Dividend Decisions

Lesson 16

KEY CONCEPTS

■ Walter's Model ■ Gordon's Model ■ M.M. Approach

Learning Objectives

To understand:

- Dividend Policy
- Types of the Dividend Policies
- Determinants of Dividend Policy
- Dividend Relevance- Walter's Model, Gordon's Model
- Dividend Growth Model
- Dividend Irrelevance- Modigliani
- Stock Splits
- Share Repurchase

Lesson Outline

- Introduction
- Type/ Forms of Dividend
- Types of Dividend Policies
- Stock Splits
- Share Repurchase
- Determinants and Constraints of Dividend Policy
- Different Dividend Theories – (a) Walter's Model (b) Gordon's Model (c) Modigliani-Miller Hypothesis of Dividend Irrelevance Policy
- Case studies
- Lesson Round-Up
- Glossary
- Test Yourself
- List of Further Readings

INTRODUCTION

Meaning of Dividend

The term dividend refers to that part of profits of a company which is distributed by the company among its shareholders. It is the reward of the shareholders for investments made by them in the shares of the company.

In other words, it is the return that a shareholder gets from the company out of profit on his shareholding.

According to the Institute of Chartered Accountant of India, "A dividend is a distribution to shareholders out of profit or reserves available for this purpose."

DIVIDEND POLICY

The term dividend policy refers to the policy concerning quantum of profit to be distributed as dividend. The concept of dividend policies implies that companies through their Board of Directors evolve a pattern of dividend payment which has a bearing on future action.

> "Dividend policy determines the division of earnings between payments to shareholders and retained earnings."
>
> ***-Weston and Brigham***

The dividend decision is not an easy task for the managers as dividend constitutes the cash flow that accrues to equity holders where as retained earnings are one of the most significant sources of funds for financing the corporate growth. Both dividend and growth are desirable but are conflicting goals to each other. Higher dividend means less retained earnings and vice versa.

The formulation of the dividend policy poses many problems. On the one hand theory would seem to dictate that the firm should retain all funds which can be employed at a higher rate than the capitalization rate; on the other hand, stock-holders preference must be considered.

KINDS (FORMS) OF DIVIDEND

Dividends can be classified in various forms. Dividends paid in the 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 on the basis of medium in which they are paid:

A company may pay dividend in different forms which are shown in following figures as follows:

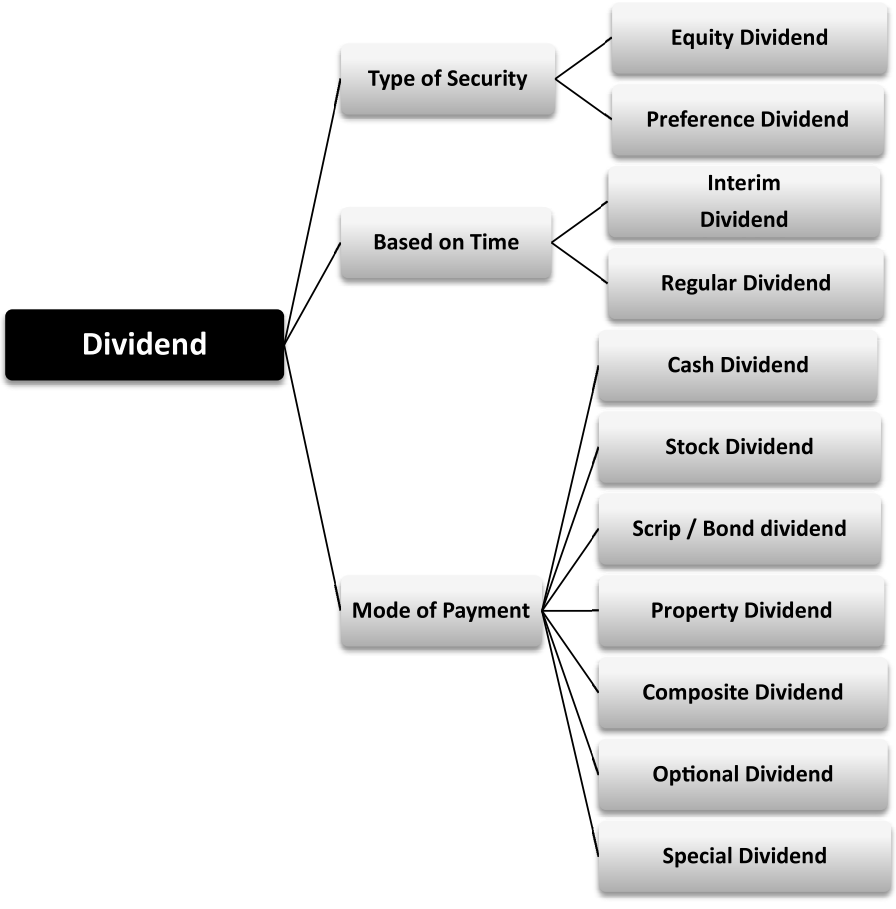


Fig.- 1 Different forms of Dividend

1) Equity Dividend:

The dividend paid on equity shares is called Equity Dividend. The rate of equity dividend is set (recommended) by the board of directors of a business firm and approved by their shareholders.

2) Preference Dividend:

Preference dividend is paid on Preference Shares. At the time of issue of such shares, the rate of dividend is mentioned which remains fixed in nature. This dividend on preference shares is paid before equity dividend. The board of directors of a business firm does not put any recommendation towards preference dividend viz. rate, payment mode etc.

3) Interim Dividend:

Interim dividend is paid by a company for the current year before the accounts for that period have been closed. Such dividend is paid when the company has heavy earning during the year.

4) Regular Dividend:

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

5) Cash Dividend:

A cash dividend is a usual method of paying dividends. Payment of dividend in cash results in outflow of funds

and reduces the company's net worth, though the shareholders get an opportunity to invest the cash in any manner they desire. This is why the ordinary shareholders prefer to receive dividends in cash. But the firm must have adequate liquid resources at its disposal or provide for such resources so that its liquidity position is not adversely affected on account of cash dividends.

6) Stock Dividend:

Stock dividend means the issue of bonus shares to the existing shareholders. If a company does not have liquid resources it is better to declare stock dividend. Stock dividend amounts to capitalization of earnings and distribution of profits among the existing shareholders without affecting the cash position of the firm.

7) Scrip or Bond Dividend:

A scrip dividend promises to pay the shareholders at a future specific date. In case a company does not have sufficient funds to pay dividends in cash, it may issue notes or bonds for amounts due to the shareholders. The objective of scrip dividend is to postpone the immediate payment of cash. A scrip dividend bears interest and is accepted as a collateral security.

8) Property Dividend:

Property dividends are paid in the form of some assets other than cash. They are distributed under exceptional circumstances and are not popular in India.

9) Composite Dividend:

When dividend is paid partly in cash and partly in the form of property then it is known as composite dividend.

10) Optional Dividend:

Instead of paying composite dividend, if the company gives option to its shareholders either for cash dividend or for property dividend then it is called option dividend.

11) Extra or Special Dividend:

Special dividend is an abnormal and non-recurring form of dividend, when the management of company does not want to make frequent changes in the regular rate of dividend but company is having good amount of profits or undistributed reserves then they can declare extra or special dividend.

STOCK SPLITS

A stock split is a decision by a company's board of directors to increase the number of shares outstanding by issuing more shares to current shareholders. For example, in a 2-for-1 stock split, a shareholder receives an additional share for each share held. So, if a company had 10 million shares outstanding before the split, it will have 20 million shares outstanding after a 2-for-1 split. Generally a company announces a stock split when the price of the shares has risen to the point that it might be unappealing to investors who are more comfortable with lower-priced securities.

