

# **Accounting for Financial and Managerial Decision and Control [AFMDC]**

## **Unit 4**

### **Ratios for Management Performance Analysis**

#### **Structure**

- Performance measurement techniques: Analysis and interpretation of ratios for measuring productivity, profitability, activity, stability and growth possibility

#### **After the completion of this unit, you should be able to:**

- Compute productivity, profitability, activity, stability and growth possibility ratios
- Analyze the performances of an organization by measuring productivity, profitability, activity, stability and growth possibility ratios

#### **4.1 Ratios for Management Performance Analysis**

Management is required to evaluate their performance compared to different periods of its own enterprise or with industry average or with same business nature of other enterprises. Management is interested to know and review about the productivity, profitability, activity, stability and growth possibility of its own enterprise that can help management decide the course of action to be taken in future.

The important ratios to measure management performance can be classified in the following broad groups:

- (a) Ratio Measures Productivity
- (b) Ratio Measures Profitability
- (c) Ratio Measures Activity
- (d) Ratio Measures Stability
- (e) Ratio Measures Growth Possibility

### Ratio Measures Productivity

It measures how effectively the firm's human resources are utilized to generate net sales, net value added, net fixed assets etc. Similarly, it can also measure to what extent firm pays to employees.

The key ratios calculated under this group are:

$$i. \text{ Sales per Employee} = \frac{\text{Net Sales}}{\text{No. of Employees}} = \text{Rs. ....}$$

$$ii. \text{ Net Added Value per Employee} = \frac{\text{Total Value Added}}{\text{No. of Employees}} = \text{Rs. ....}$$

$$\text{Value Added} = \text{Sales} - \text{Cost of Bought in Material and Services}$$

$$= \text{Net Profit Before Taxes} + \text{All Conversion Cost}$$

$$iii. \text{ Labour Equipment Ratio} = \frac{\text{Net Fixed Assets}}{\text{No. of Employees}} = \text{Rs. ....}$$

$$iv. \text{ Wages Distribution Ratio} = \frac{\text{Total Wages}}{\text{Total Value Added}} = \text{..... \%}$$

(Total Wages Includes Direct Wages and Indirect Wages)

$$v. \text{ Wage Base} = \frac{\text{Total Wages}}{\text{No. of Employees}} = \text{Rs. ....}$$

### Ratio Measures Profitability

It measures the management's overall effectiveness as shown by the returns generated on sales and investment. It can also measure to what extent the firm spent its non-manufacturing expenses to generated net sales. The key ratios calculated under this group are:

$$i. \text{ Total Capital Profit Ratio} = \frac{\text{Net Profit}}{\text{Total Capital}} = \text{.....\%}$$

$$ii. \text{ Sales/Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} = \text{.....\%}$$

$$iii. \text{ Net Profit/Sales Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} = \text{.....\%}$$

$$iv. \text{ Sales/Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} = \text{.....\%}$$

(Operating Profit = Net Profit + Non-operating Expenses and Losses – Non-operating Income)

$$v. \text{ Owned Capital/Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Worth or Owned Capital}} = \dots\dots\dots\%$$

$$vi. \text{ Sales/Administration and Selling Expenses Ratio} = \frac{\text{Admininstration and Selling Expenses}}{\text{Sales}} = \dots\dots\%$$

**Ratios Measures Activity**

It measures how effectively the firm is utilized its available resources i.e. capital, current assets, inventory, account receivable, net fixed assets to generated sales. It can also measure the efficiency of the management to manage funds allocated to current and fixed assets. The key ratios calculated under this group are:

$$i. \text{ Total Capital Turnover Ratio} = \frac{\text{Sales}}{\text{Parmanent Capital}} = \dots\dots \text{ Times}$$

$$ii. \text{ Current Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Current Assets}} = \dots\dots \text{ Times}$$

$$iii. \text{ Inventory Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Inventory}} = \dots\dots \text{ Times}$$

$$iv. \text{ Account Receivable Turnover Ratio} = \frac{\text{Sales}}{\text{A/C. Receivable}} = \dots\dots \text{ Times}$$

$$v. \text{ Fixed Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Net Fixed Assets}} = \dots\dots \text{ Times}$$

**Ratios Measures Stability**

It measures how effectively the firm becomes able to meet its maturing obligations without any delay. It can also measure other key factors regarding financially stability of firm. The key ratios calculated under this group are:

$$i. \text{ Interest Expenses Ratio} = \frac{\text{Interest Expenses}}{\text{Sales}} = \dots\dots\dots\%$$

$$ii. \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \dots\dots \text{ Ratio}$$

$$iii. \text{ Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}} = \dots\dots \text{ Ratio}$$

$$iv. \text{ Owned Capital Ratio} = \frac{\text{Owners' Equity}}{\text{Permanent Capital}} = \dots\dots\dots\%$$

$$v. \text{ Ratio of Fixed Assets to Long-term Capital} = \frac{\text{Net Fixed Assets}}{\text{Permanent Capital}} = \dots\dots\dots\%$$

