
UNIT 21 DIVIDEND THEORIES

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21.1 INTRODUCTION

Dividend theories show the relevance and irrelevance of dividend on the market value of shares. Theories try to project that in what way dividend affect the shares market value and how share valuation is done using different approaches of dividend models. Various models are given by different researcher concerning dividend declaration and their affect on the market value of shares this unit tries to cover those theories and tries to project the relevance on market value of shares.

21.2 OBJECTIVES

After reading this unit, you shall be able to,

- Understanding the different models of dividend theories
- Understanding the valuation of shares by using different approaches
- Understanding how management deals with dividend decision making

21.3 DIVIDEND THEORIES

Dividend is a part of profit which is distributed by the company to the shareholders. Distribution of dividend is important as it increases the income of shareholders and it builds confidence in them consequently it also affect the market value of shares as well.

Company has to take the decision that what portion of their income has to be distributed as dividend and what portion they should retain for further investment.

Payment of dividends has to rationale:

- It reduces the income for further investments
- It increases the value of shares.

There are basically two approaches for dividend theories each having a different perspective and argument for dividend and market values of shares.

Relevance Theories:

- a) Walter's Model
- b) Gordon's Models
- c) Traditional Model

Irrelevance Theories

- a) Residual Theories
- b) Miller and Modigliani Theory(MM Approach)

21.4 THEORIES OF DIVIDEND POLICY: RELEVANCE THEORIES

Relevance theories suggest that dividend payment reflexes the market based values of shares. If a company will pay optimum dividend than it will positively affect the value of the firms. There are two theories which support relevance model of dividend payments.

21.4.1 WALTER'S MODEL

Prof. James. E. Walter postulated that corporate's dividend decision making have bearing on the worth of the company. Prof. Walter studies the bonding between cost of capital (K) and internal rate of return (I) in understanding the optimum dividend policy which enhances the worth of shareholders.

Walter's Model is based on certain assumptions:

- 1) Company initiates its investments by utilizing its retained portion of income.
- 2) The Internal Rate Of return (R) and Cost of Capital (K) of the company is stable.
- 3) The company revenue are either disbursed as dividends or taken for internal use.

4) The income and dividends of the company is constant.

5) The firm is having perpetual succession

Walter's has given the following formula:

t = market price per share.

D = dividend per share.

y = earnings per share.

i = internal rate of return.

o = cost of capital.

$$t = [D + i(y - D) / o] / o$$

Example: If the earning per share of a company is Rs 10 and dividend payout ratio is 40%. Internal rate of return is 15% and cost of capital is 10%. What will be the market per share?

Calculation:

Dividend is 40% of 10 that is Rs 4

So putting in formula

$$P = [4 + .15(10 - 4) / .10] / .10 = \text{Rs } 490$$

This theory stems on the comparative relationship between internal rate of return(i) and cost of Capital (o).

- If $i > o$ than in that case it is better to retain the earning rather than distributing them to the shareholders. As retained earnings will be better for further investment than distributing them to the shareholders. In this case firm is called as growth firm

Numerical Example:

Growth firm: $i > o$

If $i = 10\%$, $o = 8\%$, $y = \text{Rs } 8$

If Dividend is Rs 4

Calculation:

$$= \{ [4 + .10(8 - 4)] / .08 \} / .08$$

$$= \text{Rs } 687.5$$

- If $i=0$ than firm will be called as normal firm as retained earnings will have no influence on the share price. So in that case there will be no optimum payout.

Normal firm: $i=0$

If $i=15\%$, $o=15\%$, $y=Rs\ 4$ $D=Rs\ 4$

$$= \{[4 + .15(0)]/.15\}/.15$$

Rs177.77

- If $R < K$ than firm can be termed as declining firm. Firm income from investment will be less than shareholder earnings. In that case it is advisable for the firm to distribute all the earnings to the shareholders.

Declining firm: $i < o$

If $i=10\%$, $o=15\%$, $y=Rs\ 8$, $D=Rs\ 6$

$$= \{[6 + .10(2)]/.15\}/.15$$

Rs275.5

Criticism

Model assumed that firm investments are totally done through internal financing and no borrowing from outside is done which is unrealistic in nature.

