

Business Finance Assignment-2

1. → ^D A) IRR is the most reliable means of choosing between mutually exclusive projects.

2. → A. $\frac{\text{Marketing Price of Share}}{\text{Earning per share.}}$

3. → D. All of the above.

4. → C. 900000

5.

i Cash Flow $\Rightarrow$ Sales - Cost $\Rightarrow 2500 - 1500 \Rightarrow 1000$

Tax deduction $\Rightarrow 1000 - 40\% \Rightarrow \boxed{600}$

ii Discount Rate $\Rightarrow 20\%$

Net Present Value $\Rightarrow \frac{2500}{(1+20\%)} - \frac{1500}{(1+20\%)} - \frac{400}{(1+20\%)} \Rightarrow \boxed{500.333}$

iii The net present value of the project will increase due to the increase in the time of the payment.

G. There are several ratios used to measure the efficiency of a business as follows:-

(i) Trade Receivable turnover period $\rightarrow$ It is used in business accounting to quantify how well the business is managing the credit that they provide the customers. It is also helpful to measure the frequency of a company's receivables are converted to cash.

(ii) Inventory Turnover Ratio $\rightarrow$ It is an important ratio to measure as to calculate how well the business is turning its inventory into sales.

(iii) Trade Payable Turnover ratio $\rightarrow$ It is used to measure the number of times the business is paying off its creditors or suppliers in an accounting period.

7. The limitations of ratio analysis are:-

- (i) Financial accounting data is influenced by views and hypotheses. Different accounting methods are used which reduces the ability to compare and thus it is less effective.
- (ii) Ratio analysis done using past data and references are taken but there is lack of reference from current or future data.
- (iii) The rate of inflation also affects the ratio analysis majorly.
- (iv) Changes in the operation are ~~unseen~~ unexpected and hence there can be a difference i.e. before the changes and after the changes.

8. (i) Beta measures the expected move in a stock relative to general movement in the overall market.

→ A beta greater than 1 indicates a stock's price swings more widely i.e. it more volatile.

→ A beta less than 1 indicates that a stock's price is less volatile than the overall market.

Reason for different beta is that they might be taking different things into consideration.
A will calculate ~~into~~ of the Beta.

The nature of the business also plays an important role while calculating beta.

9. (ii) B_{geared} of 1.1 on a debt equity ratio 1:2.

Corporate tax $\Rightarrow 30\%$

$$B_{\text{geared}} = B_{\text{ungeared}} \left[1 + \frac{D}{E} (1 - t) \right]$$

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

$$\boxed{0.8148} = B_{\text{ungeared}}$$

When $B/D \Rightarrow 2:2$

$$B_{\text{geared}} \Rightarrow 0.8148 \left[1 + (1 - 30\%) \right] \Rightarrow \boxed{1.38516}$$

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

10. (i) The problems associated in such scenarios are: -

- There might be a ~~clash~~ conflict or clash amongst their shareholder thoughts and the company itself.
- Shareholders are usually interested easy and fast profit, whereas the company thinks ^{and plans} for a long run and future opportunities.
- ~~But~~ It is necessary for the managers to take shareholders into consideration but it is not always true.

(ii) Current dividend $\Rightarrow ₹10$.

Risk free rate $\Rightarrow 6\%$

Growth $\Rightarrow 8\%$

Market risk premium $\Rightarrow 5\%$

~~Risk~~ $B = 1.8$

Required equity $\Rightarrow$ Risk premium $\times B$ + Risk free

$$\Rightarrow (1.8 \times 5) + 6 \Rightarrow \boxed{15\%}$$

Share price $\Rightarrow$

11. (i) Beta is a measure of stock's volatility in relation to the overall market. It measures the expected move in share market relative to movement of the overall market.

* Beta $\Rightarrow$ Covariance of return of an asset w
Variance of return on the overall market

(ii) Beta greater than 1 indicates high volatility, whereas beta less than 1 indicates less volatility of the price in the overall stock market.

