

# Financial Management

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# LEVERAGE

- General term for any technique to multiply gains and losses.
- Is used to explain a firm's ability to use fixed assets or funds to magnify the return to its owners.



# OPERATING LEVERAGE

- Is defined as the impact of a change in the revenue on profit or cash flow and arises whenever a firm can increase its revenues without a proportionate increase in its operating expenses.
- Based on the relationship between a firm's sales revenue and its earnings before interest and taxes.



# TYPES OF LEVERAGE

## OPERATING LEVERAGE

- The leverage associated with investment (asset acquisition) activities is referred as operating Leverage.

Formula :  $\text{operating leverage} = \frac{\text{contribution}}{\text{operating profit}}$

Where ,  $\text{contribution} = \text{sales} - \text{variable cost}$

$\text{operating profit} = \text{sales} - \text{variable cost} - \text{fixed cost}$

- Operating leverage is also defined as the ratio of the percentage change in operating income for a given percentage change in sales.

$\text{DOL} = \frac{\% \text{change in operating income}}{\% \text{change in sales}}$

- The risk associated with operating leverage is called operating risk . It is the risk of not being able to cover fixed operating costs by firm

## DEGREE OF OPERATING LEVERAGE

- Measures the sensitivity of a firm's operating income to a change in sales.
- The degree of operating leverage is directly proportional to a firm's level of business risk, and therefore it serves as a proxy for business risk.
- It is sales revenue less total variable cost divided by sales revenue less total cost.

- $$\begin{aligned} \text{DOL} &= \frac{\% \text{ change in EBIT}}{\% \text{ change in sales}} \\ &= \frac{q(p-v)}{(q(p-v)-f)} \\ &= \frac{(\text{Sales}-\text{VC})}{\text{EBIT}} \end{aligned}$$

q – quantity      p – price per unit

v – variable cost per unit

f – total fixed cost

VC – variable costs

EBIT – earning before interest and tax

# ILLUSTRATION

- Following is the cost information of a firm:
- Fixed cost=Rs.50000
- Variable cost=70%of sales
- Sales=Rs.250000
- Now , Operating Leverage=contribution/operating profit  
=75000/25000  
=3

# FINANCIAL LEVERAGE

- Reflects the debt amount used in the capital structure of a firm.
- It is an impact on returns of a change in the extent to which the firm's assets are financed with borrowed money. Other things remaining same, lower the amount borrowed, lower the interest, lower will be the profit, whereas greater the amount borrowed, lower the interest, greater will be the profit.





## DEGREE OF FINANCIAL LEVERAGE

- Measures firm's exposure to the financial risk.
- DFL can be defined as the percentage change in earnings per share (EPS) that results from a given percentage change in earnings before interest and tax.
- Measures the sensitivity of a firm's EPS to a change in its operating income.

- $DFL = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}}$

$$= \frac{EBIT}{(EBIT - I)}$$

I – sum of all “before tax” fixed finance costs including interest on debts , grossed up preference share dividends

## TOTAL / COMBINED LEVERAGE

- Represents maximum use of leverage.
- The product of two leverages “operating and financial” is called the total leverage and estimates the percentage change in the income with a change in the revenue.

