***CHAPTER ONE***

***DIVIDEND POLICY AND THEORY***

***Overview***

*Dear students in your study of Financial management-I you have discussed the two major areas of corporate finance Investment Decision and Financing Decision. In this chapter of Financial Management-II, We will give you the extended explanation of the third important decision areas of corporate finance dividend policy.*

* 1. ***Basics of Dividends***

The term *dividend* usually refers to payments made out of a firm’s earnings to its owners, either in the form of cash or stock. If a payment is made from sources other than current or accumulated retained earnings, the term **distribution** rather than dividend is used. However, it is acceptable to refer to a distribution from earnings as a dividend and distribution from capital as a liquidating divided.

Successful companies earn income. That income then be reinvested in operating assets, used to acquire securities, used to retire debt, or distributed to stockholders. If the decision is made to distribute income to stockholders, three key issues arise: (1) How much should be distributed? (2) Should distribution be as cash dividends, or should the cash be passed on to shareholders by buying back some of the stock they hold? (3) How stable should the distribution be; that is, should the funds paid out from year to year be stable and dependable, which stockholders would probably prefer, or be allowed to vary with the firms’ cash flows and investment requirements, which would probably be better from the firm’s standpoint? These three issues are the primary focus of this chapter, but we also consider two related issues, stock dividend and stock splits.

Dividends are that portion of firm’s net earnings paid to stockholders. Preference shareholders are entitled to fixed rate of dividends irrespective of the firms earnings. Equity holders’ dividends fluctuate year after year. It depends on what portion of earnings it to be retained by the firm and what portion is to be paid off. As dividends are distributed out of net income, the firm’s decisions on retained earnings have a bearing on the amount to be distributed. Retained earnings constitute an important source of financing investment requirements of a firm. However, such opportunities should have enough growth potential and sufficient profitability. There is an inverse relationship between these two- larger retentions, lesser dividends and vice versa. Thus two constituents of net profits are always competitive and conflicting.

Dividend policy has direct influence on the two components of shareholders’ return- dividends and capital gains. A low payout and high retention may have the effect of accelerating earnings growth. Investors of growth companies realize their money in the form of capital gains. Dividends yield will be low for such companies. The influence of dividend policy on future gains to happen in distant future and therefore by all means uncertain. Share prices are a reflection of many factors including dividends. Some investors prefer current dividends to future gains as prophesied by an English saying – A bird in hand is worth two in the bush. Given all these constraints, it is a major of financial management.

***1.2. Forms of Dividends***

Dividends are that portion of earnings available to shareholders. Generally, dividends are distributed in cash, but sometimes they may also declare dividends in other forms which are discussed below:

* **Cash dividends:** Most companies pay dividends in cash. The investors also especially the old and retired investors depend on this form of payment for want of current income.

The basic type of cash dividends are:

* Regular cash dividends
* Extra dividends
* Special dividends
* Liquidating dividends
* **Scrip dividends:** in this form of dividends, equity shareholders are issued transferable promissory notes with shorter maturity periods which may or may not interest bearing. This form is adopted if the firm has earned profits and it will take some time to convert its assets into cash (having more of credit sales than cash sales). Payment of dividend in this form is done only if the firm is suffering from weak liquidity position.
* **Bond dividend:** Scrip and bond dividend are the same except that they differ in terms of maturity. Bond dividends carry longer maturity period and bear interest, whereas scrip dividends carry shorter maturity and may or may not carry interest.
* **Stock dividend (Bonus shares):** Stock dividend is the distribution of additional shares to the shareholders at no additional cost. This has the effect of increasing the number of outstanding shares of the firm. The retained earnings are capitalized to give effect to bonus issue. This decision has the effect of recapitalization, that is, transfer from reserves to share capital not changing the total net worth. The investors are allotted shares in proportion to their present holding. Declaration of bonus shares has a favorable psychological effect on investors. They associate it with prosperity.

