

*Notes*

32

ACCOUNTING RATIOS - I

In the previous lesson, you have learnt the relationship between various items of the financial statements. You have also learnt various tools of analysis of financial statements such as comparative statements, common size statement, and trend analysis. However, like the above tools another important tool which is very useful to examine the financial statements is ratio analysis. Accounting ratios are calculated from the financial statements to arrive at meaningful conclusions pertaining to liquidity, profitability, and solvency. Accounting ratios can be of different types. In this lesson, we will learn about different types of accounting ratios and their methods of calculation.



OBJECTIVES

After studying this lesson, you will be able to :

- state the meaning of accounting ratio;
- classify the accounting ratios;
- explain various types of accounting ratios on the basis of liquidity and turnover.

32.1 OBJECTIVES OF RATIO ANALYSIS

Ratios are regarded as a test of earning capacity, financial soundness and operating efficiency of a business organisation. The use of ratios in accounting and financial management analysis helps the management to know the profitability, financial position (liquidity and solvency) and operating efficiency of an enterprises.

The objectives of ratio analysis may be better understood by the following advantages of ratio analysis.

Advantages and Uses of Ratio Analysis

The advantages derived by an enterprise by the use of accounting ratios are:



Notes

- i. **Useful in Analysis of Financial Statements :** Accounting ratios are useful for understanding the financial position of the enterprise. Bankers, investors, creditors, etc., all analyse Balance Sheets and Profit and Loss Accounts by means of ratios.
- ii. **Useful in Simplifying Accounting Figures :** Accounting ratio simplifies, summarises and systematises a long array of accounting figures to make them understandable. Its main contribution lies in communicating precisely the inter-relationships which exist between various elements of financial statements.
- iii. **Useful in Judging the Operating Efficiency of Business :** Accounting ratios are essential for understanding the affairs of an enterprise, specially its operating efficiency. Accounting ratios are also useful for diagnosis of the financial health of an enterprise. This is done by evaluating liquidity, solvency, profitability, etc. Such an evaluation enables the management to assess financial requirements and the capabilities of various business units.
- iv. **Useful for Forecasting :** Ratios are helpful in business planning and forecasting. The trend ratios are analysed and used as a guide to future planning. What should be the course of action in the immediate future is decided, many a times, on the basis of trend ratios, *i.e.*, ratios calculated for a number of years.
- v. **Useful in Locating the Weak Spots :** Accounting ratios are of great assistance in locating the weak spots in the business even though the overall performance may be quite good. Management can pay attention to the weakness and take remedial action. For example, if the firm finds that the increase in distribution expenses is more than proportionate to the results achieved, these can be examined in detail and depth to remove any wastage that may be there.
- vi. **Useful in Inter-firm and Intra-firm Comparison :** A firm would like to compare its performance with that of other firms and of industry in general. The comparison is called inter-firm comparison. If the performance of different units belonging to the same firm is to be compared, it is called intra-firm comparison. Such comparison is almost impossible without accounting ratios. Even the progress of a firm from year to year cannot be measured without the help of ratios. The accounting ratios are the best tools to compare the various firms and divisions of a firm.

32.2 MEANING AND ITS CLASSIFICATION

The ratio is an arithmetical expression *i.e.* relationship of one number to another. It may be defined as an indicated quotient of the mathematical expression. It is expressed as a proportion or a fraction or in percentage or in terms of number of times. A financial ratio is the relationship between two accounting figures expressed mathematically. Suppose two accounting figures of a concern are sales ₹ 1,00,000 and profits ₹ 15,000. The ratio between these two figures will be

$$\frac{15,000}{1,00,000} = 3 : 20 \text{ or } 15\%$$

Ratios provide clues to the financial position of a concern. These are the indicators of financial strength, soundness, position or weakness of an enterprise. One can draw conclusions about the financial position of a concern with the help of accounting ratios.

