

UNIT - II

Time value of money

meaning:

The value observed from the money over time as a result of investment & re-investment time value of money means worth of rupees received today different from the worth of rupees to be received in future.

Reason for time preference of money:

I. Risk

There are financial & non financial risk

Involved over time uncertainty future & risk

II. Preference for Present Consumption:
Future consumption
Urgency of needs

III. Inflation

Inflationary situation

Today's money's value

Decreases purchasing power

Increase of future value

Investment opportunities ∴

Availabilities

opportunities

Investment of cashflow & fundflow

Formula's

Computation of interest over no. of years

$$\text{Future Value} = P(1+r)^n$$

P = Principle

R = Rate of interest

N = No. of years

3. Calculate the maturity amount
₹ 2,00,000 invested for 2 years
at 12% compounded.

- (i) Annually
- (ii) Semi-Annually
- (iii) Quarterly
- (iv) Monthly

4. A bank instructing Ltd offer 14%
interest on fixed deposits
what is effective interest
compounding is done.

- (i) Half yearly
- (ii) Quarterly
- (iii) Monthly

5. Calculate the rate of interest
if the period doubling
investment.

$$A = 4 \text{ years} \quad B = 6 \text{ years}$$

Rule of 69.

Doubling period = $0.35 + 69 / \text{Rate of interest}$

Compound value of annuity.

$$FV = \frac{A \left[(1+R)^N - \frac{1}{R} \right]}{R}$$

Compound value of series of payment

$$FV = P + [1+R]^n$$

Present value of annuity:

Sum: 1

1. Raj makes initial deposit of ₹ 2,00,000 in bank Ltd; interest is compounded at 10% per annum for 6 years. Compute the amt of maturity?
2. Mr. Ragav invest ₹ 25,000 at a bank 10% 5 yrs. Calculate the maturity value if the interest compounded annually will be get how much interest is compounded both.

Multiple Compounding Period:

$$\text{Future Value} = P \left[1 + \frac{R}{M} \right]^{nM}$$

M = Frequency of Compounding

Effective rate of interest:

$$\text{ERI} = \left[1 + \frac{R}{M} \right]^M - 1$$

Doubling Period:

Investors making a financial decision rule of 72 % 69.

$$\text{Doubling Period} = \frac{72}{\text{rate of interest}}$$

$$\text{Rate of interest} = \frac{72}{\text{Doubling Period}}$$

4. maturity value of
 Annuity = $\left(\frac{1+R}{R} \right)^R - 1$

Before

$$\begin{aligned} & \Downarrow \\ & 20,000 \times \left(\frac{115}{100} \right)^{10} - 1 \\ & = 20,000 \times \left(\frac{115/100}{5/100} \right)^{10} - 1 \\ & = 20,000 \times \left(\frac{1+0.05}{0.05} \right)^{10} - 1 \\ & = 63,120.11 \end{aligned}$$

After 10 months

Rate of interest = $\frac{6 \times 1}{100 \times 2} \left(\frac{100}{6} \times \frac{1}{12} \right)$

$$= \frac{6}{12} = \frac{1}{2} = \frac{2}{100}$$

$$\frac{P \left(\frac{1+R}{R} \right)^R - 1}{R} = 20,000 \times \left(\frac{1+0.02}{0.02} \right)^{10}$$

