

Dividend Policy: Effect on Valuation



There has been significant debate over how dividend policy of the company would affect valuations. Miller and Modigliani argued under perfect capital market assumptions a company's dividend policy should have no impact on its cost of capital or on shareholder's wealth. Gordon and Lintner believe, even under perfect capital markets assumptions, investors prefer a dollar of dividend than a dollar of potential capital gains from investing earning because they view dividends as less risky. Some companies follow constant dividend policy while others may resort to residual dividend payout. Irrespective of the message conveyed by management, investors across the globe may view dividend policy of a company differently.

Does Dividend Policy of the Company Affect Valuations?

Over the last 40 years financial theorists have debated the extent to which dividend policies should and does matter to a company's shareholders. One group of theorist believes that dividend policy is irrelevant to shareholders. The group typically holds that only the decisions of the company that are directly related to investment in working and fixed capital affect shareholder's wealth. A second group holds that dividend policy does matter to investors, for one or more reasons, and that a company can affect shareholder's wealth through its dividend policy. Typically, dividend relevance is attributed to either a presumption that investors value a unit of dividend more highly than an equal amount of uncertain capital gain,

or to one or more market imperfections. Such imperfections include taxes (in which a given amount of dividend is taxed differently than an equal amount of capital gains), asymmetric information (specifically, that corporate insiders are better informed about their company's prospects than outside investors), and agency costs (in particular, that management has a tendency to squander extra cash).

Dividend policy does not matter – Miller and Modigliani theory

Miller and Modigliani (MM) argued that in a world without taxes, transaction costs and equal ('symmetric') information among all investors – that is, under perfect capital market assumptions – a company's dividend policy should have no impact on its cost of capital or on shareholder's wealth.



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Their argument begins by assuming a company has a given capital budget (e.g. it accepts all projects with positive net present values [NPVs]), and that its current capital structure and debt ratio are optimal. Another way of stating this argument is that the dividend decision is independent of a company's investment and financing decisions. For example, suppose that a company decides to pay all its earnings as dividends. To finance capital projects, it could issue additional common shares in the amount of its capital budget (such financing would keep its capital structure unchanged). The value of the newly issued shares would exactly offset the value of the dividend. Thus, if a company paid out a dividend that represented 5% of equity, its share price would be expected to drop by 5%. If a common stock in United States is priced at \$20 before a \$1 per share dividend, the implied new price would be \$19. The shareholder has an asset worth \$20 if the dividend is not paid or assets worth \$20 if the stock drops to \$19 and a \$1 dividend is paid.

Under the MM assumptions, there is no meaningful distinction between dividend and share repurchases – they both are ways for a company to return cash to its shareholders. If a company had few investment opportunities such that its current cash flows were more than needed for positive NPV projects, it could distribute the excess cash flow via a dividend or share repurchase.

An intuitive understanding of MM dividend irrelevance also follows from the concept of a 'homemade dividend'. In a world with no taxes or transaction costs, if shareholders wanted or needed income, they could construct their own dividend policy by selling sufficient shares to create their desired cash flow stream. In

the real world there are market imperfections that create some problems for MM's dividend irrelevance propositions. First, both companies and individuals incur transaction costs. A company issuing new shares incurs flotation costs (i.e. costs in selling shares to the public that include underwriter's fees, legal costs, registration expenses, and possible negative price effects) often estimated to be as much as 4% to 10% of the capital raised, depending on the size of the company and size of the issue. Shareholders selling shares to create a homemade dividend would incur transaction costs and, in some countries capital gain taxes (of course, cash dividend incurs taxes in most countries). Furthermore, selling shares on a periodic basis to create an income stream of dividends can be problematic over time if share prices are volatile. If share prices decline, shareholders have to sell more shares to create the same dividend stream.

