Break Even Point

Meaning:

Break-even analysis is a specific method of presenting and studying the inner relationship between costs, volume and profits. (hence, the name c-v-p analysis). It is an important tool of financial analysis whereby the impact on profit of the changes in volume, price, costs and mix can be found out with a certain amount of accuracy. A business is said to break even when its total sales are equal to its total costs. It is a point of no profit or no loss. At this point contribution is equal to fixed costs.

Break-even point, can be calculated thus:

$$\text{B.E.P. (In Units)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$$

OR

$$= \frac{\text{Fixed Cost}}{\text{Selling Price/Unit} - \text{Marginal Cost/Unit}}$$

$$\text{B.E.P. (Sales)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}} \times \text{Selling Price/Unit}$$

$$\text{or} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

Margin of Safety

Total sales minus the sales at break-even point is known as the margin of safety. Lower break-even point means a higher margin of safety. Margin of safety can also be expressed as a percentage of total sales.

The formula is:

Margin Of Safety = Total Sales – Sales At B.E.P.

$$\text{or} = \frac{\text{Profit}}{\text{P/V Ratio}}$$

$$\text{Margin Of Safety (As A Percentage)} = \frac{\text{Margin Of Safety}}{\text{Total Sales}} \times 100$$