$$3. 4500 \left[1 + \frac{9}{100} \right] = \frac{9}{100} = (0.09) = 0.0941$$

$$= 1.09 \times 4500 = \boxed{4905}$$

A. IV^{th} year payment = 6000

= 6000

<u>I.</u>	1942
<u>II.</u>	3564
<u>III.</u>	4905
<u>IV.</u>	6000
	16,411

8. maturity value of Annuity

$$\left(\frac{C(1+R)^n - 1}{R} \right)$$

$$= 20,000 \left(\frac{1 + \frac{12}{100}}{\frac{12}{100}} \right)^7 - 1$$

$$= 20,000 \times \frac{(1 + 0.12)^7 - 1}{0.12}$$

$$= 20,000 \times 2.2107 - 1$$

$$= 20,000 \times \frac{1.2107}{0.12}$$

$$= 9,01,800$$

$$6. \text{ Doubling Period} = \frac{0.35 + 69}{\text{Rate of interest}}$$

$$6\% = \frac{0.35 + 69}{6} = 11.85 \text{ years}$$

$$9\% = \frac{0.35 + 69}{9} = 8.02 \text{ years}$$

$$12\% = \frac{0.35 + 69}{12} = 6.10 \text{ years}$$

$$1) \quad FV = P(1+R)^n$$

$$1. \quad 1500 \left[1 + \frac{9}{100} \right]^5 = \frac{9}{100} = (1 + 0.09)^5$$

$$= 0.27 + 1$$

$$= 1.27$$

$$= 1.27 \times 1500 = \boxed{1942}$$

$$2. \quad 3000 \left[1 + \frac{9}{100} \right]^2 = \frac{9}{100} = (0.09)^2$$

$$= 0.18 + 1$$

$$= \boxed{1.18} \times 3000$$

$$= 0.1475 \times 100 = 14.75\%$$

c) Compound is monthly:

$$ERI = \left[1 + \frac{0.14}{12} \right]^{12} - 1$$

$$= (1.0117)^{12} - 1$$

$$= 1.1498 - 1$$

$$= 0.1498 \times 100$$

$$= 14.98\%$$

5) Doubling Period = $\frac{72}{\text{Rate of interest}}$

Rate of interest = $\frac{72}{\text{Doubling Period}}$

$$= 72/4 \times 100$$

$$= 1800 = 18\%$$

$$= 72/6 \times 100$$

$$= 1200$$

$$= 12\%$$

semi Annually:

6 months = 6%.

$$= 2,100,000 (1 - 0.06)^{2 \times 2}$$

$$= 2,100,000 \times (1.06)^4$$

$$= 2,100,000 \times 1.2625$$

$$= 2,52,500$$

4. If interest compounded $\frac{1}{2}$ +

$$a) \text{ ERI} = \left[1 + \frac{0.14}{2} \right]^2 - 1$$

$$= (1.07)^2 - 1$$

$$= 1.1449 - 1$$

$$= 0.1449 \times 100$$

$$= 14.49\%$$

b) Interest compounded quarterly

$$12/3 = 4$$

$$\text{ERI} = \left[1 + \frac{0.14}{4} \right]^4 - 1$$

$$= (1.035)^4 - 1$$

$$= 1.1475 - 1$$

6. Calculate the doubling period using the rule of 69.

(i) $A = 6\%$.

(ii) $B = 9\%$.

(iii) $C = 12\%$.

Calculate the future value of the following series of payment at the end of the 4 years

$P_1 = 1500$ end of the first year

$P_2 = 3000$ " " "

$P_3 = 4,500$ " "

$P_4 = 6,000$ " "

8) Calculate the maturity value of amount Rs. 20,000 paid annually for 7 years 12%.
Compound annually

9. Given base monthly investment of ₹ 2000 towards a re-accruing deposit with a finance year the rate of interest 6%. Compound monthly. what is the maturity value of this re-accruing the deposit after the 10 months.

Solution:

$$\begin{aligned} 1. \quad F.V &= P(1+R)^n \\ &= 2,00,000 \left(1 + \frac{10}{100}\right)^6 \\ &= 2,00,000 \times (1 + 0.10)^6 \\ &= 2,00,000 \times (1.10)^6 \\ &= 2,00,000 \times 1.7716 \\ &= \boxed{3,54,320} \end{aligned}$$

$$= 16.105 - 1$$

$$= 15.105$$

Maturity amount = 20,00,000

$$\frac{20,00,000}{15.105}$$

$$= 1,32,406$$

investment
a
with a
rate of
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is
sit

$$\begin{aligned} 2. \quad F.V &= P(1+R)^{MN} \\ &= 25,000 \left(1 + \frac{10}{100}\right)^{5 \times 1} \\ &= 25,000 \times (1.10)^5 \\ &= 25,000 \times 1.6105 \\ &= 40,262.50 \end{aligned}$$

