LEVERAGES

Model-1: Operating Leverages:

Situation-1: one level of activity

$$OP = \frac{\text{contribution}}{EBIT}$$

Situation-2: Two level of activity

$$OP = \frac{\text{Percentage of change in operating Income [EBIT]}}{\text{\% change in Revenue [sales]}}.$$

Model-2: Financial Leverage:

Situation-1: Absence of preference dividend

$$FL = \frac{EBIT}{EBT}$$

Situation-2: presence of preference dividend

$$FL = \frac{EBIT}{EBT - \frac{PD}{1-Tax}}$$

Situation-3: Data between two level of activity

$$FL = \frac{\% \Delta \text{ in } EPS}{\% \Delta \text{ in } EBIT}, \quad \Delta = \text{change}.$$

Model-3: Combined Leverage:

Situation-1: one level of activity

$$CL = \frac{\text{contribution}}{EBT}$$

Situation-2: Two level of activity

$$CL = \frac{\%\Delta \text{ in } EBT/EAT/EPS}{\%\Delta \text{ in Revenue [sales]}}$$

* Return on Investment

$$= \frac{EBIT}{\text{Total capital employeed [eq + Debt + preferen]}} \times 100$$

* Return on equity

$$\frac{\text{Net profit after tax}}{\text{Share holders fund [equity only]}} \times 100.$$

Model-4; BEP and Margin of safety:

$$BEP = \frac{\text{Fixed cost per unit}}{\text{contribution per unit.}}$$

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

*PV ratio = $\frac{\text{contribution}}{\text{Sales}}$ (or) Sales x PV = contri

Bep = $\frac{\text{Fixed cost}}{\text{PV ratio}}$ (or) PV x BEP = Fixed cost

So, MOS = $\frac{\text{Contri} - FC}{\text{contri}}$ = $\frac{EBIT}{\text{contri}}$

* Operation leverage = $\frac{\text{contri}}{EBIT}$

then, DOL = $\frac{1}{MOS}$

*Asset turn over Ratio = $\frac{\text{Turnover (or) Sales}}{\text{Total Assets [FA+CA]}}$

*Segment due to preference

= ROI [1-Tax] x preference %

*Segment due to debt amount

= ROI [1-Tax] x Int% [1-Tax]