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Rollno : 19

Section : A

Business Finance - 2
Assignment - 1

- 1) (D) IRR is the most reliable means of choosing between mutually events.
- 2) (A) Market price of share / Earning per share
- 3) (D) All of the above.
- 4) 10,00,000
- 5) (i) Cashflow from the project at date 1 is
 $+2500 - 1500 = 1000$ including tax rate
 $= 1000 - (1000 \times 40\%)$
 $= 1000 - 400$
 $= 600$
- (ii) $NPV = 2500(1-20\%)^{+1} - 1500(1-20\%)^{+1}$
 $= 800$
- (iii) $NPV = 2500(1-20\%)^1 - 1500(1-20\%)^2$
 $= 1040$; NPV of the project Increase

6) The efficiency ratios give the insight of the effectiveness of the company's management of the working capital components.

$$\text{Inventory T/O Period} = \frac{\text{Inventory}}{\text{Cost of Sales}} \times 365$$

$$\text{Trade Credit T/O Period} = \frac{\text{Trade receivable}}{\text{Credit Sale}} \times 365$$

These ratios are generally measured in 1 year time period.

7) → It ignores the qualification aspect of the business. It ~~at~~ only accounts for the accounting or inventory aspect of the business.

→ Price level changes owing to the historical cost principle are also ignored.

→ Accounting ratios are prepared based on accounting information. Thus if the accounts are subjected to window dressing, personal bias & judgement, it will paint a false picture.

→ The variation in accounting practice, e.g., straight line depreciation written down method could affect the numbers & hence the ratios.

8) i) If $\beta < 1$, Risk rate is less than Market Risk premium.

If $\beta > 1$, Risk rate is more than Market Risk premium.

If $\beta = 1$, hence the business is average.

ii) $\beta 1.1$

Corporate tax = 30%

Equity to debt ratio = 1:2

$$\beta_{\text{gear}} = \beta_{\text{ungeared}} \left[1 + \frac{1}{2} (1 - 0.3) \right]$$

$$\beta_{\text{ungeared}} = 0.8148$$

$$\beta_{\text{gear}} = \beta_{\text{ungeared}} [1 + 0.7]$$

$$\boxed{\beta_{\text{gear}} = 1.38516}$$

9) (D) In general the market value of investment trust is not correlated to the Net Present Value.

10) (i) There may be conflicts of the interest in the company.

→ Manager use lots of information which they might use to maximise shareholder wealth.

→ There also be chance that there is leak of information from the company

(ii) $MPS = 70$ Cost of equity = $10/70 + 9.8\% = 22.285$

$$DPS = 10 \quad R_{ve} = R_f + MRP \times \beta$$

$$R_f = 6\% \quad 22.285 = 6 + 5 \times \beta$$

$$MRP = 5\%$$

$$Growth = 8\%$$

$$\boxed{\beta = 3.257}$$

$$\begin{aligned} \text{New } \beta &= \text{Old } \beta + 20\% \text{ of old } \beta \\ &= 3.257 + (0.8 \times 3.257) \\ &= 5.8626 \end{aligned}$$

$$R_e = 6 + (5 + 5.8626) = 35.313\%$$

$$10 / MPS \times 100 = 27.81426$$

$$MPS = 1000 / 27.81426 = 36.6109$$

$$\text{New MPS} = 36.6109$$

11) (i) Beta is the measure of the systematic risk.

$$\beta = \frac{\text{Cov}(i, \text{mkt})}{\text{Var}_m} = \frac{\sigma_{im}}{\sigma_m^2} = \frac{\sigma_i \times \rho_{im}}{\sigma_m}$$

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$$(ii) \beta = \frac{\text{Cov}(i, \text{mkt})}{\text{Var}_m} = \frac{\sigma_{im}}{\sigma_m^2}$$

(iii) As an active stock market investor, I would invest in β .

