

Assignment - 2 Business Finance

(1) Which of the following statements is NOT true about Internal Rate of Return (IRR) method of project appraisal.

⇒ D) IRR is the most ~~re~~ reliable means of choosing between mutually exclusive projects.

(2) Which one of the following is the correct formula for the price Earnings ratio?

⇒ A) Market price of a share / Earnings per share.

(3) While calculating Inventory turnover period, Inventories include

⇒ D) All the above.

(4)

⇒ Company's cash inflow from operating activities = $800,000 + 1,20,000 + (1,00,000)$
 $= \underline{\underline{10,20,000}}$

(5)

⇒ Project generates

i) 2500 in Sales, 1500 in costs (excluding depreciation)

⇒ At date 1,

Cash flow = Cash Inflow (2500) - Cash Outflow (1500)
 $= 1000$

Tax Rate 40% ∴ Tax = 400

∴ Total Cash flow = 600

ii) NPV of the project = $\frac{6000}{(1+20\%)} = 500$

iii) Decreases as the denominator increases.

Q6)

⇒ Some of the most commonly considered efficiency ratios include inventory turnover, accounts receivable turnover, accounts payable turnover and the cash conversion cycle.

① The inventory turnover ratio gives an indication of how many times a company sells and restocks its inventory over a given period of time. Higher inventory turnover ratios are generally considered favourable, evidencing brisk sales, but excessively frequent turnover may indicate inefficient ordering or that a company may be having difficulty meeting demands for orders on a timely basis.

② Accounts receivable turnover ratio:-

It provides an indication of a company's efficiency at collecting sales revenues on a timely basis. Companies using a payment terms of 30 to 60 days and being paid on time yields ~~an~~ account receivable turnover ratios between 6 to 12. Low ratios can indicate payment collection problems.

② Account Payable Turnover Ratio:

The accounts payable turnover ratio is a short term liquidity metric that gauges how efficiently a company manages its outflow of cash, especially in relation to paying its creditors.

③ Cash Conversion Cycle:-

The cash conversion cycle combines the measurements of inventory, accounts receivable and accounts payable turnover ratios to give a more complete summary of a company's overall proficiency at managing its inflows and outflows of cash.

Q7)

⇒ Limitation of Ratio Analysis:

- Ratio Analysis does not measure the human element of a firm.
- Ratio Analysis can only be used for comparison with other firms of the same size and type.
- Ratio Analysis does not take into account external factors such as a worldwide recession.
- The peculiarities of trade may make ratio analysis less useful because of difficulty to ~~interpret~~ interpret few certain ratios.

Q8.)

(i) $\Rightarrow$ Beta indicates how volatile a stock's price is in comparison to the overall stock market. The beta varies because the industry varies accordingly the risks involved also varies. Difference in ratios, Brand Value, etc results to different betas in the stock market

(ii) Geared beta = 1.1

Debt equity ratio = 1:2

Tax rate of 30%

Geared beta = ?

debt equity ratio = 2:2

$$\text{Geared Beta} = \text{Ungeared beta} + (1 + D/E) \times (1 - \text{Tax})$$

$$1.1 = x + (1 + 1/2) \times (0.7)$$

$$x = 0.8148$$

$$\begin{aligned} \text{New Geared Beta} &= 0.8148 + (1 + 2/2) \times (0.7) \\ &= \underline{\underline{1.385}} \end{aligned}$$

Q9) IRR is the same 21%

NPV changes to 9,00,900 approx 9 lakhs

~~NPV~~

Q10) Systematic risk is the risk of losing investments due to factors, such as political risk and macroeconomic risk that affect the performance of the overall market.

Specific risk is the risk of losing an investment due to company or industry specific hazard.

Q11) a) The beta of a project is a measure of the systematic risk of the project relative to a diversified portfolio of all risky assets.

The market would have a beta of 1.

The beta of the company (β_c) is given by the following formula :- $\beta_c = \frac{\sigma_{pm}}{\sigma_m^2}$

where, σ_{pm} = covariance between the returns expected from the company and the returns expected from the market.

σ_m^2 = variance of the returns expected from the market.

b) The beta of the company may be measured by :

- looking at the company's historical returns on equity and comparing against market returns, but subject to significant variation for example dependent upon the time period considered.

- considering the industry beta based on a range of companies undertaking similar activities.

c) A stock with a beta of 1 implies it is in the line with the market, hence the company may be useful for short term gain.

A stock with a beta of -1 implies it is opposite to the market. I will not consider this type of companies of short term.

d) Cash.