**Important Dates for Cash Dividend Payments (Dividend Payment Chronology)**

1. **Announcement Date:** The corporation’s board of directors announces the dividend decision, e.g., ‘‘all shareholders of record as of 12/1/2012 will receive a cash dividend of 0.25 per share, to be paid on 15/2/2012.’’
2. **Ex-Dividend Date:** the first day the stock trades without the right to receive the dividend. The stock price will fall by the amount of dividend when it begins trading that day. This date will typically be two business days before the record date. This day will be 10/1/2012, so if you purchase the stock on or after this day, you will not receive the 0.25 dividend (since there won’t be enough time to list you as an official stockholder of record as of 12/1/1012). Prior to the ex-dividend date, the stock is said to be trading cum dividend (with dividend); subsequently it trades ex dividend.
3. **Record Date:** Stockholder’s name must appear as valid owner of stock on this date in order to receive the dividend (12/1/2012).
4. **Payment Date:** cash dividend payments are made on this date (15/2/2012).

**1.3. Ex-Dividend and Stock Price**

What happens to the stock price when it goes ex, meaning the ex-dividend date arrive? Example, suppose there is a stock that sells for birr 10 per share. The BOD declares a dividend of Br. 1 per share, and the record date is Thursday, June 14. The ex- date will be two businesses (not calendar) days earlier, on Tuesday June 12. If you buy the stock on Thursday, June 7, right as the market closes, you will get the birr 1 dividend because the stock is trading cum dividend. If you wait and buy the stock right as market opens on Tuesday June 12 you will not get the birr 1 dividend. What will happen to the value of the stock overnight?

If you think about it, the stock is obviously worth about birr 1 less on Tuesday morning, so its price will drop by this amount between close of business on Thursday and Tuesday opening. In general, we expect that the value of a share of stock will go down by about the dividend amount when the stock goes ex dividend. The stock price will be 10-1 = Br 9 on the ex-date.

**1.4. Dividend Theories**

Different theories have been given by various people on dividend policy. We have the traditional theory and the new sets of theories based on the relationship between dividend policy and firm value. The modern theories can be grouped as – (a) theories that consider dividend decision as an active variable in determining the value of the firm and (b) theories that do not consider dividend decision as an active variable in determining the value of the firm.

Optimal dividend policy is the dividend policy that strikes a balance between current dividends and future growth and maximizes the firm’s stock price. In an effort to find out the optimal dividend policy different theories and models have been suggested by various scholars. We will highlight some of them in upcoming sections.

**1.4.1. Traditional Approach**

This approach is given by B. Graham and D.L. Dodd. They clearly emphasize the relationship between the dividends and the stock market. According to them, the stock value responds positively to high dividends and negatively to low dividends, that is, the share values of those companies rises considerably which pay high dividends and the price falls in the event of low dividends paid.

**Drawbacks of the traditional Approach:** As per this approach, there is a direct relationship between the firms value (stock price) and dividend payment. High dividend payment positively responds to firms value and low dividend payment negatively responds to firms value (stock price). This may not always be true. A company’s share prices may rise in spite of low dividends due to other factors.

**1.4.2. Modern Dividend Theories**

**A. Walter Model**

Prof. James E. Walter considers dividend payouts are relevant and have a bearing on the share price of the firm. He further states, investment policies of a firm cannot be separated from its dividend policy and both are interlinked.

The choice of an appropriate dividend policy affects the value of the firm. His model clearly establishes a relationship between the firm’s rates of return r, its cost of capital k, to give a dividend policy that maximizes stockholders wealth. The firm would have the optimum dividend policy that will enhance the value of the firm.

This can be studied with the relationship between r and k. If r>k, the firm’s earnings can be retained as the firm has better and profitable investment opportunities and the firm can earn more than what the shareholders could by re-investing, if earnings are distributed. Firms which have r>k are called ‘growth firms’ and such firms should have a zero pay-out ratio.

If the return on investment r is less than cost of capital k, the firm should have a 100% pay-out ratio as the investors have better investment opportunities than the firm. Such policy will maximize the firm value.