Rate of interest 6 months
[half yearly]

$$\begin{aligned} &= 25,000 \left(1 + \frac{5}{100}\right)^{5 \times 2} \\ &= 25,000 \times (1.05)^{10} \\ &= 25,000 \times 1.6289 \\ &= 40,722.50 \end{aligned}$$

$$\begin{aligned} 3. \quad F.V &= P(1+R)^{MN} \\ &= 2,00,000 \left(1 + \frac{12}{100}\right)^{2 \times 1} \\ &= 2,00,000 (1.12)^2 \\ &= 2,00,000 \times 1.2544 \\ &= 2,50,880 \end{aligned}$$

earning 10% over its able
to use pay the debenture

solutions:

10) Present Value Annuity = $\frac{1}{(1+R)^n}$

1 year

$$PV = 60,000 \times \frac{1}{\left(1 + \frac{20}{100}\right)^1} \quad 0.2$$
$$= 60,000 \times 0.833$$

$$= \boxed{49,980}$$

2 year = $\frac{1}{(1+R)^n}$

$$= 60,000 \times \frac{1}{\left(1 + \frac{20}{100}\right)^2}$$

$$= 60,000 \times 0.694$$

$$= 41,640$$

$$\begin{aligned}
 3 \text{ year} &= \frac{1}{(1+R)^n} = 60,000 \times \frac{1}{(1+20/100)^3} \\
 &= 60,000 \times 0.57 \\
 &= 34,200
 \end{aligned}$$

$$\begin{aligned}
 4 \text{ year} &= \frac{1}{(1+R)^n} \\
 &= 60,000 \times \frac{1}{(1+20/100)^4} \\
 &= 60,000 \times 0.48 \\
 &= 28,800
 \end{aligned}$$

11. Present Value Annuity = $\frac{1}{(1+R)^n}$

1 year

$$\begin{aligned}
 PV &= 20,000 \times \frac{1}{(1+9/100)^1} \\
 &= 20,000 \times \frac{1}{(1.09)^1} \\
 &= 20,000 \times 0.917 \\
 &= 18,340
 \end{aligned}$$

Theories of Capital Structure

(01) Types

I. Net income approach

NO Corporate taxes

Cost of debt

Cost of equity

Does not change the risk
result is both and remaining
constant

$$V = S + D$$

V = means \rightarrow Total market value

S = means \rightarrow market value of
equity shares

D = market value of debt

Equity shares = net income

$$\frac{\text{EBIT}}{\text{Volume of firm (value)}}$$

ii. Net operating income approach:

- 1. Capital structure change overall cost of capital value of unlevered & retained risk of share holders
- Reactionary approach

iii. Modi (Gillian) Modigliani approach

- 1. No corporate taxes
- 2. Expect to the earning capacities
- 3. Premium of financial risk
- 4. 100% pay out ratio

$$\frac{\text{Earnings available to share holders}}{\text{Cost of equity}}$$

$$\frac{\text{EBIT}}{\text{Volume of firm (value)}}$$

2 year

$$\frac{1}{(1+R)^n}$$

$$= 20,000 \times \frac{1}{(1+9/100)^2}$$

$$= 20,000 \times 0.841$$

$$= 16,820$$

3rd year

$$\frac{1}{(1+R)^n} = 20,000 \times \frac{1}{(1+9/100)^3}$$

$$= 20,000 \times \cancel{0.841} \times 0.770$$

$$= 15,400$$

4th year

$$\frac{1}{(1+R)^n} = 20,000 \times \frac{1}{\frac{(1+9)^4}{100}}$$

$$= 20,000 \times 0.78$$

$$= 14,160$$

$$1 \text{ year} = 18,340$$

$$2 \text{ year} = 16,820$$

$$3 \text{ year} = 15,440$$

$$4 \text{ year} = \underline{14,160}$$

12. Present value of Constant

$$= \frac{C}{R}$$

(i) $C = \text{Cash flow dividend Perpaid}$
 $= ₹ 10 \text{ p.a}$
 $R = \text{Interest Rate Per Payment}$
 $\text{Period} = 8\%$

