

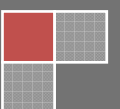
2009

Strategic Financial Management (SFM) by Ravi Singh

CA Final (New Course)

This Book covers whole syllabus of CA final (new course) as prescribed by ICAI. Theory as well as concepts to solve practical problems has been incorporated in this book in very lucid and useful manner.

RAVI SINGH
Sunshine publication
02/10/2009



INDEX

Introduction: 3

Expression of Dividend: 3

Time Value of Money: 4

Dividend policy: 5

Walter's model: 5

Growth model / Gorden Model / Dividend Discount Model: 6

M M APPROACH (Modi giliani & Miller Approach) : 8

VALUE OF DECLINING FIRM: 9

REDICAL APPROACH: 9

▪

•

•

•

•

•

•

•

•

•

•

•

•

•

•

Introduction:

Dividend policy is the most controversial topic in financial management.

There are good reasons for the company to pay and as well as for not to pay dividend.

The focus of this Chapter is to determine whether company should pay dividend or whether it should retain it as retained earnings for further investment purpose.

Notes:

- Dividend is always paid firstly to preference share holders.
- Dividend is always paid on Face value.

Expression of Dividend:

Dividend may be expressed in the following 3 manners:

1. Dividend Rate = $\frac{\text{Dividend Per Share}}{\text{Face Value of Share}} \times 100$
2. Dividend Yield Ratio = $\frac{\text{Dividend Per Share}}{\text{Market Price per share}} \times 100$
3. Dividend payout Ratio = $\frac{\text{Dividend Per Share (DPS)}}{\text{Earnings per Share}} \times 100$

Notes:

- Earnings Per Share (EPS) : $\frac{\text{Earnings Available to Equity holders}}{\text{Total number of Equity Share}}$
- Market price per Share (MPS) : $\frac{\text{Total market value/capitalization rate}}{\text{Total number of equity shares}}$
- Dividend per Share (DPS) : $\frac{\text{Total Dividend paid}}{\text{Total number of equity shares}}$

Dividend Payout and Dividend yield are always calculated on yearly Basis.

Time Value of Money:

Time value of money is the one of the most important concept of finance. Without understanding of this concept Subject like SFM cannot be studied.

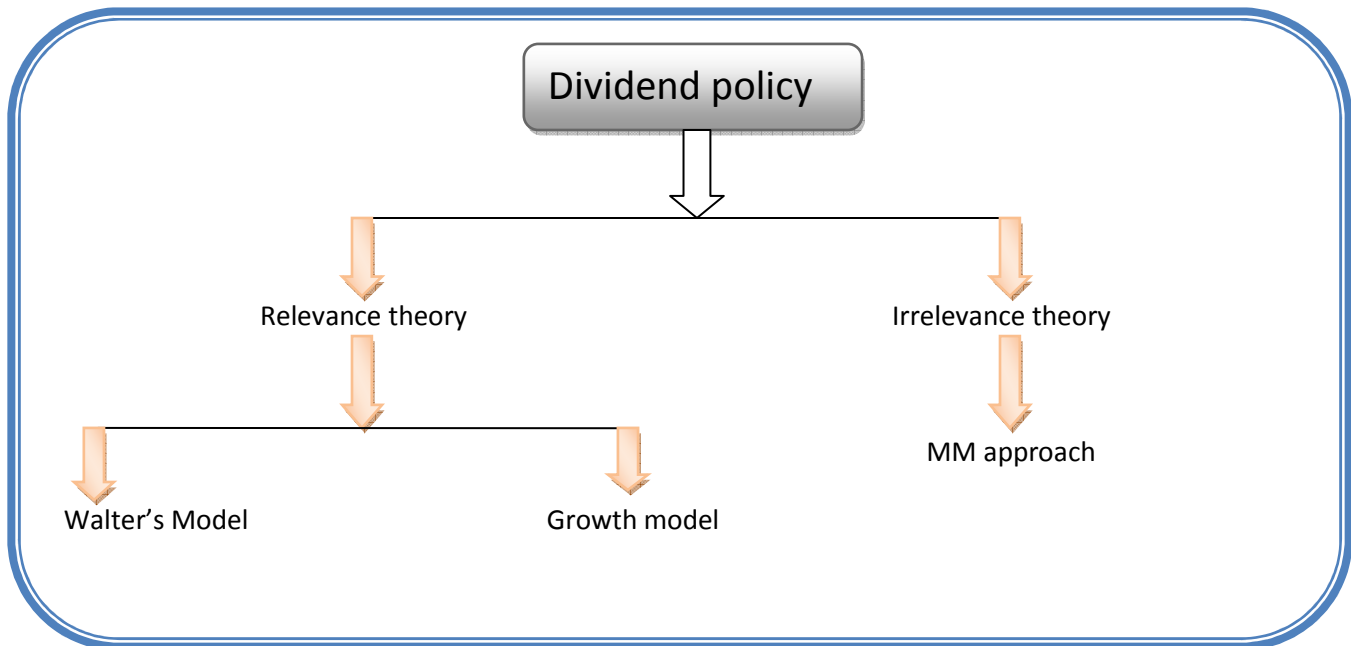
This concept is categorized in following two heads:

1. Future Value.
2. Present value.

- $\text{Future Value} = \text{Present Value} + (1 + \text{rate})^n$
- $\text{Present Value} = \frac{\text{Future Value}}{(1 + \text{rate})^n}$
- $\text{Present value of Infinite equal cash flows} = \frac{\text{Annual Cash Flows}}{\text{Discount rate}}$
- $\text{Present Value of cash flow growing at constant rate up to perpetuity:}$
$$= \frac{\text{Cash flow at end of year one}}{\text{Discount rate} - \text{Growth rate}}$$

Dividend policy:

Dividend policy can be categorized under 2 major heads:



Relevance theory concluded that dividend plays an important role in determination of market price.

