

CHAPTER - 4

Financing Decisions - Leverages

1 MEANING OF LEVERAGE

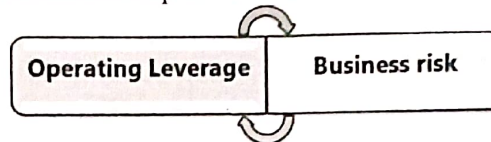
- The term leverage represents **influence or power**. In financial analysis, leverage represents the influence of one financial variable over some other related financial variable.
- These financial variables may be costs, output, sales revenue, Earnings Before Interest and Tax (EBIT), Earning Per Share (EPS) etc.
- Generally, if we want to calculate the impact of change in variable X on variable Y, it is termed as Leverage of Y with X, and it is calculated as follows :

$$\text{Measurement of Leverage} = \frac{\text{Change in Y} \div \text{Y}}{\text{Change in X} \div \text{X}}$$

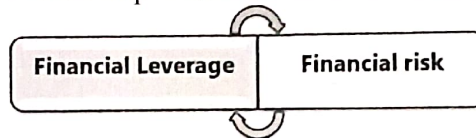
2 TYPES OF LEVERAGE

There are three commonly used measures of leverage in financial analysis. These are :

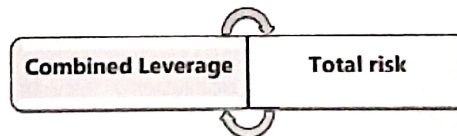
- i) **Operating Leverage** : It is the relationship between sales and EBIT and indicates **business risk**.



- ii) **Financial Leverage**: It is the relationship between EBIT and EPS and indicates **financial risk**.



- iii) **Combined Leverage**: It is the relationship between Sales and EPS and indicates **total risk** i.e., both business risk and financial risk.



3 CHART SHOWING DEGREE OF OPERATING LEVERAGE, FINANCIAL LEVERAGE AND COMBINED LEVERAGE

Profitability Statement			
Sales	xxx	Degree of Operating Leverage	Degree of Combined Leverage
Less: Variable Cost	(xxx)		
Contribution	xxx		
Less: Fixed Cost	(xxx)		
Operating Profit/ EBIT	xxx	Degree of Financial Leverage	
Less: Interest	(xxx)		
Earnings Before Tax (EBT)	xxx		
Less: Tax	(xxx)		
Profit After Tax (PAT)	xxx		
Less: Pref. Dividend (if any)	(xxx)		
Net Earnings available to equity shareholders/ PAT	xxx		
No. Equity shares (N)	xxx		
Earnings per Share (EPS) (PAT ÷ N)	xxx		

4 OPERATING LEVERAGE

- Operating Leverage (OL) means tendency of operating income (EBIT) to change disproportionately with change in sale volume.
- This disproportionate change is caused by operating fixed cost, which does not change with change in sales volume.
- Operating leverage is a function of three factors:
 - Amount of fixed cost,
 - Variable contribution margin, and
 - Volume of sales.

4.1 DEGREE OF OPERATING LEVERAGE (DOL)

- When we measure magnitude of disproportionate change, it is termed as degree of leverage.
- Degree of Operating Leverage (DOL) may be defined as percentage change in EBIT with respect to percentage change in sales quantity.

$$\text{Degree of Operating Leverage (DOL)} = \frac{\text{Percentage Change in EBIT}}{\text{Percentage Change in Sales}}$$

Mathematically:

$$\text{DOL} = \frac{\Delta \text{EBIT}}{\text{EBIT}} \div \frac{\Delta Q}{Q}$$

Here,

- EBIT = $Q(S - V) - F$
 Q = Sales quantity
 S = Selling price per unit
 V = Variable cost per unit

Δ Denotes change

$$\text{DOL} = \frac{\Delta [Q(S-V)-F] / [Q(S-V)-F]}{\Delta Q / Q}$$

Now ΔF is nil because change in fixed cost is nil. Therefore:

$$\text{DOL} = \frac{\Delta Q(S-V) / [Q(S-V)-F]}{\Delta Q / Q} = \frac{\Delta Q(S-V)}{Q(S-V)-F} \times \frac{Q}{\Delta Q} = \frac{Q(S-V)}{Q(S-V)-F}$$

$$\text{DOL} = \frac{\text{Contribution}}{\text{Contribution} - \text{Fixed Cost}} = \frac{\text{Contribution}}{\text{EBIT}}$$

