DIVIDEND POLICY

Introduction

The important aspect of dividend policy is to determine the amount of earnings to be distributed to shareholders and the amount to be retained in the firm. Retained earnings are the most significant internal sources of financing the growth of the firm. On the other hand, dividends may be considered desirable from the shareholders' point of view as they tend to increase their current return. Dividends, however, constitute the use of the firm's funds. Dividend policy involves the balancing of the shareholders' desire for current dividends and the firms' needs for funds for growth.

Meaning of Dividend Policy:

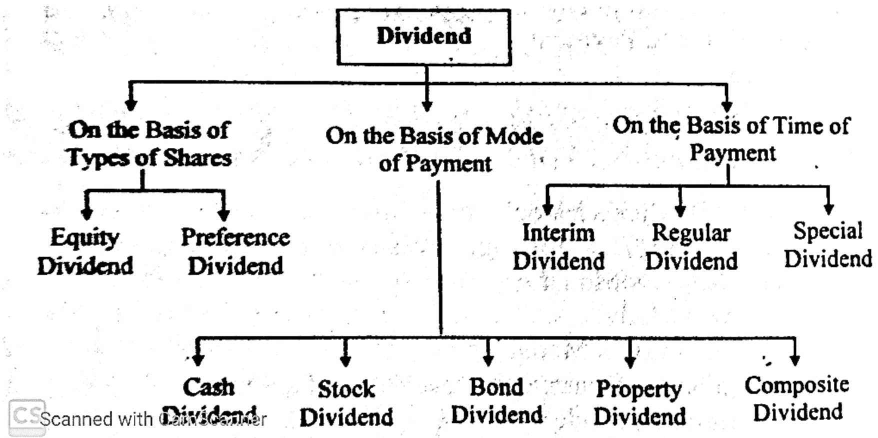
According to Weston and Brigham, "Dividend policy determines the division of earnings between payments to shareholders and retained earnings"

Objective of dividend policy

A firms' dividend policy has the effect of dividing its net earnings into two parts: retained earnings and dividends. The retained earnings provide funds to finance the firm's long – term growth. It is the most significant source of financing a firm's investment in practice. Dividends are paid in cash. Thus, the distribution of earnings uses the available cash of the firm. A firm which intends to pay dividends and also needs funds to finance its investment opportunities will have to use external sources of financing, such as the issue of debt or equity.

6.1 TYPES OF DIVIDENDS:

Dividends can be classified in various form. Dividends paid in ordinary course of business are known as Profit dividends, while dividends paid out of capital are known as Liquidation dividends, Dividends may also be classified based on medium in which they are paid.



Dividends classification based on medium is discussed here.

6.1.1 Cash Dividends

Cash dividend is, by far, the most important form of dividend. In cash dividends stockholders receive cheques for the amounts due to them. Cash generated by business earnings is used to pay cash dividends. Sometimes the firm may issue additional stock to use proceeds so derived to pay cash dividends or approach bank for the purpose. Generally, stockholders have strong preference for cash dividends.

6.1.2 Stock Dividends

Stock dividends rank next to cash dividends in respect of their popularity. In this form of dividends, the firm issues additional shares of its own stock to the stockholders in proportion to the number of shares held in lieu of cash dividends. The payment of stock dividends neither affects cash and earnings position of the firm nor is ownership of stockholders changed. Indeed there will be transfer of the amount of dividend from surplus account to the capital stock account which amount to capitalization of retained earnings. The net effect of this would be an increase in number of shares of the current stockholders. But there will be no change in their equity. With payment of stock dividends, the stockholders have simply more shares of stock to represent the same interest as it was before issuing stock dividends. Thus, there will be merely an adjustment in the firm's capital structure in terms of both book value and market price of the common stock.

6.1.2.1 Stock Splits

Closely related to a stock dividend is a stock split. From a purely economic point of view a stock split is nothing but a giant stock dividend. A stock split is a change in the number of outstanding shares of stock achieved through a proportional reduction of increase in the par value of the stock. The management employs this device to make a major adjustment in the market price of the firm's stock and consequently in its earnings and dividends per share. In stock split only the par value and number of outstanding shares are affected. The amounts in the common stock, premium and retained earnings remain unchanged.