For investors, it can be pretty exciting to hear that a stock you own is about to be split, because a share price that is too high is a good problem to have and one that's typically confronted by successful and growing companies. While a split doesn't actually make your investment any more valuable in and of itself, a lower share price and the resulting increase in trading liquidity can certainly attract additional investors.

Stock Split Example

Suppose, a company has 2000 stocks each stock is worth 20 rupees. Now, if the company wants to increase the number of stocks, then it will split them. This means that the total number of stocks increases but there will be no impact on the cost of these stocks. Suppose, the company has split it in the ratio of 2:1, then:

Earlier, 1 stock = 20 rupees

After a 2:1 split,

1 stock= 10 rupees (per share price/number of parts in which split has occurred i.e. 20/2 here)

This means that the number of stocks will now be 4,000 but the total cost of stocks remains at 40,000.

Reason Behind Stocks Split

The following reasons facilitate this split:

1. One of the basic reasons behind the stock split is the inability of investors to afford the share. Once the share prices hit a specific high price, companies decide to go for a stock split since it will allow more investors to own stocks at a lower price.
2. Once the number of shares increases, it leads to greater liquidity in stocks. The increased liquidity eases trading for buyers and sellers without any major impact on share prices. Due to this companies can repurchase their shares at a lower cost as their order will not increase the share price of more liquid stock.
3. The number of shares owned by investors' increases. Now, after some time, when share prices reach a high, the investor will enjoy more profit.
4. Sometimes, the split is executed to meet the minimum criteria to stay listed on the exchange. This usually happens in the case of a reversed stock split.

SHARE REPURCHASE

A stock buyback occurs when a company buys back its shares from the marketplace with its accumulated cash. Also known as a share repurchase, a stock buyback allows a company to re-invest in itself. The repurchased shares are absorbed by the company, reducing the number of outstanding shares on the market. Because there are fewer shares on the market, the relative ownership stake of each investor increases.

Reasons of share repurchase:

- The board might feel that the company's stock is undervalued, making it a good investment.
- Investors often perceive a buyback as an expression of confidence by the company.
- If the excess cash is a windfall, the company may not want to commit to paying a dividend (if it doesn't already) or to increasing its existing dividend on an ongoing basis (if it already pays a dividend). An ongoing dividend can burden a company during lean times if it's maintained, and leave investors upset if it's cut.
- The company's large shareholders may not want the extra tax burden of an increased dividend. Unlike dividends, share-repurchase programs don't have immediate tax implications for shareholders, as there's no payment to investors.
- The company may wish to offset the dilution caused by generous employee stock-option plans.

Impact of a Share Repurchase

When a company buys back shares, the total number of shares outstanding diminishes. It paves the way for a few different phenomena.

First, technical analysis metrics such as earnings per share (EPS) or cash flow per share (CFPS) will increase due to a decrease in the denominator used to produce the figures. Thus, investors must be wary of the situation, as

EPS and CFPS will become artificially inflated – meaning that the increase cannot be attributed to economic value creation activities such as boosting earnings or cutting costs.

Second, following the concept of supply and demand, we can predict an increase in the stock price. Assuming that the demand for the stock remains constant in the face of a reduction in supply, we can project that the price of the stock will increase. Once again, investors must be wary of the phenomenon as it may not result from legitimate improvements in the business' financial health.

DETERMINANTS OF DIVIDEND POLICY

A company has to follows so many instructions and procedures for making a suitable dividend policy. These can be analyzed as follows:

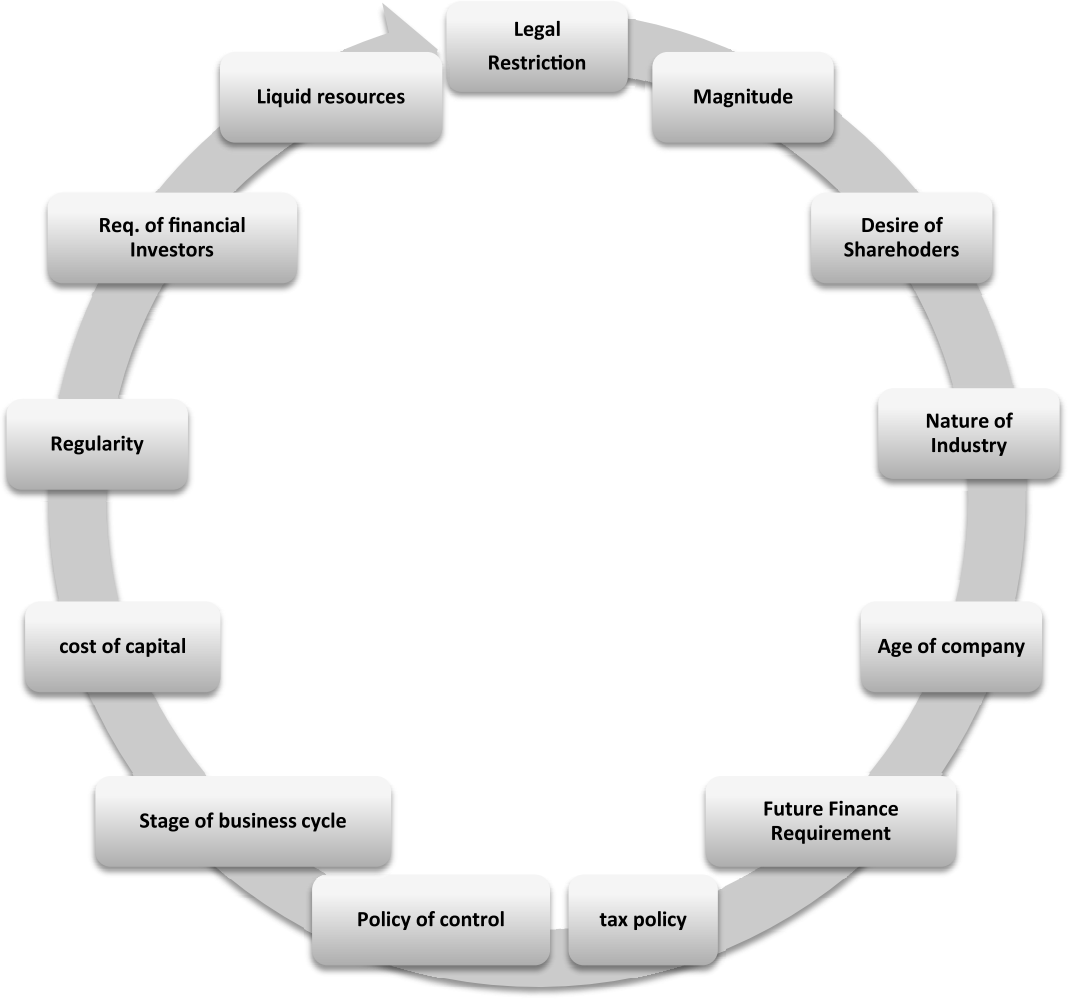


Fig.- 2 Determinants (Factors) of Dividend

1. Legal Restrictions:

As regards cash dividend policy several legal constraints bear upon it – a firm may not pay a dividend which will impair capital. Dividend must be paid out of firm's earnings/current earnings. Contract/ Agreements for bonds/loans may restrict dividend payments. The purpose of legal restriction is to ensure that the payment of dividend may not cause insolvency.

2. Magnitude and Trend of Earnings:

The amount and trend of earnings is an important aspect of dividend policy. It is rather the starting point of the dividend policy. As dividends can be paid only out of present or past year's profits, earnings of a company fix the upper limits on dividends. The dividends should, generally, be paid out of current year's earnings only as the retained earnings of the previous years because more or less a part of permanent investment in the business is to earn current profits. The past trend of the company's earnings should also be kept in consideration while making the dividend decision.