If a firm has return on investment r equal to its cost of capital k, the firm’s dividend policy will have no impact on the firm’s value. The dividend pay-out can range between zero and 100% and the firm value will remain constant in all cases. Such firms are called ‘normal firms’

***Assumptions of Walter’s Model***

1. **Financing:**  all financing is done through retained earnings. Retained earnings are the only source of available and the firm does not use any external source of funds like debt or new equity.
2. **Constant rate of return and cost of capital:**  the firm’s r and k remain constant and it follows that any additional investment made by the firm will not change the risk and return profile.
3. **100% pay-out or retention:** All earnings are either completely distributed or re-invested entirely immediately.
4. **Constant EPS and DPS:** The earnings and dividends do not change and are assumed to be constant forever.
5. **Life:** The firm has a perpetual life.

Walter’s formula to determine the market price is as follows

$$P=\frac{D+[\frac{r}{K}\left(E-D\right)]}{K}$$

Where P is the market price per share

 D is dividend per share

 k is cost of capital

 E is earning per share

 r is IRR

**Example:** The following information relates to Alpha Corporation. Show the effect of dividend policy on market price of its shares using Walter’s Model.

 Cost of capital 11%

 Earnings per share Br. 10

 ROI may be assumed as follows 15%, 11% and 8%

Show the effect of the dividend policies on the share value of the firm for three different levels of r, taking the dividend pay-out ratios as zero (0%), 25%, 50%, 75% and 100%.

***Solution:*** k 11% EPS Br 10, r 15% DPS=0

$$P=\frac{D+[\frac{r}{K}\left(E-D\right)]}{K}$$

Case I: r>k (r=15%, k=11%)

$$P=\frac{0+[\frac{0.15}{0.11}\left(10-0\right)]}{0.11}= \frac{13.64}{0.11}=123.97$$

$$P=\frac{2.5+[\frac{0.15}{0.11}\left(10-2.5\right)]}{0.11}= \frac{12.73}{0.11}=115.73$$

$$P=\frac{5+[\frac{0.15}{0.11}\left(10-5\right)]}{0.11}= \frac{11.82}{0.11}=107.44$$

$$P=\frac{7.5+[\frac{0.15}{0.11}\left(10-7.5\right)]}{0.11}= \frac{10.91}{0.11}=99.17$$

$$P=\frac{10+[\frac{0.15}{0.11}\left(10-10\right)]}{0.11}= \frac{10}{0.11}=90.91$$

Case II: r=k (r=11%, k=11%)

$$P=\frac{0+[\frac{0.11}{0.11}\left(10-0\right)]}{0.11}= \frac{10}{0.11}=90.91$$

$$P=\frac{2.5+[\frac{0.11}{0.11}\left(10-2.5\right)]}{0.11}= \frac{12.75}{0.11}=90.91$$

$$P=\frac{5+[\frac{0.11}{0.11}\left(10-5\right)]}{0.11}= \frac{10}{0.11}=90.91$$

$$P=\frac{7.5+[\frac{0.11}{0.11}\left(10-7.5\right)]}{0.11}= \frac{10}{0.11}=90.91$$

$$P=\frac{10+[\frac{0.11}{0.11}\left(10-10\right)]}{0.11}= \frac{10}{0.11}=90.91$$

Case III: r<k (r=8%, k=11%)

$$P=\frac{0+[\frac{0.08}{0.11}\left(10-0\right)]}{0.11}= \frac{7.27}{0.11}=66.12$$

$$P=\frac{2.5+[\frac{0.08}{0.11}\left(10-2.5\right)]}{0.11}= \frac{7.96}{0.11}=72.31$$

$$P=\frac{5+[\frac{0.08}{0.11}\left(10-5\right)]}{0.11}= \frac{8.64}{0.11}=78.51$$

$$P=\frac{7.5+[\frac{0.08}{0.11}\left(10-7.5\right)]}{0.11}= \frac{9.32}{0.11}=84.72$$

$$P=\frac{10+[\frac{0.08}{0.11}\left(10-10\right)]}{0.11}= \frac{10}{0.11}=90..91$$

***Interpretation:*** The above workings can be summarized as follows:

1. When r>k, that is in growth firms, the value of shares is inversely related to dividend payout ratio, as the dividend payout ratio increases, market value of shares decline. Market value of share is highest when dividend payout is zero and least when dividend payout is 100%.
2. When r=k, market value of share is constant irrespective of the dividend payout ratio. It is not affected whether the firm retains the profits or distributes them.
3. When r<k, in declining firms, the market price of share increases as the dividend payout increases. There is positive correlation between the two.