6.1.3 Scrip Dividend

Scrip dividend means payment of dividend in scrip of promissory notes. Sometimes company needs cash generated by business earnings to meet business requirements because of temporary shortage of cash. In such cases the company may issue scrip or notes promising to pay dividend at a future date. The scrip usually bears a definite date of maturity or sometimes maturity date is not stipulated, and its payment is left to the discretion of the Board of Directors. Scrips may be interest-bearing or non-interest bearing. Such dividends are relatively scarce.

6.1.3.1. Bond Dividend

As in scrip dividends, dividends are not paid immediately in bond dividends. Instead the company promises to pay dividends at a future date and to that effect bonds are issued to stock holders in place of cash. The purpose of both the bond and scrip dividends is alike, i.e., postponement of dividend payments. Difference between the two is in respect of the date of payment and their effect are the same. Both result in lessening of surplus and addition to the liability of the firm. The only difference between bond and scrip dividends is that the former carries longer maturity than the latter. Bond dividends are not popular in India.

6.1.4 Property Dividend:

In property dividend the company pays dividends in the form of assets other than cash. Generally, assets which are superfluous for the company are distributed as dividends to the stockholders. Sometimes the company may use its products to pay dividends. Securities of the subsidiary companies owned by the company may also take the form of property dividends. This kind of dividend payment is not in vogue in India.

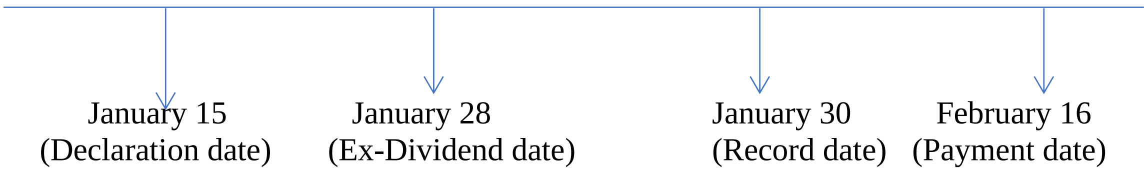
6.1.5 Composite Dividend:

When dividend is paid partly in the form of cash and partly in other form, it is called as composite dividend. It is only combination of earlier method.

6.2 Standard Method of Cash Dividend Payment

The decision to pay a dividend rests in the hands of the board of directors of the corporation. When a dividend has been declared, it becomes a debt of the firm and cannot be rescinded easily. Sometime after it has been declared, a dividend is distributed to all shareholders as of some specific date. Commonly, the amount of the cash dividend is expressed in terms of dollars per share (dividends per share). As we have seen in other chapters, it is also expressed as a percentage of the market price (the dividend yield) or as a percentage of net income or earnings per share (the dividend payout).

<u>Example of procedure for dividend payment</u>



6.3 Establishing Dividend policies and Decisions

How do firms determine the level of dividends they will pay at a particular time? As we have seen, there are good reasons for firms to pay **high** dividends and there are good reasons to pay **low** dividends. There are three approaches for establishing dividend policy, such as residual dividend approach, dividend stability and a compromise dividend policy.

6.3.1 Residual Dividend Approach

- Firms with higher dividend payouts will have to sell stock more often. Such sales are not very common, and they can be very expensive.
- Consistent with this, we will assume that the firm wishes to minimize the need to sell new equity. We will also assume that the firm wishes to maintain its current capital structure.
- If a firm wishes to avoid new equity sales, then it will have to rely on internally generated equity to finance new positive NPV projects. Dividends can only be paid out of what is left over. This leftover is called the *residual,* and such a dividend policy is called a **residual dividend approach**.
- With a residual dividend policy, the firm's objective is to meet its investment needs and maintain its desired debt-equity ratio before paying dividends.

Illustrate, imagine that a firm has $1,000 in earnings and a debt-equity ratio of 0.50. Notice that, because the debt-equity ratio is 0.50, the firm has 50 cents in debt for every $1.50 in total value. The firm's capital structure is thus debt and equity.

