

# Chapter 2 *Financial Statement Analysis*

## INTRODUCTION

A financial statement is an official document of the firm, which explores the entire financial information of the firm. The main aim of the financial statement is to provide information and understand the financial aspects of the firm. Hence, preparation of the financial statement is important as much as the financial decisions.

## MEANING AND DEFINITION

According to Hamptors John, the financial statement is an organized collection of data according to logical and consistent accounting procedures. Its purpose is to convey an understanding of financial aspects of a business firm. It may show a position at a moment of time as in the case of a balance-sheet or may reveal a service of activities over a given period of time, as in the case of an income statement.

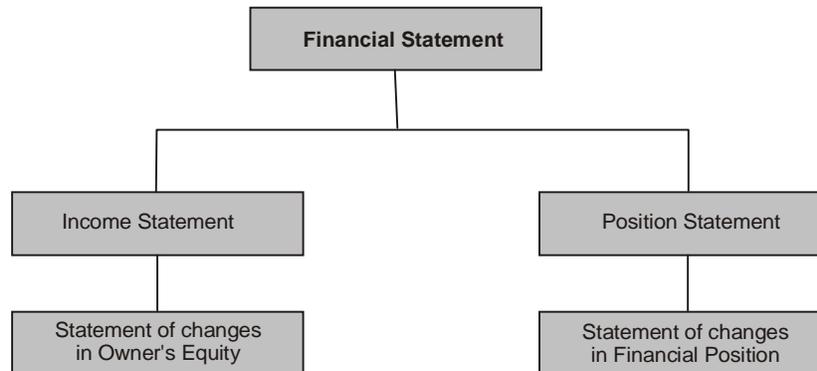
Financial statements are the summary of the accounting process, which, provides useful information to both internal and external parties. **John N. Nyer** also defines it “Financial statements provide a summary of the accounting of a business enterprise, the balance-sheet reflecting the assets, liabilities and capital as on a certain data and the income statement showing the results of operations during a certain period”.

Financial statements generally consist of two important statements:

- (i) The income statement or profit and loss account.
- (ii) Balance sheet or the position statement.

A part from that, the business concern also prepares some of the other parts of statements, which are very useful to the internal purpose such as:

- (i) Statement of changes in owner’s equity.
- (ii) Statement of changes in financial position.



**Fig. 2.1** Financial Statement

### **Income Statement**

Income statement is also called as profit and loss account, which reflects the operational position of the firm during a particular period. Normally it consists of one accounting year. It determines the entire operational performance of the concern like total revenue generated and expenses incurred for earning that revenue.

Income statement helps to ascertain the gross profit and net profit of the concern. Gross profit is determined by preparation of trading or manufacturing a/c and net profit is determined by preparation of profit and loss account.

### **Position Statement**

Position statement is also called as balance sheet, which reflects the financial position of the firm at the end of the financial year.

Position statement helps to ascertain and understand the total assets, liabilities and capital of the firm. One can understand the strength and weakness of the concern with the help of the position statement.

### **Statement of Changes in Owner's Equity**

It is also called as statement of retained earnings. This statement provides information about the changes or position of owner's equity in the company. How the retained earnings are employed in the business concern. Nowadays, preparation of this statement is not popular and nobody is going to prepare the separate statement of changes in owner's equity.

### **Statement of Changes in Financial Position**

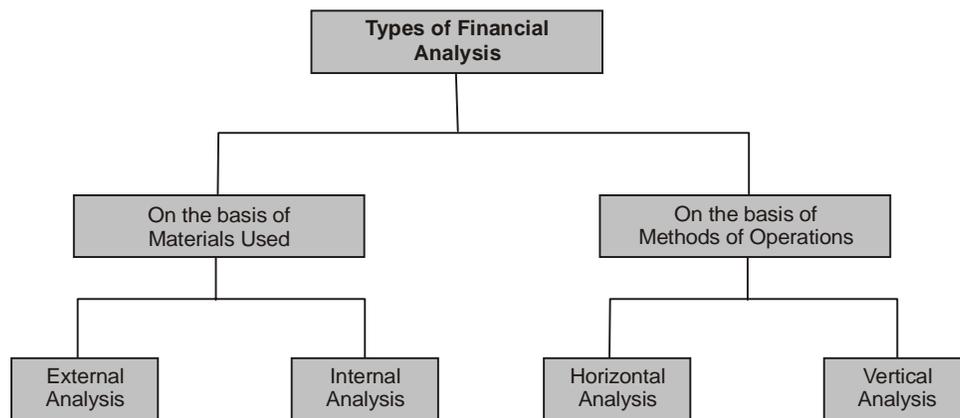
Income statement and position statement shows only about the position of the finance, hence it can't measure the actual position of the financial statement. Statement of changes in financial position helps to understand the changes in financial position from one period to another period.

