Business Finance – 2

Assignment – 1

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

2) (A) Market price of share / Earning per share

3) (D) All of the above

4) (C) 9,00,000

5) i) Sales – costs – tax = 2500 – 1500 – 400
= Rs. 600

~~ii) NPV = 600 (1 – 20%) = 480~~

ii) ~~iii)~~ NPV = 1000 (1 – 20%) = ~~480~~ Rs. 800

iii) NPV = 2500 (1 – 20%) – 1500 (1 – 20%)^2 = Rs. 1040
The NPV has increased by 240.

6) The ratios used to analyse a company's efficiency are –

i) Inventory turnover ratio
ii) Asset turnover ratio
iii) Trade receivables turnover ratio
iv) Trade payables turnover ratio

i) Inventory turnover ratio – It is used to determine if sales are enough to turn or use the inventory.

ii) Asset turnover ratio – It shows how many sales are generated from each unit of assets a company own.

iii) Trade receivables turnover ratio – It measures how efficiently a company can collect its ~~debt~~. ~~use debtors~~ receivables

iv) Trade payables turnover ratio – It measures how efficiently a company can extend its ~~use~~ payables.

7) The limitations of ratio analysis are:

i) It ignores the human element of any business.

ii) It ignores the price-level changes due to inflation.

iii) It does not incorporate the variations in accounting practices.

iv) It does not always give a true picture of the reality as it is based on the accounting data which could contain bias of the accountants.

8) i) The Beta of a stock ~~medi~~ indicates how volatile ~~its~~ it's price is in comparison to the overall stock market. This volatility relates to the existing activities of the company. It considerers factors like the risk involved, the potential of growth of the company, the cyclicality of the project. These factors are what determine the Beta of a stock. Different companies have different levels of risk, growth potential, and other factors. Thus, stocks of different companies trade at different betas in the stock market.

ii) Geared beta = ungeared beta x [1 + debt : equity ratio x (1 − tax rate)]

Current geared beta = 1.1
Current debt : equity ratio = ~~2:2~~ 1:2
tax rate = 30%

$1.1 = \text{Ungeared beta} \times [1 + 1:2\,(1 - 30\%)]$

$$\text{Ungeared beta} = \frac{1.1}{1 + \frac{1}{2}(1 - 0.3)}$$

$$= \frac{1.1}{1.35}$$

Ungeared beta = 0.815

New debt : equity ratio = 2 : 2
New geared beta = $(0.815)[1 + 2:2\,(1 - 30\%)]$
$= (0.815)[1 + 0.7]$
$= (0.815)(1.7)$
$= 1.3855$
New geared beta = 1.4

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

10) i) The shareholders wealth can be maximised by improving the stock price. The problem associated with doing this is that, the stock price depends on the beta of company. The higher the beta the more returns it guarantees. So, the companies could try to improve their beta by either of increasing their debt : equity ratio or by increasing their risk.

* To increase their debt : equity ratio they would need to increase their debt. This could be a problem incase ~~they are not able to face with the~~ of insolvency.

Increasing their risk is also not a nice solution to this problem. ~~There~~ This would make the debtors ~~very~~ uneasy and could lead to conflict between different stakeholders.

Hence, while theoretically, companies exist to maximise the wealth of their owners, it is has a lot of problems and it is difficult to do so in the real world.

ii) Market price of stock = Rs. 70

Current dividend per share = Rs. 10

Growth rate = 8%.

Risk free rate = 6 %.

Market risk premium = 5%.

11) i) Beta is a measure of the systematic risk associated with any particular stock. ~~We can compare individual stocks with the overall market~~
The formula of beta is
$$\beta_i = \sigma_{im} / \sigma_m^2 \text{ or } \beta_i = \rho_{im} \sigma_i / \sigma_m .$$

ii) We can compare individual stocks with the overall market by assessing the beta of the stock. For company i, $\beta_i = \sigma_{im} / \sigma_m^2$, where σ_m^2 is the variance of the market index and σ_{im} is the covariance between the individual stock's return and that of the market.

iii) I would invest in a stock with a beta of 1 as, historically, stocks with betas higher than 1 have amplified the return of the whole market while stocks with negative betas work counter cyclically from the rest of the market.

iv)

v) Zero coupon bonds.

12) Debt : Equity Ratio = 1 : 1
Risk free rate of return = 7%.
Equity risk premium = 5%.
Gross cost of debt = 9%
Beta = 1.5%, Tax = 25%.

i) WACC = ?
Cost of Equity = Risk free rate + Equity risk premium
= 7% + 5%
= 12%.

~~WACC = (Cost of Equity × Equity Capital) +~~

Net cost of debt = Gross cost of debt × (1 − tax rate)
= 9% (1 − 25%)
= 0.0675

$$WACC = \frac{(\text{Cost of Equity} \times \text{Equity Capital}) + (\text{Net cost of debt} \times \text{Debt capital})}{\text{Total Capital}}$$

$$= \frac{(12\% \times 1) + (0.0675 \times 1)}{1+1}$$

$$= \frac{0.12 + 0.0675}{2}$$

$$= \frac{0.1875}{2}$$

WACC = 0.09375

ii) The required rate of return would be equal to the cost of equity as per the Miller-Modigliani approach. So,

~~Cost of equity~~ =
Geared beta = Ungeared beta (1 + debt : equity ratio (1 − tax rate))
1.5% = Ungeared beta (1 + 1/1 (1 − 25%))
Ungeared beta = (1.5%) ÷ (7/4)
= 0.0086

Cost of equity = Risk free rate + Equity risk premium × Beta
= (7%) + (5%) (0.0086)
= 0.07
= 7%

Cost of equity
Required return rate of equity = 7%.

14) i) Current ratio :- This ratio is used to assess whether the company will be able to pay its bills over the next few months.

ii) Debtors turnover period - This ratio assess the number of days taken by debtors to make their payments.

ii) The manager needs to track the trade payables turnover ratio as it would tell him how much the company owes the creditors and how much time they usually take to pay them. The equation is

$$\text{Trade payables turnover ratio} = \frac{\text{Average trade payables}}{\text{Credit purchases.}}$$

15) i) debt : equity = 1 : 1
Gross redemption yield on debt = 8%.
Dividend yield = 4%.

Cost of capital =