(iii) As an advisor, I would advise a stock of beta between 1 & -1.

iv Government schemes has 0 debt

$$12(i) \text{ Cost of equity} \Rightarrow RF + (R_{\text{Equity Risk Premium}} \times \beta) \\ \Rightarrow 7 + (5 \times 1.5) \Rightarrow \underline{14.5\%}$$

$$\text{Net cost of debt} \Rightarrow RF + \text{Gross cost of debt} (1 - 25\%) \\ \Rightarrow 0.0675 \Rightarrow \underline{6.75\%}$$

$$WACC = \text{Net cost of debt} \left(\frac{MV \text{ of debt}}{MV \text{ of debt} + \text{equity}} \right) + \text{Cost of equity} \left(\frac{MV \text{ of equity}}{MV \text{ of debt} + \text{equity}} \right) \\ \Rightarrow 6.75 \left(\frac{1}{2} \right) + 14.5 \left(\frac{1}{2} \right) \Rightarrow \underline{10.625\%}$$

$$(ii) \beta_{\text{levered}} = \beta_{\text{unlevered}} \left(1 + \frac{D}{E} (1 - t) \right)$$

$$1.5 = \beta_{\text{unlevered}} (1 + (1 - 25\%)) \Rightarrow \underline{0.857}$$

$$\text{Required return on equity} \Rightarrow RF + (R_{\text{Equity risk premium}} \times \beta_{\text{unlevered}}) \\ \Rightarrow 7 + (5 \times 0.857) \\ \Rightarrow \underline{11.285\%}$$

$$13(i) \text{ NPV AF} \Rightarrow \frac{1 - \left(\frac{1}{1.15} \right)^4}{0.15} \Rightarrow \underline{2.855}$$

$$NPV \Rightarrow \text{Inflow } 40000 \times 2.855 - \text{PV of outflows at } t_0$$

$$0 = 114200 - \text{PV of outflow at } t_0$$

$$PI \Rightarrow \frac{NPV}{\text{Outflow}} + 1 \Rightarrow 1.054 = \frac{NPV}{114200} + 1$$

$$NPV \Rightarrow \underline{27,308.8}$$

$$(ii) \text{ Cost of capital} \Rightarrow 7308.8 = 40000 \left(\frac{1 - (1+i)^{-4}}{i} \right) - 114200 \\ \Rightarrow 121508.8i = 40000 - 40000(1+i)^{-4} \\ i = \underline{12\%}$$

iii Cost of project $\Rightarrow ₹ 1,14,200$

iv Payback $\Rightarrow \frac{\text{out flow at } t_0}{\text{amount}} \Rightarrow \frac{114,200}{40,000} \Rightarrow \boxed{2.86 \text{ years}}$

14 (a) Current Ratio $\rightarrow$ The ratio ~~which~~ ~~measure~~ of current assets to current liabilities is called current ratio. It is used to evaluate a company's ability to pay its short term obligations such as accounts payable and wages. Higher the value, stronger the financial position.

b) Debtor turnover period $\rightarrow$ It is also known as Receivable Turnover Ratio, it is an accounting measure used to measure how effective a company is in extending credit as well as collecting debt. It is used to measure how many times a company's receivables are converted to cash in a certain period of time.

(ii) The financial manager must use "Current Ratio" so as to meet its short-term obligation.

* Current Ratio $\Rightarrow \frac{\text{Current Assets}}{\text{Current Liability}}$

15 i The volatility of the shares are higher which means it is riskier to buy it also has a ~~good~~ ~~probability~~ chance of higher returns. An investor would consider buying shares as its dividend yield is of 4%. High risk also denote higher returns to earn.