Statement of changes in financial position involves two important areas such as fund flow statement which involves the changes in working capital position and cash flow statement which involves the changes in cash position.

## TYPES OF FINANCIAL STATEMENT ANALYSIS

Analysis of Financial Statement is also necessary to understand the financial positions during a particular period. According to Myres, “Financial statement analysis is largely a study of the relationship among the various financial factors in a business as disclosed by a single set of statements and a study of the trend of these factors as shown in a series of statements”.

Analysis of financial statement may be broadly classified into two important types on the basis of material used and methods of operations.



**Fig. 2.2** Types of Financial Statement Analysis

### 1. Based on Material Used

Based on the material used, financial statement analysis may be classified into two major types such as External analysis and internal analysis.

#### A. External Analysis

Outsiders of the business concern do normally external analyses but they are indirectly involved in the business concern such as investors, creditors, government organizations and other credit agencies. External analysis is very much useful to understand the financial and operational position of the business concern. External analysis mainly depends on the published financial statement of the concern. This analysis provides only limited information about the business concern.

#### B. Internal Analysis

The company itself does disclose some of the valuable informations to the business concern in this type of analysis. This analysis is used to understand

the operational performances of each and every department and unit of the business concern. Internal analysis helps to take decisions regarding achieving the goals of the business concern.

## 2. Based on Method of Operation

Based on the methods of operation, financial statement analysis may be classified into two major types such as horizontal analysis and vertical analysis.

### A. Horizontal Analysis

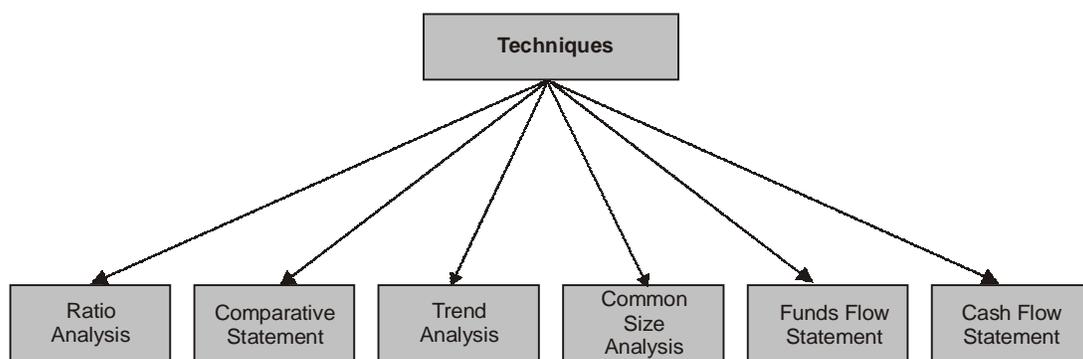
Under the horizontal analysis, financial statements are compared with several years and based on that, a firm may take decisions. Normally, the current year's figures are compared with the base year (base year is considered as 100) and how the financial information are changed from one year to another. This analysis is also called as dynamic analysis.

### B. Vertical Analysis

Under the vertical analysis, financial statements measure the quantities relationship of the various items in the financial statement on a particular period. It is also called as static analysis, because, this analysis helps to determine the relationship with various items appeared in the financial statement. For example, a sale is assumed as 100 and other items are converted into sales figures.

