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

Ans D) IRR is most reliable means of choosing between mutually exclusive projects

2 Which one of the following is correct formula for the price earning ratio?

Ans A) Market price of share / Earning per share

3 While Inventory turnover period. Inventories include

Ans D) All of the above

4 What is the company's cash inflow from operating activities in the year ended 2019?

Ans c) 9,00,000 (Operating Profit + (Decrease in working capital)
└ 8,00,000 + (1,50,000 - 2,50,000)

5) The project generated 2500 in sales and 1500 in cost (excluding depriciation) at date 1. Tax rate = 40%. Discount rate for project is 20%.

i) What is the cash ~~flow~~ flow from project at date 1?

Sales - cost = 2500 - 1500 = 1000 (EBIT)

(-) Taxes = (40% of 1000) = -400

Cash flow from project = 600

ii) What is the NPV of the project?

PV of Inflow = 600 / (1 + 0.2) = 600/1.2 = 500

NPV = PV of Outflow - PV of Inflow = $\left(\frac{2500}{1.2} - \frac{2100}{1.2}\right) = \frac{400}{1.2} = 500$

iii) NPV goes up.

6 If you want to measure any business efficiency, what ratios you will analysis and why?

To Measure any business efficiency the following Ratios might be taken into consideration are:-

① Inventory turnover period:-

Stock turnover period = $\frac{\text{Inventories}}{\text{cost of sales}} \times \frac{365}{\text{period}}$

It is an attempt to access how much inventory company holds in relation company's operation shows how long inventory is held for an average. Inventory turnover period that is less rapid than other companies in the same industry might indicate an inefficiently large inventory holding. Thus helping in measuring the business efficiency.

② Trade receivable turnover period.

This measure the average length of time taken for trade receivables to settle their balance.

Trade receivable turnover period = $\frac{\text{trade receivables}}{\text{Credit sales}} \times 365$

It is desirable for this period to be as short as possible Better for the company's cash flow if those owing the company money pay as quickly as possible. It can be however be difficult to press for speedier payment. Doing so could damage the company's relationship with its customers. This helps in measuring business efficiency as if the business will have higher trade receivable turnover period then it could result into default earlier cause of the lack of liquidity.

7 Briefly list down limitation of ratio analysis.

The limitation of ratio analysis are as follows

- It diverts attention from the figures and statements themselves: It is important to look aspects such as the sheer size of the company under consideration. A larger company will have more bargaining power and may be able to enjoy economies of scale. It is also important to look at information in the notes which is not usally reflected in ratios.
- Comparisons can be affected by different accounting policies or by other external factors: For example, two in avilage companies use different methods for the calculation of depreciation then any ratio based on their financial statements may not be comparable. Two similar business could be affected to different extents by current movements. A vehicle distributor selling Japanese cars will be exposed to movement in the value of Yen to a much greater extent than a distributor of British cars.
- There would be ~~partial~~ peculiarities of the trade which make it difficult to interpret certain ratio: A property company say, might appear to have a very low return on capital employed. One reason for this is that the value of the properties shown in the statement of financial position will be updated on regular basis, thus increasing capital employed. This will make it difficult to compare results with a business whose asset have not been revalued.
- The statements could have been deliberately distored by so called creative accounting: This involves the delibrate abuse of the subjectivity inherit in accounting to select accounting policies or make assumptions which tend to bias the figures in the direction chosen by management.

8i) State possible reasons why stocks trade at different betas in stock market.

Beta ~~can be~~ is regarded to be a measure of systematic risk associated with a particular stock/company for a company correlation.

$\beta = \frac{Cov(security, market)}{Variance(market)} = \frac{\sigma_{im}}{\sigma_m^2}$ or $\frac{\rho_{im}\,\sigma_i}{\sigma_m}$

The possible reasons that stocks trade at different beta in stock market are ① The risk associated with that stock ② The volitality of the stock ③ Market dominace of the stock ④ Other competitors (does the stock have a market name or not or any kind of monopoly in the market ⑤ How would changes in the market affect a particular stock of different from one company and different for other. ⑥ Interest Rate (cost of equity for a stock $= R_F + [MRP]\beta$)

Therefore stocks trade at different betas in stock market.

ii) A company has a geared beta of 1.1 on debt to equity ratio of 1:2 and corporate tax 30%. Calculate geared beta if the debt equity is 2:2

$\beta_{geared} = \beta_{ungeared}\left[1 + \frac{B}{E}(1-t)\right]$

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

$\beta_{ungeared} = \frac{1.1}{1.35}$, $\beta_{ungeared} = 0.814$

New Debt-Equity = 2:2 = 1:1

$\beta_{geared} = \beta_{ungeared}\left[1 + \frac{B}{E}(1-t)\right]$

$= 0.8148\left[1 + \frac{1}{1}(1-30\%)\right]$

$= 0.8148\,[1+0.7)$

$= 0.8148 \times 1.7$

$\beta_{new} = 1.3852$

9) Which of the following statements is true?