4.2 BREAK-EVEN ANALYSIS AND OPERATING LEVERAGE

- At break-even point (BEP) of production level and sales, there will be no profit and loss i.e. total cost is equal to total sales revenue.

$$\text{Break-even point in units} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}}$$

- Let us understand through the following example:

4.3 MARGIN OF SAFETY (MOS) AND OPERATING LEVERAGE (OL)

- In cost accounting, margin of safety (MOS) may be calculated as follows:

$$\text{MOS} = \frac{\text{Sales} - \text{BEP Sales}}{\text{Sales}} \times 100$$

- Higher margin of safety indicates lower business risk and higher profit and vice versa. MOS is inversely related to OL.
- If we both multiply and divide above formula with profit volume (PV) ratio then:

$$\text{MOS} = \frac{\text{Sales} - \text{BEP Sales}}{\text{Sales}} \times \frac{\text{PV Ratio}}{\text{PV Ratio}} = \frac{(\text{Sales} \times \text{PV Ratio}) - (\text{BEP} \times \text{PV Ratio})}{\text{Sales} \times \text{PV Ratio}}$$

Further,

$$\text{DOL} = \frac{\text{Contribution}}{\text{EBIT}}$$

hence

$$\text{Degree of Operating leverage} = \frac{1}{\text{Margin of Safety}}$$

- Let us understand this through the following example:

PROBLEM : 1

A Company produces and sells 10,000 shirts. The selling price per shirt is ₹500. Variable cost is ₹200 per shirt and fixed operating cost is ₹25,00,000.

- CALCULATE operating leverage.
- If sales are up by 10%, then COMPUTE the impact on EBIT?

(Study Material)

SOLUTION : 1

- Statement of Profitability

	₹
Sales Revenue (10,000 x 500)	50,00,000
Less: Variable Cost (10,000 x 200)	20,00,000
Contribution	30,00,000
Less: Fixed Cost	25,00,000
EBIT	5,00,000

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{\text{₹ 30 lakhs}}{\text{₹ 5 lakhs}} = 6 \text{ times}$$

$$\text{(b) Operating Leverage (OL)} = \frac{\% \text{ Change in EBIT}}{\% \text{ Change in Sales}}$$

$$6 = \frac{X / 5,00,000}{5,00,000 / 50,00,000}$$

$$X = ₹ 3,00,000$$

$$\therefore \Delta \text{EBIT} = ₹ 3,00,000 / ₹ 5,00,000 = 60\%$$

4.4 FINANCIAL LEVERAGE

- Financial leverage (FL) maybe defined as 'the use of funds with a fixed cost in order to increase earnings per share'.
- In other words, it is the use of company funds on which it pays a limited return.
- Financial leverage involves the use of funds obtained at a fixed cost in the hope of increasing the return to common stockholders.

$$\text{Financial Leverage (FL)} = \frac{\text{Earnings before interest and tax (EBIT)}}{\text{Earnings before tax (EBT)}}$$

Where, EBIT = Sales - (Variable cost + Fixed cost)

EBT = EBIT - Interest

4.3.1 DEGREE OF FINANCIAL LEVERAGE (DFL)

- Degree of financial leverage is the ratio of the percentage increase in Earnings Per Share (EPS) to the percentage increase in Earnings Before Interest and Taxes (EBIT).
- Financial Leverage (FL) is also defined as "the ability of a firm to use fixed financial charges to magnify the effect of changes in EBIT on EPS"

$$\begin{aligned} \text{Degree of Financial Leverage (DFL)} \\ = \frac{\text{Percentage change in earnings per share (EPS)}}{\text{Percentage change in earnings before interest and tax (EBIT)}} \end{aligned}$$

$$\text{DFL} = \frac{\Delta \text{EPS}}{\text{EPS}} \div \frac{\Delta \text{EBIT}}{\text{EBIT}}$$

Now, $\text{EPS} = \frac{[(\text{EBIT} - I)(1 - t)] - D}{\text{No. of Shares}}$

Here,

T = Tax Rate

D = Dividend on Preference Shares (inclusive of dividend tax if any)