Dividend policy does matter – bird in the hand argument

Gordon and Lintner have argued that even under perfect capital markets assumptions, investors prefer a dollar of dividend to a dollar of potential capital gains from investing earnings because they view dividends as less risky. The arguments are also referred to as 'bird in the hand' argument, a reference to the proverb "a bird in the hand is worth two in the bushes". By assuming that a given amount of dividends is less risky than the same amount of capital gains, the argument is that a company that pays a dividend will have a lower cost of equity capital than an otherwise similar company that does not pay dividends; the lower cost of equity should result in a higher share price.

Dividend policy matters – tax implications

In some countries, dividend income is traditionally taxed at higher rates than capital gains. For instance in the 1970s, tax rates on dividend income in United States were as high as 70%, whereas long term capital gains were 35%. Even as recently as 2002, United States tax rate was as high as 39.1% on dividends and 20% on long-term capital gains. (From 2003 to 2010, dividends and long-term capital gains were taxed at 15% in the United States.)

An argument could be made that in a country that taxes dividend at higher rates than capital gains, taxable investors should prefer companies that pay low dividends and reinvest dividends in profitable growth opportunities. Presumably, any growth in earnings in excess of opportunity costs of funds would translate into a higher share price. If, for any reason, a company lacked growth opportunities sufficient to consume its annual retained earnings, it could distribute such funds through share repurchases (again the assumption is that capital

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gains are taxed more lightly than dividends). Taken to its extreme, this argument would advocate a zero payout ratio.

Other theoretical issues – factors that affect dividend payout policies

The following section presents other important issues that arise in theory of dividend policy —

Signaling effect: Unexpected changes in a company's dividend policy are often viewed by investors as a signal from management about projects of a firm's future performance. In other words, stockholders perceive changes in dividend policy as conveying important information about the firm.

Clientele effect: This refers to varying preferences for dividend for different groups of investors, such as individuals, institutions and corporations. The dividend clientele effect states that different groups desire different levels of dividends. Rationales for the existence of the clientele effect include

- **Tax considerations:** High-tax bracket investors (like some individuals) prefer low dividend payouts, and low-tax bracket investors (like corporations and pension funds) prefer high dividend payouts, when dividends are taxed in the hands of investors.
- **Requirement of institutional investors:** Some institutional investors will invest only in companies that pay a dividend yield above some target threshold. Examples are dividend-focused mutual funds and some trusts that are required to hold dividend-paying stocks.
- **Individual investor preference:** Some individuals prefer buying stocks so that they can spend the dividends while preserving the principal.

Restrictions on dividend payments:

Companies may be restricted from paying dividend either by legal requirements or by implicit restrictions caused by cash needs of the business. Common restrictions on dividend payments include:

- **The impairment of capital rule:** A legal requirement in some countries mandates that dividends paid cannot be in excess of retained earnings.
- **Debt covenants:** These are designed to protect bondholders and dictate things a company must or must not do. Many covenants require a firm to meet or exceed a certain target for liquidity ratios (e.g. current ratio) and coverage ratios (e.g. interest coverage ratio) before they can pay a dividend.
- **Cash flow:** A company may pay a dividend in excess of earnings for a short period of time, but most companies will not pay a dividend in excess of their cash from operations (CFO) unless a company is going out of business.
- **Industry life cycle:** A firm early in its life will not typically pay a dividend because the firm would prefer to reinvest profits back into the company to facilitate growth.

Floataion costs of new issues versus cost of retained earnings:

When a company issues new shares of common stock, floataion cost of 3% to 7% is taken from the amount of capital raised to pay for investment bankers and other costs associated with issuing new stock. Since retained earnings have no such fees, the cost of new equity capital is always higher than the cost of retained earnings. A company that has a sufficient amount of positive net present value (NPV) projects would prefer to fund those projects using retained

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earnings rather than paying a dividend and issuing new shares. Also that floataion costs make it unprofitable for a company to fund its dividend payments by issuing new shares of stock.

