

BF Assignment

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. 1000000

5(i) Cashflow from the project at date 1 is •
+ 2500 - 1500 = 1000

including tax rate = 1000 - (1000 × 40%)
= 1000 - 400 = 600

ii) $NDV = 2500 (1 - 20\%) - 1500 (1 - 20\%)$
= 800

iii) $NDV = 2500 (1 - 20\%) - 2500 (1 - 20\%)$
= 1040, NPV of the Project
Increase

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

Inventory T/O period = $\frac{\text{inventory}}{\text{Cost of sale}} \times 365$

Trade credit T/O period = $\frac{\text{Trade receivable}}{\text{Credit sale}} \times 365$

This ratios are generally measured in 1 year time period.

7.

- It ignores the qualification aspect of the business. It 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 number & hence the ratios.

8. If $\beta < 1$, Risk rate is less than Market Risk Premium

i)

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

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

- ii) $\beta = 1$
corporate tax = 30%.
Equity to debt ratio = 1:2

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

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

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

$$\beta_{\text{geared}} = 1.38516 \quad \underline{\text{Ans}}$$

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 uses 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 = $10/70 + 8\% = 22.285\%$

DPS = 10

RF = 6%

MRP = 5%

Growth = 8%

$$R_{\text{ec}} = R_{\text{f}} + \text{MRP} \times \beta$$

$$22.285 = 6 + 5 \times \beta$$

$$\beta = 3.257$$

$$\text{New } \beta = \text{old } \beta + 80\% \text{ of old } \beta$$

$$= 3.257 + (0.8 \times 3.257)$$

$$= 5.8626$$

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

$$10/\text{MPS} \times 100 = 27.81426$$

$$\text{MPS} = 1000 / 27.81426 = 36.6109$$

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

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

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

$$\beta = \frac{\sigma_i \times \rho_{im}}{\sigma_m}$$

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

iii) As an active stock market investor, I would ~~not~~ invest in β .

iv) Cash

$$12. R_e = 7\%$$

$$\text{Market Rate Premium} = 5\%$$

$$\beta = 1.5$$

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

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

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

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

$$r_e = R_f + MRP \times \beta$$

$$= 7 + 5 \times 1.5$$

$$= 14.5 \%$$

$$v_d = 9 (7 - 0.25)$$

$$= 6.75$$

$$WACC = \left(14.5 \times \frac{1}{2} \right) + \left(6.75 \times \frac{1}{2} \right)$$

$$= 10.625 \%$$

$$(ii) \beta_g = \beta_{unlevered} \left[1 + \frac{P}{E} (1 - t) \right]$$

$$1.5 = \beta_{gear} \left[1 + \frac{1}{1} (1 - 0.25) \right]$$

$$\beta_{unlevered} = 0.8571$$

$$r_e = R_f + MRP \times \beta$$

$$= 7\% + 5\% \times 0.8571$$

$$r_e = 11.2855\%$$

(13)

$$(1) IRR = 15\%$$

$$40000 \times 9\frac{15}{4} - x = 0$$

$$x = 40000 \left[\frac{1 - (1.75)^{1/4}}{0.15} \right]$$

$$x = 114199.1345$$

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

$$\text{Cost of capital} = 214199.1365 \times 1.064$$

$$= 3.037725$$

$$3.037697 = \frac{1 - (1 + i)^{-4}}{i}$$

$$3.037697 \times i + (1 + i)^{-4} - 1 = 0$$

Using the table function in calculator

$$i = 11.99 = 12\%$$

$$\text{Payback} = \frac{114199.14}{40069} = 2.85 \quad \boxed{3 \text{ yrs}}$$

$$\text{NPV} = 121507.89 - 114199.14$$

$$= 7308.75$$

14.9)

a) Current Ratio $\rightarrow \frac{\text{Current Asset}}{\text{Current Liability}}$

$\rightarrow$ This ratio is used to check whether the company will be able to pay bill over the few months.

b) Debtor turnover Ratio

$$= \frac{\text{Net credit sales}}{\text{Average receivables acc.}} \times 365$$

It is used to 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 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 liabilities.