## TECHNIQUES OF FINANCIAL STATEMENT ANALYSIS

Financial statement analysis is interpreted mainly to determine the financial and operational performance of the business concern. A number of methods or techniques are used to analyse the financial statement of the business concern. The following are the common methods or techniques, which are widely used by the business concern.



**Fig. 2.3** Techniques of Financial Statement Analysis

1. Comparative Statement Analysis
  - A. Comparative Income Statement Analysis
  - B. Comparative Position Statement Analysis

2. Trend Analysis
3. Common Size Analysis
4. Fund Flow Statement
5. Cash Flow Statement
6. Ratio Analysis

### Comparative Statement Analysis

Comparative statement analysis is an analysis of financial statement at different period of time. This statement helps to understand the comparative position of financial and operational performance at different period of time.

Comparative financial statements again classified into two major parts such as comparative balance sheet analysis and comparative profit and loss account analysis.

### Comparative Balance Sheet Analysis

Comparative balance sheet analysis concentrates only the balance sheet of the concern at different period of time. Under this analysis the balance sheets are compared with previous year's figures or one-year balance sheet figures are compared with other years. Comparative balance sheet analysis may be horizontal or vertical basis. This type of analysis helps to understand the real financial position of the concern as well as how the assets, liabilities and capitals are placed during a particular period.

#### Exercise 1

The following are the balance sheets of Tamil Nadu Mercantile Bank Ltd., for the years 2003 and 2004 as on 31st March. Prepare a comparative balance sheet and discuss the operational performance of the business concern.

#### **Balance Sheet of Tamil Nadu Mercantile Bank Limited**

*As on 31st March*

**(Rs. in thousands)**

Liabilities	2003 Rs.	2004 Rs.	Assets	2003 Rs.	2004 Rs.
Capital	2,845	2,845	Cash and Balance with RBI	27,06,808	22,37,601
Reserve and Surplus	39,66,009	47,65,406	Balance with Banks and Money at call & and short notice	11,36,781	16,07,975
Deposits	4,08,45,783	4,40,42,730	Investments	2,14,21,060	2,35,37,098
Borrowings	7,27,671	2,84,690	Advances	1,95,99,764	2,11,29,869
Other Liabilities	16,74,165	17,99,197	Fixed Assets	4,93,996	5,36,442
Provisions			Other Assets	18,58,064	18,35,883
	4,72,16,473	5,08,94,868		4,72,16,473	5,08,94,868

## Solution

### Comparative Balance Sheet Analysis

Particulars	Year ending 31st March		Increased/ Decreased (Amount)	Increased/ Decreased (Percentage)
	2003 Rs.	2004 Rs.		
<b>Assets</b>				
<b>Current Assets</b>				
Cash and Balance with RBI	27,06,808	22,37,601	(+) 4,69,207	(+) 17.33
Balance with Banks and money at call and short notice	11,36,781	16,07,975	(-) 4,71,194	(-) 41.45
<b>Total Current Assets</b>	<b>38,43,589</b>	<b>38,45,576</b>	<b>1987</b>	<b>0.052</b>
<b>Fixed Assets</b>				
Investments	2,14,21,060	2,35,37,098	(-) 21,16,038	(-) 9.88
Advances	1,95,99,764	2,11,39,869	(-) 15,40,105	(-) 7.86
Fixed Assets	4,93,996	5,36,442	(-) 42,446	(-) 8.59
Other Assets	18,58,064	18,35,883	(+) 22,181	(+) 1.19
<b>Total Fixed Assets</b>	<b>4,33,72,884</b>	<b>4,70,49,292</b>	<b>(+) 36,76,408</b>	<b>8.48</b>
<b>Total Assets</b>	<b>4,72,16,473</b>	<b>5,08,94,868</b>	<b>36,78,395</b>	<b>7.79</b>
<b>Current Liabilities</b>				
Borrowings	7,27,671	2,84,690	(+) 4,42,981	60.88
Other Liability and Provisions	16,74,165	17,99,197	(-) 1,25,032	7.47
<b>Total Current Liability</b>	<b>24,01,836</b>	<b>20,83,887</b>	<b>3,17,949</b>	<b>13.24</b>
Fixed Liability Capital	2,845	2,845	—	—
Reserves surplus	39,66,009	47,65,406	(+) 7,99,397	20.16
Deposit	4,08,45,783	4,40,42,730	(+) 31,96,947	7.83
<b>Total Fixed Liability</b>	<b>4,48,14,637</b>	<b>4,88,10,981</b>	<b>(+) 39,96,344</b>	<b>8.92</b>
<b>Total Liability</b>	<b>4,72,16,473</b>	<b>5,08,94,868</b>	<b>36,78,395</b>	<b>7.79</b>