Financial flexibility: Companies may not initiate, or may reduce or omit, dividends to obtain the financial flexibility associated with having substantial cash on hand. A company with substantial cash holding is in a relatively strong position to meet unforeseen operating needs and to exploit investment opportunities with minimum delays. Having a strong cash position can be particularly valuable during economic contraction when the availability of credit may be reduced. Financial flexibility may be viewed as a tactical consideration that is of greater importance when access to liquidity is critical and when company's dividend payout is relatively large.

Shareholder's preference for current income versus capital gains: A lower tax rate for dividends compared to capital gains does not necessarily mean companies

will raise their dividend payouts. Investors may not prefer higher dividend, even if the tax rate on dividend is more favourable for multiple reasons:

- Taxes on dividends are paid when the dividend is received, while capital gains taxes are paid when shares are sold.
- The cost basis of shares may receive a step-up in valuation at the shareholder's death. This means that taxes on capital gains may not have to be paid at all.
- Tax exempt institutions such as pension funds and endowments will be indifferent between dividends and capital gains.

Types of Dividend Policies

Dividend policy is a strategy that



A *stable dividend policy is the one in which regular dividends are paid that generally do not reflect short-term volatility in earnings. A constant dividend payout ratio policy is the policy of paying out constant percentage of net income as dividends. A residual dividend policy is based on paying out as dividends any internally generated funds remaining after such funds are used to finance positive NPV projects. This type of dividend has been often mentioned in theoretical discussions of dividend policy but is rarely used in practice.* ”

a company follows to determine the amount and timing of dividend payments. In this reading we categorise and discuss three types of dividend policy – stable dividends, constant dividend payout ratio, and residual dividend policies. A *stable dividend policy* is the one in which regular dividends are paid that generally do not reflect short-term volatility in earnings. A *constant dividend payout ratio policy* is the policy of paying out constant percentage of net income as dividends. A *residual dividend policy* is based on paying out as dividends any internally generated funds remaining after such funds are used to finance positive NPV projects. This type of dividend has been often mentioned in theoretical discussions of dividend policy, but is rarely used in practice.

Stable dividend policy – the target payout ratio

Companies that use a stable dividend policy base dividends on a long-term forecast of suitable earnings, and increase dividends when earnings have increased to a suitably higher level. Thus, if the long-term forecast for sustainable earnings is slow growth, the dividends would be expected to grow slowly over time, more or less independent to cyclical upwards or downwards spike in earnings. If sustainable growth were not expected to grow over time, however, the corresponding dividends would be level (i.e. not growing). Compared with the two other types of dividend policies, a stable dividend policy typically involve less uncertainty for shareholders about the level of future dividends. This is because the other types of policies reflect to a higher degree short-term volatility

in earnings and/or investment opportunities.

A stable dividend can be modeled in a process of gradual adjustment towards a target payout ratio based on long-term sustainable earnings. A *target payout ratio* is a goal that represents the proportion of earnings that the company intends to distribute (pay out) to shareholders as dividends over the long term. A strict interpretation of the target payout ratio method means that a company would pay out a specific percentage of its earnings each year as dividends, and the amount of those dividends would vary directly with earnings. A more common approach, however, is for management to define a target payout ratio and seek a dividend level that satisfies the target, on average, over time.

The target payout ratio approach is based on three general conclusions concerning the way companies seem to set their dividend policy based on empirical observation.

- Base annual dividends on a target payout ratio applied to long-term sustainable earnings. The dividend growth rate must equal the long-run growth rate in earnings in order for the Gordon growth model to be applied to valuing a stock.
- Moving slowly towards that target payout ratio over time rather than all at once.
- Avoid cutting or eliminating the dividend except in extreme circumstances.
- If company earnings are expected to increase and the current payout ratio is below the target payout ratio, an investor can estimate future dividends through the following formula:

$$\left(\begin{matrix} \text{expected} \\ \text{dividend} \end{matrix} \right) = \left(\begin{matrix} \text{previous} \\ \text{dividend} \end{matrix} \right) + \left(\begin{matrix} \text{expected increase} \\ \text{in EPS} \end{matrix} \right) \times \left(\begin{matrix} \text{target payout} \\ \text{ratio} \end{matrix} \right) \times \left(\begin{matrix} \text{adjustment} \\ \text{factor} \end{matrix} \right)$$

where:

adjustment factor = $1/\text{number of years over which adjustment in dividend will take place.}$