Cost of equity $\Rightarrow 4\%$

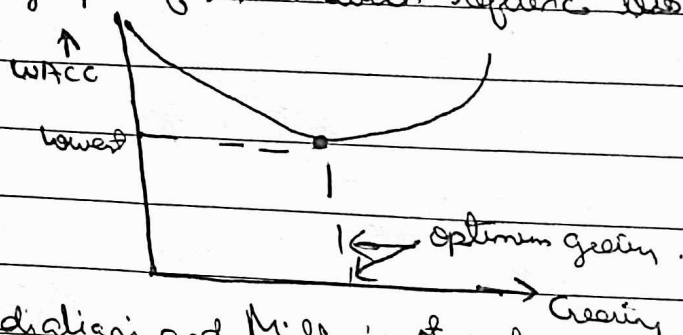
Net cost of debt $\Rightarrow GR/(1-t) \Rightarrow 8\%$ when $t=0$.

Cost of capital $\Rightarrow 8\% \left(\frac{1}{2}\right) + 4\% \left(\frac{1}{2}\right) \Rightarrow 0.06 \Rightarrow \boxed{6\%}$

(ii) As per the traditional theory the market value of asset is maximised and Weight average cost of capit is minimized, an optimal structure of capital exists.

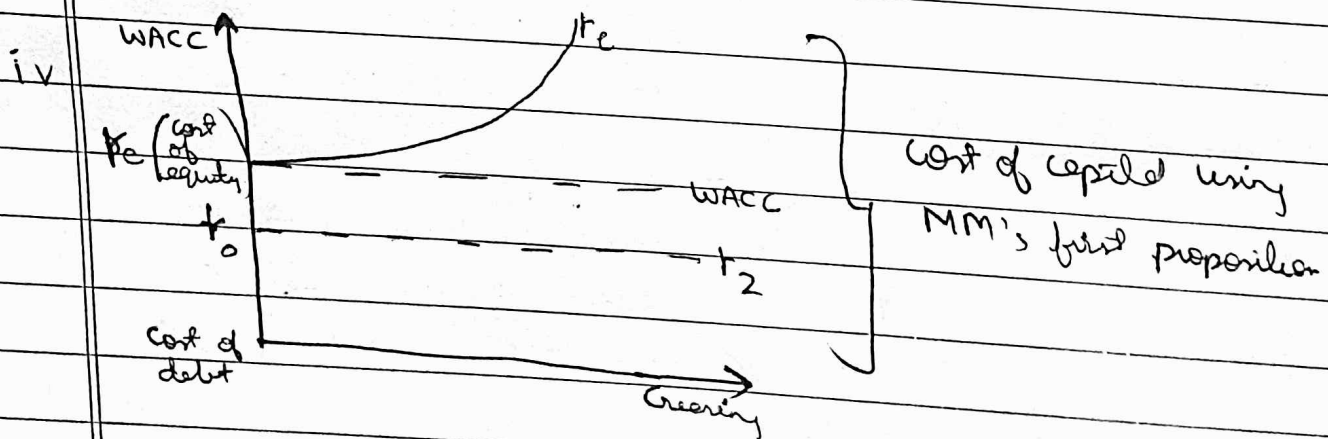
Debt has a tax saving ability and it is also cheaper than equity finance. Therefore with weight average cost of capital falls when gearing increases.

The risk of invention also increases with the increase in gearing. After a certain level the WACC also ~~down~~ results in a downward slope. The graph of WACC with reference ~~to~~ to gearing is a U-shaped graph.



iii) Modigliani and Miller's ^{1st} ~~independence~~ proposition states that the market is dependent on its decisions which are made with respect to investment. Its underlying assumptions are:-

- A perfect market exists.
- No taxes are there.
- Debt is risk free.
- There are no agency cost.



v a) Cost of equity = Risk free rate + ($\beta \times$ equity risk premium)
 $\Rightarrow 6\% + (1.4 \times 5\%) \Rightarrow \boxed{13\%}$

b) $B_{gearing} = B_{ungearing} \times \left(1 + \frac{D}{E}(1-t)\right)$
 $= 1.4 \times \left[1 + \frac{4}{6}(1-30\%)\right] \Rightarrow 2.05333$

c) Cost of equity $\Rightarrow$ Risk free rate + ($\beta \times$ equity risk premium)
 $\Rightarrow 6\% + (2.0533 \times 5\%) \Rightarrow \boxed{16.2665\%}$