### Comparative Profit and Loss Account Analysis

Another comparative financial statement analysis is comparative profit and loss account analysis. Under this analysis, only profit and loss account is taken to compare with previous year's figure or compare within the statement. This analysis helps to understand the operational performance of the business concern in a given period. It may be analyzed on horizontal basis or vertical basis.

### Trend Analysis

The financial statements may be analysed by computing trends of series of information. It may be upward or downward directions which involve the percentage relationship of each and every item of the statement with the common value of 100%. Trend analysis helps to understand the trend relationship with various items, which appear in the financial statements. These percentages may also be taken as index number showing relative changes in the financial information resulting with the various period of time. In this analysis, only major items are considered for calculating the trend percentage.

#### Exercise 2

Calculate the Trend Analysis from the following information of Tamilnadu Mercantile Bank Ltd., taking 1999 as a base year and interpret them (in thousands).

Year	Deposits	Advances	Profit
1999	2,05,59,498	97,14,728	3,50,311
2000	2,66,45,251	1,25,50,440	4,06,287
2001	3,19,80,696	1,58,83,495	5,04,020
2002	3,72,99,877	1,77,26,607	5,53,525
2003	4,08,45,783	1,95,99,764	6,37,634
2004	4,40,42,730	2,11,39,869	8,06,755

#### Solution

Trend Analysis (Base year 1999 = 100)

(Rs. in thousands)

Year	Deposits		Advances		Profits	
	Amount Rs.	Trend Percentage	Amount Rs.	Trend Percentage	Amount Rs.	Trend Percentage
1999	2,05,59,498	100.0	97,14,728	100.0	3,50,311	100.0
2000	2,66,45,251	129.6	1,25,50,440	129.2	4,06,287	115.9
2001	3,19,80,696	155.5	1,58,83,495	163.5	5,04,020	143.9
2002	3,72,99,877	181.4	1,77,26,607	182.5	5,53,525	150.0
2003	4,08,45,783	198.7	1,95,99,764	201.8	6,37,634	182.0
2004	4,40,42,730	214.2	2,11,39,869	217.6	8,06,755	230.3

#### Common Size Analysis

Another important financial statement analysis techniques are common size analysis in which figures reported are converted into percentage to some common base. In the balance sheet the total assets figures is assumed to be 100 and all figures are expressed as a percentage of this total. It is one of the simplest methods of financial statement analysis, which reflects the relationship of each and every item with the base value of 100%.

**Exercise 3**

Common size balance sheet of Tamilnadu Mercantile Bank Ltd., as on 31st March 2003 and 2004.