On simplifying the above we get,

$$\text{DFL} = \frac{\text{EBIT}(1-t)}{(\text{EBIT} - \text{Int.})(1-t) - D_p}$$

$$\text{DFL} = \frac{\text{EBIT}}{(\text{EBIT} - \text{Int.}) - \frac{D_p}{1-t}}$$

If the company has not issued preference shares, then:

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{Int.}} = \frac{\text{EBIT}}{\text{PBT}}$$

- When DFL is more than one (1), financial leverage exists.
- More is DFL, higher is financial leverage.
- A positive DFL/ FL means firm is operating at a level higher than break-even point and EBIT and EPS moves in the same direction.
- Negative DFL/ FL indicates the firm is operating at lower than break-even point and EPS is negative.

Let us understand through the following analysis:

Situation 1: No Fixed Interest charges

Particulars	X (₹)	Y (₹)
EBIT	1,00,000	1,50,000
Tax @ 50%	50,000	75,000
PAT	50,000	75,000
No. of shares	10,000	10,000
EPS	5	7.5

$$\text{Degree of Finance Leverage (DFL)} = \frac{\text{Change in EP}}{\text{Change in EBIT}} = \frac{50\%}{50\%} = 1$$

Situation 2: Positive Financial Leverage

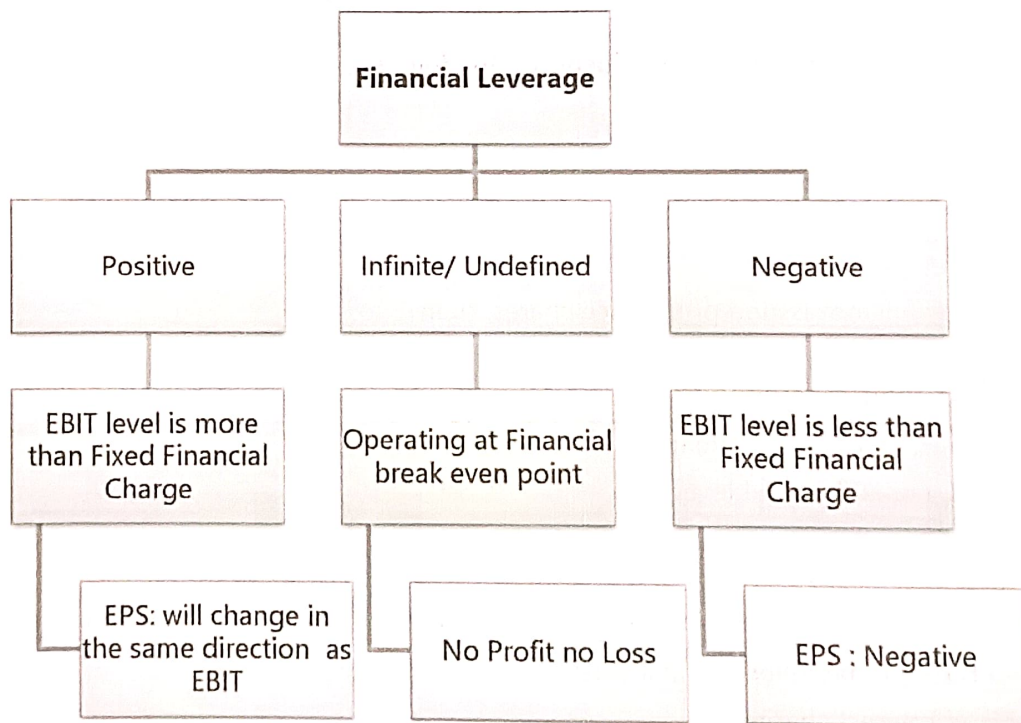
Particulars	X (₹)	Y (₹)
EBIT	1,00,000	1,50,000
Interest	20,000	20,000
EBT	80,000	1,30,000
Tax @ 50%	40,000	65,000
PAT	40,000	65,000
No of Shares	10,000	10,000
EPS	4	6.5

$$\text{Degree of Finance Leverage (DFL)} = \frac{\text{Change in EPS}}{\text{Change in EBIT}} = \frac{62.5\%}{50\%} = 1.25$$

$$*\text{Change in EPS} = \frac{\left(\frac{2.5}{4} \times 100\right)}{50\%} = 62.5\%$$