3. Desire and Type of Shareholders:

Although, legally, the discretion as to whether to declare dividend or not has been left with the Board of Directors, the directors should give importance to the desires of shareholders in the declaration of dividends as they are the representatives of shareholders. Desires of shareholders for dividends depend upon their economic status. Investors, such as retired persons, widows and other economically weaker persons view dividends as a source of funds to meet their day-to-day living expenses. To benefit such investors, the companies should pay regular dividends. On the other hand, a wealthy investor in a high income tax bracket may not benefit by high current dividend incomes. Such an investor may be interested in lower current dividends and high capital gains.

4. Nature of Industry:

Nature of industry to which the company is engaged also considerably affects the dividend policy. Certain industries have a comparatively steady and stable demand irrespective of the prevailing economic conditions.

5. Age of the Company:

The age of the company also influences the dividend decision of a company. A newly established concern has to limit payment of dividend and retain substantial part of earnings for financing its future growth and development, while older companies which have established sufficient reserves can afford to pay liberal dividends.

6. Future Financial Requirements:

It is not only the desires of the shareholders but also future financial requirements of the company that have to be taken into consideration while making a dividend decision. The management of a concern has to reconcile the conflicting interests of shareholders and those of the company's financial needs.

7. Taxation Policy:

High taxation reduces the earnings of the companies and consequently the rate of dividend is lowered down. Sometimes Government levies dividend-tax on distribution of dividend beyond a certain limit. It also affects the rate of capital formation.

8. Policy of Control:

Policy of control is another determining factor in so far as dividends are concerned. If the directors want to have control on company, they would not like to add new shareholders and therefore declare a dividend at low rate, because by adding new shareholders they fear dilution of control and diversion of policies and programmes of the existing management. So, they prefer to meet the needs through retained earnings. If the directors do not bother about the control of affairs they will follow a liberal dividend policy. Thus control is an influencing factor in framing the dividend policy.

9. Stage of business Cycle:

The demand for capital expenditure, money, supply, etc. changes during the different stages of a business cycle, as a result, dividend policy may fluctuate from time to time.

10. Cost of Capital:

If the cost of capital involved in external financing is greater than the cost of internally generated funds, a corporation adopts a conservative dividend policy.

11. Regularity:

Some corporations consider that regularity in payment of dividend is more important than anything else. They may use past earnings to pay dividends regularly irrespective of whether they have current profits or not.

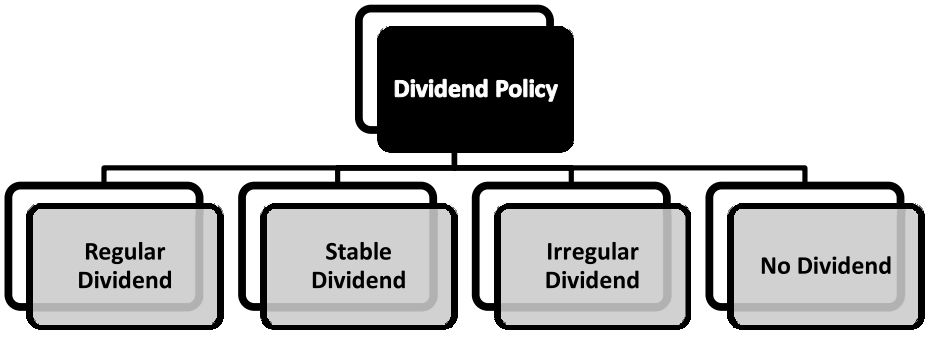
12. Requirements of Institutional Investors:

Dividend policy of a company can be affected by the requirements of institutional investors such as financial institutions, banks, insurance corporations, etc. These investors usually favor policy of regular payment of cash dividends and stipulate their own terms with regard to payment of dividend on equity shares.

13. Liquid Resources:

The dividend policy of a firm is also influenced by the availability of liquid resources. Although a firm may have sufficient available profits to declare dividends, yet it may not be desirable to pay dividends if it does not have sufficient liquid resources. Hence, the liquidity position of a company is an important consideration in paying dividends.

TYPES OF DIVIDEND POLICY



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 person 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 among 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-to-day 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.

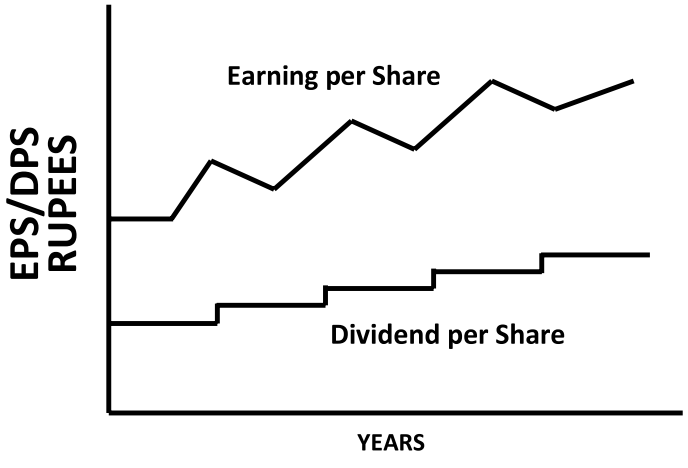
However, it must be remembered that regular dividends can be maintained only by companies of long standing and stable earnings. A company should establish the regular dividend at a lower rate as compared to the average earnings of the company.

2) STABLE DIVIDEND POLICY:

The term 'stability of dividend' 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:

a) Constant Dividend Policy:

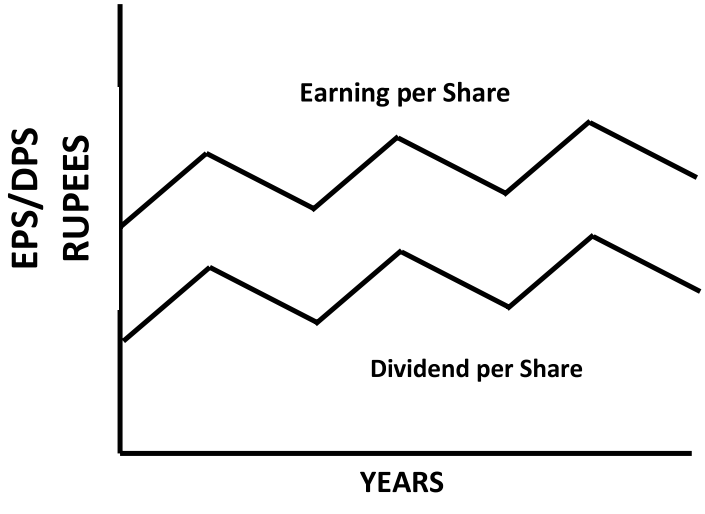
Some companies follow a policy of paying fixed dividend per share irrespective of the level of earnings year after year. Such, firms, usually, create a 'Reserve for Dividend Equalization' to enable them to pay the fixed dividend even in the year when the earnings are not sufficient or when there are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



Constant Dividend per share

b) Constant payout Ratio:

Constant pay-out ratio means payment of a fixed percentage of net earnings as dividends every year. The amount of dividend in such a policy fluctuates in direct proportion to the earnings of the company. The policy of constant pay-out is preferred by the firms because it is related to their ability to pay dividends.



Constant Dividend Pay-out Ratio

c) Stable Rupee Dividend Plus Extra Dividend:

Some companies follow a policy of paying constant low dividend per share plus an extra dividend in the years of high profits. Such a policy is most suitable to the firm having fluctuating earnings from year to year.