The first step in implementing a residual dividend policy is to determine the amount of funds that can be generated without selling new equity. If the firm reinvests the entire $1,000 and pays no dividend, then equity will increase by $1,000. To keep the debt-equity ratio of 0.50, the firm must borrow an additional $500. The total amount of funds that can be generated without selling new equity is thus $1,000 + 500 = $1,500.

The second step is to decide whether or not a dividend will be paid. To do this, we compare the total amount that can be generated without selling new equity ($1,500 in this case) to planned capital spending.

- If funds needed exceed funds available, then no dividend will be paid. In addition, the firm will have to sell new equity to raise the needed financing or else postpone some planned capital spending.
- If funds needed are less than funds generated, then a dividend will be paid. The amount of the dividend will be the residual, that is, that portion of the earnings that is not needed to finance new projects.

For example,

Suppose we have \$900 in planning capital spending. To maintain the firm's capital structure, this \$900 must be financed by 2⁄3 equity and 1⁄3debt. So, the firm will actually borrow 1⁄3 X \$900 = \$300. The firm will spend 2⁄3 X \$900 = \$600 of the \$1,000 in equity available. There is a \$1,000 - 600 = \$400 residual, so the dividend will be \$400.

In sum, the firm has after tax earnings of \$1,000. Dividends paid are \$400. Retained earnings are \$600, and new borrowing totals \$300. The firm's debt-equity ratio is unchanged at 0.50.

6.3.2 Stability of Dividend

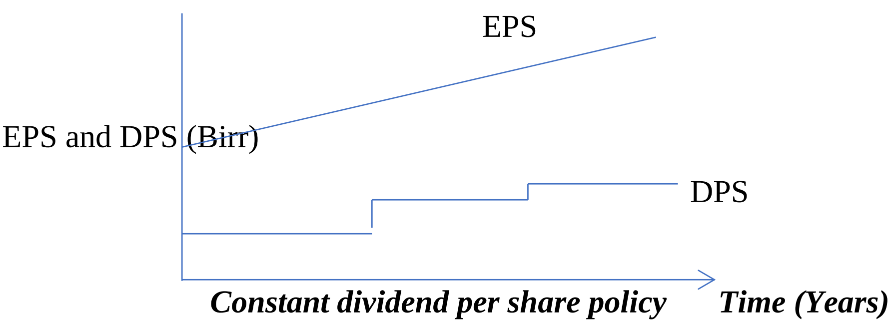
It is considered a desirable policy by the management of most companies in practices. Many surveys have shown that shareholders also seem generally to favor this policy and value stable dividends higher than the fluctuating ones. All other things being the same, ***the stable dividend policy may have a positive impact on the market price of the share.***

It is also meant regularity in paying some dividend annually, even though the amount of the dividend may fluctuate over the years and may not relate to earnings. There are a number of companies, which have records of paying dividend for a long, unbroken period. More precisely, ***stability of dividend refers to the amounts paid out regularly.*** Three forms of such stability may be distinguished:

a) Constant dividend per share or dividend rate
b) Constant pay out.
c) Constant dividend per share plus extra dividend.

a) Constant dividend per share or dividend rate

The companies announce dividend as per cent of the paid-up capital per share. A company follows the policy of paying a fixed rate on paid-up capital as dividend every year, irrespective of fluctuations in the earnings. This policy does not imply that the dividend per share or dividend rate will never be increased. When the company reaches new levels of earnings and expects to maintain them, the annual dividend per share may be increased. The relationship between earnings per shares and the dividend per share under this policy is shown below figure



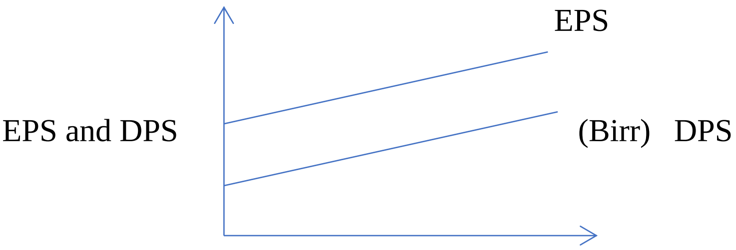
Constant dividend per share policy

A constant dividend per share policy puts ordinary shareholders at par with preferred shareholders irrespective of the firm's investment opportunities or the preference shareholders. Those investors who have dividends as they only sources of their income may prefer the constant dividend policy. They do not accord much importance to the changes in share prices. In the long run, this may help to stabilize the market price of the share.