Situation 3. When EBT is nil (EBIT = Fixed Interest)

$$\text{Degree of Finance Leverage (DFL)} = \frac{\text{EBIT}}{\text{Nil}} = \text{Undefined}$$



Positive and Negative Financial Leverage

Analysis and Interpretation of Financial leverage

S. No.	Situation	Result
1	No Fixed Financial Cost	No Financial leverage
2	Higher Fixed Financial cost	Higher Financial Leverage
3	When EBIT is higher than Financial Break-even point	Positive Financial leverage
4	When EBIT is less than Finance Break-even point	Negating Financial leverage

4.4 COMBINED LEVERAGE

Combined leverage maybe defined as the potential use of fixed costs, both operating and financial,

which magnifies the effect of sales volume change on the earning per share of the firm.

$$\begin{aligned} \text{Combined Leverage (CL)} &= \text{Operating Leverage (OL)} \times \text{Financial Leverage (FL)} \\ &= \frac{C}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}} \\ &= \frac{C}{\text{EBT}} \end{aligned}$$

4.4.1 DEGREE OF COMBINED LEVERAGE (DCL)

- Degree of combined leverage (DCL) is the ratio of percentage change in earning per share to the percentage change in sales.
- It indicates the effect the changes in sales will have on EPS.

$$\begin{aligned} \text{DCL} &= \text{DOL} \times \text{DFL} \\ &= \frac{\% \text{Change in EBIT}}{\% \text{Change in Sales}} \times \frac{\% \text{Change in EPS}}{\% \text{Change in EBIT}} \\ &= \frac{\% \text{Change in EPS}}{\% \text{Change in Sales}} \end{aligned}$$

4.4.2 ANALYSIS OF COMBINED LEVERAGE

Combine leverage measures total risk. It depends on combination of operating and financial risk.

DOL	DFL	Comments
Low	Low	Lower total risk. Cannot take advantage of trading on equity.
High	High	Higher total risk. Very risky combination.
High	Low	Moderate total risk. Not a good combination. Lower EBIT due to higher DOL and lower advantage of trading on equity due to low DFL.
Low	High	Moderate total risk. Best combination. Higher financial risk is balanced by lower total business risk.

PROBLEM : 2

A firm's details are as under:

Sales (@100 per unit)	₹24,00,000
Variable Cost	50%
Fixed Cost	₹10,00,000

It has borrowed ₹ 10,00,000 @ 10% p.a. and its equity share capital is ₹ 10,00,000 (₹ 100 each).

Consider tax @ 50 %.

CALCULATE:

- Operating Leverage
- Financial Leverage
- Combined Leverage
- Return on Investment
- If the sales increases by ₹6,00,000; what will the new EBIT?

(Study Material)

SOLUTION : 2

(₹)

	24,00,000
Sales	12,00,000
Less: Variable cost	12,00,000
Contribution	10,00,000
Less: Fixed cost	2,00,000
EBIT	1,00,000
Less: Interest	1,00,000
EBT	50,000
Less: Tax (50%)	50,000
EAT	10,000
No. of equity shares	5
EPS	

(a) Operating Leverage = $\frac{12,00,000}{2,00,000} = 6$ times

(b) Financial Leverage = $\frac{2,00,000}{1,00,000} = 2$ times

(c) Combined Leverage = OL × FL = 6 × 2 = 12 times.

(d) ROI = $\frac{50,000}{10,00,000} \times 100 = 5\%$

Here ROI is calculated as ROE i.e. $\frac{\text{EAT} - \text{Pref. Dividend}}{\text{Equity shareholders' fund}}$

(e) Operating Leverage = 6

$$6 = \frac{\Delta \text{ EBIT}}{0.25}$$

$$\Delta \text{ EBIT} = \frac{6 \times 1}{4} = 1.5$$

Increase in EBIT = ₹ 2,00,000 × 1.5 = ₹ 3,00,000

New EBIT = ₹ 5,00,000

PROBLEM : 3

Following are the selected financial information of A Ltd. and B Ltd. for the year ended March 31st, 2021:

	A Ltd.	B Ltd.
Variable Cost Ratio	60%	50%
Interest	₹ 20,000	₹ 1,00,000
Operating Leverage	5	2
Financial Leverage	3	2
Tax Rate	30%	30%

You are required to FIND out:

- (i) EBIT
- (ii) Sales
- (iii) Fixed Cost
- (iv) Identify the company which is better placed with reasons based on leverages.