Particulars	31st March 2003 Amount	Percentage	31st March 2004 Amount	Percentage
<b>Fixed Assets</b>				
Investments	2,14,21,060	45.37	2,35,37,098	46.25
Advances	1,95,99,764	41.51	2,11,39,869	41.54
Fixed Assets	4,93,996	1.05	5,36,442	1.05
Other Assets	18,58,064	3.94	18,35,883	3.61
<b>Total Fixed Assets</b>	<b>4,33,72,884</b>	<b>91.86</b>	<b>4,70,49,292</b>	<b>94.44</b>
<b>Current Assets</b>				
Cash and Balance with RBI	27,06,808	5.73	22,37,601	4.40
Balance with banks and money at call and short notice	11,36,781	2.41	16,07,975	3.20
<b>Total Current Assets</b>	<b>38,43,589</b>	<b>8.14</b>	<b>38,45,576</b>	<b>7.60</b>
<b>Total Assets</b>	<b>4,72,16,473</b>	<b>100.00</b>	<b>5,08,94,868</b>	<b>100.00</b>
<b>Fixed Liabilities</b>				
Capital	2,845	0.01	2,845	0.01
Reserve and Surplus	39,66,009	8.40	47,65,406	9.36
Deposits	4,08,45,783	86.50	4,40,42,730	86.54
<b>Total Fixed Liabilities</b>	<b>4,48,14,637</b>	<b>94.91</b>	<b>4,88,10,981</b>	<b>95.91</b>
<b>Current Liability</b>				
Borrowings	7,27,671	1.54	2,84,690	0.56
Other Liabilities				
Provisions	16,74,165	3.55	17,99,197	3.53
<b>Total Current Liability</b>	<b>24,01,836</b>	<b>5.09</b>	<b>20,83,887</b>	<b>4.09</b>
<b>Total Liabilities</b>	<b>4,72,16,473</b>	<b>100.00</b>	<b>5,08,94,868</b>	<b>100.00</b>

**FUNDS FLOW STATEMENT**

Funds flow statement is one of the important tools, which is used in many ways. It helps to understand the changes in the financial position of a business enterprise between the beginning and ending financial statement dates. It is also called as statement of sources and uses of funds.

Institute of Cost and Works Accounts of India, funds flow statement is defined as “a statement prospective or retrospective, setting out the sources and application of the funds of an enterprise. The purpose of the statement is to indicate clearly the requirement of funds and how they are proposed to be raised and the efficient utilization and application of the same”.

## CASH FLOW STATEMENT

Cash flow statement is a statement which shows the sources of cash inflow and uses of cash out-flow of the business concern during a particular period of time. It is the statement, which involves only short-term financial position of the business concern. Cash flow statement provides a summary of operating, investment and financing cash flows and reconciles them with changes in its cash and cash equivalents such as marketable securities. Institute of Chartered Accountants of India issued the Accounting Standard (AS-3) related to the preparation of cash flow statement in 1998.

### Difference Between Funds Flow and Cash Flow Statement

Funds Flow Statement	Cash Flow Statement
1. Funds flow statement is the report on the movement of funds or working capital	1. Cash flow statement is the report showing sources and uses of cash.
2. Funds flow statement explains how working capital is raised and used during the particular	2. Cash flow statement explains the inflow and out flow of cash during the particular period.
3. The main objective of fund flow statement is to show the how the resources have been balanced mobilized and used.	3. The main objective of the cash flow statement is to show the causes of changes in cash between two balance sheet dates.
4. Funds flow statement indicates the results of current financial management.	4. Cash flow statement indicates the factors contributing to the reduction of cash balance in spite of increase in profit and vice-versa.
5. In a funds flow statement increase or decrease in working capital is recorded.	5. In a cash flow statement only cash receipt and payments are recorded.
6. In funds flow statement there is no opening and closing balances.	6. Cash flow statement starts with opening cash balance and ends with closing cash balance.

### Exercise 4

From the following balance sheet of A Company Ltd. you are required to prepare a schedule of changes in working capital and statement of flow of funds.

#### *Balance Sheet of A Company Ltd., as on 31<sup>st</sup> March*

Liabilities	2004	2005	Assets	2004	2005
Share Capital	1,00,000	1,10,000	Land and Building	60,000	60,000
Profit and Loss a/c	20,000	23,000	Plant and Machinery	35,000	45,000
Loans	—	10,000	Stock	20,000	25,000
Creditors	15,000	18,000	Debtors	18,000	28,000
Bills payable	5,000	4,000	Bills receivable	2,000	1,000
			Cash	5,000	6,000
	1,40,000	1,65,000		1,40,000	1,65,000