Irrelevance theory concluded that dividend has no role to play in determination of market price of shares.

Walter's model:

Meaning: Walter said that present market price of a share is sum of two cash flows stream:

1. Present value of all Dividend = Dividend per share(DPS)/ K_e
2. Present value of returns on retained earnings = $\frac{R/K_e (EPS - DPS)}{K_e}$

Formula: $P_0 = \text{Dividend per share (DPS)}/K_e + \frac{R/K_e (EPS - DPS)}{K_e}$

Where:

Po= Current market price Ex dividend.

K_e = Investors Expectation / Cost of Equity /Discount rate/Capitalization Rate/ Expected rate of return/Opportunity cost.

R = Rate of return on investment / Return on Equity (RoE) / IRR (Internal Rate of Return).

Assumptions to Walter's theory (only selected):

1. Company has infinite life (Going Concern)
2. Company is financed by equity only.
3. K_e and R always remain constant.
4. EPS & DPS remains constant.

Optimum Dividend As Per Walter's Model / All or Nothing Approach :

Optimum dividend as per Walter's model depends upon the relationship between K_e and R .

NATURE OF FIRM	CASE	OPTIMUM DIVIDEND PAYOUT RATIO	OPTIMUM RETENTION RATIO
Growth firm	$R > K_e$	0%	100%
Declining Firm	$R < K_e$	100%	0%
Normal firm	$R = K_e$	Indifferent	Indifferent

Growth model / Gorden Model / Dividend Discount Model:

Gorden said that current market price is the present value of future dividend growing at a constant rate.

Formula:

$$P_0 = \frac{D_1}{K_e - g} \quad \text{or} \quad \frac{D_0 (1 + g)}{K_e - g} \quad \text{or} \quad \frac{E_1 (1 - b)}{K_e - g}$$

Where :

D_1 = Dividend at the end of year 1. Or Expected dividend or dividend to be paid , Dividend not yet paid .

g = Growth Rate i.e $b \times r$.

b = Retention ratio

r = Rate of return on investment.

P_0 = Current market price,

D_0 = Current year dividend, dividend just paid / Dividend as on today / last year dividend.

E_1 = Earning per share at the end of year 1.

Assumptions (only selected):

1. Company has an infinite life (going concern) .
2. Growth rate is constant upto infinity .
3. K_e is always greater than g .

Where :

$$D_1 = D_0 (1 + g) .$$

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

$$EPS_1 \times (1 - b) = EPS_1 \times \text{Dividend payout ratio} .$$

$$= EPS_1 \times \frac{DPS_1}{EPS_1}$$

$$= DPS_1$$

$$= D_1$$

NOTE : When company is distributing all its earning as dividend i. e $EPS = DPS$, In such case growth rate will be zero and our growth formula will be come

$$P_0 = \frac{D_0 (1 + g)}{K_e - g}$$

$$P_0 = \frac{D_0}{K_e} \quad [: g = 0]$$

$$P_0 = \frac{EPS}{K_e} \text{ or } DPS$$

NOTE : When $g = 0$, Then in such case $E_1 = D_1 = D_0 = EPS = DPS$.

Wherever growth rate is given in question we will always try to use growth model .

NOTE . Price earnings ratio (P/E) : $\frac{MPS}{EPS}$

Price - Market price, Earning = EPS

Optimum Dividend As Per Growth Model / All or Nothing Approach :

Same as walter's model .

NATURE OF FIRM	CASE	OPTIMUM DIVIDEND PAYOUT RATIO	OPTIMUM RETENTION RATIO
Growth firm	$R > K_e$	0%	100%
Declining Firm	$R < K_e$	100%	0%
Normal firm	$R = K_e$	Indifferent	Indifferent

M M APPROACH (Modi giliani & Miller Approach) :

Dividend Irrelevance Model.

- M M Concluded that dividend do not plays any role in determination of market value. Market value is rather affected by earnings and investment requirement.

FORMULA :

$$NP_o = \frac{(n + m) \times P_1 + E_1 - I_1}{(1 + K_e)^1}$$

Where :

- n = Existing number of equity share .
- P_o = Current market price
- m = new number of Equity shares issued at year end market price .
- p_1 = MPS at the end of year 1 .
- E_1 = Total earning at the end of year 1 .
- I_1 = Total investment made by the company at end of year 1.
- K_e = Cost of equity -----
- $N+m$ = Total number of equity shares at the end of year end .
- $N \times p_o$ = Total market value of company exiting share as on today .
- $(n+m) \times p_1$ = Total market value at the end of year 1 .

VALUE OF DECLINING FIRM:

$$\text{Value of growing firm} = \frac{D_0 (1 + g)}{K_e - g}$$

$$\text{Value of declining firm} = \frac{D_0 (1 - g)}{K_e + g}$$

REDICAL APPROACH:

Radical approach considers the effect of taxation in dividend policy.