

BF - Assignment

Unit → 3 & 4

Q1 D

Q2 A

Q3 D

Q4 D

Q6 Ratio to study if we want to know about business efficiency are:

- Inventory turnover ratio: This ratio shows how long inventory is held on an average. The higher the ratio, less efficient is the business which means stock is piling up & lower the ratio means business is efficient. $\Rightarrow \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$

- Trade Receivable Turnover Period:

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

average time taken for trade receivables to settle their balances. We want this period to be as short as possible.

- Trade Payable Turnover Period : ~~365~~

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

→ average number of days of credit that a company has from its suppliers.

Q7: limitations of ratio analysis are :

- (1) Historical information : Since information used in analysis is based on real past results released by the company & hence it won't necessarily represent future company performance.
- (2) Inflationary effects : Since financial statements are released periodically, there are time differences b/w each release. If inflation has occurred b/w period, then real prices are not reflected in financial statements. Thus we can only compare those numbers when they are adjusted for inflation.
- (3) Changes in accounting policies : If the company has changed its accounting policies, this may significantly affect financial reporting. The key financial metrics utilized in ratio analyses are altered & the financial results recorded after the change are not comparable to results recorded before the change.
- (4) Operational changes : When significant operational changes occur, the comparison of financial metrics before & after the operational change may lead to misleading conclusions about company performance & future growth.

(5) Seasonal effects : The inability to adjust ratio analysis to seasonal effects may lead to false interpretation of the results from the analysis.

(6) Manipulation of financial statements : Ratio analysis is based on information reported by company in its financial statements which can be easily manipulated & hence wouldn't show the true nature of business.

Ques (8) (A)

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

(ii) Different stocks trade at different betas because not every line of business is different in nature.

(iii) If $B < 1$, it means the company is providing stable profits.

(iv) If $B > 1$, this means company is highly volatile i.e. if market is earning '1' then our company will earn 1.5 times.

(v) If $B < 1$, it means if market is growing our company is declining & vice versa.

(ii) Tax = 30%

$$B_G = 1.1$$

$$D/E = 1:2$$

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

$$1.1 = B_U \left[1 + \frac{1}{2} (0.7) \right]$$

$$B_U = 0.8148$$

Now: new D/E ratio is : 2:2

$$B_G = 0.8148 \left[1 + (0.7) \right] \Rightarrow 0.8148 \left[1.7 \right]$$

So, new geared beta : 1.3852

Ques 9 D.

Ques 10 (i) The main aim of management is to maximize the wealth of shareholders but this aim - Sometimes they are not consistent with this aim.

(ii) It is very common to have conflicts b/w owners and managers as managers don't profit directly from firm's goal to maximize Shareholder's wealth.

iii) Hence agency problems arise when management do not work ~~at~~ with interest of shareholders.

II $ROE = \text{Divident Yield} + \text{Growth}$ ✓

$$\Rightarrow \frac{10}{70} + \frac{8}{100} = 22.85\%$$

$$ROE = R_f + (R_m - R_f) \beta$$

$$22.85 = 6 + (5) (\beta) = 3.257$$

systematic risk increased by 80%

$$\beta_N = 3.257 + 0.80 (3.257)$$

$$\beta_{new} = 5.8626$$

$$ROE_N = 6 + 5 (\beta_{new}) = 6 + 5 (5.8626) = 35.313\%$$

$$ROE_{new} = \frac{10}{26} + 8\% \Rightarrow 35.313\%$$

$$DC = 36.61$$

New market value of share.

d) (i) Beta of stock

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

where σ_{im} : covariance of stock & market

σ_m : st. deviation of market.

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

$$\text{so, } \beta_i = \frac{\rho_{im} \sigma_i \sigma_m}{\sigma_m^2} \Rightarrow \frac{\rho_{im} \sigma_i}{\sigma_m}$$

where: $\rho_{im} \Rightarrow$ correlation b/w market & stock.

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

(iii) As an active investor we would invest in $B=1$ as if we will invest in $B=-1$ even if market is growing & our company wouldn't be indeed falling.

(iv) Gilt-edged / Govt. bonds.

Ques: (12)

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

$$= 7 + 5(1.5)$$

$$\Rightarrow 0.145 \cdot 14.5\%$$

$$LOD = \text{Unlevered debt} (1 - \text{tax})$$

$$= 9(1 - 0.25)$$

$$= 6.75\%$$

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

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

$$= 10.625\%$$

$$(ii) B_u = B_v / \left[1 + \frac{D}{E} (1 - \text{tax}) \right]$$

$$1.5 = B_v / \left[1 + (1 - 0.25) \right]$$

$$B_v = 0.8571$$

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

$$= 7 + 5(0.8571)$$

$$= 11.2857\%$$

$$WACC_{\text{new}} \Rightarrow \text{cost of equity} = \boxed{11.2857\%}$$

Q14

I

Page No.

Date

(i) Current Ratio : $\frac{\text{Current assets}}{\text{Current liabilities}}$

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

b) 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.