Example

Last year ABC Inc. had earnings of ₹3.50 per share and paid a dividend of ₹0.70. In the current year, the company expects to earn ₹4.50 per share. The company has a 35% target payout ratio over five year period. Expected dividends have been presented in the workings below:

$$\begin{aligned}\text{Expected dividend} &= 0.70 + [(4.50 - 3.50) \\ &\quad \times (0.35) \times (1/5)] \\ &= 0.70 + 0.07 \\ &= 0.77\end{aligned}$$

Note that while the earnings are expected to increase by approximately 28.6% ($\text{₹}1.00/\text{₹}3.50$), the increase in dividend would be 10% ($\text{₹}0.07/\text{₹}0.70$)

Constant dividend payout ratio policy

In this type of policy, a dividend payout ratio decided by the company is applied to current earnings to calculate the dividend. With this type of dividend policy, dividends fluctuate with earnings in the short term. Constant dividend payout ratio policies are infrequently adopted in practice.

Residual dividend policy

The residual dividend policy is an intuitively appealing dividend policy that is rarely used in practice because it typically results in highly volatile dividend payments. The residual dividend policy is based on paying out as dividends the full amount of any internally generated funds remaining after financing the current projects capital expenditure (investments in positive NPV projects) consistent with the target capital structure. A residual dividend policy presumes that equity financing comes from

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reinvested earnings rather than new share issuance, which is more expensive. Directing internally generated funds first to positive NPV projects is consistent with shareholder wealth maximisation as is, typically, distributing to shareholders the balance that cannot be so invested. The residual dividend policy puts investments in positive NPV projects ahead of considerations of not reducing the dividend. Under the residual dividend policy, however, dividend may swing from low to zero when capital expenditure needs are high (relative to internally generated funds) too high when reverse situation holds. The increased uncertainty about future dividends may lead investors to require a higher rate of return on equity investments as compensation, possibly offset any advantage to the policy.

Example

Larsen Company has ₹1,000 in earnings. Larsen has a target debt-to-equity ratio of 0.5. This implies a capital structure of one-third debt and two-third equity. If the firm reinvests all its earnings, the equity will increase by ₹1,000. To maintain the target capital structure, the firm

must borrow an additional ₹500. Thus, the total amount of funds that can be generated without selling new equity is $\text{₹}1,000 + \text{₹}500 = \text{₹}1,500$. If planned capital spending is less than the total amounts of capital available (for example ₹900 versus ₹1,500) the firm can pay dividends. To maintain the target capital structure, the ₹900 capital spending will be financed with $[(1/3)(\text{₹}900)] = \text{₹}300$ of debt and $[(2/3)(\text{₹}900)] = \text{₹}600$ of equity. The residual amount is $(\text{₹}1,000 - \text{₹}600) = \text{₹}400$, so dividends under the residual method would be ₹400.

Effect of Initiation of Regular Dividends on Price-To-Earnings Multiple

According to dividend preference theory, a company that pays regular dividends is often perceived as having less risk and a lower cost of equity. We can use the constant dividend discount model to see that this lower cost of equity may lead to a higher price-to-earnings ratio for the firm.

Emerald Bank and Trust is a regional financial firm located in the western United States. The firm has never paid a dividend, but due to acquisitions over the last ten years, Emerald has grown to a considerable size. Management believes the rate of acquisitions will slow in the future and that it is time to start a regular dividend payment to shareholders. Emerald's chief financial officer has compiled the following information

- Emerald currently sells at a P/E ratio of 10 to 12 times current earnings per share.
- The industry average P/E is 14 to 16 times earnings.
- The growth rate for the firm is estimated as 7%.
- The required rate of return on Emerald's stock is 11%
- Initiation of dividend would

lower the required rate of return to 9%.