Suppose one shopkeeper (X) earns a profit of ₹ 1,000 and another (Y) earns ₹ 20,000 which one is more efficient? We may say that the one who earns a higher profit is running his shop better. In fact to answer the questions, we must ask, how much is the capital employed by each shopkeeper? Let, X employ ₹ 1,00,000 and Y ₹ 4,00,000. We can work out the percentage of profit earned by each to the capital employed. Thus,

$$X = \frac{\text{₹ } 10,000}{\text{₹ } 1,00,000} \times 100 = 10\%$$

$$Y = \frac{\text{₹ } 20,000}{\text{₹ } 4,00,000} \times 100 = 5\%$$

These figures show that for every ₹100 of capital, X earns ₹ 10 and Y earns ₹ 5. X is obviously making a better use of the funds employed by him. He must be treated as more efficient of the two. The above example shows that absolute figures by themselves do not communicate the meaningful information.

Broadly accounting ratios can be grouped into the following categories :

- (a) Liquidity ratios (b) Activity ratios (c) Solvency ratios
(c) Profitability ratios

Liquidity Ratios

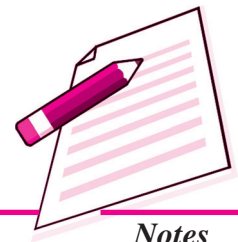
The term liquidity refers to the ability of the company to meet its current liabilities. Liquidity ratios assess capacity of the firm to repay its short term liabilities. Thus, liquidity ratios measure the firms' ability to fulfil short term commitments out of its liquid assets.

The important liquidity ratios are :

- (i) Current Ratio
(ii) Quick Ratio

- (i) **Current Ratio** : Current ratio is a ratio between current assets and current liabilities of a firm for a particular period. This ratio establishes a relationship between current assets and current liabilities. The objective of computing this ratio is to measure the ability of the firm to meet its short term liability. It compares the current assets and current liabilities of the firm. This ratio is calculated as under :

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



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MODULE - 6

Analysis of Financial Statements



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Accounting Ratios - I

Current Assets are those assets which can be converted into cash within a short period i.e. not exceeding one year. It includes the following :

Cash in hand, Cash at Bank, Trade Receivables, Short term investment, Stock, Prepaid expenses.

Trade Receivables include Bills Receivables and Sundry Debtors.

Current liabilities are those liabilities which are expected to be paid within a year. It includes the following :

Trade Payables, Bank overdraft, Provision for tax, Outstanding expenses.

Trade Payables include Sundry Creditors and Bills Payables.

Significance

It indicates the amount of current assets available for repayment of current liabilities. Higher the ratio, the greater is the short term solvency of a firm and vice - versa. However, a very high ratio or very low ratio is a matter of concern. If the ratio is very high it means the current assets are lying idle. Very low ratio means the short term solvency of the firm is not good. Thus, the ideal current ratio of a company is 2 : 1 i.e. to repay current liabilities, there should be twice current assets.

Illustration 1

Calculate current ratio from the following :

	₹
Sundry debtors	4,00,000
Stock	160,000
Marketable securities	80,000
Cash	120,000
Prepaid expenses	40,000
Bill payables	80,000
Sundry creditors	160,000
Debentures	200,000
Outstanding Expenses	160,000

Solution :

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

Accounting Ratios - I

$$\begin{aligned}\text{Current Assets} &= \text{Sundry Debtors} + \text{Stock} + \text{Marketable Securities} + \text{Cash} + \\ &\quad \text{Prepaid Expenses} \\ &= ₹ (400,000 + 160,000 + 80,000 + 120,000 + 40,000) \\ &= ₹ 800,000 \\ \text{Current Liabilities} &= \text{Bill Payables} + \text{Sundry Creditors} + \text{Outstanding Expenses} \\ &= ₹ (80,000 + 160,000 + 160,000) = ₹ 400,000 \\ \text{Current Ratio} &= \frac{₹ 8,00,000}{₹ 4,00,000} = 2 : 1\end{aligned}$$

(ii) **Quick Ratio** : Quick ratio is also known as Acid test or Liquid ratio. It is another ratio to test the short-term solvency of the concern. This ratio establishes a relationship between quick assets and current liabilities. This ratio measures the ability of the firm to pay its current liabilities. The main purpose of this ratio is to measure the ability of the firm to pay its current liabilities. For the purpose of calculating this ratio, stock and prepaid expenses are not taken into account as these may not be converted into cash in a very short period. This ratio is calculated as under:

$$\text{Liquid Ratio} = \frac{\text{Liquid or Quick Assets}}{\text{Current Liabilities}}$$

where, liquid assets = current assets – (stock + prepaid expenses)

Significance

Quick ratio is a measure of the instant debt paying capacity of the business enterprise. It is a measure of the extent to which liquid resources are immediately available to meet current obligations. A quick ratio of 1 : 1 is considered good/favourable for a company.