b) Constant Payout

The ratio of dividend to earnings is known as payout ratio. Some companies may follow a policy of constant payout ratio ie., paying a fixed percentage of net earnings every year. With this policy of the amount of the dividend will fluctuate in direct proportion to earnings. If a company adopts a 40 percent payout ratio, then 40 percent of every Birr of net earnings will be paid out.

For example, if the company earns, 2 Birr per share, the dividend per share will be 0.80 Birr and if it earns 1.5 Birr per share the dividend per share will be 0.60 Birr. The relation between the earnings per share and the dividend per share under the policy is exhibited in the below figure.



Dividend policy of constant payout ratio

This policy is related to a company's ability to pay dividends. If the company incurs losses, no dividend shall be paid regardless of the desires of shareholders. Internal financing with retained earnings is automatic when this policy is followed. At any given payout ratio, the number of dividends and the additions to retained earnings increase with increasing earnings and decrease with decrease earnings. This policy does not put any pressure on a company's liquidity since dividends are distributed only when the company has profited.

c) Constant dividend per share plus Extra dividend

The smallest amount of dividend per share is fixed to reduce the possibility of every missing a dividend payment. By paying extra dividend in periods of prosperity, an attempt is made to prevent investors from expecting that the dividend represents an increase in the established dividend amount. This type of policy enables a company to pay a constant amount of dividend regularly without a default and allows a great deal of flexibility for supplementing the income of shareholders only when the company earnings are higher than the usual, without committing itself to make a larger payments as part of the future fixed dividend.

6.3.3 A Compromise Dividend Policy

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

1. Avoid cutting back on positive NPV projects to pay a dividend.
2. Avoid dividend cuts.
3. Avoid the need to sell equity.
4. Maintain a target debt-equity ratio.
5. Maintain a target dividend payout ratio.

These goals are ranked more or less in order of their importance. In our strict residual approach, we assume that the firm maintains a fixed debt-equity ratio. Under the compromise approach, the debt-equity ratio is viewed as a long-range goal. It is allowed to vary in the short run if necessary, to avoid a dividend cut or the need to sell new equity.

In addition to having a strong reluctance to cut dividends, financial managers tend to think of dividend payments in terms of a proportion of income, and they also tend to think investors are entitled to a "fair" share of corporate income. This share is the long-run **target payout ratio**, and it is the fraction of the earnings the firm expects to pay as dividends under ordinary circumstances. Again, this ratio is viewed as a long-range goal, so it might vary in the short run if this is necessary. As a result, in the long run, earnings growth is followed by dividend increases, but only with a lag.

6.4 FACTORS AFFECTING DIVIDEND POLICY:

There is a controversy amongst financial analysts regarding impact of dividends on market price of a company's shares. Some argue that dividends do not have any impact on such price while others hold a different opinion. However, preponderance of evidence suggests that dividend policies do have a significant effect on the value of the firm's equity shares in the stock exchange. Having accepted this premise, it will now be appropriate to consider those factors which affect the dividend policy of a firm. The factors affecting the dividend policy are both external as well as internal.

6.4.1 External factors:

1.General state of economy - The general state of economy affects to a great extent the management's decision to retain or distribute earnings of the firm. In case of uncertain economic and business conditions, the management may like to retain the whole or a part of the firm's earnings to build up reserves to absorb shocks in the future. Similarly, in periods of depression, the management may also withhold-dividends payment to retain a large part of its earnings to preserve the firm's liquidity position. In periods of prosperity the management may not be liberal in dividend payments though the earning power of a company warrants it because of availability of larger profitable investment opportunities similarly in periods of inflation, the management may withhold dividend payments in order to retain larger proportion of the earnings for replacement of worn-out assets.