Q12) a) Cost of equity = Risk-free rate + beta * Equity risk premium

$$= 7\% + 1.5 * 5\% = 14.5\%$$

$$\text{Cost of debt} = 9\% (1 - 25\%) = 6.75\%$$

$$\text{WACC} = 0.5 * 14.5\% + 0.5 * 6.75\% = 10.625\%$$

b) Ungeared beta needs to be computed

$$\beta_o = \beta_u * (1 + D/E (1-t))$$

$$1.5 = \text{Ungeared beta} * (1 + 1/1 * (1 - 25\%))$$

$$\text{Ungeared beta} = 0.857143$$

$$\text{New cost of equity} = 7\% + 0.857143 * 5\% = 11.29\%$$

$$\text{Q13)} \text{ Cost of project} = 40000 \left(\frac{1}{1.15} + \frac{1}{1.15^2} + \frac{1}{1.15^3} + \frac{1}{1.15^4} \right) = 114200$$

$$\text{Payback} = 114200 / 40000 = 2.855$$

$$\text{PI} = \text{PVIF} / \text{Cost} \Rightarrow \text{PVIF} = \text{PI} * \text{Cost} = 1.064 * 114200 = 121509$$

$$\text{NPV} = \text{PVIF} - \text{Cost} = 121509 - 114200 = 7309$$

Cost of Capital ($i = 12\%$)

Q14) a) Current Ratio: $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

To assess whether the company will be able to pay its over the next few months.

b) Debtors turnover period:

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

This is a measure of the average length of time taken for debtors to settle their balance.

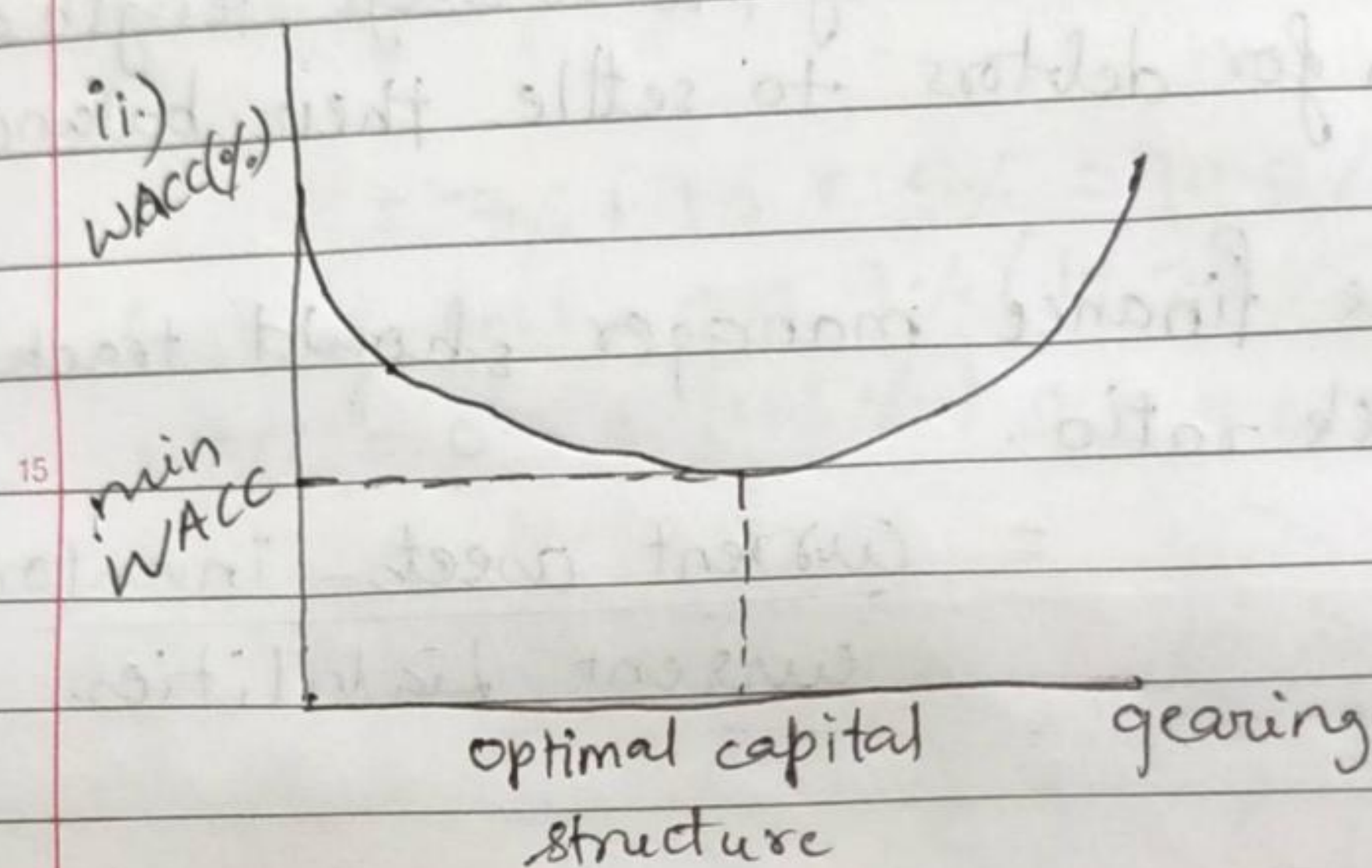
c) The finance manager should track the quick ratio.

$$= \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

15) i.) Investors will invest in the shares of this company.

