Business Finance Assignment
Unit - 3 & 4

Q1 d) IRR is most reliable means of choosing between mutually exclusive projects.

Q2 a) Market price of share / earnings per share

Q3 d) All of the above

Q4 d) 1,00,000

Q5 Sales = 3500 (+ve CF)
Costs = 1500 (-ve CF)

(i) Cashflow at date = 1 + 2500 - 1500 [+ve 1000]

(ii) NPV = Net cashflow × Discounting factor.

$= 1000 \left(\frac{1}{1.20}\right)^1 = \frac{1000}{1.20}$

$= 833.33$ NPV

(iii)

0	1	2
	+2500	-1500

$NPV_2 = \left(\frac{2500}{1.20}\right)^1 + \frac{(-1500)}{(1.20)^2}$

$= 2083 - 1041.667$

$= 1041.667$

Q.6 To measure business efficiency, one can use -

- Inventory Turnover Ratio - number of times a company has sold & replished its goods/inventory over specific period of time. The ratio ~~Ratio of market sales~~ measures how many times the total average inventory has been sold over the course of a period.

$$\text{ratio} = \frac{\text{cost of goods sold}}{\text{average inventory}}$$

- Asset turnover ratio - it measures a company's ability to efficiently generate revenues from its assets. In other words, the asset turnover ratio calculates sales as a percentage of the company's assets.

$$\text{ratio} = \frac{\text{revenue}}{\text{total assets}}$$

- Receivables Turnover Ratio - it measures how efficiently a company can ~~achieve~~ actively collect its debts & extend its credit. A company with a higher accounts receivables turnover ratio relative to its peers is favourable.

$$\text{ratio} = \frac{\text{net credit sales}}{\text{average accounts receivables}}$$

Q.7 Limitations of Ratio Analysis -

- ratio analysis information is historic - it is not current.
- ratio analysis does not take into account external factors such as a worldwide recession.
- ratio analysis does not measure the human element of a firm.
- ratio analysis can ~~at~~ only be used for comparison with other firms of the same size & type.
- it may be difficult to compare with other businesses as they may not be willing to share the information.

Q.8 (ii) $\beta_{(geared)} = \beta_{(ungeared)} \times \left(1 + \frac{D}{E}(1-t)\right)$

geared $\beta = 1:1$

Debt to equity ratio = 1:2

Tax rate = 30%

∴ for new geared data, we need ungeared data first.

$$1:1 = \beta_{(ungeared)} \times \left(1 + \frac{1}{2}(1-0.3)\right)$$

$$\beta_{(ungeared)} = \frac{1:1}{\left(1 + \frac{1}{2}(1-0.3)\right)}$$

$$= 0.815$$

$$\text{New. } \beta_{(geared)} = 0.815\left(1 + \frac{2}{2}(1-0.3)\right)$$

$$= 1.385 \quad [\text{new geared } \beta]$$

Q9 c) In general the market value of investment bonds is equal to the net present value.

Q.8 (i) The beta of a stock indicates how volatile is its price in comparison to the overall stock market. This volatility relates to the existing activities of the company. It considers factors which are risk involved, the potential growth of the company. The factors are what determine the beta of the stock different companies have different risk, growth potential & other factors. Thus, stocks of different companies trade at different betas in the stock market.

Q.10 (i) When business managers try to maximise the wealth of their firm, they are actually trying to increase company's stock price. As the stock increases, value of firm increases.
Some of the problems associated with demonstrating that companies actually do operate in such way as to maximise the shareholder's wealth.

1] Conflicts between owners & managers. Since the managers of a firm are directed & guided by a board of directors & because they don't profit directly from the firm's goal to maximise shareholders wealth. This conflict is called Agency Problem.

2] Long term sustainable goals. Profit maximisation of shareholders is one of the top goals of financial management but this type of practice doesn't imply that short term profit will help provide produce long-term goal.

3] Product quality. While maximising wealth, it is very important for the shareholders to make sure that the quality of product isn't ruined.

(ii) DPS = 10

Growth = 8%

MPS = 70

a) $\beta = 1$

Cost of equity = Exp DY + Growth

$$RE = \frac{10}{70} + 8\%$$

$$= 22.2857\%$$

$$RF = 6\% + 5\% \times \beta_1$$

$$\beta_1 = \frac{16.2856}{5}$$

$$\beta_1 = 3.25714$$

New β = old + 80% of old

= 5.86285

New RF = 6% + (5% of 5.86285)

= 35.31426%

$$RF = 35.1426 = \left(\frac{10}{MPS} \times 100\right) + 8\%$$

$$\frac{10}{MPS} \times 100 = 27.81426$$

$$MPS = \frac{1000}{27.31426} =$$

= 36.6109

New MPS = 36.6109

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Q.11 (i) Beta of stock refers to how volatile a stock's price is in comparison to overall stock market.

$$\text{Beta coefficient } (\beta) = \frac{\text{covariance } (Re, Rm)}{\text{Variance } (Rm)}$$

Re → Return of individual stock
Rm → Return on the overall market.

