

BF Assignment

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$$(i) \text{ Cash flow: } 2500 - 1500 \\ = 1000$$

$$\text{net cashflow} = 1000 / (1 - 0.4) \\ = 600.$$

(ii) NPV at $t=0$

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

$$(i) \text{ Cash flow at } t=1 \quad 2500(0.6) = 1500$$

$$\text{in flow at } t=0 \quad 1500(1.2)^{-1} = 1250$$

$$\text{our flow at } t=0 \quad 1500(1.2)^{-2} = 1041.67$$

$$\text{Net NPV} \Rightarrow 1250 - 1041.67 \\ = 208.34.$$

$$(i) \text{ Inventory turnover ratio: } \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Higher the ratio, less efficient the business
if vice-versa.

(ii) Trade Payable Turnover $\rightarrow \frac{\text{Trade Payable}}{\text{Credit Purchase}} \times 365$

(iii) Avg. time taken by trade company to pay to its creditors.

(iii) Trade Receivable turnover $\rightarrow \frac{\text{Trade Receivable}}{\text{Credit Sales}} \times 365$

Avg time taken for trade Receivables to settle the balances.

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Limitations

- $\rightarrow$ Historical information: Since info used in analysis is based on real past results released by Co. $\therefore$ hence it won't necessarily represent future Co. performance.
- $\rightarrow$ Inflation affects $\rightarrow$ Since financial statements are released periodically, if inflation has occurred b/w periods, real prices aren't reflected in financial statements.
- $\rightarrow$ changes in accounting policies $\rightarrow$ if Co. has changed its accounting policies, this may significantly affect financial reporting.
- $\rightarrow$ Operational changes $\rightarrow$ When this occurs the ratios cannot be compared rationally.

Manipulation of financial statements : Ratio analysis is based on information reported by company & hence can be manipulated.

Q11 Beta is a measure of volatility of a stock when compared to market.

Different stocks have different beta because every line of business is different in nature.

If $B = 0$, this means stable returns.

If $B > 1$, aggressive returns (highly volatile)

If $B < 0$, it means as the market grows the company falls & vice versa.

$$D/E = \frac{1}{2}, \quad B_M = 1.1, \quad T = 30\%$$

$$1.1 = B_{un} \left[1 + \frac{1}{2}(1 - 0.3) \right]$$

$$\therefore B_{un} = 0.8148$$

$$\text{Now } D/E = 2:2$$

$$\therefore B_u = 0.8148 (1 + 0.7) = \boxed{1.3852}$$

i) Main aim of management is to maximize wealth of shareholder but sometimes they aren't consistent with their aim.

(ii) Conflicts are very common with owners & managers.

(iii) Hence agency problems arise when managers doesn't work with interest of owners.

(11)

$$ROE = DY + g$$

$$= \frac{10}{70} + \frac{8}{100} \Rightarrow 22.285\%$$

$$ROE = R_f + (R_i - R_m) \beta \Rightarrow 6 + 5(\beta) = 22.285$$

$$\beta = 3.257$$

$$\beta_{new} = 3.257 + 0.8(3.257)$$

$$= 5.8626$$

$$ROE_{new} = 6 + 5(5.8626)$$

$$= 35.313\%$$

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(iii) Hence agency problems arise when management do not work with interests 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%

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

$$\beta_{new} = 5.8626$$

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

$$ROE_{new} = \frac{10}{36} + 8\% \Rightarrow 35.313\%$$

$$DC = 36.61$$

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.

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

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

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

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

(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.

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

$$= 7 + 5(1.5)$$

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

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

$$= 9(1 - 0.25)$$

$$= 6.75\%$$

$$WACC : \frac{\text{Cost of Debt}}{\text{Debt} + \text{Equity}} \times \text{cost of debt} + \frac{\text{Equity}}{\text{D} + \text{E}} \times \text{cost of eq.}$$

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

$$= 10.625\%$$

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

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

$$B_u = 0.8571$$

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

$$= 7 + 5(0.8571)$$

$$= 11.2857$$

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

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

ii) Debtors turnover Period : $\frac{\text{Accounts Receivable Turnover}}$

=> $\frac{\text{Average accounts Receivable}}{\text{Net credit Sales}}$

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 & practices are efficient with quality customers.

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

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 company will face problems paying its creditors.

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(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.

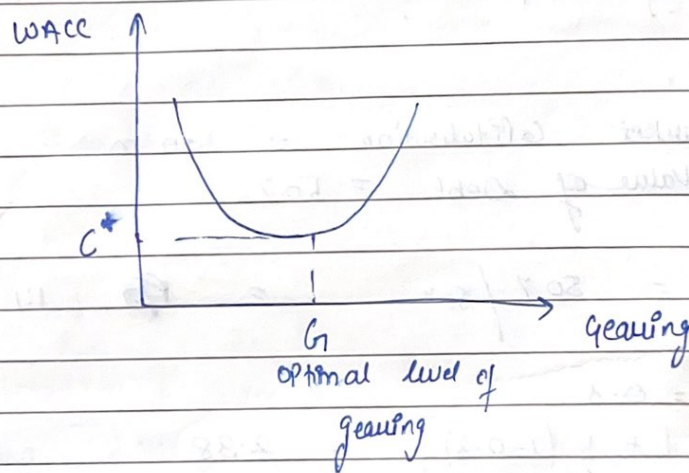
net cost of debt = 8%

net cost of equity = 4%

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

(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 $\downarrow$ (due to tax effects), but on further increasing gearing, the risk to shareholders $\uparrow$ will eventually increase cost of capital $\uparrow$ 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.