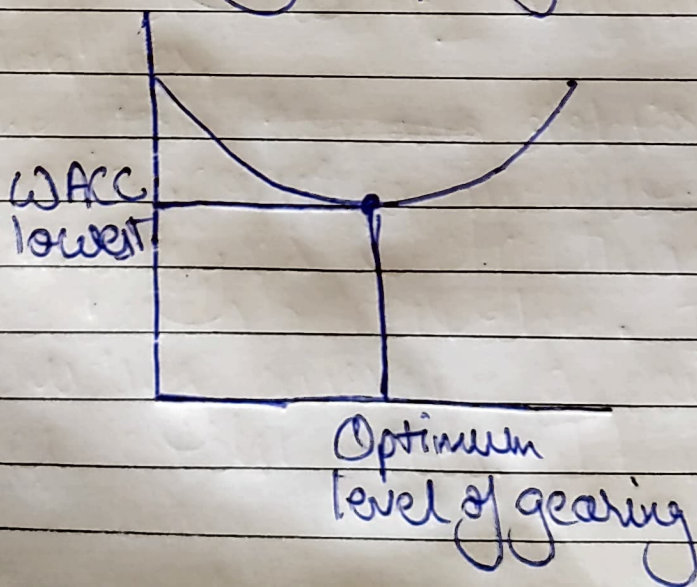


15 i) The company has a debt to equity ratio of 1:1 which is considered good (with a GRY of 8%, above that the dividend yield is 4%, which is pretty good & a less risky dividend yield).
Cost of Capital for the investor should be 9.6%.

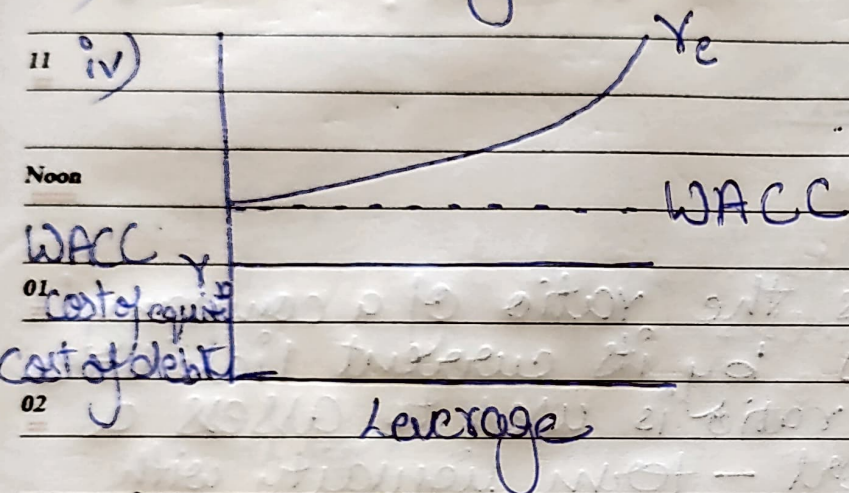
ii) Traditional view of the effect of gearing says that leveraging ~~eff~~ decreases the WACC until an optimum level of gearing is reached by the company. More leverage results in higher cost of equity because decrease in WACC means increase in company's value which helps in results in increasing the cost of equity.



iii) Miller Modigliani (MM) irrelevance proposition states that capital structure does not affect WACC, thereby does not affect valuation.

Assumptions made by MM were -

- 1) No Taxes
- 2) Debt + Equity
- 3) Perfect information is available to all, no information asymmetry.
- 4) Loan is available to all at the same rate of return
- 5) No agency cost
- 6) Interest stays constant.



v) given,
risk-free rate of return, $R_f = 6\%$

Equity risk Premium, $E(R_{mkt}) - R_f = 5\%$

$$\beta = 1.4$$

$$\begin{aligned}\text{Cost of equity} &= R_f + [E(R_{mkt}) - R_f] \times \beta_i \\ &\Rightarrow 6\% + 5\% (1.4) \\ &\Rightarrow 13\%\end{aligned}$$

b) Market Capitalization = 100m, Market value of Market value of debt = 50% $\times$ 100m = 50m
 $D/E = 50M/100M = 1/2$

$$\text{Tax rate} = 30\% , \beta_{\text{ungeared}} = 1.4$$

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

$$\Rightarrow 1.4 \left[1 + \frac{1}{2} (1 - 30\%) \right]$$

$$\Rightarrow 1.89$$

$\therefore \beta_{\text{geared}}$ is 1.89

- 14i) a) Current ratio is the ratio of a company's current assets by its current liabilities. The current ratio is used to assess a company's short-term liquidity with respect to its available assets & pending liabilities.
- b) The term ~~turnover~~ debtors turnover refers to an accounting measure that quantifies a company's effectiveness in collecting its accounts receivable. It is calculated by dividing average account receivable from net credit sales. It is used in business accounting to quantify how well companies are managing the credit that they extend to their customers.

