PARTICULARS	AMT
Profit before interest and tax	xx
(−) Interest	(x)
Profit before tax	xx
(−) tax	(x)
Profit after tax	xx
(−) pref. dividend	(x)
Profit available for Equity shareholders	xx

3 BASIC THINGS WE ALL SHOULD KNOW!!

Lets understand it by way of an Example.

- Equity share capital   1,00,000 × 10   = 10L
- Earning   = 2L
- Market capitalization   = 100L

Yeh kya Hota hai????
(**Market values of shares as per BSE/NSE**)

How much is each share earning??

Earning per share

$$= \frac{2,00,000}{1,00,000}$$

$$= ` 2 \text{ per share}$$

What's the Market value of share??

Market value per share
$= \dfrac{1,00,00,000}{1,00,000}$
$= ` 100$

Whats the Face Value per share??

Face Value per share
$= \dfrac{10,00,000}{1,00,000}$ $= ` 10$

We know the 3 basics!!

Hence
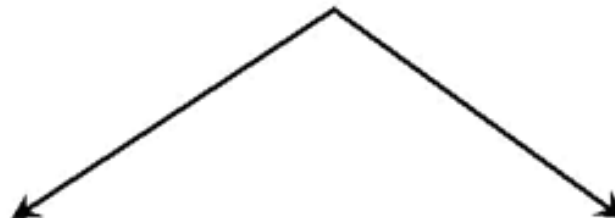
Earning per share	Market value per share	Face Value per share
$\dfrac{2,00,000}{1,00,000}$	$\dfrac{1,00,00,000}{1,00,000}$	$\dfrac{10,00,000}{1,00,000}$
= ` 2 per share	= ` 100	= ` 10

SOME MORE BASICS....

Dividend can be expressed in 3 different forms

1. Dividend rate : when dividend is expressed as % of FV

2. Dividend yield : when dividend is expressed as % of market price

3. Dividend payout : when dividend is expressed as % of Earning.

Out of 2,00,000 of earning 1,00,000 is distributed as dividend 2,00,000

$$\text{Hence} = \frac{1,00,000}{1,00,000} = \text{Retained earning} = \frac{1,00,000}{1,00,000}$$

`1 Dividend per share        `1 R.E. per share

EARNING = DIVIDEND + RETENTION

Hence Earning

Dividend

Retained Earning
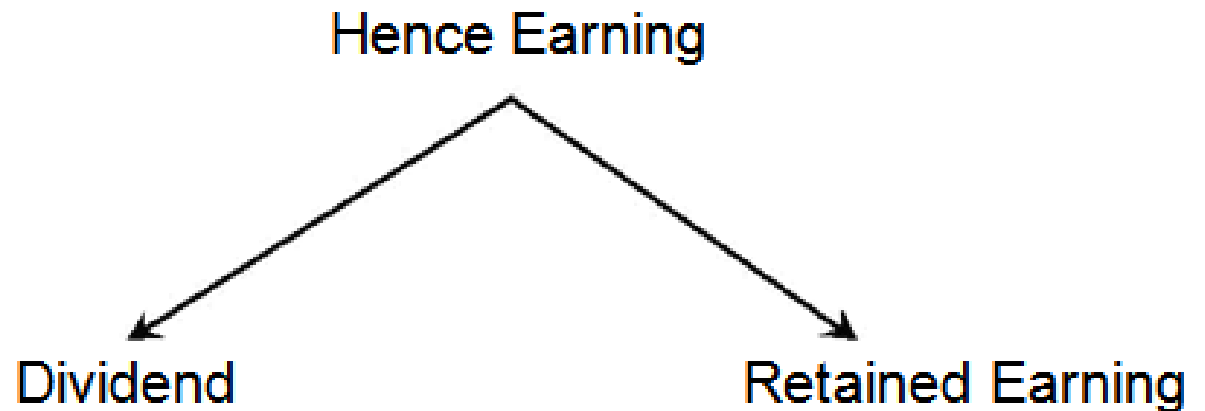
What proportion should be used? To maximum shareholder

Hence the Doubt is that,

Kya PROPORTION hone chaiye??