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

d) A ~~ext~~ excessively high ratio would mean that there's a pile of cash tied up in unproductive short term assets.

(ii) Debtors turnover Period : $\frac{\text{Average accounts receivable}}{\text{Net credit sales}}$

=> $\frac{\text{Average accounts receivable}}{\text{Net credit sales}}$

Uses a) This ratio measures how well a company uses & manages its credits. It extends to customer & how quickly the cost customers delay.

b) A high ratio would mean the corporate's collection processes are efficient with quality customers.

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

II

i) The finance managers should use quick ratio.

Page No.	
Date	

(ii) 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 company will face problems paying its creditors.

Ques 15

(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.

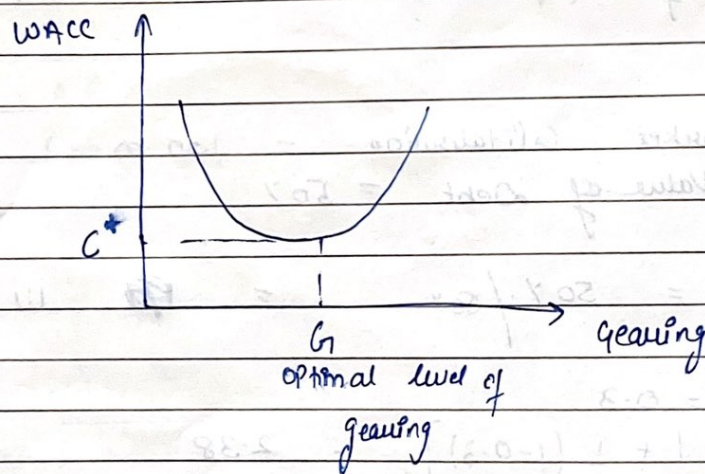
Net cost of debt = 8%

Net cost of equity = 4%

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

(ii) Traditional View:

- It focussed on optimised level of gearing.
- It believed that increasing in level of gearing i.e. increasing debt would bring down cost of capital & (due to tax effects) but on further increasing gearing, the risk to shareholders & will eventually increase cost of capital & hence WACC will increase.



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

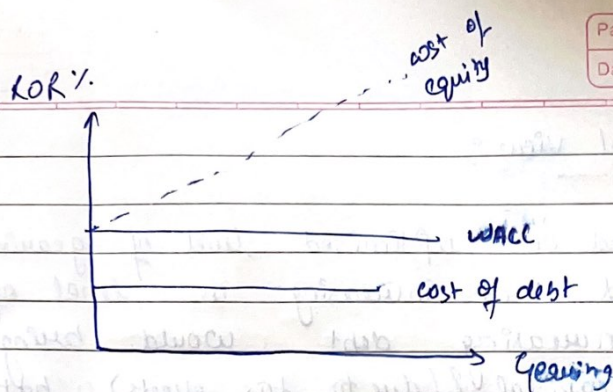
Assumptions:

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

→ 40%.

nt rate = 20%.

(iv)



(v)

$M_f = 6\%$

$k_{cp} = 5\%$

$B_{un} = 1.4$

$$COE = M_f + (M_f - k_{cp}) B \Rightarrow 6\% + (1.4)(5\%) = 13\%$$

(b)

Total market capitalisation = 100 m
market value of debt = 50%.

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

tax = 0.3

$$B_u = 1.4 \left(1 + \frac{1}{1} (1 - 0.3) \right) = 2.38$$

(c)

$$COE = M_f + (B \times k_{cp}) = 6\% + 2.38(5\%) = 17.9\%$$

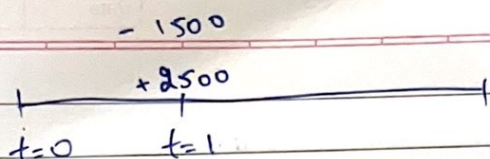
1250

= 1041.667

7

Q5

I



tax $\rightarrow$ 40%.
Discount rate = 20%.

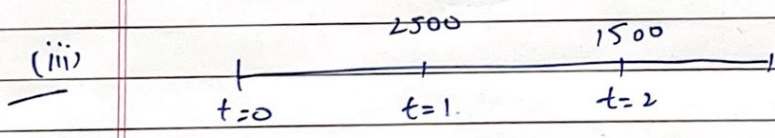
(i) Net cash flow: (t=1)

$$2500 - 1500 = 1000.$$

tax $\rightarrow$ 40%.

So, $1000 (0.4) = 400$
hence net cashflow: $\Rightarrow 1000 - 400$
 $\Rightarrow 600.$

(ii) NPV at t=0.
 $600 (1.2)^{-1} = 500.$



net cashflow at t=1 = $2500 (1 - 0.4) = 2500 (0.6) \Rightarrow 1500.$

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

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

So, NPV at t=0 $1250 - 1041.667$
 $= \boxed{208.34.}$ Ans.