

HW - Chapter 6 - Leverages - Q4

(i) Calculation of Fixed Cost

$$\begin{aligned} \text{DOL} &= \text{Contribution} \div \text{EBIT} \\ 2.5 &= \text{Rs. } 10,00,000 \div \text{EBIT} \\ \text{EBIT} &= \text{Rs. } 4,00,000 \\ \text{Fixed Cost} &= 10,00,000 - 4,00,000 = \text{Rs. } 6,00,000 \end{aligned}$$

(ii) Calculation of Degree of Combined Leverage (DCL)

Question says that a 25% change in sales will wipe out EPS. Here, wipe out means it will reduce EPS by 100%.

$$\begin{aligned} \text{DCL} &= \text{Percentage Change in EPS} \div \text{Percentage Change in Sales} \\ &= 100\% \div 4 = 25\% \end{aligned}$$

(iii) Calculation of Degree of Financial Leverage (DFL)

$$\begin{aligned} \text{DCL} &= \text{DOL} \times \text{DFL} \\ 4 &= 2.5 \times \text{DFL} \\ \text{So, DFL} &= 1.6 \end{aligned}$$

(iv) Calculation of Interest and amount of Debt

$$\begin{aligned} \text{DFL} &= \text{EBIT} \div \text{EBIT-Int} \\ \text{Or, } 1.6 &= \text{Rs. } 4,00,000 \div \text{Rs. } 4,00,000 - \text{Int} \\ \text{Or, Int} &= \text{Rs. } 1,50,000 \\ \text{Debt} &= \text{Amount of debt} \div \text{Interest Rate} = \text{Amount of Interest} \div 16\% = \text{Rs. } 1,50,000 \div 16\% \\ \text{Debt} &= \text{Rs. } 9,37,500 \end{aligned}$$

(v) Calculation of Earnings per share (EPS)

$$\begin{aligned} \text{EPS} &= (\text{EBIT-Int})(1-t) \div \text{No. of Equity Shares} = (\text{Rs. } 4,00,000 - \text{Rs. } 1,50,000) 0.5 \div 1,00,000 = \\ &= \text{Rs. } 1.25 \end{aligned}$$