

Tutorial Notes

Class: B.Com (Hons.) Semester III (CC7)

Subject: Management Principles & application.

Topic: Ratio Analysis: Interpretations, Advantages and Controlling Technique

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### **RATIO ANALYSIS: INTERPRETATIONS, ADVANTAGES AND CONTROLLING TECHNIQUE**

#### **Interpretations of Ratio Analysis:**

The phrase integrated ratio analysis, as a controlling technique, lends itself to two interpretations:

- (i) Controlling through Return on Investment (i.e. ROI); as ROI is an integration of a good number of important accounting ratios.
- (ii) Controlling through computing accounting ratios vis-a-vis, liquidity, solvency, profitability and activity; and reading/observing conclusions of various related ratios, in conjunction with each other.

**Let us consider both these interpretations of integrated ratio analysis:**

#### **(1) Controlling through ROI:**

##### **Return on Investment (ROI):**

ROI is one of the most successfully used overall control techniques; which measure the success of a company by the ratio of earnings to investment of capital. This approach has been an important part of the control system.

**ROI is computed according to the following formula:**

$$\text{ROI} = \frac{\text{Profits before interest, tax and dividends}}{\text{Capital employed}} \times 100$$

Where, capital employed refers to the total long-term investment in a company. (We may also take average capital employed i.e. capital employed in the beginning + capital employed at the end /2) Capital employed is calculated as the summation of fixed assets + net working capital (i.e. current assets- current liabilities).

**With the help of ROI, a company can compare its present performance with its past performances; and can also compare itself with other companies having similar investments and being similarly situated.**

Merits of ROI:

(i) ROI gives an overall assessment of business functioning. It guides management in increasing profits through a better utilization of capital invested. It, in fact, focuses managerial attention on the central objective of the business i.e. making best profits possible on capital available.

(ii) ROI is effective; where authority is decentralized. When departmental managers are furnished with a guide to efficiency that applies to the company as a whole; they develop a keener sense of responsibility for their departments and top management can easily hold subordinate managers responsible.

## **(2) Controlling through Computing Accounting Ratios:**

**A popular, useful and comprehensive way to study ratios is by classifying these from the following perspectives:**

(I) Liquidity

(II) Solvency

(III) Profitability

(IV) Activity or performance

### **(I) Liquidity Ratios:**

**Important liquidity ratios are:**

**(i) Current ratio (or Working Capital ratio):**

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

(The ideal Current ratio is 2:1)

**(ii) Liquid ratio (Acid Test ratio/Quick ratio):**

$$\text{Liquid ratio} = \frac{\text{Liquid Assets (or quick assets)}}{\text{Current Liabilities}}$$

Liquid Assets = Current Assets – Stock – Prepaid expenses

(Ideal liquid ratio is 1:1)

## **(II) Solvency Ratios:**

**Important solvency ratios are:**

### **(i) Debt-Equity Ratio (D.E. ratio):**

$$\text{D.E. ratio} = \frac{\text{Debt}}{\text{Equity}}$$

Where, Debt = long-term loans

Equity = Shareholders Funds.

Or

$$\text{D.E. ratio} = \frac{\text{Debt}}{\text{Debt} + \text{Equity}}$$

### **(ii) Proprietary Ratio:**

$$\text{Proprietary Ratio} = \frac{\text{Proprietary funds i.e. Shareholders' Funds}}{\text{Total Assets}}$$

### **(iii) Interest coverage ratio (or fixed charges cover):**

Interest coverage ratio = Profits before interest and tax/Interest on long-term debt

## **(III) Profitability ratios:**

**Important profitability ratios are:**

### **(i) Gross Profit Ratio:**

$$\text{Gross Profit Ratio} = \frac{\text{Gross profits}}{\text{Net Sales}} \times 100$$

### **(ii) Net Profit Ratio:**

$$\text{Net Profit Ratio} = \frac{\text{Net profit}}{\text{Net Sales}} \times 100$$

#### **Note:**

Net Profits may be considered from two perspectives: net profits before tax and net profit after tax. Hence net profit ratio has these two variations: net profit ratio (before tax) and net profit ratio (after tax).

### **(iii) Operating Profit ratio:**

$$\text{Operating Profit ratio} = \frac{\text{Operating Profits}}{\text{Net Sales}} \times 100$$

(Operating Profits = Net Profit-non-operating incomes + non-operating expenses.)

**(iv) Operating Ratio:**

$$\text{Operating Ratio} = \frac{\text{Cost of Sales} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

**(v) Return on Investment:**

This ratio has been explained earlier.

**(IV) Activity Ratios (or performance ratios):**

Some of the important activity ratios are:

**(i) Stock Turnover ratio:**

$$\text{Stock turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average Stock}}$$
$$\text{Average Stock} = \frac{(\text{Opening Stock} + \text{Closing Stock})}{2}$$

**(ii) Fixed Assets Turnover ratio:**

$$\text{Fixed Assets turnover ratio} = \frac{\text{Sales or cost of sales}}{\text{Net fixed assets}}$$

(Net Fixed assets= fixed assets-depreciation)

**(iii) Working Capital turnover ratio:**

$$\text{Working Capital turnover ratio} = \frac{\text{Sales or Cost of Sales}}{\text{Working Capital}}$$

(Working Capital= Current Assets -current Liabilities)

**(iv) Debtors Turnover Ratio:**

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivables}}$$

Where:

Accounts Receivable = Debtors + Bills Receivable

$$\text{Average Accounts Receivable} = \frac{\text{Opening accounts receivables} + \text{Closing accounts receivables}}{2}$$

**(v) Debt Collection Period (or Average age of debtors):**

$$\text{Debt Collection Period} = \frac{365 \text{ days or 12 months}}{\text{Debtors Turnover ratio}}$$

### **Advantages of Ratio Analysis:**

#### **Following are some advantages of ratio analysis:**

(i) Accounting ratios make data speak i.e. data which otherwise are a dumb mass of information become meaningful and understandable through conversion into accounting ratios.

(ii) Ratios facilitate intra-firm and inter-firm comparisons i.e. financial performance of a company can be compared over a number of years; and performance of the company can be compared with other companies, similarly situated, in the industry.

#### **(iii) Accounting ratios facilitate undertaking corrective action:**

Management may lay down targets (or standards) of various ratios against which actual ratios may be compared. This exercise enables management to locate weak points in organisational functioning and suggest suitable remedial actions to correct deviations from standards.

#### **(iv) Ratio analysis facilitates decision-making:**

It provides information which facilitates management to make decisions vis-a-vis various aspects of company functioning. Banks, financial institutions, investors etc. are also facilitated in their decisions about whether to advance money to company or invest in it, by virtue of information provided (or revealed) through ratio-analysis.

#### **(v) Ratios are useful for forecasting purposes:**

With the help of the indication of trends revealed by ratio-analysis; management can do forecasting of events, through appropriate statistical devices like correlation, regression etc.