**Limitations of the model**

Walter has assumed that investments are exclusively financed by retained earnings and no external financing is used. This model is applicable only to all equity firms. Secondly r is assumed to be constant which again is not a realistic assumption. Finally, k is also assumed to be constant and this ignores the business risk of the firm which has a direct impact on the firm value.

**B. Gordon’s Dividend Capitalization Model**

Gordon also contends that dividends are relevant to the share prices of a firm. Myron Gordon uses the Dividend Capitalization Model to study the effect of the firm’s dividend policy on the stock price.

***Assumptions***

* **All equity firm:** The firm is an all equity firm with no debt.
* **No external financing** is used and only retained earnings are used to finance any expansion schemes.
* **Constant r**
* **Constant cost of capital k**
* **The life of the firm is indefinite**
* **Constant retention ratio:**

Gordon’s model assumes investors are rational and risk averse. They prefer certain returns to uncertain returns and therefore give a premium to the constant returns and discount uncertain returns. The shareholders therefor prefer current dividends to avoid risk. In other words, they discount future dividends. Retained earnings are evaluated by the shareholders as risky and therefore the market price of the shares would be adversely affected. Gordon explains his theory with preference for current income. Investors prefer to pay higher price for stocks which fetch them current dividend income. Gordon’s model can be symbolically expressed as:

$$P=\frac{E\left(1-b\right)}{K-br}$$

Where: P is the price of the share

 E is earning per share

 b is retention ratio

 (1-b) is dividend payout ratio

 K is cost of equity capital

 br is growth rate in the rate of return on investment

**Example:**  Given K as 11%, E is $ 10, calculate the stock value of Mahindra Tech. for (a) r=12%, (b) r=11% and (c) r=10% for various levels of dividend payout ratios given under:

|  |  |  |
| --- | --- | --- |
|  | DP ratio(1-b) | Retention ratio |
| A | 10% | 90% |
| B | 20% | 80% |
| C | 30% | 70% |
| D | 40% | 60% |
| E | 50% | 50% |

**Solution:** Case I r>k (r=12%, k=11%)

$$P=\frac{E\left(1-b\right)}{K-br}$$

1. DP 10%, b 90%

$$P=\frac{10\left(1-0.9\right)}{0.11-(0.9x0.12)} = \frac{1}{0.002}=500$$

1. DP 20%, b 80%

$$P=\frac{10\left(1-0.8\right)}{0.11-(0.8x0.12)} = \frac{2}{0.014}=142.86$$

1. DP 30%, b 70%

$$P=\frac{10\left(1-0.7\right)}{0.11-(0.7x0.12)} = \frac{3}{0.026}=115.38$$

1. DP 40%, b 60%

$$P=\frac{10\left(1-0.6\right)}{0.11-(0.6x0.12)} = \frac{4}{0.038}=105.26$$

1. DP 50%, b 50%

$$P=\frac{10\left(1-0.5\right)}{0.11-(0.5x0.12)} = \frac{5}{0.05}=100$$

Case II r=k (r=11%, k =11%)

1. DP 10%, b 90%

$$P=\frac{10\left(1-0.9\right)}{0.11-(0.9x0.11)} = \frac{1}{0.011}=90.91$$

1. DP 20%, b 80%

$$P=\frac{10\left(1-0.8\right)}{0.11-(0.8x0.11)} = \frac{2}{0.022}=90.91$$

1. DP 30%, b 70%

$$P=\frac{10\left(1-0.7\right)}{0.11-(0.7x0.11)} = \frac{3}{0.033}=90.91$$

1. DP 40%, b 60%

$$P=\frac{10\left(1-0.6\right)}{0.11-(0.6x0.11)} = \frac{4}{0.044}=90.91$$

c) DP 50%, b 50%

$$P=\frac{10\left(1-0.5\right)}{0.11-(0.5x0.11)} = \frac{5}{0.055}=90.91$$

Case III r<k (r=10%, k= 11%)

