2. LEVARGAES

ADDITIONAL PROBLEMS

Q1 X ltd has estimated that for a new product its break-even point is 20,000 units if the item is sold for ₹14 per unit and variable cost ₹9 per unit. Calculate the degree of operating leverage for sales volume 25,000 units and 30,000 units.

Q2 The following summarises the percentage changes in operating income, percentage changes in revenues, and betas for four pharmaceutical firms.

Firm	Change in revenue	Change in operating income	Beta
PQR ltd	27%	25%	1.00
RST ltd	25%	32%	1.15
TUV ltd	23%	36%	1.30
WXY ltd	21%	40%	1.40

(i) Calculate the degree of operating leverage for each of these firms. Comment also.
(ii) Use the operating leverage to explain why these firms have different beta.

Q3 The capital structure of JCPL Ltd. is as follows:

Particulars	₹
Equity share capital of ₹10 each	8,00,000
8% Preferences share capital of ₹10 each	6,25,000
10% Debenture of ₹100 each	4,00,000
	18,25,000

Additional Information:

Profit after tax (tax rate 30%)	₹1,82,000
Equity share dividend paid	15%.
Market price per equity share	₹20

Operating expenses (including depreciation ₹90,000) being 1.50 times of EBIT Require to Calculate:

(i) Operating and financial leverage.
(ii) Cover for the preference and equity share of dividends.
(iii) The earning yield and price earnings ratio.
(iv) The net fund flow.

Q4 The operating income of a textile firm amounts to ₹1,86,000. It pays 50% tax on its income. Its capital structure consists of the following :

Particulars	₹
14% Debentures	5,00,000
15% Preference Shares	1,00,000
Equity Shares (₹100 each)	4,00,000

(i) Determine the firm's EPS

(ii) Determine the percentage change in EPS associated with 30% change (both increase and decrease) in EBIT.

(iii) Determine the degree of financial leverage at the current level of EBIT.

(iv) What additional data do you need to compute operating as well as combined leverage?

Q5 Company P and Q are having same earnings before tax. However, the margin of safety of Company P is 0.20 and, for Company Q, is 1.25 times than that of Company P. The interest expense of Company P is ₹1,50,000 and, for Company Q, is 1/3rd less than that of Company P. Further, the financial leverage of Company P is 4 and, for Company Q, is 75% of Company P.

Other information is given as below:

Particulars	**Company P**	**Company Q**
Profit volume ratio	25%	33.33%
Tax rate	45%	45%

You are required to prepare Income Statement for both the companies.

Q6 Information of A Ltd. is given below:

- ✦ Earnings after tax: 5% on sales
- ✦ Income tax rate: 50%
- ✦ Degree of Operating Leverage: 4 times
- ✦ 10% Debenture in capital structure: ₹3 lakhs
- ✦ Variable costs: ₹6 lakhs

Required:

(i) From the given data complete following statement:

Sales	xxxx
Less: Variable costs	₹6,00,000
Contribution	xxxx
Less: Fixed costs	xxxx
EBIT	xxxx
Less: Interest expenses	xxxx
EBT	xxxx
Less: Income tax	xxxx
EAT	xxxx

(ii) Calculate Financial Leverage and Combined Leverage.

(iii) Calculate the percentage change in earning per share, if sales increased by 5%.

Q7 The net sales of A Ltd. is ₹30 crores. Earnings before interest and tax of the company as a percentage of net sales is 12%. The capital employed comprises ₹10 crores of equity, ₹2 crores of 13% Cumulative Preference Share Capital and 15% Debentures of ₹6 crores.

Income-tax rate is 40%.

(i) Calculate the Return-on-equity for the company and indicate its segments due to the presence of Preference Share Capital and Borrowing (Debentures).

(ii) Calculate Operating Leverage of the Company given that combined leverage is 3.