

Business Finance - Assignment

Unit 3 & 4

Qus 1 (iv) D.

Qus 2 (i) A

Qus 3 (iv) D

Qus 4 (iii) D

Qus 5: (a) Ratios to analyse the efficiency of business are as follows:

(1) Inventory Turnover Ratio:

This ratio shows how long inventory is held on average. The less the ratio, more the company is efficient whereas in case of high ratio, stocks pile up and sales slows down.

$$= \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

(2) Trade Receivable Turnover Period:

It is the measure of average time taken for trade receivables to settle their balances. As ~~per~~ short as possible the period, more desirable the business.

$$= \frac{\text{Trade Receivables}}{\text{Credit Sales}} \times 365$$

(3) Trade Payable Turnover Period:

It is the measure of average time taken by ~~comp~~ business to pay its suppliers. The longer the period, more

preferable the supplier.

$$= \frac{\text{Trade Payable}}{\text{Credit Purchase}} \times 365$$

Ques 9: Limitations of ratio analysis are as follows:

(1) Inflationary Cost:

Financial statements are released periodically and therefore there are time differences between each release. If inflation had occurred in between periods, then real prices are not reflected in financial statement. Thus, the numbers across different periods are not comparable until they are adjusted for inflation.

(2) Historical Information:

The information used in analysis are past real results released by the company hence ~~also~~ cannot analyse future outcome.

(3) Changes in Accounting Policies:

If the company changes its ^{accounting} financial policies and procedures, hence affecting the financial reporting. Due to changes, financial results recorded after change are comparable to that before change.

(4) Operational changes:

When significant operational changes occur, the comparison of financial metrics before and after the operational change may lead to misleading

conclusions about the company's performance and future prospects.

(5) Seasonal Effects:

The inability to adjust the ratio analysis to the seasonality effects may lead to false interpretations of the results from the analysis.

(6) Manipulation of financial statements:

Company may manipulate the actual result to a better result; hence would not show the true nature of business.

Q8: (i) Beta is the measure of volatility or systematic risk of a stock when compared to market.

(ii) when $\beta \approx 0$; the market is stable i.e. profits are consistent.

(iii) when $\beta > 1$; the company has high-volatile profits for ex. if $\beta = 1.5$; the company will get 1.5 times profit.

(iv) when $\beta < 1$; the company and market goes in opposite direction i.e. if market increases company decreases and vice versa.

(II) Tax = 30% $B_u = 1.1$ $D/E = 1.2$

$$B_d = B_u \left(1 + \frac{D}{E} (1 - \text{tax}) \right)$$

$$1.1 = B_u \left[1 + \frac{1}{2} (1 - 30\%) \right]$$

$$1.1 = B_u (1.35)$$

$$B_u = 0.8148$$

$$B_G = B_U \left(1 + \frac{D}{E} (1 - \text{tax}) \right)$$

$$= 0.8148 \left(1 + (1 - 30\%) \right)$$

$$= 0.8148 (1 + 0.7)$$

$$= 0.8148 (1.7)$$

$$B_G = 1.3851$$

Ques 9 (D)

Ques 10 (I) → The main aim of management is to maximize the wealth of shareholders but sometimes they are not consistent with this aim.

→ It is very common to have conflicts between owners and managers as managers do not profit directly from firm's goal to maximize shareholder's wealth.

→ Hence agency problems arise when management do not work in the interest of shareholders.

(I) $ROE = \text{Dividend Yield} + \text{Growth}$

$$= \frac{10}{70} + \frac{8}{100}$$

$$ROE = 28.285\% \quad \text{--- (2)}$$

$$ROE = r_f + (r_m - r_f)\beta$$

$$28.285 = 6 + 5(\beta) =$$

$$\boxed{\beta = 3.857}$$

Systematic risk increased by 80%

$$\beta_N = 3.857 + 0.80(3.857)$$

$$\boxed{\beta_N = 5.8626}$$

$$ROE_N = 6 + 5(\beta_{New})$$

$$= 6 + 5(5.8626)$$

$$\boxed{ROE_N = 35.313\%}$$

$$ROE_N = \text{Dividend Yield} + \text{Growth}$$

$$= \frac{10}{x} + 8\% = 35.313\%$$

$$\boxed{x = 36.61}$$

↙ New market price of share.

Ques.

Q11 (i) Beta of stock.

$$\beta_i = \frac{\sigma_{im}}{\sigma_m^2}$$

where σ_{im} is covariance of stock and market

σ_m : St. deviation of market.

since $\sigma_{im} = \rho_{im} \sigma_i \sigma_m$

So $\beta_i = \frac{\rho_{im} \sigma_i \sigma_m}{\sigma_m^2}$

$$\beta_i = \frac{\rho_{im} \sigma_i}{\sigma_m}$$

where ρ_{im} is correlation coefficient
b/w market and stock.