$$= 10/8\% = \frac{10}{0.08}$$

$$= 125$$

(ii) Cash flow dividend Perpaid
Payment = 10 p.a

Interest Rate Per Payment
Period = 8%

$$= \frac{9000}{18/100}$$

$$= \frac{9000}{0.18} = \boxed{50000}$$

12. P.V Growing Perpetuity = $\frac{C}{R \cdot G}$

$$= \frac{12}{22\% - 6\%}$$

$$= \frac{12/10}{100} = 75 \text{ RS}$$

14. Sinking Fund

$$\text{S.F. instalment} \times \frac{(1+R)^n - 1}{R}$$

$$\text{S.F. Instalment} \times \left(\frac{1 + 10/100}{10/100} \right)^5 - 1$$
$$= \left(\frac{1 + 0.1}{0.1} \right)^5 - 1$$

$$= \left(\frac{1 + 1}{0.1} \right)^5 - 1$$

what would be market Price of the preference share if the rate of interest is 8%.

13) A company has paid equity dividend of ₹ 12 per share if profits and dividend are expected to grow at 6%. Calculate the market price of equity share if the rate of interest for the investors is 12%.

14) Sinking Fund

M.M.R Ltd has issued the debentures ₹ 20,00,000 to be repaid after 5 years. How much should the company invest in sinking fund

PARTICULAR	₹
INTEREST	160,000
$20000 \times 100 = 20,00000$ $20,00000 \times 8/100$	
LESS (-) Before tax $35/100 \times 160,000$	56,000
After tax	104,000
COST OF ISSUED	20,00000
(-) COST OF ISSUED	50,000
NET PROCEEDS	1950,000

$$\text{Cost of Debenture} = \frac{\text{Interest Before tax}}{\text{Net proceeds}} \times 100$$

$$= \frac{160,000}{1950,000} \times 100$$

$$= 8.21$$

$$\text{maximum amount} = \frac{20,00,000}{15.105}$$

$$= 1,32,406$$

UNIT - III Cost of Capital

Meaning:

Cost of capital is a capital amount that for using companies growth

- ⇒ For financing operations
- ⇒ long term funds [raisings]

Planning of Capital Structure
Features / importance:

Sales - determine the operating profit
 effect of changes in sales
 earnings before interest and tax
 [EBIT]

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$\text{Contribution} = \text{Sales} - \text{Variable cost}$$

i) Degree of operating leverage
 [DOL]
 only for the percentage
 change in sales.

$$\text{DOL} = \frac{\text{Percentage change in EBIT}}{\text{Percentage change in sales}}$$

ii) Financial leverage:
 The uses of fixed interest
 and dividend and securities
 equity shareholders ability
 of financial changes.

$$\text{Financial leverage} = \frac{\text{Earnings before interest and taxes}}{\text{Earnings before taxes}}$$

Annual before tax	₹ 3,21,25
↳ $5,32,125 \times \frac{25}{100}$	1,82,411
	₹ 2,49,481

Calculation of Average value of debt

Gross product (50,000 x 10%)	= 5,00,000
↳ less cost of issue	
$5,00,000 \times \frac{25}{100}$	= 1,25,000
	₹ 3,75,000
Redemption value = 50,000 x 10	= 5,00,000

$$= \frac{3,75,000 + 5,00,000}{2}$$

$$= ₹ 4,37,500$$

Cost of debt before tax = $\frac{5,32,125}{5,30,937.5} \times 100$

Cost of debt after tax = $\frac{2,49,481}{5,30,937.5} \times 100$

Debt issue of 10% discount premium 10%

Interest $50,00,000 \times \frac{10}{100} = 5,00,000$

Add:

Cost of issue $\frac{500,000}{10} \times \frac{25}{100} = 1,25,000$

Calculation of Average value:

$$\text{Gross proceeds} = 50,00,000 \times 90 \\ = 45,00,000$$

$$\begin{aligned} (-) \text{Cost of issue} \\ = 50,00,000 \times \frac{25}{100} = 12,50,000 \\ \hline 32,50,000 \end{aligned}$$

$$\begin{aligned} \text{Redemption Value } 50,00,000 \times 110 \\ = 55,00,000 \end{aligned}$$

$$\begin{aligned} \text{Average value debt} &= \frac{32,50,000 + 55,00,000}{2} \\ &= 43,75,000 \end{aligned}$$

$$\begin{aligned} \text{Cost of debt before tax} &= \frac{32,50,000}{43,75,000} \times 100 \\ &= 74.29\% \end{aligned}$$

$$\begin{aligned} \text{Cost of debt after tax} &= \frac{6,12,500}{43,75,000} \times 100 \\ &= 14.00\% \end{aligned}$$

Combined leverage ✓ 7 2^m

leverage measures percentage change

operating profit result

financial measures

Indicate the financial risk

Combined leverage = operating leverage × financial leverage

$$\frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}}$$

1. A firm sells its only product at ₹12 per unit. It is variable cost 8 percent present sales are 1000 units calculate the operating leverage each of the following situations

When fixed cost is ₹ 1000
" " " ₹ 1200
" " " ₹ 1500

Optimum Cost

Balance leverage

High Capitalisation

Dependent issues

rate of interest is low

Simplicity

Trading on equity

Additional profit

Preference share

Stability on sales

Growing market high sales

Fixed commitments

interest payment

sales of liquidation

debt in capital

Interest
after tax / Net proceeds

$$104000 / 1950000 \times 100$$

$$= 5.33\%$$

Debenture issued in a premium of 10%

Business 20,000 x (100+10)

	20,000 x 110	2200000
(-) cost of issue		50,000
		<hr/>
		2150000

$$\text{Before tax} = \frac{160000}{2150000} \times 100 = 7.4\%$$

$$\text{After tax} = \frac{104000}{2150000} \times 100 = 4.8\%$$

Debenture issued at discount 10%

Business proceeds 20,000 x (100-10)

$$20,000 \times 90 = 1800000$$

(-) cost of issue	50,000
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$$1750000$$

$$\text{Before tax} = \frac{160000}{1750000} \times 100 = 9.14\%$$

$$= \frac{104000}{1750000} \times 100 = 5.94\%$$

flexibility, timing, size of the firm.

Purpose of financing

Period of finance

flotation cost

Theory of capital structure / Types of capital structure:

Net income approach :-

No corporate taxes

cost of debt

cost of equity

It doesn't change the risk

Result is both and remaining constant.

$$V = S + D$$

V means Total Market Value

S means Market value of equity shares

D means Market value of debt.

$$\text{Equity shares} = \frac{\text{Net Income}}{\text{Equity capitalization rate}}$$

(at)

$$\frac{\text{Earnings available to shareholders}}{\text{Cost of equity}}$$

$$\frac{\text{EBIT}}{\text{volume of firm}}$$

2.

Int. 10% (-)
A firm has issued the 50,000 10% debentures of ₹100 each redeemable in 10 yrs time at 10% premium. The cost of issue was 2.5%. The company income tax rate is 35%. Determine the cost of debentures before as well as after a tax if they were issued at par, at premium 5%, 10% discount.

3.

A firm issued the 60,000 15% irredeemable preference shares of ₹100 each. Issue of expenses were ₹60,000. Determine the cost of P. shares are issued the at par, at premium 10% discount 5%.

Meaning of leverage:

The term of leverage refers to an increased means of accomplishing some purpose.

It possible to lift object which is otherwise impossible.

The area of finance fixed cost, ability, assets and fund etc. magnify the return provided to owners.

Jainashikhanie

J. E. Walter

Leverage is the employment of an asset or funds for which the funds fixed cost or fixed return

Leverage is a percentage return on equity to percentage return on capitalisation.

Types of leverage:

Operating leverage:-

Fixed cost operations.

REDMI NOTE 5 PRO MI DUAL CAMERA

Production of sales & main change

Combined leverage.

Q. M B sales of ₹1200000 the variable cost 50% sales while the fixed cost amount ₹360000 the amt of interest long term debt is 120,000 you are required to calculate the combined leverage interest its impact if sales increased by 10%.