### **Ratios Measures Growth Possibility**

It measures how effectively the firm grows in size and scope in terms of sales, value added, labour strength, total capital and net profit. The key ratios calculated under this group are:

$$i. \text{ Sales Growth Rate} = \frac{\text{Current Year's Net Sales}}{\text{Previous Year's Net Sales}} = \dots\dots\dots \text{ Times}$$

$$ii. \text{ Added Value Growth Rate} = \frac{\text{Current Year's Total Value Added}}{\text{Previous Year's Total Value Added}} = \dots\dots\dots \text{ Times}$$

$$iii. \text{ Labour Strength Increase Rate} = \frac{\text{Current Year's Total Number of Employees}}{\text{Previous Year's Total Number of Employees}} = \dots\dots\dots \text{ Times}$$

$$iv. \text{ Total Capital Increase Rate} = \frac{\text{Current Year's Total Capital}}{\text{Previous Year's Total Capital}} = \dots\dots\dots \text{ Times}$$

$$v. \text{ Net Profit Increase Rate} = \frac{\text{Current Year's Net Profit}}{\text{Previous Year's Net Profit}} = \dots\dots\dots \text{ Times}$$

## **4.2 Ratio Analysis on Behalf of Prospective Lenders and Investors**

### **Appraisal from the Point of View of Prospective Lenders**

The prospective lenders or lending institutions, which have granted short-term loans, are primarily interested in company's liquidity position. However, in case of long-term loans, they will give more emphasis to the earning power and debt-equity position of the company. It is because in the absence of profits, even a very strong liquidity position of the company cannot ensure repayment of loans after some years. The long-term loans can be paid only when there is sufficient inflow of cash from internal resources. Therefore, a lending institution will prefer a low debt-equity ratio because in an adverse situation, it will provide an additional security to its investments in the company. Thus a lending institution will be interested in knowing about the following points:

- i. Liquidity Position:** A good liquidity ratio will be preferred by the lending institution.
- ii. Profitability Position:** A higher profitability will provide a higher earning cover for interest.
- iii. Debt-equity Ratio:** A low debt-equity ratio will be a plus point for the company.
- iv. Growth in Retained Earnings:** A satisfactory rate of growth and retained earnings will definitely be preferred by a lending institution.

## Appraisal from the Point of View of an Investor

An investor is primarily interested in the following four things to determine the relative strengths of the company's share in the market:

- i. The Earning per Share.
- ii. The Dividend per Share.
- iii. The Intrinsic Value of Share and
- iv. The Prospects of Growth in the Value of Shares.

## Ratio Uses on Behalf of Prospective Lenders and Investors

The following key ratios are used by lending institution and investors before providing loans to companies and analyses their investment status.

1. Current Ratio =  $\frac{\text{Current Assets}}{\text{Current Liabilities}} = \dots\dots \text{Ratio}$
2. Quick Ratio =  $\frac{\text{Quick Assets}}{\text{Current Liabilities}} = \dots\dots\dots$
3. Interest Coverage Ratio =  $\frac{\text{Net Profit Before Taxes and Interest}}{\text{Interest Charge}} = \text{Times}$
4. Debt Equity Ratio =  $\frac{\text{Long Term Debt}}{\text{Shareholders' Equity}} = \dots\dots \%$
5. Debt to Total Capital Ratio =  $\frac{\text{Long-term Debt}}{\text{Permanent Capital}} = \dots\dots\%$
6. Return on Investment =  $\frac{\text{Net Profit Before Taxes and Interest}}{\text{Total Assets (Operating)}} = \dots\dots\%$
7. Gross Profit Margin =  $\frac{\text{Gross Profit}}{\text{Net Sales}} = \dots\dots\%$
8. Net Profit Margin =  $\frac{\text{Net Profit}}{\text{Net Sales}} = \dots\dots\%$
9. Earning per Share =  $\frac{\text{Profit after Tax} - \text{Dividend on Preference Shares}}{\text{Number of Outstanding Shares}} = \text{Rs. } \dots\dots\dots$
10. Book Value per Share =  $\frac{\text{Shareholder's Fund}}{\text{Number of Outstanding Shares}} = \text{Rs. } \dots\dots\dots$

$$11. \text{ Earnings to Price Ratio} = \frac{\text{Earning per Share}}{\text{Market Price per Share}} = \text{Rs. ....}$$

$$12. \text{ Dividend Yield Ratio} = \frac{\text{Dividend per Share}}{\text{Market Price per Share}} = \text{..... \%}$$

$$13. \text{ Dividend Payout Ratio} = \frac{\text{Dividend per Share}}{\text{Earning per Share}} = \text{.....\%}$$

$$14. \text{ Dividend Cover Ratio} = \frac{\text{Earning per Share}}{\text{Dividend per Share}} = \text{..... Times}$$

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