Is proportion Necessary???

Kya PURA earning, Dividend mai baat de??

Ya lets not give Dividend, and keep the entire Money in Reserves. .

What's your Final AIM???

THE ANSWERS TO ALL OUR
QUESTIONS RELATED TO
PROPORTION ARE GIVEN BY. . . .

DIVIDEND

POLICIES

TRADITIONAL MODEL

- Investors during the era (The traditional model was framed in the 1950's analyzing the US Market)Did not have confidence in the ability of the Management in respect to optimum reinvestment of Retained earnings.

- Hence as per the traditional Model, the optimum payout ratio is 100% DIVIDEND.

FORMULA TO CALCULATE EQUTY PRICE

- The pricing equation is $P = m\,D + \dfrac{E}{3}$

m = multiplier

D = dividend

E = Earning

The pricing Equation is

$$P = m \left[D + \frac{E}{3} \right]$$

m = multiplier
D = dividend
E = Earning
P = price of share.

$$P = m \left[\frac{3D + E}{3} \right]$$

$$\left(\because E = D + R \right)$$

$\downarrow$ $\downarrow$
DIV Retained
Earning

$$P = m \left[\frac{3D + D + R}{3} \right]$$

$$P = m \left[\frac{4D}{3} + \frac{R}{3} \right]$$

CONCLUSION

- According to this Model, Dividend has 4 times the Impact on share price as compared to Retention. M = Multiplier (which depends on Companies Fundamentals, Corporate Governance, Dividend stability etc)

LETS PROVE HIS CONCEPT

- Stock is Trading at Rs. 500 per share

- Dividend Yield is 15%

- Payout Ratio is 40%

- What would be the share price if the firm follows Optimum dividend policy as per traditional model.

Solution   Given

Market price per share : ₹ 500
dividend yield = 15%
payout ratio = 40%

i) dividend yield : $\dfrac{\text{Dividend per share}}{\text{Market price per share}} \times 100$

$15 = \dfrac{\text{Dividend per share} \times 100}{500}$

dividend per share : ₹ 75

(ii) payout ratio = $\dfrac{\text{Dividend per share}}{\text{Earning per share}} \times 100$

$$40 = \dfrac{75}{E.P.S} \times 100$$

Earning per share = ₹ 187.5

As per traditional model.

$$P = m\left(D + \dfrac{E}{3}\right)$$

where   P =   market price per share

m =   multiplier

D =   Dividend per share

E =   Earning per share

$$500 = m\left[75 + \frac{187.5}{3}\right]$$

$$m = 3.636$$

As per traditional model optimum payout ratio
= 100%.

Hence $\quad D = E = 187.5$

$\therefore \qquad P = m\left[D + \dfrac{E}{3}\right]$

$$P = 3.636\left[187.5 + \frac{187.5}{3}\right]$$

$$P = ₹\ 909.09$$

Prof. James E Walter

Walter Model

↓

Assumption

↓

Retained earning is the only source of finance for the company. (hence no issue of equity) (no borrowing of debt)

Hence opportunity cost of a paying dividend is sacrifice of investment in a project.

Hence by the return from the project is greater than R_e, then no dividend is to be paid

Hence Walter Model into comparison of two things.

Return on Equity	Return on Cop. Emp.	Return on Investment	Internal rate of return	Basically this is what we will get from investment
↑	↑	↑	↑	↑
a) ROE /	ROCE /	ROI /	IRR =	denoted by "r"

AND

b) Re /	Ke /	Kc / =	denoted by R_e
	↓	↓	↓
	Cost of Eg.	Cost of Cap.	Cost o capital

As Retained Earning can be only used to finance a project of Re=Ke = Kc the pricing equation is given as.

1. ✓ If ROE is greater than Re $(r > r_e)$

It implies that company is able to generate returns over and above the Expectation of shareholders.

Accordingly optimum payout ratio = 0.

Hence no dividend.