(iv) Cash

12) $R_f = 7\%$

Market rate Premium = 5%

$$\beta = 1.5$$

$$\text{tax} = 25\%$$

$$\text{Equity/debt} = 1/1$$

$$\text{Gross debt} = 9\%$$

$$(i) WACC = (r_d \times w_d) + (r_e \times w_e)$$

$$\begin{aligned} V_e &= R_f + MRP \times \beta \\ &= 7 + 5 \times 1.5 \\ &= 14.5\% \end{aligned}$$

$$\begin{aligned} r_d &= 9(1 - 0.25) \\ &= 6.75 \end{aligned}$$

$$\begin{aligned} WACC &= (14.5 \times 1/2) + (6.75 \times 1/2) \\ &= 10.625\% \end{aligned}$$

(6)

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$$(11) \beta_g = \beta_{\text{unlevered}} [1 + D/E (1-t)]$$

$$1.5 = \beta_{\text{gear}} [1 + 1/1 (1 - 0.25)]$$

$$\beta_{\text{unlevered}} = 0.8571$$

$$\begin{aligned} R_e &= R_f + MRP \times \beta \\ &= 7\% + 5\% \times 0.8571 \end{aligned}$$

$$R_e = 11.2855\%$$

13) 1) IRR = 15%

$$40000 \times a_{\overline{4}|}^{15} - x = 0$$

$$x = 40,000 \left[\frac{1 - (1.15)^{1/4}}{0.15} \right]$$

$$x = 114199.1345$$

$$\text{Cost of project} = 114199.1345 \text{ Rs}$$

$$\begin{aligned} \text{Cost of capital} &= 114199.1345 \times 1.064 \\ &= 3.037725 \end{aligned}$$

$$3.0376971 + (1+i)^{-1} - 1 = 0$$

Using the table function in calculator
 $i = 11.99 \approx 12\%$

$$\text{Payback} = \frac{114199.14}{40000} = 2.85 \quad \boxed{3 \text{ yrs}}$$

$$NPV = 121507.89 - 114,199.14$$

$$= \boxed{7308.75}$$

14) (i)

a) Current ratio $\Rightarrow \frac{\text{Current asset}}{\text{Current liability}}$

→ This ratio is used to ~~at~~ assess whether the company will be able to pay bill over the few months.

b) Debtor turn over Ratio

$$= \frac{\text{Net Credit sales}}{\text{Average Receivable accounts}} \times 365$$

It is used for measure the efficiency from which the company is able to collect on its receivable from its creditors.

(ii) To track the daily basis, The one can use the quick ratio or super quick ratio. It is a ratio of readily convertible current assets to current liabilities.

It is used to check whether the company has enough cash bank balance stocks to repay any current liability.

15) (i) The shareholder may buy the share by seeing that the ~~comp~~ equity & debt of the company is equal.

→ Also the dividend yield is good

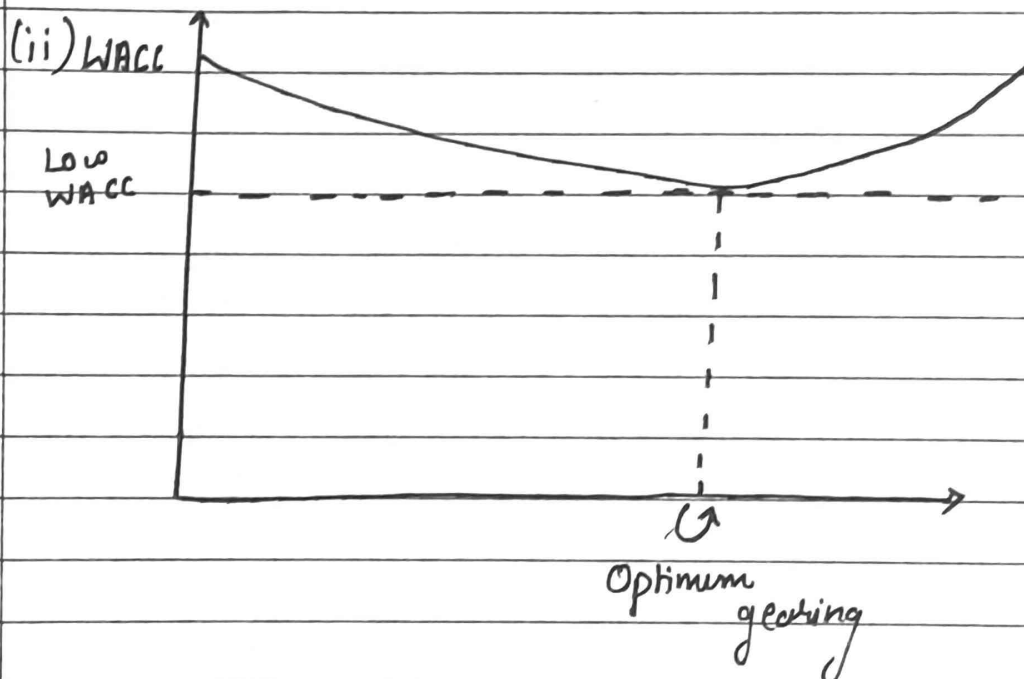
→ To ~~diversis~~ diversify portfolio of reduce their risk.