2. **Legal restrictions** - A firm may also be legally restricted from declaring and paying dividends. For example, in India, the companies Act, 1956 has put several restrictions regarding payments and declaration of dividends. Some of these restrictions are as follows:

(i) Dividends can only be paid out of (a) the current profits of the company, (b) the past accumulated profits or (c) money provided by the Central or State Governments for the payment of dividends in pursuance of the guarantee given by the Government. Payment of dividend out of capital is illegal.

(ii) A company is not entitled to pay dividends unless (a) it has provided for present as well as all arrears of depreciation, (b) a certain percentage of net profits of that year as prescribed by the central Government not exceeding 10%, has been transferred to the reserves of the company.

(iii) Past accumulated profits can be used for declaration of dividends only as per the rules framed by the Central Government in this behalf.

Similarly, the Indian Income Tax Act also lays down certain restrictions on payment of dividends. The management has to take into consideration all the legal restrictions before taking the dividend decision otherwise it may be declared as ultra vires.

6.4.2 Internal factors

The following are the internal factors which affect the dividend policy of a firm:

1.Desire of the shareholders - Of course, the directors have considerable liberty regarding the disposal of the firm's earnings, but the shareholders are technically the owners of the company and, therefore, their desire cannot be overlooked by the directors while deciding about the dividend policy.

Shareholders of a firm expect two forms of return from their investment in a firm:

(i) Capital gains - The shareholders expect an increase in the market value of the equity shares held by them over a period of time. Capital gain refers to the profit resulting from the sale of capital investment i.e., the equity shares in case of shareholders. For example, if a shareholder purchases a share for 40 and later on sells it for 60 the amount of capital gain is a sum of 20.

(ii) Dividends - The shareholders also expect a regular return on their investment from the firm. In most cases the shareholders' desire to get dividends takes priority over the desire to earn capital gains because of the following reasons:

(a) Reduction of uncertainty - Capital gains or a future distribution of earnings involves more uncertainty than a distribution of current earnings.

(b) Indication of strength - The declaration and payment of cash dividend carries an information content that the firm is reasonably strong and healthy.

(c) Need for current income - Many shareholders require income from the investment to pay for their current living expenses. Such shareholders are generally reluctant to sell their shares to earn capital gain.

2. Financial needs of the company - The financial needs of the company are to be considered by the management while taking the dividend decision. Of course, the financial needs of the company may be in direct conflict with the desire of the shareholders to receive large dividends. However, a prudent management should give more weightage to the financial needs of the company rather than the desire of the shareholders. In order to maximize the shareholders' wealth, it is advisable to retain earnings in the business only when company has better profitable investment opportunities as compared to the shareholders. However, the directors must retain some earnings, whether profitable investment opportunity exists, to maintain the company as a sound and solvent enterprise.

3. Desire of control - Dividend policy is also influenced by the desire of shareholders or the management to retain control over the company. The issue of additional equity shares for procuring funds dilutes control to the detriment of the existing equity shareholders who have a dominating voice in the company. At the same time, recourse to long-term loans may entail financial risks and may prove disastrous to the interests of the shareholders in times of financial difficulties.

In case of a strong desire for control, the management may be reluctant to pay substantial dividends and prefer a smaller dividend pay-out ratio. This is particularly true in case of companies which need funds for financing profitable investment opportunities and an outside group is seeking to gain control over the company.

However, where the management is strongly in control of the company either because of substantial shareholdings or because of the shares being widely held, the firm can afford to have a high dividend pay-out ratio.

4. Liquidity position - The payment of dividends results in cash outflow from the firm. A firm may have adequate earnings, but it may not have sufficient cash to pay dividends. It is, therefore, important for the management to take into account the cash position and the overall liquidity position of the firm before and after payment of dividends while taking the dividend decision. A firm may not, therefore, be in a position to pay dividends in cash or at a higher rate because of insufficient cash resources. Such a problem is generally faced by growing firms which need constant funds for financing their expansion activities.