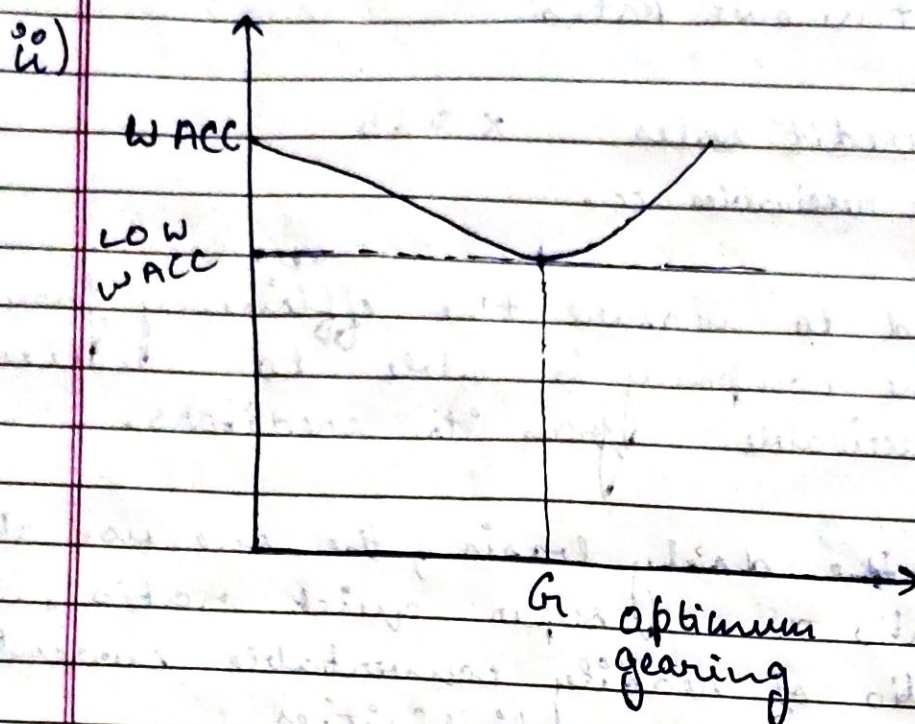
15.

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

- Also the dividend yield is good
- To diversify portfolio & reduce their risk
- Business prospect, potential.

$$\begin{aligned} \text{COC} &= \left(8 \times \frac{1}{2} \right) + \left(4 \times \frac{1}{2} \right) \\ &= \frac{12}{2} = 6.10 \end{aligned}$$

The suitable COC should be higher than 6%



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

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

→ WACC & gearing are inversely proportional to each other.

→ The cost of equity increase at faster ratio than cost of debt.

(iii)

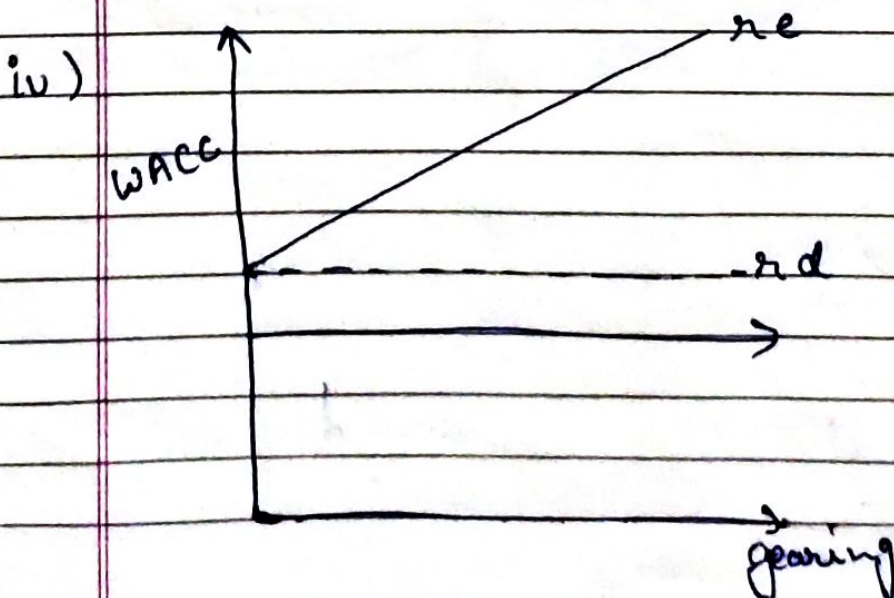
→ Assumption

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.

→ 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 2 factors will cancel each other hence value remains the same.



(v) (a) $R_f = 6$
 $MRP = 5$
 $\beta = 1.4$

Cost of Equity $= 6 + (5 \times 1.4)$
 $= 13\%$

b) $t = 30\%$
 $D:E = 1:1$

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

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

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

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