1. DP 10%, b 90%

$$P=\frac{10\left(1-0.9\right)}{0.11-(0.9x0.10)} = \frac{1}{0.02}=50$$

1. DP 20%, b 805

$$P=\frac{10\left(1-0.8\right)}{0.11-(0.8x0.10)} = \frac{2}{0.03}=66.67$$

1. DP 30%, b 70%

$$P=\frac{10\left(1-0.7\right)}{0.11-(0.7x0.10)} = \frac{3}{0.04}=75$$

1. DP 40%, b 60%

$$P=\frac{10\left(1-0.6\right)}{0.11-(0.6x0.10)} = \frac{4}{0.05}=80$$

1. DP 50%, b 50%

$$P=\frac{10\left(1-0.5\right)}{0.11-(0.5x0.10)} = \frac{5}{0.06}=83.33$$

**Interpretation:** Gordon is of the opinion that dividend decision does have a bearing on the market price of the share.

1. When r>k, the firm’s value decrease with an increase in payout. Market value of share is highest when dividend payout is least and retention highest.
2. When r=k, the market value of share is constant irrespective of the dividend payout ratio. It is not affected whether the firm retains the profits or distributes them.
3. When r<k, market value of share increases with an increase in dividend payout ratio.

**1.5. Establishing a Dividend Policy**

**1. Residual Dividend Policy**

It is a dividend policy under which a firm pays dividends only after meeting its investment needs while maintaining a desired debt–equity ratio. With a residual dividend policy, the firm’s objective is to meet its investment needs and maintain its desired debt debt-equity ratio before paying dividends. Given this objective, firms with many investment opportunities to pay a small percentage of their earnings as dividends and other firms with fewer opportunities to pay a high percentage of their earnings as dividends. In the real world, young, fast growing firms commonly employ a low payout ratio, whereas, older, slower growing firms in more mature industries use higher ratio.

**2. Stable dividend policy**

A strict residual approach might lead to a very ***unstable*** dividend payout. If investment opportunities in one period are quite high, dividends will be low or zero. Conversely, dividends might be high in the next period if investment opportunities are considered less promising. Stable dividend policy is dividends are a constant proportion of earnings over an earning cycle. Cyclical dividend policy is dividends are a constant proportion of earnings at each pay date.

***Advantages of stability of dividends***

* **Build confidence amongst investors:** A stable dividend policy helps to build confidence and remove uncertainty in the minds of investors. A constant dividend policy will not have and fluctuations suggesting to investors that the firm’s future is bright. In contrast, shareholders of a firm having an unstable dividend policy will not be certain about their future in such a firm.
* **Investor’s desire for current income:** A firm has different categories of investors –old and retired persons, pensioners, youngsters, salaried class, housewives, etc. prefer current income. Their living expenses are fairly stable from one period to another. Sharp changes in current income, that is, dividends, may necessitate sale of shares. Stable dividend policy avoids sale of securities and inconvenience to investors.
* **Information about firm’s profitability:** investors use dividend policy as a measure of evaluating the firm’s profitability. Dividend decision is a sign of firm’s prosperity and hence firm should have a stable dividend policy.
* **Institutional investors’ requirement:** Institutional investors like mutual funds prefer to invest in companies which have record of stable dividend policy. A company having erratic dividend policy is not preferred by these institutions. Thus to attract these organizations having large quantities of investible funds, firms allow s stable dividend policy.
* **Ease of raising additional finance:** Shares of a company with stable and regular dividend payments appear as quality investment rather than a speculation. Investors of such companies are known for their loyalty and whenever the firm comes with new issues, they are more responsive and receive. Thus raising additional funds become easy.
* **Stability in market price of shares:** The market price of shares varies with the stability in dividend rates. Such shares will not have wide fluctuation in the market prices which is good for investors.

**3. Compromise Dividend Policy**

In practice, many firms appear to follow what amounts to a compromise dividend policy. Such a policy is based on the following main goals:

* Avoid cutting back on positive NPV projects to pay dividend.
* Avoid the need to sell equity
* Maintain a target debt-equity ratio
* Maintain a target dividend payout ratio.