Advantages of Stable Dividend Policy:

A stable dividend policy is advantageous to both the investors and the company on account of the following:

i) It is sign of continued normal operations of the company.

ii) It stabilizes the market value of shares.

iii) It creates confidence among the investors.

iv) It provides a source of livelihood to those investors who view dividends as a source of funds to meet day-to-day expenses.

v) It meets the requirements of institutional investors who prefer companies with stable dividends.

vi) It improves the credit standing and makes financing easier.

vii) It results in a continuous flow to the national income stream and thus helps in the stabilization of national economy.

3) IRREGULAR DIVIDEND POLICY:

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

i) Uncertainty of earnings

ii) Unsuccessful business operations

iii) Lack of liquid resources

iv) 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 unfavorable working capital position or on account of requirements of funds for future expansion and growth.

ESSENTIALS OF A SOUND DIVIDEND POLICY

Following are the essentials of a sound dividend policy of a company:

1. Stability:

Stability in dividend distribution implies regularity in payment of dividend. If a company pays high dividend in a year but fails to pay any dividend next year, then it can not be said as good. On the other hand, if a company pays dividend each year even though at a medium rate, its shareholders will remain satisfied and its shares will not be subjected to high speculation.

2. Gradually Rising Dividends:

The management of the company should always try to make some increase in dividend rate each year, though this increase will depend on increase in income of the company. If there are huge profits in any year then in that year the company should distribute additional or special dividend.

3. Distribution of Cash Dividend:

Dividend should be paid in cash. But, if the amounts of reserves and funds in the company become very high,

then stock dividend may also be declared. But the distribution of stock dividend should remain within reasonable limits otherwise the company may become victim of over-capitalization.

4. Moderate Start:

In the beginning years of company's incorporation, dividend should be declared at lower rates for some years so that company's financial position may become sound. Afterwards with the growth and progress of the company, dividend rates may be increased gradually.

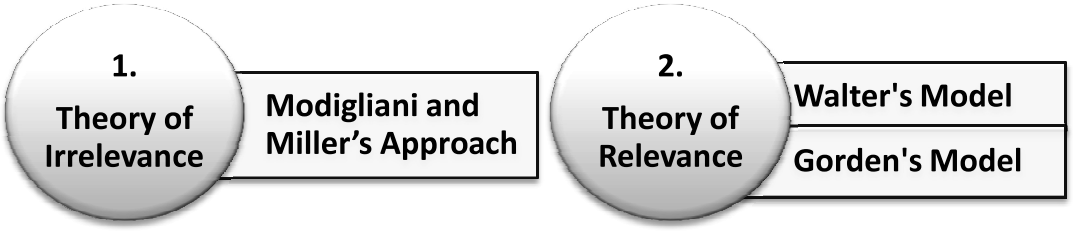
5. Other factors:

Dividend should be paid out of earned profits only. If there is carry forward of past losses, then dividend should not be declared till these are set off. Though, the dividend is usually paid only once in a year in order to keep the shareholders in high spirits, interim dividends should also be declared.

DIVIDEND THEORIES / DIVIDEND MODELS

Relationship between Dividend Policy and Value of Firm:

Dividend decision is a financial decision. There are conflicting theories regarding impact of dividend decision on the valuation of a firm. For the sake of convenience, these theories can be grouped into the following two categories:



1. IRRELEVANT CONCEPT OF DIVIDEND

MODIGLIANI AND MILLER'S APPROACH (M-M MODEL)

According to this theory, dividend decision is irrelevant so far as the valuation of the firm is concerned. The major argument indicating that dividends are irrelevant to the value of shares and the firm was first propounded by Franco Modigliani and Meston Miller in 1961.

According to Modigliani and Miller (M-M), dividend policy of a firm is irrelevant as it does not affect the wealth of the shareholders. They argued that the value of the firm depends on its earning potentiality and investment policy and not on the pattern of income distribution. Thus, when investment decision of the firm is given, dividend decision, *i.e.,* the split of earnings between dividends and retained earnings, is of no significance in determining the value of the firm.

As observed by M-M, "Under conditions of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy may have no influence on the market price of the shares."

Assumptions of M-M Hypothesis

This hypothesis is based on the following assumptions:

1. The capital markets are perfect. Perfect capital markets imply that

a) Information is freely available to all,

b) Transaction and floatation costs do not exist and

c) No investor is large enough to affect the market price of a share.

2. Investors behave rationally.

3. There are either no taxes or there are no differences in the tax rates applicable to dividends and capital gains. This means that investors value a rupee of dividend as much as a rupee of capital gains.

4. The firm has a fixed investment policy.

5. Risk or uncertainty does not exist, *i.e.,* investors are able to forecast future prices and dividends with certainty and one discount rate is appropriate for all securities at time periods.

Explanation of the Theory

The logic put forward by M-M in support of their hypothesis is that whatever increase in shareholders' wealth results from dividend payments, will be exactly offset by the decline in the market price of the shares because of external financing and, hence, there will be no change in the total wealth of the shareholders.

External financing results in 'increasing the number of shares' and 'fall in the future earnings per share'. Thus, whatever a shareholder is benefited in as a result of increased dividends will be neutralized completely on account of fall-in the value of shares due to decline in the expected earning per share as a result of external financing.

According to M-M hypothesis, the market value of a share in the beginning of the period is equal to the present value of dividends paid at the end of the period plus the market value of the share at the end of the period. This can be identified in the form of the following formula:

$$P_0 = \frac{D_1 + P_1}{1 + CR} \; and$$

$$P_1 = P_0(1 + CR) - D_1$$

Where, P0 = Market price at the beginning or at the 0 period.

P1 = Market price at the end of period 1.

CR (or Ke) = Capitalization rate of the firm or cost of equity capital.

D1 = Dividend per share at the end of period 1.

Illustration:

Show that the payment or non-payment of dividend does not affect the value of the firm as per MM approach with the help of the following information:

A company belongs to a risk class for which the appropriate rate of capitalization is 10%. The total number of equity shares is 30,000. The current market price of an equity share is Rs.80. The company is thinking to declare a dividend of Rs.4 per share at the end of the current year. The company expects to have a net income of Rs.3,00,000. It has proposal of making investment of Rs.6,00,000 in new proposals. If MM approach is adopted, show that payment or non-payment of dividend does not affect the value of equity shares of the company.

Solution:

Here, P_0 = 80, D_1 = Rs.4, CR = 10% or .1, P_1 = ?

(A) When dividend is paid:

i) Price per share at the end of year 1:

$$P_0 = \frac{D_1 + P_1}{1 + CR}$$

$$80 = \frac{4 + P_1}{1 + 0.1}$$

88 – 4 = P1

P1 = Rs.84

ii) Value of the company:

a)	Amount needed for investments		Rs.6,00,000
	Less Profit retained:		
	Profit	3,00,000	
	Less Dividend (30,000 × Rs.4)	1,20,000	1,80,000
	Amount to be raised through new issue		4,20,000

b) No. of new shares = $\frac{\text{Rs.4,20,000}}{\text{Rs.84}}$ = 5,000 shares

c) Total No. of shares = 30,000 + 5,000 = 35,000

d) Value of Total Shares = 35,000 × Rs.84 = Rs.29,400,000

e) Value of the Firm = $\frac{\text{Value of total shares} - (\text{I} - \text{E})}{1 + \text{CR}}$