**Solution****Schedule of Changes in Working Capital**

Particulars	2004 Rs.	2005 Rs.	Incharge Rs.	Decharge Rs.
Current Assets				
Stock	20,000	25,000	5,000	—
Debtors	18,000	28,000	10,000	—
Bills Receivable	2,000	1,000	—	1,000
Cash	5,000	6,000	1,000	
A	<b>45,000</b>	<b>60,000</b>		
Less Current Liabilities				
Creditors	15,000	18,000		3,000
Bills Payable	5,000	4,000	1,000	
B	<b>20,000</b>	<b>22,000</b>	17,000	4,000
A-B	25,000	38,000	—	13,000
Increase in W.C.	<b>38,000</b>	<b>38,000</b>	<b>17,000</b>	<b>17,000</b>

**Fund Flow Statement**

Sources	Rs.	Application	Rs.
Issued Share Capital	10,000	Purchase of Plant and Machinery	10,000
Loan	10,000	Increase in Working Capital	13,000
Funds From Operations	3,000		
	<b>23,000</b>		<b>23,000</b>

**Exercise 5**

From the above example 4 prepare a Cash Flow Statement.

**Solution****Cash Flow Statement**

Inflow	Rs.	Outflow	Rs.
Balance b/d	5,000	Purchase of plant	10,000
Issued Share Capital	10,000	Increase Current Assets	
Loan	10,000	Stock	
Cash Opening Profit	3,000	Decrease in Bills Payable	5,000
Decrease in Bills	1,000	Balance c/d	10,000
Receivable	3,000		1,000
Increase in Creditors			6,000
	<b>32,000</b>		<b>32,000</b>

**RATIO ANALYSIS**

Ratio analysis is a commonly used tool of financial statement analysis. Ratio is a mathematical relationship between one number to another number. Ratio is used as an index for evaluating the financial performance of the business concern. An accounting ratio shows

the mathematical relationship between two figures, which have meaningful relation with each other. Ratio can be classified into various types. Classification from the point of view of financial management is as follows:

- Liquidity Ratio
- Activity Ratio
- Solvency Ratio
- Profitability Ratio

### Liquidity Ratio

It is also called as short-term ratio. This ratio helps to understand the liquidity in a business which is the potential ability to meet current obligations. This ratio expresses the relationship between current assets and current liabilities of the business concern during a particular period. The following are the major liquidity ratio:

S. No.	Ratio	Formula	Significant Ratio
1.	Current Ratio	$= \frac{\text{Current Assets}}{\text{Current Liability}}$	2 : 1
2.	Quick Ratio	$= \frac{\text{Quick Assets}}{\text{Quick / Current Liability}}$	1 : 1

### Activity Ratio

It is also called as turnover ratio. This ratio measures the efficiency of the current assets and liabilities in the business concern during a particular period. This ratio is helpful to understand the performance of the business concern. Some of the activity ratios are given below:

S. No.	Ratio	Formula
1.	Stock Turnover Ratio	$\frac{\text{Cost of Sales}}{\text{Average Inventory}}$
2.	Debtors Turnover Ratio	$\frac{\text{Credit Sales}}{\text{Average Debtors}}$
3.	Creditors Turnover Ratio	$\frac{\text{Credit Purchase}}{\text{Average Credit}}$
4.	Working Capital Turnover Ratio	$\frac{\text{Sales}}{\text{Net Working Capital}}$

### Solvency Ratio

It is also called as leverage ratio, which measures the long-term obligation of the business concern. This ratio helps to understand, how the long-term funds are used in the business concern. Some of the solvency ratios are given below:

S. No	Ratio	Formula
1.	Debt-Equity Ratio	$\frac{\text{External Equity}}{\text{Internal Equity}}$
2.	Proprietary Ratio	$\frac{\text{Shareholder / Shareholder's Fund}}{\text{Total Assets}}$
3.	Interest Coverage Ratio	$\frac{\text{EBIT}}{\text{Fixed Interest Charges}}$

### Profitability Ratio

Profitability ratio helps to measure the profitability position of the business concern. Some of the major profitability ratios are given below.

S. No	Ratio	Formula
1.	Gross Profit Ratio	$\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$
2.	Net Profit Ratio	$\frac{\text{Net Profit after tax}}{\text{Net Sales}} \times 100$
3.	Operating Profit Ratio	$\frac{\text{Operating Net Profit}}{\text{Sales}} \times 100$
4.	Return in Investment	$\frac{\text{Net Profit after tax}}{\text{Shareholder Fund}} \times 100$

### Exercise 6

From the following balance sheet of Mr. Arvind Industries Ltd., as 31st March 2007.