ii) The finance manager should track current ratio ~~debtors turnover ratio~~ on a regular basis as this ratio will help him ~~keep~~ know whether the company will be able to pay its debt due in next 12 months

The formula of current ratio is -

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current Liabilities}}$$

12: i) $D/E = 1:1$, $E(R_{\text{MKT}}) - R_f = 5\%$
 $R_f = 7\%$ Gross cost of debt = 9%
 $\beta = 1.5$ Tax rate = 25%

$$\begin{aligned}\text{Net cost of debt} &= \text{Interest} (1 - \text{Tax rate}) \\ &\Rightarrow 9\% \times (0.75) \\ &\Rightarrow 6.75\%\end{aligned}$$

$$\begin{aligned}\text{Cost of equity} &= R_f + [E(R_{\text{MKT}}) - R_f] \times \beta \\ &\Rightarrow 7\% + 5\% \times 1.5 \\ &\Rightarrow 7\% + 7.5\% \Rightarrow 14.5\%\end{aligned}$$

$$\text{WACC} = \text{Cost of equity} \times \frac{E}{V} + \text{Net cost of debt} \times \frac{D}{V}$$

$$\Rightarrow 14.5\% \times \frac{1}{1+1} + 6.75\% \times \frac{1}{1+1}$$

$$\Rightarrow \frac{1}{2} [14.5\% + 6.75\%] \Rightarrow \frac{21.25\%}{2} = 10.625\%$$

i) As the company pays all its debt the ROE will fall down as the equity value will go up because of low debt. That means it will be harder for the company to generate profits.

ii) Beta is a measure of stock's volatility in relation to the overall market.

$$\beta = \frac{\text{cov}(i, \text{mkt})}{\text{var}_{\text{mkt}}}$$

ii) Factors that determine beta-

- Nature of the business.
- Financial leverage of the company.
- Operating leverage of the company.

iii) As an investor I would be interested in buying a stock with beta is equal to one because the stock price will tend to move with the market. On the other hand I will not be interested in buying a stock with beta is equal to -1 because that means the stock will go against the market.

iv) Any asset with risk-free rate can have a beta of zero. For Example, Government Bonds.

1) d) IRR is the most reliable means of choosing mutually exclusive projects

2) a) Market price of share / Earnings per share

3) d) All of the above

4) d) ~~10,00,000~~ 12,00,000

5) Ratios for business analysis:-

i) Working capital ratio, it represents a company's ability to pay its current liabilities with its current assets.

ii) Quick Ratio, this ratio shows how well current liabilities are covered by cash & by items with a ready cash value.

iii) Earnings per share, EPS, measures net income earned on each share of a company's common stock.

iv) Price - Earnings ratio, P/E, this ratio reflects investors' assessments of those future earnings.

v) Debt - Equity ratio, D/E, this ratio is used to evaluate a company's financial leverage.

vi) Return on Equity, ROE, helps the shareholders to know how profitable their capital is in the

business they invest in.

7) Limitations of ratio analysis -

- i) ratio analysis is historic
- ii) ratio analysis does not take into account external factors.
- iii) ratio analysis does not measure the human element of a firm.

iv) ratio analysis can only be used for comparison with other firms of same size & type.

v) it may be difficult to compare with other businesses as they might not be willing to share the information.

8i) Stocks trade at different betas in the market because every stock has its own systematic risk, as the size, type & name of the company changes the risk & volatility of the stock changes.

ii) $D/E = 1:2$, $\beta_{\text{geared}} = 1.1$, $\text{Tax} = 30\%$

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

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

$$\Rightarrow \beta_{\text{ungeared}} = \frac{1.1}{\left[1 + \frac{1}{2} (1 - 30\%) \right]} = 0.815$$

~~Q 30~~ β_{geared} for $D/E = 2:2$

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

$$\Rightarrow 0.815 \left[1 + \frac{2}{2} [1 - 30\%] \right]$$

$$\Rightarrow 1.39$$

9) a) In general the market value of investment trust is lower than the net present value.