Where, I = Total investment required

E = Earnings during the period

$$\text{Value} = \frac{29,40,000 - (6,00,000 - 3,00,000)}{1 + 0.1}$$

$$\text{Value} = \frac{26,40,000}{1.1}$$

= Rs.24,00,000

(B) When dividend is not paid, total profit is retained and additional funds required for proposals are raised by issuing equity shares:

i) Price per share at the end of year 1:

$$P_0 = \frac{D_1 + P_1}{1 + CR}$$

P1 = Rs.88

ii) Value of the company:

a)	Amount needed for investments	Rs.6,00,000
	Less Profit retained	3,00,000
	Amount to be raised by new issue	3,00,000

b) No. of new shares = $\frac{Rs.3,00,000}{Rs.88}$ = 3,409 shares

c) Total no. of shares = 30,000 + 3,409 = 33,409

d) Value of total shares = 33,409 × Rs.88 = Rs.29,39,992

e) Value of the firm = $\frac{\text{Value of total shares - (I - E)}}{1 + CR}$

$$= \frac{29,39,992 - (6,00,000 - 3,00,000)}{1 + 1.1}$$

$$= \frac{26,39,992}{1.1}$$

= Rs.23,99,993 or Rs.24,00,000

Illustration:

Ram Company belongs to a risk class for which the appropriate capitalization rate is 12%. It currently has outstanding 30000 shares selling at Rs. 100 each. The firm is contemplating the declaration of dividend of Rs. 6 per share at the end of the current financial year. The company expects to have a net income of Rs. 3,00,000 and a proposal for making new investments of Rs. 6,00,000. Show that under the MM assumptions, the payment of dividend does not affect the value of the firm. How many new shares issued and what is the market value at the end of the year?

Solution

$P_0 = \frac{(D_1 + P_1)}{1 + k_e}$

P_0 = market price per share at 0 time

ke = capitalisation rate for firm in that risk class (assumed constant throughout)

D1 = dividend per share at time 1

P_1 = market price per share at time 1. In the given problem

Po = 100

D1 = r 6

P1 =?

ke = 12%

$P_0 = \frac{(D_1 + P_1)}{1 + k_e}$

= 100(1.12) = 6 + P_1

OR

6 + P1 = 112

P1 = 112 – 6

P1 = ₹ 106

If Dividend is not declared

Ke = 12%, Po = 100, D1 = 0, P1 =?

100 = (0 + P1)

1+ 0.12

112 = P1

The following illustration shows the calculation of number of new shares to be issued/ Market Value of Firm when dividend is paid/not paid

	Dividends is Paid	***Dividends is not Paid***
Net Income (r)	3,00,000	3,00,000
Total Dividend (r)	1,80,000	Nil
Retained earning (r)	1,20,000	3,00,000
Investment required (r)	6,00,000	6,00,000
Amount to be raised from new shares (A) (r)	4,80,000	3,00,000
Relevant Market Price (B) (r)	106	112
No. of shares to be issued (A/B) (r)	4,528	2,679
Total number of shares at the end of the year	30,000	30,000
Total Number of shares	34,528	32,679
Market Price per share (r)	106	112
Market Value for shares (r)	36,60,000	36,60,000

There is no change in the total market value of shares whether dividends are distributed or not distributed.

Illustration:

Z Ltd. has 1,000 share at $100 per share. The company is contemplating a $10 per share dividend at the end of the year. It expects a net income of $25,000.

Required: Calculate the company's share price under the following conditions:

- Dividend declared
- Dividend not declared

Also, assuming that the company pays dividends and makes a new investment of $48,000 in the coming period, how many new shares will need to be issued to the Finance Investment Programme (as per the MM) approach with a 20% risk factor?

Solution:

The price of share can be expressed as follows:

$P_1 = P_0 (1 + k) - D_1$

When a dividend is not paid:

P_1 = \$100 (1 + 10) - 0

= 100 x 1.10

=\$110

When a dividend is paid:

P_1 = 100 (1 + .10) - 10

= \$100

New shares:

M x P_1 = i - (X - ND_1)

M x 100 = 48,000 - (25,000 - 10,000)

110M = 33,000

M = 33,000 / 100

M = 330 shares

Criticism of M-M Hypothesis

M-M hypothesis of dividend irrelevance is based on unrealistic assumptions, the most critical of which are as follows:

1. Perfect Capital Market:

Perfect capital market does not exist in reality. Information about the company is not available to all persons.

2. Tax Differential:

Taxes do exist and there are different rates of tax for capital gains and dividends. Capital gains are subject to lower tax rate compared to dividends. Hence, cost of internal financing will be cheaper than external financing. So, the shareholders would favor retention of earnings on account of tax differential.

3. Floatation Cost:

The firms have to incur floatation costs while raising funds from outside. Hence, external financing will be costlier than internal financing.

4. Transaction Costs:

The shareholders have to pay brokerage fee etc. on selling their shares. Moreover, it is inconvenient also to sell shares. Hence, shareholders would prefer to have dividend as compared to capital gains.

5. Uncertainty:

There is always uncertainty in the capital market. Hence, shareholders prefer present dividends to future dividends. Hence, the value of shares of that company would be higher than that of company which is following the policy of retention of earnings.

6. Rigid Investment Policy:

The firms do not follow a rigid investment policy.

All the above discussion proves that dividend decision is very relevant in affecting the value of firm and shares.

2. RELEVANCE CONCEPT OF DIVIDEND

WALTER'S APPROACH:

Prof. Walter's approach supports the doctrine that dividend decisions are relevant and affect the value of the firm. The relationship between the internal rate of return earned by the firm and its cost of capital is very significant in determining the dividend policy to sub serve the ultimate goal of maximizing the wealth of the shareholders.

Prof Walter's model is based on the relationship between the firms':

(i) Return on investment, i.e., r, and

(ii) The cost of capital or the required rate of return, i.e., k.

According to Prof Walter, *there are three types of firms as given below:*

1) Growth Firm **(When r > k):**

If the firm earns a higher rate of return in its investment than the required rate of return, the firm should retain the earnings. Such firms are termed as growth firms and the ***optimum pay-out would be zero*** in their case. This would maximize the value of shares.

2) Declining Firm (When r < k):

In case of declining firms which do not have profitable investments, the shareholders would stand to gain if the firm distributes its earnings. For such firms, the ***optimum pay-out would be 100%*** and the firms should distribute the entire earnings as dividends.

3) Normal Firm (When r = K):

In case of normal firm the dividend policy will not affect the market value of shares as the shareholders will get the same return from the firm as expected by them. For such firms, ***there is no optimum dividend payout*** and the value of the firm would not change with the change in dividend rate.

Walter's model is based on the following assumptions:

a) Internal financing:

The firm finances all investment through retained earnings; that is debt or new equity is not issued.

b) Constant return and cost of capital:

The firm's rate of return, r, and its cost of capital, k is constant.

c) 100 percent payout or retention:

All earnings are either distributed as dividends or reinvested internally immediately.

d) Constant EPS and DPS:

Beginning earnings and dividends never change. The value of the earnings per share, EPS, and the dividend per share, DPS, may be changed in the model to determine results, but any given values of EPS or DPS are assumed to remain constant forever in determining a given value.

e) Infinite time:

The firm has a very long or infinite life.

WALTER'S FORMULA FOR DETERMINING THE VALUE OF A SHARE

Prof. Walter has given the following formula to ascertain the market price of a share:

$$P = \frac{D + \left(\frac{R}{K_e}\right)(E - D)}{K_e}$$

Where, P = market price per share

D = dividend per share

r = internal rate of return

E = earnings per share

k_e = cost of equity capitalization rate.

Criticism of Walter's Model

Walter's model has been criticized on account of various assumptions made by Prof. Walter in formulating his hypothesis:

a) The basic assumption that investments are financed through retained earnings only is seldom true in real world. Firms do raise funds by external financing.

b) The internal rate of return, i.e., r, also does not remain constant. As a matter of fact, with increased investment the rate of return also changes.

c) The assumption that cost of capital (k) will remain constant also does not hold good. As a firm's risk pattern does not remain constant, it is not proper to assume that *k* will always remain constant.

d) The formula does not consider all the factors affecting dividend policy and share price. It ignores such factors as taxation, various legal obligations etc., Moreover, determination of market capitalization rate is difficult.

