strong firms will incur all the costs (taxes, foregone investment, transactions costs of issuing new securities) of paying high dividends because their firms can afford to bear these costs while weaker firms cannot. Signaling with dividends is comparable to burning \$100 bills in public; only the wealthiest individuals can afford to commit such a wasteful act, so the signal is credible to all who witness it. The signaling model predicts that the most profitable and most promising firms will pay the highest dividends. The prediction that more profitable firms will pay the highest dividends is partially supported by empirical research, but the most promising firms (high-tech and entrepreneurial companies) have low payouts, which contradicts the signaling model’s predictions.

- ST-6.** What is the expected relationship between dividend payout levels and the growth rate and availability of positive-NPV projects under the agency cost model of dividends? What about the expected relationship between dividend payout and the diffusion of firm shareholdings? Free cash flow? Consider a firm such as Microsoft awash in free cash flow, positive-NPV projects available, and a relatively diffuse shareholder base in an industry with increasing competition. Does either the agency model or signaling model adequately predict the dividend policy of Microsoft? Which does the better job?

The agency cost model predicts that firms with many positive-NPV investment projects will have less need to pay out cash as dividends in order to overcome agency costs than will firms with few positive-NPV projects. Thus high-growth firms will have low dividend payouts. As noted in 13-20 and 13-26 above, firms with a tight ownership structure have few agency problems between managers and shareholders, so have less need to make large dividend payments. Most economists agree that Microsoft should pay out more of its cash holdings (horde?) as dividends, and the firm recently has raised its payout level—though the current payments will not seriously reduce Microsoft’s cash mountain in the foreseeable future.