

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 $= 1000 - (1000 \times 40\%)$
 $= 1000 - 400 = 600$

$$(ii) NPV = 2500(1-20\%)^{+1} - 1500(1-20\%)^{+1} \\ = 800$$

$$(iii) NPV = 2500(1-20\%)^2 - 1500(1-20\%)^2 \\ = 1040, \text{ NPV of the Project Increase.}$$

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

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

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

This ratios are generally measured in 1 year time period.

7. ~~The efficiency~~

- 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 point a false picture.
- The variation in accounting practice, e.g., straight line depreciation written down method could affect the number & hence the ratio.

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

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

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

$$\beta_{\text{gears}} = \beta_{\text{ungears}} [1 + 0.7]$$

$$\beta_{\text{gears}} = 1.38516 \quad \text{Ans/}$$

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} ~~finds~~ lots of information which they might use to maximise Shareholder wealth.

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

(i) $MPS = 70$ Cost of equity $= 10/70 + 8\% = 22.285\%$
 $DPS = 10$ $R_{re} = R_f + MRP \times \beta$
 $R_f = 6\%$ $22.285 = 6 + 5 \times \beta$
 $MRP = 5\%$ $\boxed{\beta = 3.257}$
 Growth $= 8\%$
 New $\beta = \text{old } \beta + 80\% \text{ of old } \beta$
 $= 3.257 + (0.8 \times 3.257)$
 $= 5.8626$
 $R_e = 6 + (5 + 5.8626) = 35.8626\%$

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

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

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

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

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

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

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

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

(iv) Cash.

(12.)

$$R_F = 7\%$$

Market rate premium = 5%

$$\beta = 1.5$$

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

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

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

$$(i) WACC = (rd \times wd) + (re \times we)$$

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

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

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

$$(ii) \beta_g = \text{Ungearred} [1 + P/E(1 - t)]$$

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

$$\beta_{ungearred} = 0.8571$$

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

$$\boxed{Re = 11.2855\%}$$

(13)

$$(1) \text{ IRR} = 15\%$$

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

$$x = 40000 \left[\frac{1 - (1.15)^{-4}}{0.15} \right]$$

$$x = 114199.1345$$

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

$$\text{Cost of capital} = 114199.1345 \times 1.064 = 121507.789$$

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

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

Using the table function in calculator

$$i = 11.99 \approx 12\%$$

$$\text{Payback} = \frac{114199.14}{40000} = 2.85 \text{ [3 yrs]}$$

$$\begin{aligned} \text{NPV} &= 121507.789 - 114199.14 \\ &= 7308.75 \end{aligned}$$

(14)

(i)

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

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

b) Debtor turnover Ratio

$$= \frac{\text{Net credit Sales}}{\text{Average Receivables accounts}} \times 365$$

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

15.

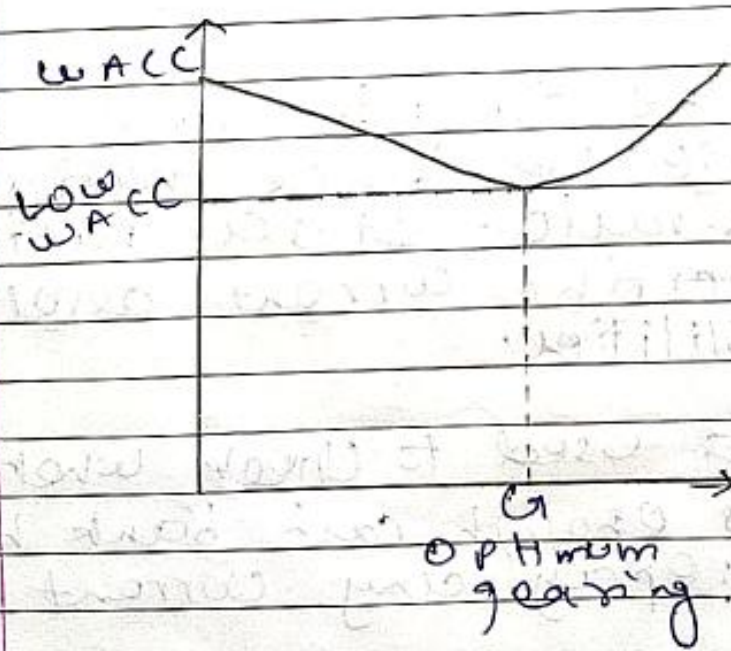
- (i). The shareholder may buy the share by seeing that the equity & debt of the company is equal
- Also the dividend yield is good
 - to diversify portfolio & reduce their risk.
 - Business prospect, ~~present~~ potential.

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

$$= 12/2 = 6\%$$

The suitable COC should be higher than 6%

(ii)



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

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

+

$$\left[\text{Net cost of equity} \times \frac{\text{Market value of equity}}{\text{market value of debt} + \text{market value of equity}} \right]$$

→ WACC & gearing are inversely proportional to each other.

→ The cost of equity increase at faster rate than cost of equity

(iii)

→ Assumption

① Debt + equity

② No tax

③ Perfect Information is available to all

④ No Asymmetric Information

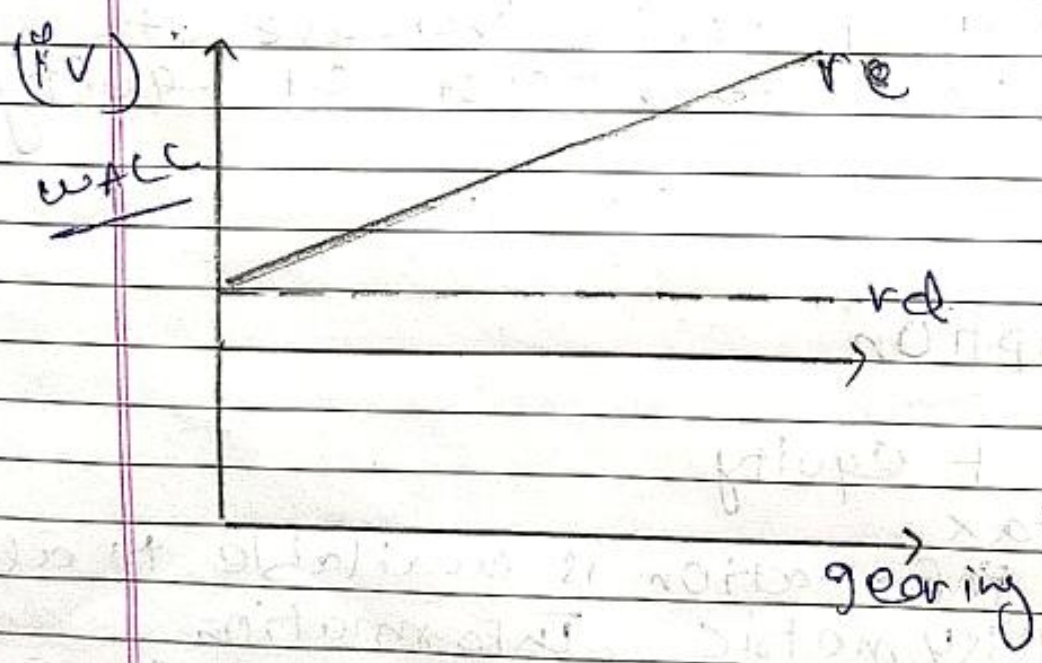
⑤ loan is available to all at some rate.

⑥ No agency cost.

⑦ Interest rate will be constant.

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- According to this model, capital structure is irrelevant & won't have an impact on WACC & thus not 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 had higher cost of equity, the 2 factor will cancel each other, hence value remaining the same.



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

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

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

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

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

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

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