(ii) Beta is the systematic risk of a security compared to market as a whole. It is mostly used in the Capital Asset Pricing Model [CAPM]

(iii) A beta of (-1) indicates that stock is exactly the mirror image of the benchmark. A beta of (+1) indicates that the security's price is more volatile than the market. As an active investor, I would invest in high beta stocks as it is a great investment.

(iv) A zero beta portfolio is a portfolio constructed to have a zero systematic risk.

Q.14 (i) a] Current ratio is used to evaluate a company's ability to pay its short term obligations, such as accounts payable & wages. A current ratio less than 1 is an indicator the company will be unable to pay its current liabilities.

b] Debtor's turnover ~~ratio~~ period measures the efficiency with which a company is able to collect on its receivables or the credit it extends to customer.

(ii) Xylo ltd. will use the current ratio to meet its short term liabilities. Current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations.

Q.15 (i) D:E = 1:1

GRY = 8%

Div Yield = 4%

A managable D:E ratio always provides a good dividend yield.

$$WACC = NCD \times \frac{D}{D+E} + RE \times \frac{E}{D+E}$$

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

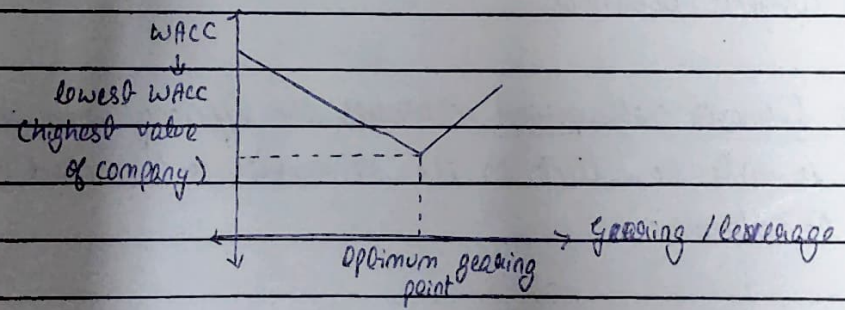
$$= 6\%$$

COC = 6% assuming growth percentage not considered.

No taxation.

(ii) Generally, cost of debt is cheaper than cost of equity.

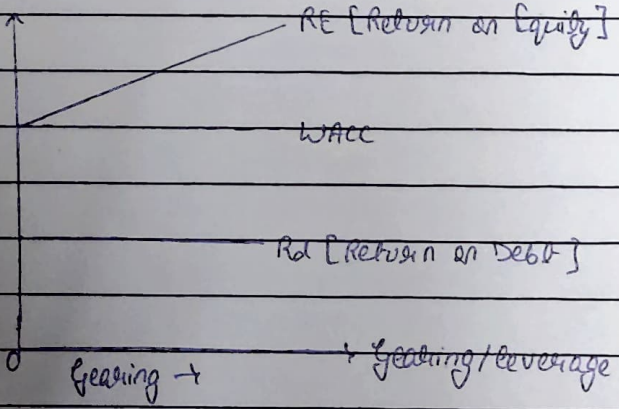
- To reduce the WACC, the manager will try to increase the weight of debt, which will increase the validation of the company.
- But in doing so, the existing shareholders will feel more at risk, & their need for a higher return will increase too.
- Thus, initially the WACC will reduce as the debt increases, that is till a certain point of leverage, beyond that the WACC will increase.



(iii) M & M's first irrelevance proposition states that the valuation of company is independent of its capital structure as it is based on investing decisions.

Assumptions →
- perfect information
- irrelevant capital structure
- No tax on debt
- No agency cost

(iv)



(v) a] Assumption - $\beta_{geared} = \beta_{ungeared} =$ 1.4 as there is insufficient information

$$R_E = R_D + ERD \times \beta$$
$$= 6\% (5\% \times 1.4)$$
$$= 13\%$$

b] Total Market = 100 M_n → Debt = 50%
Equity = 50%

D:E = 1:1 ; Tax = 30%

$$\beta_{geared} = \beta_{ungeared} \times \left(1 + \frac{D}{E}(1-t)\right) = 1.4 \times \left(1 + \frac{1}{1}(1-0.3)\right)$$
$$= 2.38$$

$$R_E = R_f + MRP \times \beta_{geared} = 6\% + (5\% \times 2.38)$$
$$= 1.79\%$$