Ans D) In general the market value of investment trust is not correlated to the net present value

10) : In theory, companies exist to maximize the wealth of its owners Explain the problems associated with demonstrating that companies actually do operate in such a way as to maximise their shareholders wealth

The problems associated with demonstrating that companies do operate in such a way as to maximise their shareholders wealth are as follows:

It may be be difficult to envisage the director acting in this way. There are many ways in which maximising shareholders wealth could be against the director best interest. Example Shareholders can diversify risk in ways that directors cannot and so director may be more risk averse in decision making than shareholders would prefer.

Many director have sufficient integrity to over any such pressure, but it will be difficult to distinguish them from those who have not.

ii) The stock of XYZ Ltd is presently trading at Rs 70. Current dividend per share is Rs 10. The company is assumed to grow sustainably at the rate of 8%. Current risk free rate is 6% and market risk premium is 5%. If systematic risk is increased by 80%. Calculate the effect on the share price.

Market Price = 70 Rs
Dividend = 10
growth = 8%
Let β = x.

$R_F = 5\%$.
$E(R_m - R_F) = 5\%$
$R_m = 5 + 6$
$R_m = 11\%$

Required return = dividend yield x 100 + growth

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

$14.2857 + 8$
$= 22.2857$.

Cost of Equity $= R_F + E(R_m - R_F)\beta$

$22.2857 = 5\% + 6\beta$

$\frac{17.28571429}{6} = \beta$

$\beta = 2.88096$

β ↑ by 80%.

∴ New β = 5.18571

Cost of Equity = 5% + (6% x 5.18571)
= 36.11428571

Required return

Market risk premium would also ↑ thus this is not taken into account.

∴ The impact of Market Price

β	MP
2.88096	70
5.18571	x

$x = \frac{70 \times 5.18571}{2.88096}$

$x = 126$

Increase % $= \left(\frac{126 - 70}{70} \times 100\right)$

$= 56/70 \times 100 = 80\%$

∴ There would be an increase of 80%.

Q11 Explain the beta of a stock along with formula

beta of a stock is regarded as a measure of systematic risk associated with particular stock.

$\beta_i = \frac{Cov(i, market)}{Var(market)}$ $\quad$ $Cov(i, market) = \sigma_i \times \sigma_m \times \rho_{im}$ (correlation with i and m)

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

It shows how security are correlated - Interact with each other.

ii How can beta be determined?

Beta can be determined as the covariance between a security and market which is then divided by the variance of the market.

iii As an active stock market investor, would you invest in a stock with beta of 1 or -1?

Beta 1 indicates that the security price tends to move with the market. Beta -1 indicates that the stock has an inverse relation with the market. So as an investor if I expect the price to rise for the market to react positively then I will invest in a stock with beta one and if I expect the prices to fall for the market to react negatively then I will invest in a stock with beta -1.

iv Name a financial instrument that is likely to have a beta of 0?

Nifty or Sensex can be a financial instrument that is likely to have a beta of 0.

12 ABC Pvt Ltd has a debt equity ratio of 1:1. The risk free rate of return is 7% the equity risk premium derived from market is 5% and the gross cost of debt is 9%. Its beta is 1.5 and assume and prosit is taxed at 25%.

i) Calculate its weighted average cost of capital

$R_F = 7\%$ $MRP = 5\%$ $\beta = 1.5$

Gross cost of debt = 9%

Net cost of Debt = $9\% - (25\% \times 9\%)$

$= 0.09 - 0.0225$

$= 0.0675 = 6.75\%$

Cost of Equity = $R_F + (MRP)\beta$

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

$= 0.07 + 0.075$

$= 14.5\%$

$WACC = (K_e \times W_e) + (K_d \times W_d)$

$= \left(14.5 \times \frac{1}{1+1}\right) + \left(6.75 \times \frac{1}{1+1}\right)$

$= 7.25 + 3.375$

$= 10.625\%$

ii) ABC is concerned about its high debt: equity ratio. If ABC were to repay all debt, what would be the require return to equity?

β will be $\beta_{ungeared} = \beta_{geared}\left[1 + \frac{D}{E}(1 - tax)\right]$

$1.5 = \frac{\beta}{1.5}\left[1 + \frac{1}{1}(1 - 25\%)\right]$

$1.5 = \frac{\beta}{1.5}[1 + 0.75]$

$\beta = \frac{1.5}{1.5} * 1.75$

$\beta = 0.85714$

Cost of Equity/ Required return = $R_F + (MRP)\beta$

$= 7\% + (5.1\% \times 0.8714)$

$= 11.2857\%$

Q13 Calculate for Project M. (Discounting factor — Not given)

:) NPV

Below question incomplete

NPV = Present value of Future cash flow - Present value of cash Inflow

14i) Define the following ratios and state its use:

a) Current ratio.