(ii)
$$B_e = B_u \left(1 + \frac{D}{E} (1 - t_c) \right)$$

(iii) 1. As $(\beta > 1)$ market will grow by 1 company will get 1.5 times profit

(ii) Government Bonds.

Question (i) $\frac{D}{E} = \frac{1}{1}$ $r_f = 7\%$ $\beta = 1.5$

$$COE = r_f + (r_m - r_f)\beta$$

$$= 7\% + (5\%)1.5$$

$$COE = 0.145$$

$$COE = 14.5\%$$

$$COD = \text{Gross Debt} \times (1 - \text{tax})$$

$$= 9\% (1 - 25\%)$$

$$COD = 6.75\%$$

$$WACC = \frac{\text{Debt}}{\text{Debt} + \text{Equity}} \times \text{cost of debt} + \frac{\text{Equity}}{\text{Debt} + \text{Equity}} \times \text{cost of equity}$$

$$= \frac{1}{2} (6.75\%) + \frac{1}{2} (14.5\%)$$

$$WACC = 10.625\%$$

$$\text{Debt} = 0$$

$$B_u = B_u [1 + (1 - t_o x)]$$

$$1.5 = B_u [1 + (1 - 0.25)]$$

$$B_u = 0.8571$$

$$\text{COE} = r_f + (\text{Am} - \text{U}_f) B_u$$

$$= 7 + 5 \times 0.8571$$

$$\text{COE} = 11.285$$

$$\text{Debt} = 0$$

$$\text{WACC} = \frac{\text{Debt} + \text{Equity}}{\text{Debt} + \text{Equity}} \times \text{Cost}$$

$$= \frac{1}{1} \times 11.285$$

$$\text{WACC} = 11.285$$

Qus 14 (I)
(a)

Current Ratio:

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

Uses: (1) This ratio is used to assess whether the company will be able to pay its bills over the next few months.

(2) It provides a comparison of an estimate of amount of money due to be received in short term with an estimate of amount of money to be paid.

(3) A low ratio would indicate that company will face issues paying to its creditors.

(4) An excessively high ratio would mean that there is a pile of cash tied up in unproductive short term assets.

(D) Debtors Turnover Ratio:

$$\text{Debtors Turnover Ratio} = \frac{\text{Average Accounts Receivable}}{\text{Net Credit Sales}}$$

Use:

(1) This ratio measures how well a company uses and manages its credits. It extends to customers and how quickly the customer pays.

(2) A high ratio would mean the corporate collection processes are efficient with quality customers.

(3) A low ratio would indicate the result of inefficient collection processes.

(II) (i) The finance manager should use quick ratio.

$$(ii) \text{ Quick ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities.}}$$

(iii) This ratio aims at looking short term liquidity.

(iv) This ratio considers what would happen if all creditors accounts were settled immediately.

(v) A quick Ratio of much less than 1 would mean that the company will face problem in paying debts.

Q15 (i) An investor might buy shares of this company, because it provides high dividend yield of 4%; no-doubt the company may be risky but it has attractive dividend yield.

Net cost of debt = 8%.

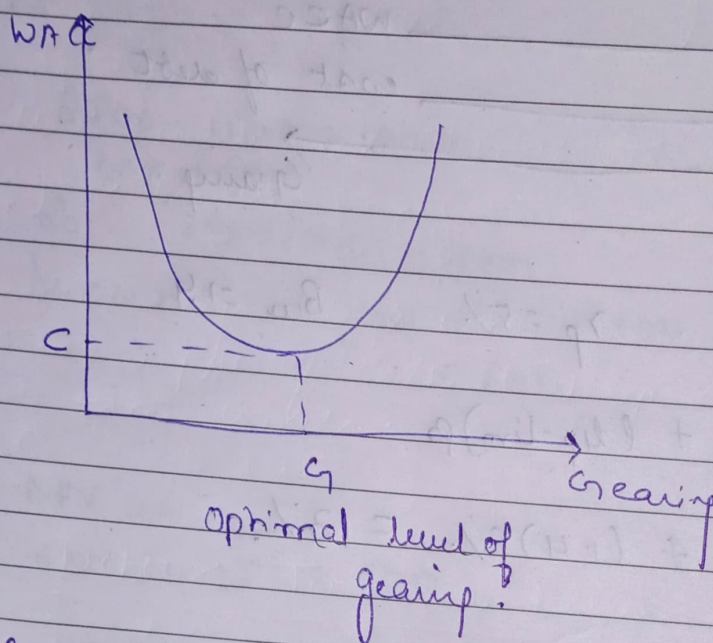
Net cost of equity = 490.

$$WACC = \frac{4\% + 8\%}{2} = 6\%.$$

(ii) Traditional View:

→ as focused on Optimised level of gearing
 → It believed that increasing level of gearing i.e. increasing debt would bring down cost of capital (due to tax effects) but
 Spiral