(Study Material)

SOLUTION : 3

Company A

(i) Financial Leverage = $\frac{\text{EBIT}}{\text{EBT i.e EBIT} - \text{Interest}}$

So, 3 = $\frac{\text{EBIT}}{\text{EBIT} - 20,000}$

Or, 3 (EBIT - 20,000) = EBIT

Or, 2 EBIT = 60,000

Or, EBIT = 30,000

(ii) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$ Or, 5 = $\frac{\text{Contribution}}{\text{₹ 30,000}}$

Or, Contribution = ₹ 1, 50,000

Sales = $\frac{\text{Contribution}}{\text{P/V Ratio (1 - variable cost ratio)}} = \frac{\text{₹ 1,50,000}}{40\%} = \text{₹ 3,75,000}$

(iii) Fixed Cost = Contribution - EBIT

= ₹ 1, 50,000 - 30,000

Or, Fixed cost = ₹ 1,20,000

Company B

(i) Financial Leverage = $\frac{\text{EBIT}}{\text{EBT i.e EBIT} - \text{Interest}}$

So, 2 = $\frac{\text{EBIT}}{\text{EBIT} - 1,00,000}$

Or, 2 (EBIT - 1,00,000) = EBIT

Or, 2 EBIT - 2,00,000 = EBIT

Or, EBIT = ₹ 2,00,000

(ii) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$

Or, 2 = $\frac{\text{Contribution}}{\text{₹ 2,00,000}}$

Or, Contribution = ₹ 4,00,000

Sales = $\frac{\text{Contribution}}{\text{P/V Ratio (1 - variable cost ratio)}} = \frac{\text{₹ 4,00,000}}{50\%} = \text{₹ 8,00,000}$

(iii) Fixed Cost = Contribution - EBIT

= ₹ 4, 00,000 - ₹ 2,00,000

Or, Fixed cost = ₹ 2,00,000

Income Statements of Company A and Company B

	Company A (₹)	Company B (₹)
Sales	3,75,000	8,00,000
Less: Variable cost	2,25,000	4,00,000
Contribution	1,50,000	4,00,000

Less: Fixed Cost	1,20,000	2,00,000
Earnings before interest and tax (EBIT)	30,000	2,00,000
Less: Interest	20,000	1,00,000
Earnings before tax (EBT)	10,000	1,00,000
Less: Tax @ 30%	3,000	30,000
Earnings after tax (EAT)	7,000	70,000

Comment based on Leverage

Comment based on leverage - Company B is better than company A of the following reasons:

- Capacity of Company B to meet interest liability is better than that of companies A (from EBIT/Interest ratio)

$$[A = \frac{30,000}{20,000} = 1.5, B = \frac{2,00,000}{1,00,000} = 2]$$

- Company B has the least financial risk as the total risk (business and financial) of company B is lower (combined leverage of Company A - 15 and Company B- 4)

PROBLEM : 4

From the following information, prepare Income Statement of Company A & B:

Particulars	Company A	Company B
Margin of safety	0.20	0.25
Interest	₹3,000	₹ 2,000
Profit volume ratio	25%	33.33%
Financial Leverage	4	3
Tax rate	45%	45%

(Study Material)

SOLUTION : 4

Income Statement

Particulars	Company A (₹)	Company B (₹)
Sales	80,000	36,000
Less: Variable Cost	60,000	24,000
Contribution	20,000	12,000
Less: Fixed Cost	16,000	9,000
EBIT	4,000	3,000
Less: Interest	3,000	2,000
EBT	1,000	1,000
Tax (45%)	450	450
EAT	550	550