Model assumes that of constant r and constant cost of capital are not genuine as r and cost of capital changes with time. Walters's model assumes that discount rate is constant and thus deduces risk from the total value of the company.

21.4.2 GORDON MODEL

Gordon model is also known as the growth model it tries to find the intrinsic value of a share assuming a constant growth in the dividend. The three variables taken for this model are dividend per share, growth rate and required rate of return. Assumption taken for this model is that dividend grows at a constant rate.

Assumptions of Gordon model are:

- a) The company is completely debt free i.e. its equity based.
- b) There exists no external borrowing.
- c) The value of internal rate of return is fairly constant.
- d) The company's capital's cost is constant.
- e) The company's earnings are ever lasting.

- f) The retention and growth ratio are also constant
- g) There exists no corporate tax.

Gordon has given following formula

$T = \text{price / share}$

$K_e = \text{Capital cost}$

$U = \text{earnings /share}$

$b = \text{retention ratio}$

$(1-b) = \text{payout ratio}$

$g = br \text{ growth rate (r = internal rate of return)}$

Here the firm share price is calculated using the formula:

$$T = \frac{E(1+b)}{K_e - br}$$

As per Gordon, when $i > 0$ the price per share enhances as the dividend payout ratio decreases.

When $i < 0$ the price per share is increased as the dividend payout ratio also sees increment
When $i = 0$ the price per share remains unchanged in response to the change in the payout ratio.

- 1) The practical or optimum pay-out ratio for a growing company ($i > 0$) is 0.
- 2) There exist no practical or optimum ratio for a normal company ($i = 0$).
- 3) There exist optimal pay-out ratio for a struggling company ($i < 0$) is 100%.

It is clearly that both Gordon and Walter share similar views on dividend policy.

Criticis m of Gordon models:

Constant Growth rate is a rare phenomenon for any firm due to various reasons like business cycle etc so assuming constant growth rate is itself a limitation of this model.

Later on Gordon revised his model by taking the factors of risk and uncertainty, he said even when $i=0$ the dividend policy complexes the worth of shares because people give more consideration to current dividend than future dividend as future is full of uncertainty and risk.

He took the concept of Bird in hand arguments means investor likes instant dividend more in comparison to differed dividend thus even if $i=0$ dividend payout can affect the value of shares because of uncertainty and risk factors, and these are the two assumptions for this argument.

21.4.3 TRADITIONAL MODEL

This model is given by B Graham and DL Dodd, they showed a clear relationship between dividend and stock market, they argued that high dividend affect the market price of shares positively and vice versa. They have introduced the concept of multiplier for establishing a relationship between market price and dividend.

They argued that price to earnings ratio(P/E ratio) related to dividend payout ratio: greater dividend payout ratio will enhance the P/E ratio and vice versa.

Formula for valuation:

$$A = h(n + f/3)$$

A= Price

h= Multiplier

n=Dividend per share

f=Earnings per share

Criticism:

Relationship of A/f ratio and dividend payout ratio is not true for firm which have high earning and low payout ratio.

Approach not applicable for firm with slow growth rate and high payout ratio.

There are investors who prefer dividend instead of unexpected capital gains and vice versa so the approach is not exactly applicable for all the firms.



Check Your Progress-A

Q1. List Relevance theories of dividend policy.

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Q2. What are essentials of Walter's Model?

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Q3. Discuss criticism of Gordon model.

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21.5 IRRELEVANCE THEORY

Irrelevance theory says that dividend decision does not affect the wealth of shareholders and thus it does not complex the worth of shares. This theory emphasis on that values of shares is affected by the earnings of the company and not by the way earning is split into retained earnings and dividend pay-out. Modigliani-Miller approach is based on this model.

Assumptions of this model:

1. There exist no information barrier to investors and non existence of transactions cost,
2. Non existence of taxes on capital gains and dividends.
3. The company's investment policy is quite rigid.