- To diversify the portfolio
- To maximise return as they would be believing in earning higher returns.
- Company's own faith and belief.

The suitable cost of capital is anything slightly higher than 6% ($8\% \times 0.5 + 4\% \times 0.5$)

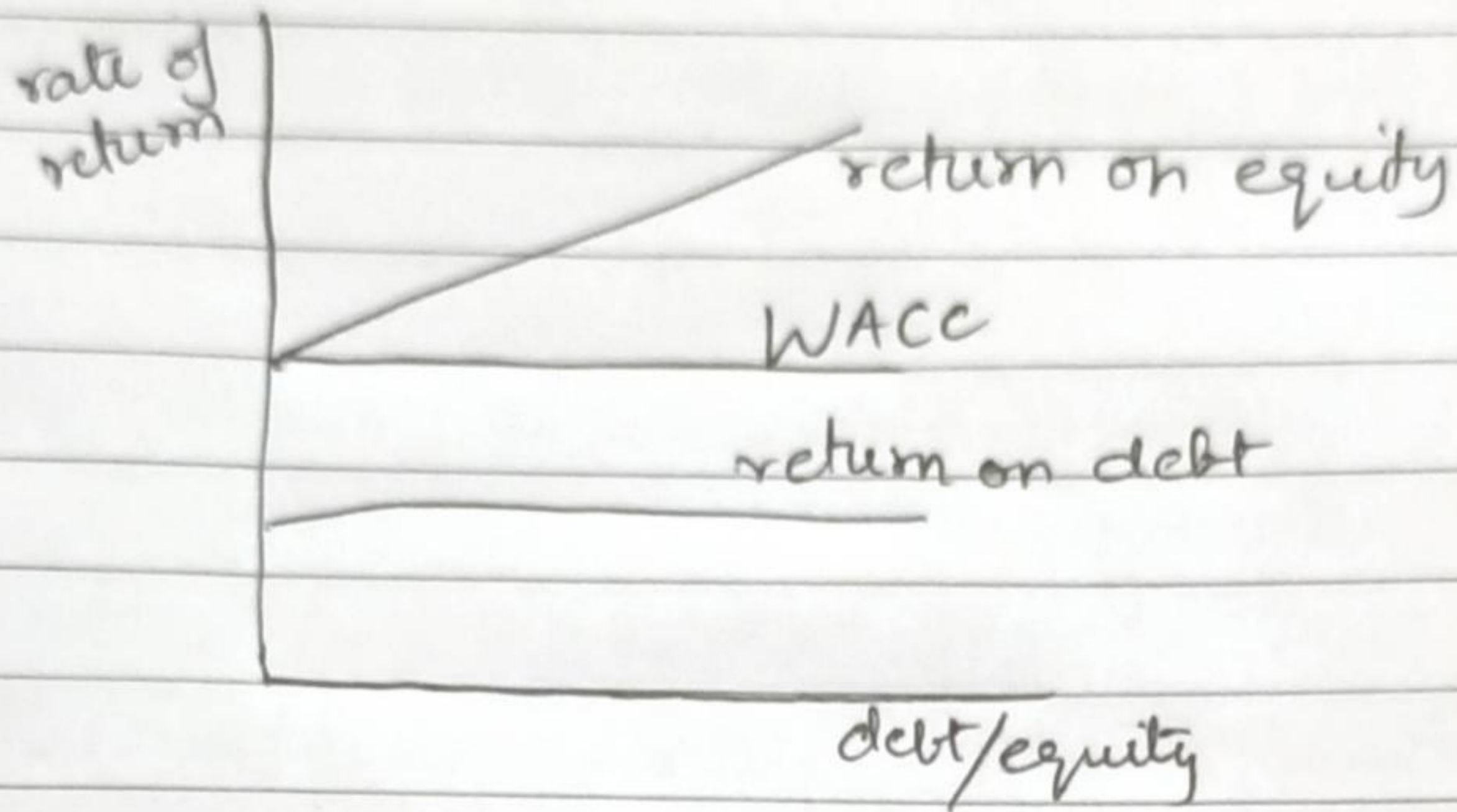


iii.) The market value of any firm is independent of its capital structure.

The following are the assumptions:

- There are no taxes in the company.
- Debt is risk-free.
- There are no agency costs.
- There are no information asymmetries.

iv.)



v.)

a) Cost of equity = $6\% + 1.4 \times 5\% = 13\%$

b)

levered equity beta = $1.4 * [(1 + 0.5/0.5) * (1 - 0.3)]$
 $= \underline{2.38}$

c) Cost of equity = $6\% + 2.38 \times 5\%$
 $= \underline{17.9\%}$