Liabilities	Rs.	Assets	Rs.
Equity Share Capital	10,000	Fixed assets (less depreciation Rs. 10,000)	26,000
7% Preference Share Capital	2,000	Current Assets:	
Reserves and Surplus	8,000	Cash	1,000
6% Mortgage Debentures	14,000	Investments (10%)	3,000
Current Liabilities:		Sundry debtors	4,000
Creditors	1,200	Stock	6,000
Bills payable	2,000		
Outstanding expenses	200		
Tax Provision	2,600		
	<b>40,000</b>		<b>40,000</b>

Other information:

1. Net sales	Rs. 60,000
2. Cost of goods sold	Rs. 51,600
3. Net income before tax	Rs. 4,000
4. Net income after tax	Rs. 2,000

Calculate appropriate ratios.

## Solution

### Short-term solvency ratios

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liability}} = \frac{14,000}{6,000} = 2.33 : 1$$

$$\text{Liquid Ratio} = \frac{\text{Liquid Ratio}}{\text{Current Liability}} = \frac{8,000}{6,000} = 1.33 : 1$$

### Long-term solvency ratios

$$\text{Proprietary ratio} = \frac{\text{Proprietor's funds}}{\text{Total Assets}} = \frac{20,000}{40,000} = 0.5 : 1$$

$$\begin{aligned} \text{Proprietor's fund or Shareholder's fund} &= \text{Equity share capital} + \text{Preference share} \\ &\quad \text{capital} + \text{Reserve and surplus} \\ &= 10,000 + 2,000 + 8,000 = 20,000 \end{aligned}$$

$$\text{Debt-Equity ratio} = \frac{\text{External equities}}{\text{Internal equities}} = \frac{20,000}{20,000} = 1 : 1$$

$$\text{Interest coverage ratio} = \frac{\text{EBIT}}{\text{Fixed interest charges}} = \frac{4,000 + 840}{840} = 5.7 \text{ times}$$

$$\begin{aligned} \text{Fixed interest charges} &= 6\% \text{ on debentures of Rs.14,000} \\ &= \text{Rs. 840} \end{aligned}$$

### Activity Ratio

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Average Inventory}} = \frac{51,600}{6,000} = 8.6 \text{ times}$$

As there is no opening stock, closing stock is taken as average stock.

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}} = \frac{60,000}{6,000} = 10 \text{ times}$$

In the absence of credit sales and opening debtors, total sales is considered as credit sales and closing debtors as average debtors.

$$\text{Creditors turn over ratio} = \frac{\text{Credit Purchases}}{\text{Average Creditors}} = \frac{43,200}{1,200} = 36 \text{ times}$$

In absence of purchases, cost of goods sold – gross profit treated as credit purchases and in the absence of opening creditors, closing creditors are treated as average creditors.

$$\text{Working Capital Turnover Ratio} = \frac{\text{Sales}}{\text{Net Working Capital}} = \frac{60,000}{8,000} = 7.5 \text{ times}$$

### **Profitability Ratios**

$$\text{Gross profit ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100 = \frac{8,400}{60,000} \times 100 = 14 \%$$

$$\text{Net profit ratio} = \frac{\text{Net Profit}}{\text{Sales}} \times 100 = \frac{2,000}{60,000} \times 100 = 3.33 \%$$

In the absence of non-operating income, operating profit ratio is equal to net profit ratio.

$$\text{Return of Investment} = \frac{\text{Net Profit after Tax}}{\text{Shareholder's Fund}} \times 100 = \frac{2,000}{20,000} \times 100 = 10 \%$$

### **MODEL QUESTIONS**

1. What is financial statement?
2. What is financial statement analysis?
3. Discuss various types of financial statement analysis.
4. Explain various methods of financial statement analysis.
5. What are the differences between fund flow and cash flow?
6. What is ratio analysis? Explain its types.