Illustration:

The earnings per share of a company are Rs.16. The market rate of discount (capitalization rate) to the company is 12.5%. Retained earnings can be employed to yield a return of 10%. The company is considering a payout of 25%, 50% and 75%. Which of these would maximize the wealth of shareholders?

Solution:

Wealth of shareholders will be maximized only when the market value of the share is maximized. For finding out the impact of the payout on market price per share, we have to use Walter's formula which is as follows:

$$V_e = \frac{D + \frac{R_a}{R_c}(E - D)}{R_c}$$

Where, $V_c = ?, \quad R_a = 10\% \ or \ .10, \quad R_c = 12.5\% \ or \ .125$

E = Rs.16 and

D = (i) 25% of Rs.16, i.e., Rs.4

(ii) 50% of Rs.16, i.e., Rs.8 and

(iii) 75% of Rs.16, i.e., Rs.12 per share.

Market value of share under different payout options:

(i) 25% payout:

$$V_e = \frac{4 + \frac{.10}{.125}(16 - 4)}{.125} = \frac{4 + 9.6}{.125} = \frac{13.6}{.125} = \text{Rs.108.80 per share}$$

(ii) 50% Payout:

$$V_e = \frac{8 + \frac{.10}{.125}(16 - 8)}{.125} = \frac{8 + 6.4}{.125} = \frac{14.4}{.125} = \text{Rs.115.20 per share}$$

(iii) 75% payout:

$$V_e = \frac{12 + \frac{.10}{.125}(16 - 12)}{.125} = \frac{12 + 3.2}{.125} = \frac{15.2}{.125} = \text{Rs.121.60 per share}$$

The above computations show that the payout ratio of 75% would maximize the wealth of the shareholders.

Illustration:

The earnings per share of a company are Rs.8 and the rate of capitalization applicable to the company is 10%. The company has before it an option of adopting a payout ratio of 25% or 50% or 75%. Using Walter's formula of dividend payout, compute the market value of the company's share if the productivity of retained earnings is (A) 15%, (B) 10% and (C) 5%. Explain fully what inference can be drawn from the above exercise.

Solution:

Calculation of market value of the company's share under different payout options:

Walter's Formula:

$$V_e = \frac{D + \frac{R_a}{R_c}(E - D)}{R_c}$$

Here, $V_e = ?, \quad R_a = (a)\ 15\%\ or\ .15 \quad (b)\ 10\%\ or\ .10$

$(c)\ 5\%\ or\ 0.05, \quad R_c = 10\%\ or\ .10$

E = Rs.8 and D = (i) 25% of Rs.8, i.e., Rs.2

(ii) 50% of Rs.8, i.e., Rs.4 and

(iii) 75% of Rs.8, i.e., Rs.6 per share

(A) If productivity of retained earnings is 15%:

(i.e., Ra = 15% or .15)

i) If Payout Ratio is 25%:

$$V_e = \frac{2 + \frac{.15}{.10}(8 - 2)}{.10} = \frac{2 + 1.5 \times 6}{.10} = \frac{11}{.10} = \text{Rs.110 per share}$$

ii) If Payout Ratio is 50%:

$$V_e = \frac{4 + \frac{.15}{.10}(8-2)}{.10} = \frac{4 + 1.5 \times 4}{.10} = \frac{10}{.10} = \text{Rs.100 per share}$$

iii) If Payout Ratio is 75%:

$$V_e = \frac{6 + \frac{.15}{.10}(8-6)}{.10} = \frac{6 + 1.5 \times 2}{.10} = \frac{9}{.10} = \text{Rs.90 per share}$$

(B) If productivity of retained earnings is 10%: (i.e., Ra = 10% or .10)

i) If Payout Ratio is 25%:

$$V_e = \frac{2 + \frac{.10}{.10}(8-2)}{.10} = \frac{2 + 1 \times 6}{.10} = \frac{8}{.10} = \text{Rs.80 per share}$$

ii) If Payout Ratio is 50%:

$$V_e = \frac{4 + \frac{.10}{.10}(8-4)}{.10} = \frac{4 + 1 \times 4}{.10} = \frac{8}{.10} = \text{Rs.80 per share}$$

iii) If Payout Ratio is 75%:

$$V_e = \frac{6 + \frac{.10}{.10}(8-6)}{.10} = \frac{6 + 1 \times 2}{.10} = \frac{8}{.10} = \text{Rs.80 per share}$$

(C) If productivity of retained earnings is 5% (i.e.., Ra = 5% or .05)

i) If Payout Ratio is 25%:

$$V_e = \frac{2 + \frac{.05}{.10}(8-2)}{.10} = \frac{2 + .5 \times 6}{.10} = \frac{5}{.10} = \text{Rs.50 per share}$$

ii) If Payout Ratio is 50%:

$$V_e = \frac{4 + \frac{.05}{.10}(8-4)}{.10} = \frac{4 + .5 \times 4}{.10} = \frac{6}{.10} = \text{Rs.60 per share}$$

iii) If Payout Ratio is 75%:

$$V_e = \frac{6 + \frac{.05}{.10}(8-6)}{.10} = \frac{6 + .5 \times 2}{.10} = \frac{7}{.10} = \text{Rs.70 per share}$$

Illustration:

The Best Performers Ltd. which earns Rs. 10 per share, is capitalized 20% and has a return on investment of 25%. Determine the price per share, using Walter's model.

Solution:

P = D + r / K (E – D) / K

= 25% / 20% (Rs.10) / 20%

= Rs.12.50 / 20%

= Rs. 62.50

GORDON'S APPROACH

Myron Gordon has also been a proponent of relevance concept of dividends. He has developed a model explicitly for the valuation of equity shares based on the relationship of dividend policy and market value of the firm. His model is based on the following assumptions:

1) The firm is an all equity firm.
2) No external financing is available. Only retained earnings will be used to financing expansion.
3) The internal rate of return is constant.
4) The cost of capital (or discount rate) for the firm remains constant and it is greater than the grow rate, i.e., CR > br (or g).
5) The retention ratio, b, once decided upon, is constant.
6) The firm and its stream of earnings are perpetual. Thus, the growth rate, g = br, is constant for ever.
7) The corporate taxes do not exist.

According to Gordon, the market value of a share is equal to the present value of an infinite stream of dividends to be received by the shareholders on that share.

However, the dividend per share is expected to grow when earnings are retained and it is equal to payout ratio, (1 - b), times earnings, i.e., D = E (1 – b), where b is the retention ratio. The retained earnings are assumed to be reinvested within the all equity firm at a rate of return of r. This allows earnings to grow at the rate of g = br per period. When we incorporate growth in earnings and dividend, resulting from retained earnings, in the dividend-capitalization model, the present value of a share will be determined by the following formula:

$$V_e \quad \text{or} \quad P_0 = \frac{E(1-b)}{CR - br} \quad \text{or} \quad \frac{D}{CR - g}$$

Where, Ve = Price of equity share

E = Earnings per share

b = Retention Ratio or percentage of earnings retained

1 – b = D/P Ratio, i.e., percentage of earnings distributed as dividends

CR or Ke = Capitalization rate of the firm or Cost of equity capital

br = Growth rate in r = g, i.e., rate of return on investment on an all-equity firm

D = Dividend per share

The implications of Gordon's model are as follows:

1) In the case of a growth firm where r > CR, the price per share increases as the dividend payout ratio decreases. Thus, such firms should retain maximum earnings.

2) In the case of a declining form where r < CR, the price per share increases as the dividend payout ratio increases. Thus, the shareholders of such firm stand to gain if the firm distributes its earnings. For such firm, optimum payout would be 100%.