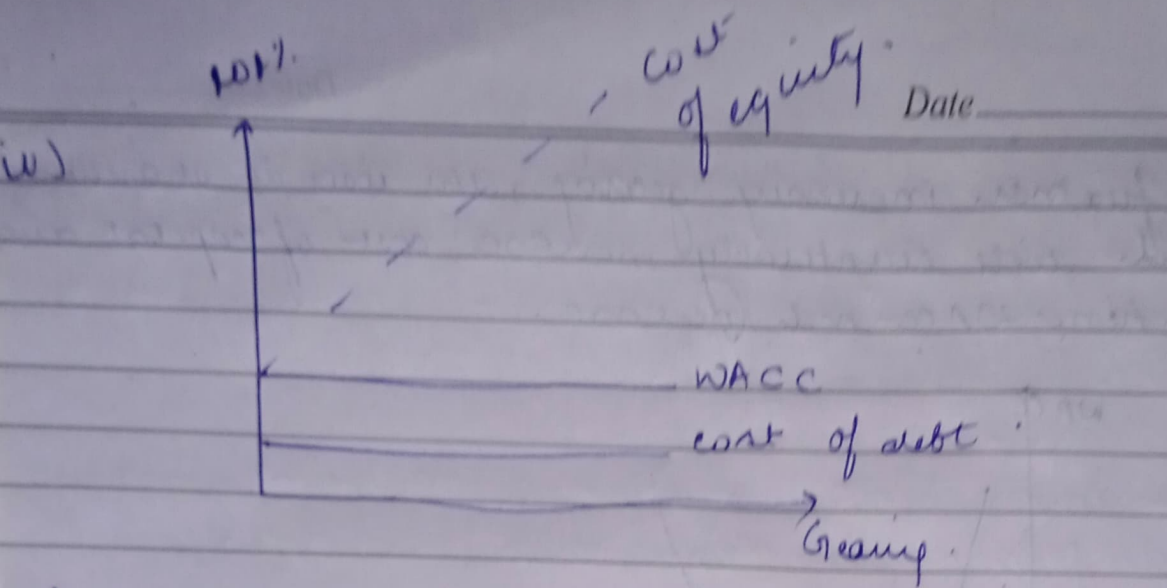
On further increasing gearing, the risk to shareholders and will eventually increase cost of capital and hence WACC will increase.



(iii) First irrelevance proposition of Modigliani & Miller states the market value of a firm is independent on its financial structure.

Assumptions.

- There are no taxes.
- Debt is risk free.
- There are no agency cost.
- No information asymmetries.
- Unlimited personal & company borrowing same interest.



(v) $r_f = 6\%$ $r_p = 5\%$ $B_{un} = 1.4$

$$COE = r_f + (B_p - L_m) \beta$$

$$= 6\% + (1.4)5\% = 13\%$$

(b) Total market Capitalisation = 100m
Market Value of debt = 50%

$$D/E = 50\% / 50\% = 1/1 = 1:1$$

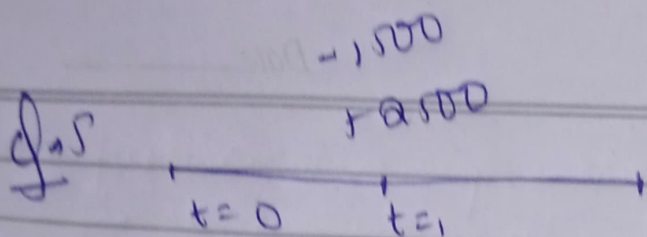
$$\text{tax} = 0.3$$

$$B_u = 1.4 / (1 + (1 - 0.3)) = 0.36$$

(c) $COE = r_f + (B \times r_p)$
 $= 6\% + 0.36(8\%)$

$$\boxed{COE = 12.9\%}$$

Date _____



tax $\rightarrow 40\%$

Discount rate $\rightarrow 20\%$

(i) Net cash flow $\{t=1\}$

$$2500 - 1500 = 1000$$

tax $\rightarrow 40\%$

$$\text{So } 1000(40\%) = 400$$

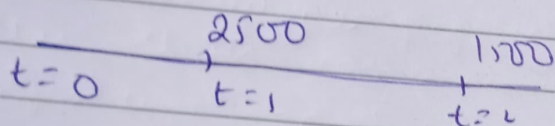
$$\text{hence net cash flow} = 1000 - 400 = 600$$

(ii)

NPV at $t=0$

$$600(1.2)^{-1} = 500$$

(iii)



$$\begin{aligned} \text{Net cash flow} &= 2500(1 - 0.4) \\ \text{at } t=1 &= 2500(0.6) \\ &= 1500 \end{aligned}$$

Inflow, so, NPV at $t=0 \Rightarrow 1500(1.2)^{-1} = 1250$

Outflow, so NPV at $t=0 \Rightarrow 1500(1.2)^{-2} = -1041.667$

So, NPV at $t=0$

$$1250 - 1041.667$$

$$A = 208.34$$