6.5. TYPES OF DIVIDEND POLICY:

The various types of dividend policies are discussed as follows:

1. Regular Dividend Policy

Payment of dividend at the usual rate is termed as regular dividend. The investors such as retired persons, widows and other economically weaker persons prefer to get regular dividends. A regular dividend policy offers the following advantages.

a. It establishes a profitable record of the company.

b. It creates confidence amongst the shareholders.

c. It aids in long-term financing and renders financing easier.

d. It stabilizes the market value of shares.

e. The ordinary shareholders view dividends as a source of funds to meet their day-today living expenses.

f. If profits are not distributed regularly and are retained, the shareholders may have to pay a higher rate of tax in the year when accumulated profits are distributed.

However, it must be remembered that regular dividends can be maintained only by companies of long standing and stable earnings. A company should establish the regular dividend at a lower rate as compared to the average earnings of the company.

2. Stable Dividend Policy

The term ‘stability of dividends’ means consistency or lack of variability in the stream of dividend payments. In more precise terms, it means payment of certain minimum amount of dividend regularly. A stable dividend policy may be established in any of the following three forms.

Constant dividend per share: Some companies follow a policy of paying fixed dividend per share irrespective of the level of earnings year after year. Such firms, usually, create a ‘Reserve for Dividend Equalisation’ to enable them to pay the fixed dividend even in the year when the earnings are not sufficient or when there are losses. A policy of constant dividend per share is most suitable to concerns whose earnings are expected to remain stable over a number of years.

3. Irregular Dividend Policy

Some companies follow irregular dividend payments on account of the following:

a. Uncertainty of earnings.

b. Unsuccessful business operations.

c. Lack of liquid resources.

d. Fear of adverse effects of regular dividends on the financial standing of the company.

4. No Dividend Policy

A company may follow a policy of paying no dividends presently because of its unfavourable working capital position or on account of requirements of funds for future expansion and growth.

5. Residual Dividend Policy

When new equity is raised floatation, costs are involved. This makes new equity costlier than retained earnings. Under the Residual approach, dividends are paid out of profits after making provision for money required to meet upcoming capital expenditure commitments.

6.6 Dividend Theories and Behavior

6.6.1 Irrelevance of Dividend

MM Approach

6.6.2 Relevance of Dividend

Walter's Model

Gordon's Model

6.6.1 Irrelevance of Dividend

The dividend policy has no effect on the share price of the company. There is no relation between the dividend rate and value of the firm. Dividend decision is irrelevant of the value of the firm. Modigliani and Miller contributed a major approach to prove the irrelevance dividend concept.

Modigliani and Miller's Approach

According to MM, under a perfect market condition, the dividend policy of the company is irrelevant, and it does not affect the value of the firm. "Under conditions of perfect markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of shares".

Assumptions

MM approach is based on the following important assumptions:

- Perfect capital market.
- Investors are rational.
- There is no tax.
- The firm has a fixed investment policy.
- No risk or uncertainty.

Proof for MM approach

The MM approach can be proved with the help of the following formula:

$$P_o = D_1 + P_1 / (1 + K_e)$$

Where,

P_o = Prevailing market price of a share; K_e = Cost of equity capital.

D_1 = Dividend to be received at the end of period one.

P_1 = Market price of the share at the end of period one.

P_1 can be calculated with the help of the following formula.

$$P_1 = P_o (1+K_e) – D_1$$

The number of new shares to be issued can be determined by the following formula:

$$M \times P_1 = I – (X – nD_1)$$

Further, the value of the firm can be ascertained with the help of the following formula:

$$n P_o = [(n + M) P_1 - (I - X)] / (1+ K_e)$$

Where,

M = Number of new shares to be issued.

P_1 = Price at which new issue is to be made.

I = Amount of investment required.

X = Total net profit of the firm during the period.

D_1= Dividend to be paid at the end of the period.

n = No. of shares outstanding at the beginning of the period.

nPo =Value of the firm

Exercise 1

X Company Ltd. has 100,000 shares outstanding the current market price of the shares Birr. 15 each. The company expects the net profit of Birr. 200,000 during the year and it belongs to a rich class for which the appropriate capitalization rate has been estimated to be 20%. The company is considering dividend of Birr. 2.50 per share for the current year. What will be the price of the share at the end of the year (i) if the dividend is paid and (ii) if the dividend is not paid.