→ Business prospect, potential

$$COC = \left(8 \times \frac{1}{2}\right) + \left(4 \times \frac{1}{2}\right)$$

$$= \frac{12}{2} = 6\%$$

The suitable COC should be lighter than 6%.



→ Generally cost of debt is cheaper than cost of ~~equi~~ equity.

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$$\rightarrow WACC = \left[(\text{Net cost of debt}) \times \left(\frac{\text{Market value of debt}}{\text{Market value of debt} + \text{Market value of equity}} \right) + \left[\text{Net cost of equity} \times \frac{\text{Market value of equity}}{\text{Market value of debt} + \text{Market value of equity}} \right] \right]$$

$\rightarrow$ WACC & Leverage are inversely proportional to each other.

$\rightarrow$ The cost of equity increase at faster rate than cost of equity.

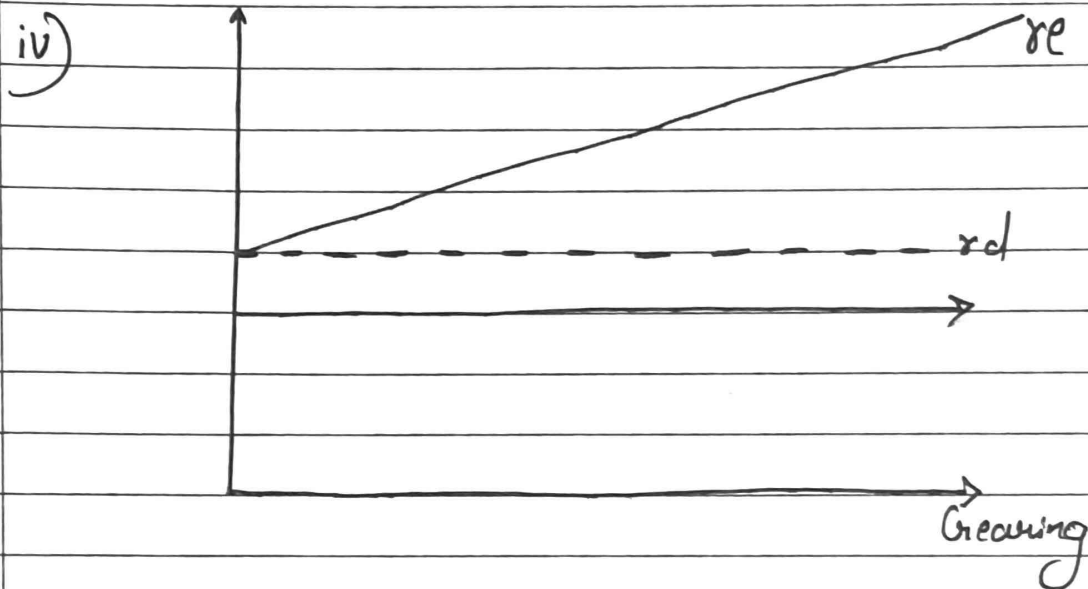
(iii) $\rightarrow$ Assumption

- 1) Debt + equity
- 2) No tax
- 3) Perfect information is available to all
- 4) No Asymmetric Information
- 5) Loan is available to all at some rate
- 6) No agency cost.
- 7) Interest rate will be constant.

$\rightarrow$ According to this model, Capital structure is irrelevant & won't have an impact on WACC & thus neither on valuation.

→ They held that each increase in the debt carried a compensating increase in the cost of equity.

→ A highly geared company offered higher ROE but also has higher cost of equity, the factor will cancel each other, hence value remains the same.



v) a) $R_F = 6$
 $MRP = 5$
 $B = 1.4$

$$\begin{aligned} \text{Cost of equity} &= 6 + (5 \times 1.4) \\ &= \boxed{13\%} \end{aligned}$$

$$(b) t = 30\%$$

$$D:E = 1:1$$

$$\beta_{\text{geared}} = \beta_{\text{ungeared}} [1 + D/E (1-t)]$$

$$1.4 = \beta_{\text{ungeared}} [1 + 1/1 (1-0.3)]$$

$$\beta_{\text{geared}} = 1.4 \times 1.7 = \boxed{2.38}$$

$$(c) \text{ Cost of equity} = 6 + (5 \times 2.38)$$
$$= \boxed{17.9\%}$$