

Break-Even Analysis and Leverages

Que 1: Jagat Company Ltd. is currently selling 800 units per year. If the selling price per unit is Rs. 1,200; variable cost per unit is Rs.800; and fixed cost are Rs. 2,00,000. What is Jagat' Degree of Operating Leverage (DOL) at its current level of operations? What if quantity manufactured and sold rises to 1,000 units?

Practice: Que 2: Jeeva Enterprises is currently selling 500 units per year. If the selling price per unit is Rs. 700; variable cost per unit is Rs.300; and fixed cost are Rs. 1,00,000. Calculate the Operating Leverage (DOL) of Jeeva Enterprises at its current level of operations? What if quantity manufactured and sold rises to 8,00 units?

Que 3: Calculate the breakeven point in units and rupees from the following data.:

Contribution margin ratio	20%
Contribution margin per unit	Rs. 8/-
Fixed cost per month	Rs. 25,000

If the net income is 70,000, what is the amount of sales in rupees?

Practice: Que 4: Calculate the breakeven point in units and rupees from the following data.:

Contribution margin ratio	20%
Contribution margin per unit	Rs. 12/-
Fixed cost per month	Rs. 30,000

If the net income is 90,000, what is the amount of sales in rupees?

Que 5: A company produces a single product and sell it as Rs. 200 each. The variable cost of the product is Rs. 120 per unit and fixed cost for the year is Rs. 96,000. The company is producing 2,000 units of the product. You are required to calculate

- (i) What is break- even quantity?
- (ii) If 10% increases in production units. What is the percentage change in profits?
- (iii) If, there is an increase 10% in selling price. What is new BEP?
- (iv) If fixed cost increase by 50%, what is the new BEP?
- (v) If the variable cost increase by Rs. 10 per unit. What is the new break-even point?

Practice: Que 6: SCL Ltd produces special kind of oil which is packaged in a 10 litre bottle. The company provides you the following informations. The company selling price is Rs. 30 per bottle each. The variable cost of the product is Rs. 16 per bottle and fixed cost for the year is Rs. 10,000. The company is producing 3,000 bottles of the product. You are required to calculate

- (i) What is break- even quantity?
- (ii) If 10% increases in production units. What is the percentage change in profits?
- (iii) If, there is an increase 10% in selling price. What is new BEP?
- (iv) If fixed cost increase by 50%, what is the new BEP?
- (v) If the variable cost increase by Rs. 10 per unit. What is the new break-even point?

Que 7: Multiwal Ltd manufactures 3 different products: A, B and C. The relevant information are mentioned below:

Particulars	Product A	Product B	Product C
Product Units	10,000	16,000	12,000
Selling price (per unit)	Rs. 40/-	Rs. 60/-	Rs. 90/-
Variable cost (per unit)	Rs. 30/-	Rs. 40/-	Rs. 50/-
Fixed cost	Rs. 40,000	Rs. 1,20,000	Rs. 1,60,000

Find out:

- Break-even point for each product and for the company as a whole.
- What is the combined contribution margin ratio?

Practice: Que 8: Banwari Ltd manufactures 3 different products: P, Q and R. The relevant informations are mentioned below:

Particulars	Product P	Product Q	Product R
Sales in Units	7,000	9,000	11,000
Selling price (per unit)	Rs. 30/-	Rs. 50/-	Rs. 80/-
Variable cost (per unit)	Rs. 20/-	Rs. 30/-	Rs. 40/-
Fixed cost	Rs. 50,000	Rs. 90,000	Rs. 1,20,000

Find out:

- Break-even point for each product and for the company as a whole.
- What is the combined contribution margin ratio?

Que 9: Consider the data for PNY Ltd. : P = Rs. 80; V = Rs. 48; F = Rs. 1,60,000; I = Rs. 60,000; T = 50% and Dp = Rs. 20,000. What is the DFL for PNY Ltd. when the level of output (Q) is 50,000 units.

Practice: Que 10: Consider the data for ABC Ltd. : P = Rs. 40; V = Rs. 24; F = Rs. 80,000; I = Rs. 30,000; T = 50% and Dp = Rs. 10,000. What is the DFL for ABC Ltd. when the level of output (Q) is 20,000 units.

Que 11: The following data are available for three firms A, B and C:

Particulars	Firm A	Firm B	Firm C
Product Units	30,000	20,000	5,000
Selling price (per unit)	Rs. 30/-	Rs. 40/-	Rs. 160/-
Variable cost (per unit)	Rs. 20/-	Rs. 25/-	Rs. 50/-
Fixed cost	Rs. 50,000	Rs. 80,000	Rs. 1,30,000
Interest	Rs. 15,000	Rs. 10,000	Rs. 15,000
Preference Dividend	Rs.7,000	Rs. 9,000	Rs. 10,000
No. of Equity shares	15,000	20,000	17,000
Tax Tate	30%	40%	50%

Find out:

- Earnings before interest and taxes
- Earnings per share
- Breakeven point
- Degree of operating leverage
- Degree of financial leverage
- Degree of combine or total leverage

Practice :Que 12: The following data are available for three firms X, Y and X:

Particulars	Firm X	Firm Y	Firm Z
Quantity Produced	20,000	10,000	3,000
Selling price (per unit)	Rs. 20/-	Rs. 50/-	Rs. 100/-
Variable cost (per unit)	Rs. 15/-	Rs. 30/-	Rs. 40/-
Fixed cost	Rs. 40,000	Rs. 70,000	Rs. 1,00,000
Interest	Rs. 10,000	Rs. 20,000	Rs. 40,000
Preference Dividend	Rs.5,000	Rs. 5,000	Rs. 10,000
No. of Equity shares	10,000	12,000	15,000
Tax Tate	40%	50%	60%

Find out:

- (i) Earnings before interest and taxes
- (ii) Earnings per share
- (iii) Breakeven point
- (iv) Degree of operating leverage
- (v) Degree of financial leverage
- (vi) Degree of combine or total leverage