3) In the case of a normal firm, where r = CR, the price per share remains unchanged and is not affected by dividend policy. For such firm, dividend policy is irrelevant and hence there is no optimum dividend payout.

Illustration:

The following information is available in respect of the rate of return on investment, the cost of capital and earning per share of Arora Ltd.

Rate of return on investment (r) = (i) 15%; (ii) 12%; and (iii) 10%

Cost of Capital (CR) = 12%

Earning per share (E) = Rs.10

Determine the value of its shares using Gordon's Model assuming the following:

	D/p Ratio (1 – b)	Retention Ratio (b)
(a)	100	0
(b)	80	20
(c)	40	60

Solution:

Dividend Policy and the Value of Shares

(i) r = 15% (r > CR) (ii) r = 12% (r = CR) (iii) r = 10% (r < CR)

(a) When D/p ratio is 100% or b = 0

$$V_e = \frac{10(1-0)}{0.12-(0)(0.15)} \quad V_e = \frac{10(1-0)}{0.12-(0)(0.12)} \quad V_e = \frac{10(1-0)}{0.12-(0)(0.10)}$$

$$= \frac{10}{0.12} = \text{Rs.}83.33 \quad = \frac{10}{0.12} = \text{Rs.}83.33 \quad = \frac{10}{0.12} = \text{Rs.}83.33$$

(b) When D/p ratio is 80% or b = 0.20

$$V_e = \frac{10(1-0.20)}{0.12-(0.20)(0.15)} \quad V_e = \frac{10(1-0.20)}{0.12-(0.20)(0.12)} \quad V_e = \frac{10(1-0.20)}{0.12-(0.20)(0.10)}$$

$$= \frac{8}{0.09} = \text{Rs.}88.89 \quad = \frac{8}{0.096} = \text{Rs.}83.33 \quad = \frac{8}{0.1} = 80$$

(c) When D/p ratio is 40% or b = 0.60

$$V_e = \frac{10(1-0.60)}{0.12-(0.60)(0.15)} \quad V_e = \frac{10(1-0.60)}{0.12-(0.60)(0.12)} \quad V_e = \frac{10(1-0.60)}{0.12-(0.60)(0.10)}$$

$$= \frac{4}{0.03} = \text{Rs.}133.33 \quad = \frac{4}{0.48} = \text{Rs.}83.33 \quad = \frac{4}{0.06} = \text{Rs.}66.67$$

GORDON'S REVISED MODEL

Gordon revised his basic model to consider risk and uncertainty. He suggested that even when rate of return is equal to cost of capital, dividend policy affects the value of the shares on account of uncertainty of future, shareholders, discount distant dividends (capital gains) at a higher rate than they discount near dividends.

The crux of Gordon's arguments is a two-fold assumption:

(i) Investors are risk averse, and

(ii) They put a premium on a certain return and discount/penalize uncertain returns.

Hence, to avoid risk, the shareholders prefer near dividends than future ones. The logic underlying the dividend effect on the share value can be described as the bird-in-the hand argument as put forward by Gordon, thus contents that the dividend decision has a bearing on the market price of share. The market price of the share is favorably affected with more dividends.

Thus, in the context of uncertainty, the cost of capital (i.e., discount rate) can not be assumed to be constant. In fact, it increases with uncertainty. In other words, the appropriate discount rate would increase with the retention rate. The distant dividends would be discounted at a higher rate than near dividends. As the discount rate increases with length of time, a low dividend payment in the beginning will tend to lower the value of share in future. Hence, increasing the retention rate has the effect of raising the average discount rate, CR. and, therefore, the firm should set a high dividend payout ratio and offer a high dividend yield in order to minimize its cost of capital.

Thus, incorporating uncertainty into his model, Gordon concludes that dividends policy affects the value of the share. His revised model justifies the behavior of investors who

(i) are risk averters and

(ii) Value a rupee of dividend income more than a rupee of capital gains income.

However, all do not agree with his views. For finding dividend rate at future period, the following formula is used:

$$D1 = D0\ (1 + g)t$$

where, D1 = Dividend rate at given future time period

D0 = Dividend at period 0

g = Growth rate

t = Time period

For calculating market price of a share at some distant future, the following formula is applied:

$$P_1 = \frac{D_0\ (1 + g)}{CR - g} = \frac{D_1}{CR - g}$$

where, Pi = Market price per share (ex-dividend)

D0 = Current year dividend

g = Constant annual growth rate of dividends

CR (or Ke) = Cost of Equity Capital (or Expected Rate of Return)

D1 = Dividend at the end of year

For finding out cost of equity share, the following formula is applied:

$$K_e \text{ or } CR = \left(\frac{D_0 (1+g)}{P_0} + g \right) \times 100 = \left(\frac{D_1}{P_0} + g \right) \times 100$$

Illustration:

The dividends of A & G Company Ltd. are expected to grow at a rate of 25% for 2 years, after which the growth rate is expected to fall to 5%. The dividend paid last year was Rs.2. The investor desires a 12% return. You are required to find the value of this stock.

PV Factor @ 12% is as under:

Year	1	2	3
Value	0.893	0.797	0.712

Solution:

Value of dividend at period Dt = D0 (1 + g)t

D0 = Dividend of last year (Rs.2 given)

D1 = Dividend of 1st year

D2 = Dividend of 2nd year

D3 = Dividend of 3rd year

g = Growth rate

CR = Expected Rate of Return

D1 = D0 (1 + g) = 2 (1 + 0.25) = Rs.2.50

D2 = D1 (1 + g) = 2.50 (1 + 0.25) = Rs.3.125

D3 = D2 (1 + g) = 3.125 (1 + 0.05) = Rs.3.281

Price of Stock at the end of second year = $\frac{D_3}{CR - g} = \frac{3.281}{0.12 - 0.05} = \frac{3.281}{0.07} = \text{Rs.}46.86$

Calculation of Present Value of Stock Price

Year	***Rs.***	***P.V.F. at 12%***	***P.V. (Rs.)***
1	2.50	0.893	2.23
2	3.125	0.797	2.49
3	46.86	0.797	37.34
	Present Value of Stock		42.06

LESSON ROUND-UP

- Dividend policy determines what portion of earnings will be paid out to stockholders and what portion will be retained in the business to finance long term growth.
- The amount of dividend payout fluctuates from period to period in keeping with fluctuations in the amount of acceptable investment opportunities available to the firm. if the opportunities abound, percentage of payout is likely to be zero; on the other hand, if the firm is unable to find out profitable investment opportunities, payout will be 100 per cent.
- Walter's model: prices reflect the present value of expected dividend in the long run. a firm is able to earn a higher return on earnings retained than the stockholder is able to earn on a like investment then it would appear beneficial to retain these earnings all other things being equal.
- Modigliani Miller Approach: According to MM, the discounted value per share before and after a dividend payment will be same as if earnings had been retained
- Dividend Policy is determined by the Board of Directors having taken into consideration a number of factors which include legal restrictions imported by the Government to safeguard the interest of various parties or the constituents of the company.
- An appropriate dividend policy must be evaluated in the light of the objectives of the firm.
- A stock split is a decision by a company's board of directors to increase the number of shares outstanding by issuing more shares to current shareholders.
- A stock buyback occurs when a company buys back its shares from the marketplace with its accumulated cash it also known as a share repurchase.

GLOSSARY

Cash Dividend: Cash dividends are the most common and popular form of dividend payouts. The company issues a dividend to all shareholders. The cash dividend amount is deposited into the bank account of the shareholder as per their shareholding.

Stock Dividend: Through stock dividend payouts, a company issues additional shares to its common shareholders without any consideration.

