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Subject :- Financial managment
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Question :-
Calculate the Degree of Operating Leverage (DOL), Degree of financial Leverage (DFL) and Degree of combined Leverage (DCL) for the following firms and interpret the results.

Ans)

Firm K
Output (units) = 60,000
Fixed cost = 7000
variable cost per unit = ~~0.020~~ 0.20

Total variable cost
= (60000 × 0.20)
= 12000

Interest in borrowed funds = 4000
selling price per unit = 0.60
Total selling price = 60000 × 0.60
= 36000

Firm k

Contribution = (Selling price - variable price)
= (36000 - 12000)
= (24000)

Profit = Contribution - FC
= (24000 - 7000)
= (17000)

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DOL = $\frac{\text{Contribution}}{\text{EBIT (profit)}}$ = $\frac{24000}{17000}$

PBT = Profit − Interest = (17000 − 4000) = 13000 = EBT

DFL = $\frac{\text{EBIT (profit)}}{\text{PBT}}$ = $\frac{17000}{13000}$ ≈ 1.31

DCL = $\frac{\text{Contribution}}{\text{EBT}}$ = $\frac{24000}{13000}$ = 1.8461 = 1.85

Firm L

Outputs (units) = 15,000

Fixed costs = 14,000

Variable cost per unit = 1.50

Total variable cost = (15000 × 1.50)

= 22,500

Invest on borrowed funds = 8000

Selling price per unit = 5.00

Total selling price = (15000 × 5.00)

= 75000

Contribution (selling price − variable cost)

= (75000 − 22500)

= (52,500)

Profit (EBIT) = (contribution − FC)

= 75000 − 22500)

= (52,500)

Profit (EBIT) = contribution − FC

= (52500 − 14000)

= 38,500

PBT / EBT = EBIT − Interest

= (38500 − 8000)

= 30,500

$$DOL = \frac{\text{Contribution}}{EBIT} = \frac{52500}{38500} = 1.363$$

$$DFL = \frac{EBIT}{PBT} = \frac{38500}{30500} = 1.262$$

$$DCL = \frac{\text{Contribution}}{EBT} = \frac{52500}{30500} = 1.721$$

FIRM M

Output (unit) = 1,00,000

Fixed costs = 1500

variable cost per unit = 0.02

Total variable cost = (100000 × 0.02)

= 2,000

Selling price per unit = 0.10

Total selling price = (1,00,000 × 0.10)

= 10000

contribution = (selling price − variable cost)

= (10000 − 2000)

= 8000

Profit (EBIT) = contribution − FC

= (8000 − 1500)

= 6500

PBT / EBT = EBIT − Interest

= (6500 − 0) = 6500

$$DOL = \frac{\text{Contribution}}{EBIT} = \frac{8000}{6500} = 1.2307$$

$$DFL = \frac{EBIT}{EBT} = \frac{6500}{6500} = 1$$

$$DCL = \frac{\text{Contribution}}{EBT} = \frac{8000}{6500} = 1.2307$$