Profitability Statement

Particular	situation I	II	III
Sales 1100×12	12000	12000	12000
(-) Variable cost 1000×8	8000	8000	8000
Contribution	4000	4000	4000
Less: fixed cost	1000	1200	1500
Operating Profit	3000	2800	2500
LBTI	4000	11000	4000
	<u>3000</u>	<u>2800</u>	<u>2500</u>
	1.33	1.12	1.6

②

Statement of Profit

Particular	₹
Sales (30000 × 20)	600000
↳ Variable cost (30000 × 10)	300000
Contribution	300000
↳ fixed cost 30000 × 5	150,000
EBIT	150,000

$$\text{operating leverage} = \frac{300000}{150,000} = 2$$

Statement of Profit Variable cost (12 ₹)

Particular	₹
Sales 30000 × 20	600000
↳ variable cost 30000 × 12	360,000
Contribution	240,000
↳ fixed cost	150,000

(or)
Earnings available to share
holders

Cost of equity

II. Net operating income
approach

1. Capital structure change
over all cost of capital
value of whole sale &
retail unit

Traditional approach

1) Financial leverage

Martin Limited has following
the capital structure
Equity shares ₹ 10 each

i) 2,50,000 " , 2000 9% P-shares

ii) 3000 10% debenture
of 100 each

Designing the capital structure.
Capital market fluctuation
Economic structure
Economics of finance

Signing
Deciding about the method of financing
Knowledge of fluctuation.
Interest, dividend, loan.
Minimum cost of capital
Avoiding the risk.

Performance of Top Mgt.

Executive level
Comparison and actual production
or profitability.

Project approval.

Other areas of decision making

Concept of Cost of Capital
Leasing, refund, Policy decision
Serial accounting concepts.

1. Sakthi Ltd issued the 20,000 21-debentures of Rs.100 each on 1st April 2009 the cost of issue was ₹50,000 the company tax rate is 35%. Determine the cost of debentures before as well as after a 5% premium 10% and at a discount of 10%.

Debentures issued at Redeemable Premium 10%

Calculation of Annual Cost

$$\text{Interest } 5,00,000 \times \frac{10}{100} \quad 50,000$$

Add: Cost of Issue

$$5,00,000 \times \frac{2.5}{100} \quad 12,500$$

$$\frac{12,500}{10 \text{ yrs}} \quad 1,250$$

$$56,250$$

$$\text{(-) Before tax } 56,250 \times \frac{35}{100}$$

$$19,687.5$$

$$36,562.5$$

Calculation Average Value:

$$\text{Gross proceeds } 50,000 \times 100$$

$$50,00,000$$

(-) Cost of Issue

$$12,500$$

$$47,75,000$$

Redeemable value

- 2) From the following information calculating operating leverage
 i) no. of units produced & sold 25,000
 ii) Selling price per unit 120 iii) variable cost per unit 70
 iv) fixed cost per unit at current level of sales is ₹ 5 what will be new operating leverage if the variable cost ₹ 12
- 3) Find out degree of operating leverage from the following data
 EBIT (2015) ₹ 40,000 sales (2015) ₹ 20,00,000
 EBIT (2016) ₹ 50,000 sales (2016) ₹ 22,00,000

Financial leverage

1. Martin Limited has following the capital structure
 i) 25,000 equity shares of ₹ 10 each
 ii) 2,000 9% P. share of ₹ 10 each
 iii) 3,000 10% debenture of ₹ 100 each
 The company's EBIT ₹ 1,00,000
 calculate the financial leverage assuming the company's tax rate 40%
 the financial leverage from the information given below.