**1.6. Summary of factors influencing dividend policy**

Factors that affect the dividend policy may be grouped into four categories (1) constraints on dividends payments, (2) investment opportunities, (3) availability and cost of alternative source of capital, and (4) effects of dividend policy on the cost of capital.

1. **Bond indentures (agreements):**  debt contracts often limit dividends payment on earnings generated after the loan was granted.
2. **Preferred stock restrictions:** typically, common dividends cannot be paid if the company has omitted its preferred dividend. The preferred rearranges must be satisfied before common dividends can be resumed.
3. **Impairment of capital rule:** dividend payment cannot exceed the balance sheet item ‘‘retained earnings’’. This legal restriction, known as the impairment of capital rule, is designed to protect creditors. Without the rule, a company that is in trouble might distribute most of its assets to stockholders and leave its debt holders out in the cold.
4. **Availability of cash:** cash dividends can be paid only with cash. Thus, a shortage of cash in the bank can restrict dividend payments; however, the availability to borrow can offset this factor.
5. **Possibility of accelerating or delaying projects:** the ability to accelerate or to postpone projects will permit a firm to adhere more closely to a stable dividend policy.
6. **Cost of selling new stock:**  if a firm needs to finance a given level of investment, it can obtain equity by retaining earnings or by issuing new common stock. If flotation costs are high, that will increase the cost of capital, making it better to set a low payout ratio and to finance trough retention rather than through sale of new common stock. On the other hand, high dividend payout ratio is more feasible for a firm whose flotation costs are low.
7. **Ability to substitute debt for equity:** a firm can finance a given level of investment with either debt or equity. If the firm can adjust its debt ratio without costs sharply, it can pay the expected dividend, even if earnings fluctuate, by using a variable debt ratio.
8. **Control:** if management is concerned about maintaining control, it may be reluctant to sell new stock; hence the company may retain more earnings than it otherwise would. However, if stockholders want higher dividends and a proxy fight looms, then the dividend will be increased.

**1.7. Repurchase of Shares**

When a firm wants to pay cash to its shareholders, it normally pays a cash dividend. Another way is to repurchase its own stock i.e. a firm can pay cash its shareholders by a repurchase of its own stock from the shareholders as an alternative to paying cash dividend.

***Advantages of Stock Repurchase***

* Repurchase announcements are viewed as positive signals by investors.
* Stockholders have a choice when a firm repurchases stocks: they can sell or not sell.
* Dividends are sticky in short-run because reducing them may negatively affect the stock price. Extra cash may then be distributed through stock repurchases.
* The target payout ratio may be achieved with the help of repurchases.

***Disadvantages of Stock Repurchases***

* Stockholders may not be indifferent between dividends and capital gains.
* The selling stockholders may not be fully aware of all the implications of repurchase.
* The corporation may pay too much for repurchase stocks.

**1.8. Stock Split and Reverse Stock Split**

A stock split is a method to increase the number of outstanding shares by proportionately reducing the face value of a share. A stock split affects only the par value and does not have any effect on the total amount outstanding in share capital. The reasons for splitting shares are:

* **To make shares attractive:** the prime reason for affecting a stock split is to reduce the market price of a share to make it more attractive to investors. Shares of some companies enter into higher trading zone making it out of reach to small investors. Splitting the shares will place them in more popular trading range thus providing marketability and motivating small investors to buy them.
* **Indication of higher future profits:** Share split is generally considered as a method of management communication to investors that the company is expecting high profits in future.
* **Higher dividend to shareholders:** when shares are split, the company does not resort to reducing the cash dividends. If the company follows a system of stable dividend per share, the investors would surely get higher dividends with stock split.

There is also **Reverse Stock Split.** Imagine holding Br. 100 of stock; comprised of 10 shares worth Br. 10 each. Assume that the firm issues a 1 for 10 reverse stock split. You now hold one share of stock that worth Br. 100. There is no wealth effect on the corporation. In reality, the stock price usually decreases when a reverse split is announced. It is often interpreted as a sign of management pessimism about the future; since a reverse split is the exact opposite of the conventional stock split that was discussed above (managers don’t feel that any future good news will increase the stock price).