Illustration 2

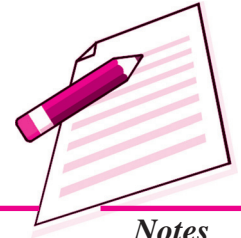
Taking the same information as given in illustrated 1 calculate the quick ratio.

Solution :

$$\begin{aligned}\text{Quick Ratio} &= \frac{\text{Liquid or Quick Assets}}{\text{Current Liabilities}} \\ \text{Quick Assets} &= \text{Currents Assets} - (\text{Stock} + \text{Prepaid Expenses}) \\ &= ₹ 8,00,000 - (₹ 1,60,000 + ₹ 40,000) = ₹ 6,00,000 \\ \text{Current Liabilities} &= ₹ 6,00,000 \\ \text{Quick Ratio} &= \frac{₹ 6,00,000}{₹ 6,00,000} = 1 : 1\end{aligned}$$

MODULE - 6

Analysis of Financial Statements



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Illustration 3

Calculate liquidity ratios from the following information :

Total current assets	₹ 90,000
Stock (included in current assets)	₹ 30,000
Prepaid expenses	₹ 3,000
Current liabilities	₹ 60,000

Solution :

$$A. \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{₹90,000}{₹60,000}$$

$$= 3 : 2 \text{ or } 1.5 : 1$$

$$B. \text{ Liquid ratio} = \frac{\text{Current Asset} - (\text{Stock} + \text{Prepaid Expenses})}{\text{Current Liabilities}}$$

$$= \frac{₹57,000}{₹60,000} = 0.95 : 1.0$$

Illustration 4

The balance sheet of ABCD Ltd. shows the following figures :

Share capital	₹ 152,000
Cash in hand and at Bank	₹ 30,000
Fixed Assets	₹ 113,000
Creditors	₹ 20,000
5% Debentures	₹ 24,000
Bill Payables	₹ 4,000
Debtors	₹ 18,000
Stock	₹ 52,000
General reserve	₹ 8,000
Profit and Loss A/c	₹ 5,000

Calculate (i) current ratio and (ii) liquid ratio.

Solution :

$$(i) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

where,

$$\begin{aligned}\text{Current Assets} &= \text{Cash in hand and at bank} + \text{Debtors} + \text{Stock} \\ &= ₹ 30,000 + ₹ 18,000 + ₹ 52,000 \\ &= ₹ 1,00,000\end{aligned}$$

$$\begin{aligned}\text{Current Liabilities} &= \text{Creditors} + \text{Bill Payable} \\ &= ₹ 20,000 + ₹ 4,000 \\ &= ₹ 24,000 \\ &= \frac{₹ 1,00,000}{₹ 24,000} = 4.26 : 1\end{aligned}$$

$$(ii) \text{ Quick Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

where,

$$\begin{aligned}\text{Quick assets} &= \text{Current Assets} - \text{Stock} \\ &= ₹ 1,00,000 - ₹ 52,000 \\ &= ₹ 48,000\end{aligned}$$

$$\text{Quick ratio} = \frac{₹ 48,000}{₹ 24,000} = 2 : 1$$

Illustration 5

From the following information, if ₹ 1000 is paid to creditors what will be the effect (increase or decrease or no change) on current ratio, if before payment, balances are : Cash ₹ 15000, Creditors ₹ 7,500?

Solution :

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

$$\text{Before payment} = \frac{\text{Cash}}{\text{Creditors}} = \frac{₹ 15,000}{₹ 7,500} = 2 : 1$$

$$\text{After payment} = ₹ 1000 \text{ to creditors}$$

$$\text{Current Ratio} = \frac{\text{Cash}}{\text{Creditors}} = \frac{₹ 15,000 - ₹ 1,000}{₹ 7,500 - ₹ 1,000}$$

$$= \frac{₹ 14,000}{₹ 6,500} = 2.15 : 1$$



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Hence, it increases the current ratio from 2 : 1 to 2.15 : 1