NET WORTH ₹ 20,00,000

debt equity ratio 3:1

Interest rate = 10%

Operating Profit = ₹ 80,00,000

conservatism during capital structure

Full utilization:

proper co-ordination:

optimum cost

Balance leverage

high capitalisation:

Debenture issued

Rate of interest is low

Simplicity:

Trading on equity:

Additional profit

P. & A public deposits

Tax shield

Higher dividend

Retain more profit

Stability on sale:

Ensuring market high sales

Fixed commitments

Interest payment

Sales fluctuation

debt Capital structure:

Side control:

Board of directors

Elected the equity share holders

Residual capital:

Tax reduction:

Capital market condition

Corporate taxation:

Government policy

Minimum Cost:

Lowest Possible Cost

Annual Payment

Minimum & maximise equity
Share holder

Maximum Return

Maximised Profit

minimise the Cost of Capital

Minimum risk

Share values

Maximum Control

Preference Share (or) debentures

Flexibility

Proper Liquidity:

Achieve the Proper liquidity

Current liability

Fixed liability

Conservation devising Capital
Structure

(10)

- $P_1 = 1500$ end of the 1 year
- $P_2 = 3000$ " " 2 "
- $P_3 = 4500$ " " 3 "
- $P_4 = 6000$ " " 4 year

$$PV = P(1+r)^n$$

$$P_1 = 1500 [1 + 9/100]^3 = 9/100 = (0.09)^3$$

$$= 0.27 + 1$$

$$= 1.27 \times 1500 = 1942$$

$$P_2 = 3000 [1 + 9/100]^2 = 9/100 = (0.09)^2$$

$$= 0.18 + 1$$

$$= 1.18 \times 3000 = 3564$$

$$P_3 = 4500 [1 + 9/100] = 9/100 = (0.09) = 0.09 + 1$$

$$= 1.09 \times 4500 = 4965$$

$$P_4 = 6000$$

1942

3564

4965

6000

16,411

= 16.1e
 = 15
 value

2. The earnings per share of Nil Ltd is 15% and the rate of interest is 15% and the rate of return on investment is 9%.

Compute the market price per share using the Walter's formula, if the dividend payout is 25%, 50%, 100%. What is the ideal payout.

3. Details regarding 3 companies are given below

Nil Ltd	Mel Ltd	JSL Ltd
R = 18%	R = 20%	R = 8%
k = 15%	k = 20%	k = 10%
E = 30 rupees	E = 40 rupees	E = 20 rupees

By using Walter's model you are required to calculate the value of equity share of each of these companies, when dividend payout is 60%, 30%, 100%.

Comment the result obtained.

Dividend Policy

1. The cost of capital and the rate of return investment Rafael Ltd and 10% & 18% respectively. The company has 5,000,000 equity shares of £10 each outstanding and earning per share £20. Compute the market price share & value of the firm following situations in the water model & comment on the result.

- i, 40% retention
- ii, 40% retention
- iii, 80% retention

The earning per share model Ltd £15 per share the rate of capitalisation applicable to the company is 18%. The productivity of earnings 12%.

Compute the market value of the 4 companies share if the Payout 20%, 50%, 70%. Optimum Payout (WM Normal model)

3) Degree of operating leverage $\left\{ \frac{\% \text{ change of EBIT}}{\% \text{ change of sales}} \right.$

$\% \text{ EBIT} = \frac{10000}{40000} \times 100 = 25\%$

$\% \text{ sales} = \frac{2000}{20000} \times 100 = 10\%$

$DOL = \frac{0.25}{0.10} \times 100 = 250\%$

Planning of fixed capital structure

Minimum cost:

Lowest possible cost.

Annual payment

Minimum and maximum equity

share holders.

Maximum returns:

Maximized profit

Minimize the cost of capital

Minimum risk.

Share values

Maximum control.

P-shares or debentures

Voting power

Flexibility.

Proper liquidity:

Active the proper liquidity

Current asset, fixed asset

Current liabilities, fixed liabilities

the
money

set

Market Price Per share = $D + \frac{r}{k} [E - D]$

D = Dividend Per share = E PS x Payout
= 20 x 100% = 20%

r = Rate of Return = 18%

k = Cost of Capital = 10%

E = Earning Per share = 20

$$= \frac{20 + \left[\frac{0.18}{0.10} \right] 20 - 20}{0.10}$$

$$= \frac{20}{0.10} = 200$$

Value of firm = No. of. Eq. sh x Market Price Per share

$$= 5,00,000 \times 200$$
$$= 10,00,00,000$$