Current ratio = $\frac{\text{current asset}}{\text{current liabilites}}$

It is used to assess whether the company will be able to pays its bill over the next few years. It provides a comparison of an estimate of the amount of money due to be recieved in the short term with an estimate of the amount of money to be paid.

b) Debtors turnover period.

Debtors turnover period ~~may~~ also known trade receivable turnover period. This is a measure of the average length of ~~the~~ time taken for trade receivable to settle their balance.

debtors turnover period = $\frac{\text{trade receivables}}{\text{credit sales}} \times 365$.

It is desirable for this period to be as short as possible. It helps in identifying the liquidity the firm would have and in how much time will they receive their money.

ii) XYLO ltd deals in goods with high turnover period. Its finance manager wishes to ascertain whether the company would be able to meet is short term liabilites. Explain which ratio should he track on regular basis and state the equation of the ratio Suggestion.

Inventory turnover period is the time taken to sell the ~~inventory~~ items inventory after it has been purchased. ~~The~~ High inventory turnover period would cause a problem in the short-term liquidity of the firm. The finance manager should keep a track of the Quick Ratio. (It focuses on ~~t~~ really reliable cash).

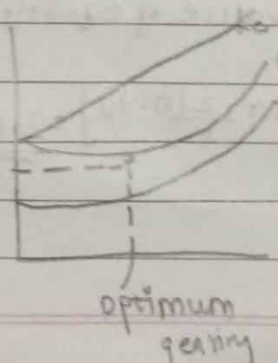
Quick Ratio = $\frac{\text{Current asset} - \text{Inventories}}{\text{Current liabilites}}$.

15 i) A company has debt to equity ratio 1:1, the gross redemption yeild on debt is 8% and the dividend yeild is 4%. Explain why an investor might by shard in the company and suggest a suitable cost of capital for the investor, assuming debt is held till maturity.

The investor might buy the shaw in the company because the dividend yeild is 4%. The investor would get back the amount invested in 25 years assuming that the dividend and the market price remain constant. Since the gross redemption yeild on debt (Percentage return debt earns ~~called~~ at the time it matures) is 8% (which is less). This may associate that the risk that the company has is very less. A suitable cost of capital for the investors would be 10 - 15%. (Doubt)

ii) Explain the traditional view of the effect of gearing on the cost of capital, including why the cost of equity increases in with an increase in gearing. You should include an appropriate diagram to illustrate your answer.

The effect of gearing on cost of capital can be both ways Gearing can be proven useful but it can also have an adverse reaction. If gearing increases the cost of equity increase as the interest given to debt is a fixed expenditure and this increases the risk of the equity shareholders.

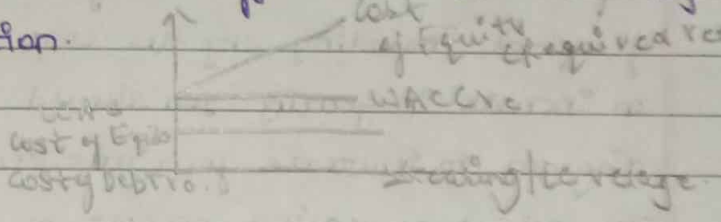


iii Identify Modigliani and Miller's first irrelevance proposition and discribe its underlying assumption

Modigliani and Miller's theory of irrelevance of capital structure It states that capital structure does not affect WACC and there by does not affect the valuation. The underlying assumptio included are:-

1. Only debt and equity financing
2. No tax
3. Perfect information is available to all, No information asymmet
4. Loan is available to all at same rate of interest
5. There is no agency.
6. Interest rate will be constant.

iv Draw a diagram showing the effect of gearing on the cost of capital using Modigliani and Miller's first proposition. According to Modigliani and Miller's first proposition capital structure does not affect WACC and thereby does not affect valuation.



v) Beta is a measure of risk of investing in a security.

a) $R_F = 6\%$ $E(R_m - R_F) = 5\%$ (MRF $\beta_{ungeared} = 1.4$.

Cost of Equity $= R_F + (MRF)\beta$

$= 6 + 5(1.4)$

$= 6 + 7 = \underline{13\%}$

b) Book value of debt = 40% Book value of equity = 60%.

D:E = 4:6 = 2:3 tax = 30%.

$\beta_{geared} = \beta_{ungeared}\left[1 + \frac{D}{E}(1-t)\right] = 1.4\left[1 + \frac{2}{3}(0.7)\right] = \underline{2.0533}$

c) Cost of Equity $= R_F + MRF \times \beta$

$= 6\% + 5(2.0533)$

$= \underline{16.2667\%}$