Workings:

i) Company A

$$\begin{aligned} \text{Financial Leverage} &= \text{EBIT}/(\text{EBIT}-\text{Interest}) \\ 4 &= \text{EBIT}/(\text{EBIT}-\text{₹ } 3,000) \\ 4 \text{ EBIT} - \text{₹ } 12,000 &= \text{EBIT} \\ 3 \text{ EBIT} &= \text{₹ } 12,000 \\ \text{EBIT} &= \text{₹ } 4,000 \end{aligned}$$

Company B

$$\begin{aligned} \text{Financial Leverage} &= \text{EBIT}/(\text{EBIT} - \text{Interest}) \\ 3 &= \text{EBIT}/(\text{EBIT} - ₹2,000) \\ 3 \text{ EBIT} - ₹ 6000 &= \text{EBIT} \\ 2\text{EBIT} &= ₹ 6,000 \\ \text{EBIT} &= ₹ 3,000 \end{aligned}$$

ii) Company A

$$\begin{aligned} \text{Operating Leverage} &= 1/\text{Margin of Safety} \\ &= 1/0.20 = 5 \\ \text{Operating Leverage} &= \text{Contribution}/\text{EBIT} \\ 5 &= \text{Contribution} / ₹ 4,000 \\ \text{Contribution} &= ₹ 20,000 \end{aligned}$$

Company B

$$\begin{aligned} \text{Operating Leverage} &= 1/\text{Margin of Safety} \\ &= 1/0.25 = 4 \\ \text{Operating Leverage} &= \text{Contribution}/\text{EBIT} \\ 4 &= \text{Contribution} / ₹ 3,000 \\ \text{Contribution} &= ₹ 12,000 \end{aligned}$$

iii) Company A

$$\begin{aligned} \text{Profit Volume Ratio} &= 25\% \text{ Given} \\ \text{Profit Volume Ratio} &= \text{Contribution} / \text{Sales} \times 100 \\ 25\% &= ₹ 20,000 / \text{Sales} \\ \text{Sales} &= ₹ 20,000/25\% \\ \text{Sales} &= ₹ 80,000 \end{aligned}$$

Company B

$$\begin{aligned} \text{Profit Volume Ratio} &= 33.33\% \\ \text{Therefore, Sales} &= ₹ 12,000/33\% \\ \text{Sales} &= ₹ 36,000 \end{aligned}$$

PROBLEM : 5

The capital structure of PS Ltd. for the year ended 31st March 2021 consisted as follows:

Particulars	Amount in (₹)
Equity share capital (face value ₹ 100 each)	10,00,000
10% debentures (₹100 each)	10,00,000

During the year 2020-21, sales decreased to 1,00,000 units as compared to units in the previous year. However, the selling price stood at ₹ 12 per unit and variable cost at ₹ 8 per unit for both the years. The fixed expenses were at ₹ 2,00,000 p.a. and the income tax rate is 30%.

You are required to CALCULATE the following:

- The degree of financial leverage at 1,20,000 units and 1,00,000 units.
- The degree of operating leverage at 1,20,000 units and 1,00,000 units.
- The percentage change in EPS.

(Study Material + Nov. 2020 - RTP + Nov. 2021 MTP - 5 Marks + March 2022 - MTP - 5 Marks)

SOLUTION : 5 Income Statement with required calculations

Particulars	(₹)	(₹)
Sales in units	1,20,000	1,00,000

Sales Value	14,40,000	12,00,000
Variable Cost	(9,60,000)	(8,00,000)
Contribution	4,80,000	4,00,000
Fixed expenses	(2,00,000)	(2,00,000)
EBIT	2,80,000	2,00,000
Debenture Interest	(1,00,000)	(1,00,000)
EBT	1,80,000	1,00,000
Tax @ 30%	(54,000)	(30,000)
Profit after tax (PAT)	1,26,000	70,000
No. of shares	10,000	10,000
(i) Financial Leverage $= \frac{\text{EBIT}}{\text{EBT}}$	$= \frac{₹ 2,80,000}{₹ 1,80,000}$ = 1.56	$= \frac{₹ 2,00,000}{₹ 1,00,000}$ = 2
(ii) Operating leverage $= \frac{\text{Contribution}}{\text{EBIT}}$	$= \frac{₹ 4,80,000}{₹ 2,80,000}$ = 1.71	$= \frac{₹ 4,00,000}{₹ 2,00,000}$ = 2
(iii) Earnings per share (EPS) $= \frac{\text{PAT}}{\text{No. of shares}}$	$= \frac{₹ 1,26,000}{10,000}$ = ₹ 12.6	$= \frac{₹ 70,000}{10,000}$ = ₹ 7
Decrease in EPS	$= ₹ 12.6 - ₹ 7 = ₹ 5.6$ $\% \text{ decrease in EPS} = \frac{5.6}{12.6} \times 100$ $= 44.44\%$	