Scrip Dividend: In a scenario where the company does not have enough dividends, it may issue a promissory note. A promissory note that is indicating to pay dividends at a later date. Essentially, this creates note payables for the company.

Stable Dividend Policy: A stable dividend policy involves fixing a certain amount of dividend that the shareholders periodically receive. Even if the company incurs a loss, the amount of dividend does not change.

Regular Dividend Policy: In a regular dividend policy, the company fixes a certain percentage of dividend from the company's profits. When the profits are high, the dividend payment will automatically be high. While the profits are low, the dividend payment will remain low. Experts usually considers this to be the most appropriate policy for paying dividends and creating goodwill.

Interim Dividend: An interim dividend is a dividend payment during a fiscal year to the shareholders. In other words, it is the payment of dividends before the annual audit of financial statements.

TEST YOURSELF

OBJECTIVE TYPE QUESTIONS

1. If Ra < Rc, the optimum dividend policy requires.....payout ratio.

2. A firm having Ra > Rc can be termed as.....

3. According to M.M. Approach, the dividend decision is.....

4. A company's payout ratio is 10%, dividend policy is .....

5. According to .... Model, he dividend decision is irrelevant.

6. According to MM Approach, a company's dividend policy as irrelevant and does not affect the .....of the shareholders.

Answer-

1. 100%
2. Growth Firm
3. Irrelevant
4. Conservative
5. M.M.
6. Wealth

ESSAY TYPE QUESTIONS

1. What is Dividend Policy? Examine the various factors determining the sound dividend policy of a joint stock company.

2. Explain the factors determining the dividend policy of a company.

3. What considerations are kept in view while deciding the dividend policy of a company? Explain.

4. What is dividend policy? Critically examine the essentials of a sound dividend policy.

5. Explain the relevance concept of dividend policy. Describe Walter's formulas regarding dividend policy.

6. Discuss the significance of dividend policy in business decisions. How can dividend policy decision influence value of the firm?

7. How would you formulate a stable dividend policy? What are the factors which affect the dividend policy?

8. What steps as a corporate executive would you suggest to the management for following an appropriate dividend policy for your company that may be appreciated by the investors in general? Give reasons for your recommendations.

9. How would you justify elimination of dividend entirely as a policy of your company to your shareholders? Under what circumstances a company should follow such a dividend policy?

PRACTICAL TYPE QUESTIONS

Question 1. A Company belongs to a risk class for which the capitalization rate is 20%. Its total number of existing shares is 1,00,000 at a selling price of Rs.100 each. The company is thinking to declare dividend of Rs.5 per share at the end of the current year. Using the Modigliani and Miller Model and assuming no taxes, answer the price of equity share at the end of the year, when (i) dividend is declared and (ii) dividend is not declared. Explain that whether dividend is paid or not, the wealth of shareholders is equal.

Answer. (i) 115, (ii) 120

Question 2. A Ltd. has 25,000 equity shares outstanding and its shareholders' expected rate of return is 10%. The current market price of a share is Rs.100. It is expected that the firm would pay dividend of Rs.5 per share in the next year. The firm has project in hand requiring new investment of Rs.5,00,000. The expected net income of the firm is Rs.2,50,000. Calculate the market value of the firm under both the conditions, i.e., when dividends are paid and are not paid. Also calculate the number of equity shares to be issued to meet the financial requirement of the new investment policy.

Answer. When dividend are paid MP = 105, No. of additional shares 3571.42

When dividend are not paid MP = 110, No. of additional shares 2272.72

Question 3. A Ltd. had 50,000 equity shares of Rs.10 each outstanding on Jan. 1, 1999. The shares are currently quoted at par in the market. The company now intends to pay dividend of Rs.2 per share for the current year. It belongs to a risk class, whose capitalization rate is 15%.

Using MM Model and assuming no taxes, ascertain the price of the company's share at the end of the year (i) When dividend is declared and (ii) when no dividend is declared. Also find out the number of new equity shares that the company must issue to meet its investment needs of Rs.2 lakhs assuming net income of Rs.1.1 lakhs.

Show that the payment or non-payment of dividend does not affect the value of the firm as per MM approach.

Answer Value of the firm = 5,00,000

Question 4. The earnings per share of a company are Rs.20. The capitalization rate is 15% and retained earnings can be employed to yield a return of 18%. The company is considering a payout of 25%, 50% and 75%. Which of these would maximize the wealth of shareholders?

Answer 153.33, 146.67, 140

Question 5. The par value of equity shares of PG Ltd. is Rs.100 per share. The company's earning per share is Rs.15. The rate of capitalization in the market is 15%. The following are the alternatives before the management regarding dividends:

a) If payout ratio is zero per cent

b) If payout ratio is 20 per cent

c) If payout ratio is 40 percent and

d) If payout ratio is 60 percent

In the above circumstances which alternative do you consider the best if the productivity of retained earnings is (a) 20%, (b) 15% and (c) 10%.

Answer. Retained earning is 20%, (133.33, 126.67, 120, 123.33), By retained earning is 15% (100, 100, 100, 100), If retained earning is 10% (66.67, 73.33, 80, 86.67)

Question 6. AR Company earns Rs.5 per share. Its rate of capitalization is 10% and rate of return on investment is 18%. According to Walter's formula, what should be the price per share at 25% dividend payout ratio? Is this the optimum payout ratio according to Walter?

Question 7. Calculate the market price of a share of Gupta ltd. under

(i) Walter's formula and (ii) Dividend growth model from the following data:

Earning per share	Rs.5
Dividend per share	Rs.3
Cost of Capital	60%
Internal rate of return on investment	20%
Retention ratio	50%

Answer. 34.37, 41.67

CASE STUDY

Question 1: SK Company has 1,000 000 outstanding equity shares at the beginning of the accounting year. The price per share on the market right now is Rs. 150. At the end of the current fiscal year, the company's BOD is considering paying a dividend of Rs. 8 per share. The company's capitalization rate is 12%, which is adequate for the risk class it is in.

a) Determine the market price per share of the company using the Modigliani-Miller Approach when the anticipated dividend is (i) announced and (ii) not declared.

b) Assuming a net income of Rs. 2 Cr. for the year, how many new shares will the firm issue at the end of the accounting year? The investment budget is Rs. 4 Cr., of which (i) the aforementioned dividends were dispersed and (ii) they were not.

c) Demonstrate that whether or not dividends are distributed, the overall market value of the shares at the conclusion of the accounting year will stay the same. Additionally, ascertain the firm's current market value in both scenarios.

Answer:

a) i) 160, ii) 168

b) i) 1,75000 ii) 1,19050

c) 15,00,000

Question 2: Following are the details of three companies' i.e. A Ltd. B Ltd. and C Ltd. All the three companies are from steel sector and having same earning. The market capitalization rate is 10%. The internal rate of return is different for each company as mentioned in the below table:

	A Ltd.	*B Ltd.*	*C Ltd.*
R_a	15%	10%	8%
R_c	10%	10%	10%
EPS	Rs. 10	Rs. 10	Rs. 10

Calculates the effect of dividend payment on the value of shares of each company under the following situations by using the Walter model and interpret your findings.

a. When no dividend is paid

b. When dividend is paid at Rs. 8 per share.

c. When dividend is paid at Rs. 10 per share.

a) 150, 100, 80

b) 230, 180, 160

c) 250, 200, 180

LIST OF FURTHER READINGS

- Financial Management: Theory and Practice by Eugene F. Brigham
- Guide to Financial Management by John Tennent
- Financial Management: Theory and Practice, 10e by Prasanna Chandra
- Financial Intelligence: A Manager's Guide to Knowing What the Numbers Really Mean
- Financial Management by A. K. Arora
- Financial Management by I. M. Pandey