Solution

$$P_o = D_1 + P_1 / (1 + K_e)$$

(i) If the dividend is paid

P_o = Birr.15; K_e = 20%; D_1 = Birr. 2.50; P_1 =?

$15 = 2.50 + P1 / 1 + 20\%$

$15 = 2.50 + P1 / 1.2$

$2.50 + P_1 = 15 \times 1.2$

$P_1 = 18 – 2.50$ P1 = Birr. 15.50

(ii) If the dividend is not paid

P_o = 15; K_e = 20%; D_1 = 0; P_1 = ?

$15 = 0 + P1 / 1 + 20\%$

$15 = 0 + P1 / 1.2$

$0 + P_1 = 15 \times 1.2$

P_1 = Birr.18

Criticism of MM approach

- The MM approach consists of certain criticisms also. The following are the major criticisms of MM approach.
- The MM approach assumes that tax does not exist. It is not applicable in the practical life of the firm.
- The MM approach assumes that, there is no risk and uncertain of the investment. It is also not applicable in present day business life.
- The MM approach does not consider floatation cost and transaction cost. It leads to affect the value of the firm.
- The MM approach considers only single decrement rate, it does not exist in real practice.
- The MM approach assumes that, investor behaves rationally. But we cannot give assurance that all the investors will behave rationally.

6.6.2. RELEVANCE OF DIVIDEND

According to this concept, dividend policy is considered to affect the value of the firm. Dividend relevance implies that shareholders prefer current dividend and there is no direct relationship between dividend policy and the value of the firm. Relevance of dividend concept is supported by two eminent persons like Walter and Gordon.

i) Walter’s Model

Prof. James E. Walter argues that the dividend policy almost always affects the value of the firm. Walter model is based on the relationship between the following important factors:

- Rate of return I
- Cost of capital (k)

According to the Walter's model, if r > k, the firm is able to earn more than what the shareholders could by reinvesting, if the earnings are paid to them. The implication of r > k is that the shareholders can earn a higher return by investing elsewhere. If the firm has r = k, it is a matter of indifference whether earnings are retained or distributed.

Assumptions

Walters model is based on the following important assumptions:

- The firm uses only internal finance.
- The firm does not use debt or equity finance.
- The firm has constant return and cost of capital.
- The firm has 100 recent payout.
- The firm has constant EPS and DPS.
- The firm has a very long life.

Walter has evolved a mathematical formula for determining the value of market share.

$$\mathbf{P = (D + (r / K_e)\ (E-D)) / K_e}$$

OR

$$\mathbf{P = D/Ke + (r(E-D)/Ke)/Ke}$$

Where,

P = Market price of an equity share; D = Dividend per share; r = Internal rate of return

E = Earnings per share; K_e = Cost of equity capital

Exercise 2

From the following information supplied to you, ascertain whether the firm is following an optional dividend policy as per Walter's Model?

Total Earnings Birr. 2,00,000

No. of equity shares (of Birr. 100 each 20,000)

Dividend paid Birr. 1,00,000

P/E Ratio 10

Return Investment 15%

The firm is expected to maintain its rate of return on fresh investments. Also find out what should be the E/P ratio at which the dividend policy will have no effect on the value of the share? Will your decision change if the P/E ratio is 7.25 and interest of 10%?

Solution

EPS = Earnings / No.of shares

= 200,000 / 20,000= Birr 10.

PE ratio = 10

K_e = 1 / PE ratio = 1 / 10= 0.10

DPS = Total dividend paid / no of shares

= 100,000 / 20,000 **= Birr 5.**

The value of the share as per Walter's Model is

P = (D + (r /K_e) (E-D)) / K_e

= (5 + 0.15 / 0.10 (10 – 5)) / 0.10

= 5 + 7.5 / 0.10 **= Birr 12.5**

Dividend payout = DPS / EPS x 100

= 5 / 10 x 100 **= 60%**

r > K_e therefore by distributing 60% of earnings, the firm is not following an optional dividend policy. In this case, the optional dividend policy for the firm would be to pay a zero dividend and the Market Price would be:

P = (5 + 0.15 / 0.10 (10 – 0)) / 0.10

= (5 + 15) / 0.10

P = Birr. 200

So, the MP of the share can be increased by following a zero payout, of the P/E is 7.25 instead of 10 then the Ke =1=0.138 and in this case K_e > r and the MP of the share is 7.25.