4. The cost of floatation is non bearing.

The gist of MM principles can be postulated as below:

Shareholders worth of capital is enhanced if the company wishes to retain the income and not distribute in form of dividends, while the shareholder will get dividend if the company wishes to disburse the income.

The formula to calculate the market price per share in this model is:

$$P_0 = (D_1 + P_1) / (1 + K_e)$$

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

P_1 = Market price per share at the end of the period

K_e = Cost of Equity capital or rate of capitalization

P_0 = Market price per share at the beginning of the period, or prevailing market price

21.6 LIMITATIONS OF M.M. HYPOTHESIS

This approach states that there is no bearing on the vested interests of the investors on the decision of the company that to either retain the income or distribute in the form of dividend. This approach is quite unpragmatic and unrealistic in nature since the market system tends to be imperfect in nature thus causing negations of MM assumptions.

Perfect Capital Markets:

This model's assumption about perfect market existence is not real.

Floatation costs:

This model suggests that cost of raising capital from market is null where as in real life this is not the situation as various market forces assume their cost in floating an issue.

Transaction Costs:

There exist various intermediaries which creates a quite space for transactional cost which this model has not taken in due consideration.

Taxes:

The model assumes that no taxes will be levied while in practicality this is not the case and government does regulate by levying taxes on transactions.

Uncertainty:

This model not takes due consideration about the ambiguity in the market. It assumes on the ability of the company to issue additional shares even in under pricing scenario of the market.

This model states that a firm can avoid dividend pay-out by issuing additional shares which seems to be under suspense.

There are two other approaches which affect dividend decision:

21.7 LINTNER'S MODEL

Litner concluded this famous study on actual dividend behaviour in the year 1956. The study concluded that investment needs are not so important for dividend decisions rather dividend distribution change affect the earnings of company. This study was done in two phase using interview method for data collection.

21.8 RADICAL APPROACH

This approach focussed on tax on earnings and dividend and concluded that if dividend is highly taxed than in that case dividend distribution is not preferred rather than capital gain is good and vice versa.

So these are the Dividend theories in practice.

21.9 SUMMARY

So these approaches shows that how dividend affect the valuation as well as retained earnings and future investments prospects. Relevance theory depicts that dividend are relevant for share valuation keeping certain assumptions as prerequisites. Whereas irrelevance theory explains that dividend are not so relevant for valuation of shares as investors are more concerned for future investments rather than current dividends.



21.10 GLOSSARY

Dividend: Dividend is a portion of income which is given by the company to its shareholders. It is a part of profit distributed by the firms to the stakeholders.

Target payout ratio: A stable dividend policy could target a long-run dividend-to-earnings ratio.

Liquidity: This denotes the ready cash available by the company so to meet the future or immediate needs.

Cash Dividend: This is the most preferred way of paying dividend. Under this dividend is paid in the form of cheque to the shareholders or to the brokerage firms.

Stock Splits: It is a process where a company divides its existing shares into multiple numbers of shares. In this method numbers of share increases whereas the market capitalization remains the same.

Stock Dividend: A stock dividend is a distribution of additional shares of stock to existing shareholders on a pro-rata basis i.e. so much stock for each share of stock held.

Stable dividend: It means when regular dividend is paid and there is consistency in dividend payment.



21.11 REFERENCES

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21.13 TERMINAL QUESTIONS

Q1. Enumerate the important parameters relevant to dividend decision making.

Q2. Differentiate between relevance and irrelevance theory.

Q3. Discuss the dividend policy and the various types of dividend policy.

Q4. The following information relates to BSNL Ltd.:

Earnings of the Company Rs 6, 00,000

Dividend payout Ratio 20%

No. of shares outstanding 2, 00,000

Rate of return on investment 8.5%

Equity capitalization rate 7%

Calculate:

- a. Market Value Per Share by using Walter Model.
- b. What is optimum dividend payout ratio?
- c. What is market value of Company's share to payout ratio?

Q5. How far do you agree that dividends are irrelevant?