Chapter-3 Financial Analysis

Ratio Analysis

Classification of Ratios

- → Profitability Ratio
- → Activity or Turnover Ratio
- → Investor Analysis Ratio
- → Leverage Ratio
- → Solvency Ratio

Topics to be covered

- Calculation of Ratios
- Preparation of Balance sheet and P/L from Ratio
- DuPoint Analysis.

Profitability Ratio

A) Income Statement Ratio

COGS Ratio : $\frac{COGS}{Sale} \times 100$

Gross Profit Ratio : $\frac{Gross\ Profit}{Sale} \times 100$

$\frac{Sale - COGS}{Sale} \times 100$

GP Ratio $= \frac{\cancel{Sale}}{\cancel{Sale}} - \frac{COGS}{Sale} \times 100$

GP Ratio $= 1 \times 100 - COGS$ Ratio

GP Ratio + COGS Ratio = 100%

Net Profit Ratio : $\frac{Net\ Profit}{Sale} \times 100$

PV Ratio : $\frac{Contribution}{Sale} \times 100$

Expense Ratio :

(a) O&A Expense Ratio $\frac{O\&A\ Exp}{Sale} \times 100$

(b) S&D Exp Ratio $\frac{S\&D\ exp}{Sale} \times 100$

Operating Cost Ratio / Operating Ratio :

COGS Ratio + O&A Exp Ratio + S&D Exp Ratio

B> Income Statement & Balance Sheet Ratios

Return on Equity (ROE) : $\frac{EAFESH}{ESC + R\&S} \times 100$

Return on total Shareholder : $\frac{EAT}{ESC + PSC + R\&S} \times 100$

Return on Total Capital $\frac{EBIT}{ESC + R\&S + PSC + \text{Debt/long term loan}} \times 100$

Return on total asset (ROTA) : $\frac{\text{Net Profit}}{\text{Total Asset}} \times 100$

Activity or Turnover Ratio [in times]

Fixed asset Turnover Ratio $\frac{\text{turnover}}{\text{Fixed Asset}}$

Current Asset turnover Ratio $\frac{\text{Sales}}{\text{Current Asset}}$

Total Asset turnover Ratio $\frac{\text{Sale}}{\text{Total Asset}}$

Capital turnover Ratio $\frac{\text{Sale}}{\text{Total Capital}}$

working Capital T/O Ratio $\frac{\text{Sale}}{\text{working Capital}}$ (CA-CL)

Debtor T/O Ratio $\frac{\text{Credit Sale}}{\text{Avg (Debtor + B/R)}}$

Creditor T/O Ratio $\frac{\text{Credit Purchase}}{\text{Avg (Creditor + B/P)}}$

RM Stock T/O Ratio $\frac{\text{RM Consumed}}{\text{Avg RM Stock}}$

WIP Stock T/O Ratio $\frac{\text{COP}}{\text{Avg WIP Stock}}$

FG Stock T/O Ratio $\dfrac{\text{COGS}}{\text{Avg FG Stock}}$

Coverage Ratios [in times]

Interest Coverage Ratio $\dfrac{\text{EBIT}}{\text{Interest}}$

Preference Dividend Coverage Ratio $\dfrac{\text{EAT}}{\text{Preference Divi}}$

Equity Dividend Coverage Ratio $\dfrac{\text{EAFESH}}{\text{Equity Divided}}$

Fixed Financial Charge Coverage Ratio $\dfrac{\text{EBIT}}{\text{Interest} + \dfrac{\text{Pref Divi}}{1-t}}$

Debt Service Coverage Ratio $\dfrac{\text{EAT} + \text{Dep} + \text{Interest}}{\text{Principle} + \text{Interest}}$

Repayment

Income Statement

Sale
- COGS

Gross Profit
- OAA / S&D

Operating Profit / EBIT
- Interest

EBT
- Tax

EAT / NET Profit

Investor Analysis Ratio

These Ratios are Calculated on equity Share holder's point of view

EPS (Earning Per Share) $\dfrac{\text{EAFESH}}{\text{No. of Equity Share}}$

Dividend Per Share (DPS) $\dfrac{\text{equity Dividend}}{\text{No. of Equity Shares}}$

Dividend Payment Ratio $\dfrac{\text{Equity Dividend}}{\text{EAFESH}} \times 100$

Dividend Payment Ratio + Retention Ratio = 100%

PE Ratio (Price Earning Ratio) $= \dfrac{\text{MPS}}{\text{EPS}}$

Book Value/Share $\dfrac{\text{ESC} + \text{R\&S}}{\text{No. of Eq Share}}$

Dividend yield Ratio $\dfrac{\text{DPS}}{\text{MPS}} \times 100$

Earning yield Ratio $\dfrac{\text{EPS}}{\text{MPS}} \times 100$

Du Point Analysis

Return on Total Asset $= \frac{\text{Net Profit}}{\text{Total Asset}} \times 100$

Net Profit Ratio × Asset turnover Ratio

$\frac{NP}{Sale} \times 100 \times \frac{Sale}{\text{Total Asset}}$

Return on Total Capital

$\frac{\text{EBIT / operating Profit}}{\text{Total Capital}} \times 100$

$\frac{\text{operating Profit}}{Sale} \times 100 \times \frac{Sale}{\text{Total Capital}}$

operating Profit Ratio × Capital T/O Ratio

Solvency Ratio

Idle Ratio

Current Ratio $\dfrac{\text{Current Asset}}{\text{Current Liability}}$ $\dfrac{2}{1}$

Quick Ratio / Liquid / Acid Test Ratio

$\dfrac{\text{CA} - \text{Stock} - \text{Prepaid Exp}}{\text{CL}}$

Cash Ratio $\dfrac{\text{Cash \& Bank} + \text{Marketable Security}}{\text{Current Liability}}$

Debt Equity Ratio

$\dfrac{\text{Debt}}{\text{Equity}}$ $\dfrac{2}{1}$

Debt → Long term

Equity → ESC + R & S

Proprietary Ratio $\dfrac{\text{Proprietor Fund}}{\text{Total Asset}}$

Capital Gearing Ratio $\dfrac{\text{PSC} + \text{Debenture}}{\text{ESC} + \text{R \& S}}$