P = (5 + 0.15 / 0.138 (10 – 5)) / 0.138

= 5 + 5.435 / 0.138

P = Birr 75.62

Criticism of Walter's Model

The following are some of the important criticisms against Walter model:

- Walter model assumes that there is no extracted finance used by the firm. It is not practically applicable.
- There is no possibility of constant return. Return may increase or decrease, depending upon the business situation. Hence, it is applicable.
- According to Walter model, it is based on constant cost of capital. But it is not applicable in the real life of the business.

ii) Gordon's Model

Myron Gordon suggests one of the popular models which assume that dividend policy of a firm affects its value, and it is based on the following important assumptions:

- The firm is an all equity firm.
- The firm has no external finance.
- Cost of capital and return are constant.
- The firm has perpetual life.
- There are no taxes.
- Constant relation ratio (g = br).
- Cost of capital is greater than the growth rate ($K_e > br$).

Gordon's model can be proved with the help of the following formula:

$$\mathbf{P = E\,(1 - b) / (K_e - br)}$$

Where,

P = Price of a share; E = Earnings per share

1 – b = D/p ratio (i.e., percentage of earnings distributed as dividends)

K_e = Capitalization rate; br = Growth rate = rate of return on investment of an all equity firm.

Exercise 3

ABC company earns a rate of 12% of its total investment of Birr. 600,000 in assets. It has 600,000 outstanding common shares at Birr. 10 per share. The discount rate of the firm is 10% and it has a policy of retaining 40% of the earnings. Determine the price of its share using Gordon's Model. What shall happen to the price of the share if the company has a payout of 60% (or) 20%?

Solution

According to Gordon's Model, the price of a share is

$$\mathbf{P = E\,(1 - b) / (K_e - br)}$$

Given: E = 12% of Birr. 10 = Birr. 1.20

r = 12% = 0.12

K = 10% = 0.10

t = 10% = 0.10

b = 40% = 0.40

Put the values into the formula

$$P = 1.20\,(1 - 0.40) / 10 - (0.40 \times 0.12)$$

$$= 1.20 \times (0.60) / 0.10 - 0.048$$

= 0.72 / 0.052

= Birr. 13.85

If the firm follows a policy of 60% payout then b = 20% = 0.20

The price is P = 1.20 (1 x 0.20) / 0.1 – (0.20 x 0.12)

= 0.05

r = 4% = 0.04; D =25% of 10 = 2.50

= 2.50 + (0.04 / 0.12 (10 – 2.50)) / 0.12

= 5 / 0.12

= Birr. 41.67

If the payout ratio is 50%, D = 50% of 10 = Birr. 5

r = 12% = 0.12; D = 50% of 10 = Birr. 5

= 5 + (0.12 / 0.12 (10 – 5)) / 0.12

= 5 + 5 / 0.12 = 10 / 0.12

= Birr. 83.33

r = 8% = 0.08; D = 50% of 10 = 5

= 5 + (0.08 / 0.12 (10 – 5)) / 0.12

= 5 + 3.33 / 0.12 = 8.33 / 0.12

= Birr. 69.42

r = 4% = 0.04; D = 50% of 10 = 5

= 5 + (0.04 /0.12 (10 – 5)) / 0.12

= 5 + 1.67 / 0.12 = 6.67 / 0.12

= Birr. 55.58

Criticism of Gordon's Model

Gordon's model consists of the following important criticisms:

- Gordon model assumes that there is no debt and equity finance used by the firm. It is not applicable to present day business.
- K_e and r cannot be constant in the real practice.
- According to Gordon's model, there is no tax paid by the firm. It is not practically applicable.