PROBLEM : 6

CALCULATE the operating leverage, financial leverage and combined leverage from the following data under Situation I and II and Financial Plan A and B:

Installed Capacity	4,000 units
Actual Production and Sales	75% of the Capacity
Selling Price	₹ 30 Per Unit
Variable Cost	₹ 15 Per Unit

Fixed Cost:

Under Situation-I	₹ 15,000
Under Situation-II	₹ 20,000

Capital Structure:

	Financial Plan	
	A (₹)	B (₹)
Equity	10,000	15,000
Debt (Rate of Interest at 20%)	10,000	5,000
	20,000	20,000

(May 2018 - RTP)

SOLUTION : 6

(i) Operating Leverage (OL)

	Situation-I	Situation-II
	(₹)	(₹)
Sales (3000 units @ ₹ 30 per unit)	90,000	90,000
Less: Variable Cost (@ ' 15 per unit)	45,000	45,000
Contribution (C)	45,000	45,000
Less: Fixed Cost	15,000	20,000
EBIT	30,000	25,000
Operating Leverage (OL) = $\frac{C}{EBIT}$	$= \frac{₹ 45,000}{₹ 30,000}$ = 1.5	$= \frac{₹ 45,000}{₹ 25,000}$ = 1.8

(ii) Financial Leverage (FL)

	A (₹)	B (₹)
Situation I		
EBIT	30,000	30,000
Less: Interest on debt	2,000	1,000
EBT	28,000	29,000
Financial Leverage (FL) = $\frac{EBIT}{EBT}$	$= \frac{₹ 30,000}{₹ 28,000}$ = 1.07	$= \frac{₹ 30,000}{₹ 29,000}$ = 1.034
	A (₹)	B (₹)
Situation-II		
EBIT	25,000	25,000
Less: Interest on debt	2,000	1,000
EBT	23,000	24,000
Financial Leverage (FL) = $\frac{EBIT}{EBT}$	$= \frac{₹ 25,000}{₹ 23,000}$ = 1.09	$= \frac{₹ 25,000}{₹ 24,000}$ = 1.04

iii) Combined Leverage (CL)

	A	B
Situation-I		
CL _ FL x OL	1.5x1.07 _ 1.61	1.5 x 1.034 _ 1.55
Situation-II		
CL _ FL x OL	1.8 x 1.09 _ 1.96	1.8 x 1.04 _ 1.872

PROBLEM : 7

You are given the following information of 5 firms of the same industry:

Name of the Firm	Change in Revenue	Change in Operating Income	Change in Earning per share
M	28%	26%	32%
N	27%	34%	26%
P	25%	38%	23%
Q	23%	43%	27%
R	25%	40%	28%

You are required to CALCULATE for all firms:

- Degree of operating leverage and
- Degree of combined leverage.

SOLUTION : 7

Calculation of Degree of Operating leverage and Degree of Combined leverage

Firm	Degree of Operating Leverage (DOL) = $\frac{\% \text{ change in Operating Income}}{\% \text{ change in Revenue}}$	Degree of Combined Leverage (DCL) = $\frac{\% \text{ change in EPS}}{\% \text{ change in Revenue}}$
M	$\frac{26\%}{28\%} = 0.929$	$\frac{32\%}{28\%} = 1.143$
N	$\frac{34\%}{27\%} = 1.259$	$\frac{26\%}{27\%} = 0.963$
P	$\frac{38\%}{25\%} = 1.520$	$\frac{23\%}{25\%} = 0.920$
Q	$\frac{43\%}{23\%} = 1.870$	$\frac{27\%}{23\%} = 1.174$
R	$\frac{40\%}{25\%} = 1.60$	$\frac{28\%}{25\%} = 1.120$
