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BUSINESS FINANCE ASSIGNMENT
UNIT 3 AND 4

1. IRR is the most reliable means of choosing between mutually exclusive projects. [D]

2. $\frac{\text{Market Price of Share}}{\text{Earning per share}}$

3. All of the above

4. 9,00,000

5. i) The cashflows from the project at date 1 is 1000 before tax and 600 after paying tax

ii)

5] i) The project has a 2500 of cash inflow and 1500 of cash outflow at date 1.

ii) NPV of the project is 1000.

6. The efficiency ratios are related to liquidity ratios. The following ratios will be used for analysis:

i) Inventory Turnover Ratio - The ratio attempts to show how long inventory is held for on average. An inventory period that is less rapid than the other companies in the same industry indicate an inefficiently large inventory holding.

ii) Trade receivables Turnover period - It measures the average length of the time taken for trade receivables to settle their balance. It is desirable to be as short as possible. It will be better for the company's cashflow if those owing the company pay as soon as possible.

A similar ratio is used to assess payables.

7. Limitations of Ratio analysis:

i) It diverts attention from the figures and statements themselves.

ii) Comparisons can be affected by different accounting policies or by other external factors

iii) There could be peculiarities of the trade which make it difficult to interpret certain ratios

iv) The statements could have been deliberately distorted by so called creative accounting

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8] i) Beta indicates how volatile a stock's price is in comparison to the overall stock market

- A value of beta in excess of 1 indicates a stock that has historically amplified the return of the whole market.
- A beta close to zero would indicate a stock that provided a more suitable return than the market as a whole.
- A negative beta would signify a stock whose performance was counter cyclical, offsetting the overall market experience

ii) Geared beta = 1.1
Debt : Equity = 1 : 2
Tax = 30%

Geared Beta = Ungeared beta * [1 + debt : equity) * (1 - tax)

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

$$\beta_{ug} = \frac{1.1}{1.35} = 0.8148$$

New Debt : Equity ratio = 2 : 2

$$\beta_g = 0.8148\left(1 + \frac{2}{2}(1 - 30\%)\right]$$

$$= 1.385$$

9] In general the market value of investment trust is higher than net present value.

10] CMP = 70
Dividend = 10
growth = 8%.
R_F = 6%.
MRP = 5%.

Dividend yield = $\frac{\text{Dividend}}{\text{CMP}} \times 100$

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

$= 14.28\%$.

Cost of equity = Dividend yield + growth
$= 14.285 + 8 = 22.285\%$.

$C_E = R_F + \beta (ERP)$
$27.28 = 6\% + \beta (5\%)$
$\therefore \beta = 3.256$

β is a measure of systematic risk. If systemmatic risk increases by 80%, β also increases by 80%.
new $\beta = 3.256 (1.8) = 5.86$
$C_E = 6\% + 5.86 (5\%) = 35.3\%$.
But, C_E = Dividend Yield + growth
$35.3 = \frac{10}{x} (100) + 8\%$ =

$\therefore x = 36.63$

Current market price will be ₹36.63

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11] i) Beta indicates how volatile a stock's price is in comparison to the overall stock market. Beta can be regarded as a measure of the systematic risk associated with a particular stock.

ii) Formula:

$$\beta_i = \rho_{im} \frac{\sigma_i}{\sigma_m}$$

where;

- ρ_{im} is the correlation coefficient between the individual company's stock return and that of the market.
- σ_i and σ_m are the standard deviations of the company's stock return and the market index respectively.

iii) As an active stock market investor, a stock would a beta of 1 would be preferred as it indicates that the stock has historically amplified the return of whole market.

iv) A zero beta portfolio constructed to have zero systematic risk is an example of a financial instrument with zero beta. Cash can also be regarded as zero beta, given no inflation.

12. Debt : Equity = 1:1
Risk free Rate of Return : 8% 7%
Equity risk premium [ERP] = 5%
Gross Cost of debt = 9%
Beta = 1.5
Tax = 25%

$$WACC = R_e \times \frac{E}{D+E} + R_{D(NT)} \frac{D}{E+D}$$

Return of Equity (Using CAPM) :
$= R_f + ERP \times \beta$
$= 7 + 5 \times 1.5$
$= 13/8\%$ 14.5%

Net Cost of Debt $[r_{D(NT)}] = 9(1 - 25\%)$
$= 6.75\%$

$$WACC = 14.5\% \times \frac{1}{1+1} + 6.75\% \times \frac{1}{1+2}$$

$= 0.10625$
$= 10.625\%$

ii) ABC decides to repay all it's debt.

∴ Beta when 100% Equity financed is ungeared

$$\beta_g = \beta_{ug}\left[1 + \frac{D}{E}(1 - Tax)\right]$$

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

$$\beta_{ug} = 0.857$$

∴ Return of Equity will be

$$R_e = R_f + ERP \times \beta_{ug}$$

$$= 7\% + 5\% \times 0.857$$

$$\approx 11.285\%$$

3]

14] a) Current Radio :

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio is used to access whether the company will be able to pay its bills over the next few months. Normally a low ratio might indicate that a company may have problems paying its creditors. An excessively high ratio indicates that the management has too much money tied up in unproductive short-term assets. Different industries have very different normal levels. In general 2:1 is considered optimal. Many analysts use the ratio to look at trends over many years. A sudden change would be cause for further investigation.

b) Debtors Turnover Period :

Trade Receivables turnover period = $\frac{\text{Trade Receivables}}{\text{Credit Sales}} \times 100$

This is a measure of the average length of time taken for trade receivables/ debtors to settle their balance. It is desirable for this period to be as short as possible. It can however be difficult to press for speedier payments. Doing so could damage the company's relation

with it's customers.

15] i) The rate of return for a bond investor is the redemption yield mentioned i.e 8%. The expected return for equity investors can't be determined from the information given as it is equal to dividend yield plus capital growth.
The equity shareholders are ~~expecting~~ accepting a greater risk and hence must be expecting a greater return than 8%. The greater return must be expected in the form of capital growth through retained earnings and increasing dividends.

ii) In the traditional school the emphasis was on determining the amount of debt a company could safely ~~take~~ carry without risking bankruptcy in severe recession.
Debt is cheaper than equity finance so as gearing increases, WACC should fall.
However ~~inc~~ on increase in debt, increases the risk to shareholders, hence they demand greater return for the increased risk.
Therefore beyond a certain level of gearing the WACC will face the downward effect.
In this case the graph of WACC against gearing will be U-shaped.

iii) Modigliani and Miller's first irrelevance proposition stated that the market value of ~~the~~ any firm is independent of it's capital structure. The assumptions taken into consideration was that there were no taxes.

iv)

v) a) Risk free rate of return = 6%
Equity risk premium = 5%.
Bug = 1.4

Cost of equity = $R_f + ERP \times B_{ug}$
= 6% + 5% × 1.4
= 0.13