- Next year's earnings are estimated to be \$ 4.00 per share.
- Emerald has a target payout ratio of 30%

Starting with the constant dividend discount mode

$$P_0 = \frac{D_1}{r_s - g}$$

Divide both sides of the equation with E1, where E1 = next year's estimated EPS.

$$\frac{P_0}{E_1} = \frac{\frac{D_1}{E_1}}{r_s - g}$$

Calculate Emerald's P/E ratio

$$\frac{P_0}{E_1} = \frac{\frac{\$1.20}{\$4.00}}{0.09 - 0.07} = \frac{0.30}{0.02} = 15$$

The conclusion is that if Emerald initiates a dividend, investors may perceive the company as less risky, and the P/E may increase from its current level of 10 to 12 times earnings to 14 to 16 times earnings. Mathematically, the higher P/E ratio is a result of the reduction in the required rate of return. This causes a smaller spread between the required rate of return and the constant growth rate, which lowers the denominator in the constant growth dividend discount model formula – the lower the denominator the higher the P/E ratio.

Signals Conveyed by Omission or Declaration of Dividends – Cross Country Differences

MM assumed that all investors – including outside investors – have the same information about the company: a situation of asymmetric information. In reality, corporate managers typically have access to more detailed and extensive information about the company than do the outside investors.

A situation of asymmetric information raises the possibility that dividend increases or decreases may affect share prices because they may convey new information about the company. A company's board of directors and management, having more information than outside investors, may use dividends to signal to investors (i.e. convey information) how the company is really doing. A company's decision to initiate, maintain, increase or cut a dividend may convey more credible information than positive words from management because cash is involved. For a signal to be effective it must be difficult or costly to mimic by another entity without the same attributes. Dividend increases are costly to mimic because a company that does not expect its cash flows to increase will not be able to maintain the dividend at increasingly high levels in the long run. (In the short run the company can borrow to fund dividends.)

Empirical studies broadly support the thesis that dividend initiations or increases convey positive information and are associated with future earnings growth, whereas dividend omission or reductions convey negative information and are associated with future earning problems.

The information conveyed by dividend initiation is ambiguous. On one hand, a dividend initiation could mean that a company is sharing its wealth with shareholders – a positive signal. On the other hand, initiating dividend could mean that a company has a lack of profitable reinvestment opportunities – a negative signal. In rare cases however, management can attempt to send positive signal by cutting the dividend. Management may believe profitable investment opportunities are available and that shareholders would ultimately receive a greater benefit by having earnings re-

invested in the company rather than being paid out as dividend.

Information content in dividend policy changes is viewed differently across countries. In United States, investors infer that even small changes in a dividend send a major signal about the company's prospects. However, in Japan and other Asian countries, investors are less likely to assume that even a large change in dividend policy signals anything about a company's future prospects. As a result, Asian companies are freer to raise and lower their dividends as circumstances change without being concerned about how investor reaction may affect the stock price.

Dividend Policy: A Summary

What we conclude about the link between dividends and valuations? It is difficult to show an exact relationship between dividend and value because there are so many variables affecting the value. In theory, in absence of market imperfections, Miller and Modigliani find that dividend policy is irrelevant to the wealth of a company's investors. But in reality, the existence of market imperfection make matters more complicated. In additions, some investors are led, by logic or custom, to prefer dividends. Financial theory predicts that reinvestment opportunities should be the dominating factor. Indeed, no matter where they are located in the world, smaller, fast growing companies pay out little or none of their earnings. Regardless of jurisdiction, more mature companies with fewer reinvestment opportunities tend to pay dividends. For these mature companies taxes, laws, tradition, signaling, ownership, structure, and attempts to reconcile agency conflicts all seem to play a role in determining the dividend payout ratio. ■