2. If ROE is less than R_e $(r < R_e)$
    it implies that co. is not able to meet
investors expectations and hence optimum payout
ratio $= 100\%$ (Hence all $E = D$)

3. If $ROE = R_e$

it implies that payment of dividend will have no impact on the share price and dividend policy becomes irrelevent

Formula :

Walter has evolved following formula to arrive at a right dividend decision :

$$P = \frac{D + (E-D)r/R_e}{R_e}$$

Where P   = Price per equity share

D   =   Dividend per share

E   =   Earnings per share

Lets Prove it

- Shalini & Co. earns Rs. 6 per share having capitalization rate of 10% and has a return on investment @ 20%.

- According to Walter's Model, what should be the price per share at 30% dividend payout ratio? Is this the optimum payment ratio as per Water?

Given

Earning per share : ₹ 6

Cost of Capital/Capitalisation rate : 10%.

Return on Investment : 20%.

Dividend payout ratio : 30%.

$$\text{dividend payout} = \frac{\text{dividend per share}}{\text{Earning per share}} \times 100$$

$$30 = \frac{\text{Dividend per share}}{6} \times 100$$

Dividend per share = ₹ 1.8.

As per Walters model

$$P = \frac{D + (E - D)\dfrac{r}{Re}}{Re}$$

where

P = Market value of the share
D = Dividend per share
E = Earning per share
r = Return on investment
Re = Cost of capital

$$P = \frac{1.8 + (6 - 1.8)\dfrac{0.20}{0.10}}{0.10}$$

P = ₹ 102

Since Return on Investment > cost of Capital payout ratio as per walters model is 0. Hence payment of ₹ 6 as dividend per share is not the optimum payout ratio.

Myron J. Gordon

How did he use dividend to value shares?

- The assumption and conclusion of Gordon model are same as that of walter's model, however it believes since the is going concern, it will have infinite life with capital appreciation taking place an nth year

- The effective intrinsic value should be calculated by capitalizing only the future streams of dividend.

FORMULA?

$$P_0 = \frac{D_1}{Re - g}$$

where $D_1 = D_0 + g \, D_0 (1+g)$ (next expected growth)

g is a sustainable growth rate. and is a function of retention and return on Equity

$$g = b \times r \cdot \longrightarrow \text{Return on Equity}$$

$$\downarrow$$

Retension

Mathematically this formulae is operative only when $R_e > g$ (for denominator is $R_e - g$ if the denominator is negative, share price will be negative. which is not possible)

$$\downarrow$$

Cost of Capital

Lets take a Illustration

If the earning per share is Rs. 18, the pay-out ratio is 40%, the return on investment is 10% and the cost of capital is 16%, what is the price/earnings ratio for the share according to the Gordon's dividend capitalization model?

Earning per share = ₹ 18
dividend pay out ratio : 40%
ROI = 10%.
Cost of capital : 16%.

According to Gordon's dividend capitalization model.

$$P_0 = \frac{D_1}{\frac{k}{c} - g}.$$

where $g = b \times r$.

Dividend pay out = 40%.

$$\frac{\text{Dividend p·s}}{\text{Earning p·s}} \times 100 = 40$$

$$D·PS = \frac{40}{100} \times 18$$

$$D·P·S = ₹ 7·2.$$

Retension (b) = Earning P·s – Dividend P·s

$$= 18 - 7·2$$

$$= ₹ \underline{10·8} \qquad = 60\% \quad \left(\because D = 40\%, \; \cancel{D} = 60\%.\right)$$

$$r = 10\%. \qquad\qquad \left\{ \begin{array}{l} D_1 = D_0(1+g) \\ \quad = 7·2(1+6\%) \\ \quad = 7·632 \end{array}\right.$$

$$g = ·10 \times 0·60$$

$$g = \underline{\underline{6\%.}}$$

$$P_0 = \frac{D_1}{R_e - g} \qquad = \frac{7·632}{·16 - 0·06.} \qquad = ₹ \underline{\underline{7·632}}$$