INTEXT QUESTIONS 32.1

I. Select the current assets from the list given below

- | | |
|-----------------------|------------------|
| Cash at bank | Debtors |
| Inventory | Prepaid expenses |
| Short term investment | Goodwill |
| Building | Cash in hand |
| Furniture | |
| Bill Receivables | |

II. Fill in the blanks with suitable words or figures :

- (i) Current Ratio = $\frac{\text{.....}}{\text{Current Liabilities}}$
- (ii) The ideal current ratio is
- (iii) The ideal liquid ratio is
- (iv) Liquid assets = – (Stock + prepaid expenses)

III. State whether the following statements are true or false :

- (i) Ratios are not helpful in business planning and forecasting.
- (ii) Accounting ratios are useful for understanding the financial position of the enterprise.

32.3 ACTIVITY OR TURNOVER RATIOS

Activity ratios measure the efficiency or effectiveness with which a firm manages its resources. These ratios are also called turnover ratios because they indicate the speed at which assets are converted or turned over in Revenue from operations (sales). These ratios are expressed as ‘times’ and should always be more than one. Some of the important activity ratios are :

- (i) Inventory turnover ratio (Stock turnover ratio)
- (ii) Trade Receivables turnover ratio (Debtors turnover ratio)
- (iii) Trade Paybles turnover ratio (Creditors turnover ratio)
- (iv) Working capital turnover ratio

(i) Inventory Turnover Ratio (Stock Turnover Ratio)

Inventory turnover ratio is a ratio between cost of revenue from operation and the average inventory. Every firm has to maintain a certain level of inventory of finished goods. But the level of inventory should neither be too high nor too low. It evaluates the efficiency with which a firm is able to manage its inventory. This ratio establishes relationship between cost of revenue from operation and average inventory.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$\text{Cost of Revenue from Operation} = \text{Opening Inventory} + \text{Net Purchases} + \text{Direct expenses} - \text{Closing Inventory}$$

$$\text{OR Cost of Revenue from Operation} = \text{Net Sales} - \text{Gross Profit}$$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

- (i) If cost of revenue from operation is not given, the ratio is calculated from revenue from operations (sales).
- (ii) If only closing inventory is given, then that may be treated as average inventory.

Significance

The ratio signifies the number of times on an average the inventory or stock is disposed off during the period. The high ratio indicates efficiency and the low ratio indicates inefficiency of stock management.

Illustration 6

Calculate inventory turnover ratio from the following information:

Opening inventory	₹ 45000
Closing inventory	₹ 55000
Net Purchases	₹ 160000

Solution :

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

$$\text{Average Inventory} = \frac{₹(45,000 + 55,000)}{2}$$

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$$\begin{aligned}
 &= ₹ 50000 \\
 \text{Cost of Revenue from Operations} &= \text{Opening Inventory} + \text{Net Purchases} - \text{Closing Inventory} \\
 &= ₹ 45000 + ₹ 160000 - ₹ 55000 \\
 &= ₹ 150000 \\
 \text{Inventory Turnover Ratio} &= \frac{₹ 1,50,000}{₹ 50,000} = 3 \text{ times}
 \end{aligned}$$

Illustration 7

Opening Inventory	₹ 19,000
Closing Inventory	₹ 21,000
Revenue from Operations (Sales)	₹ 2,00,000

Gross Profit 25% of revenue from operations. Calculate inventory turnover ratio.

Solution :

$$\begin{aligned}
 \text{Cost of Revenue from Operations} &= \text{Revenue from Operations} - \text{Gross profit} \\
 &= ₹ 2,00,000 - 25\% \text{ of } ₹ 2,00,000 \\
 &= ₹ (2,00,000 - 50,000) \\
 &= ₹ 1,50,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Average Inventory} &= \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2} \\
 &= \frac{₹(19,000 + 21,000)}{2} \\
 &= ₹ 20,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Inventory turn over Ratio} &= \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}} \\
 &= \frac{₹ 1,50,000}{₹ 20,000} = 7.5 \text{ times}
 \end{aligned}$$

Illustration 8

Annual sales	₹ 4,00,000
Gross profit 20% on sales	
Opening Inventory	₹ 38,500
Closing Inventory	₹ 41,500

Calculate inventory turnover ratio.

Solution :

$$\text{Inventory turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$\begin{aligned} \text{Costs of revenue from Ooperations} &= \text{Sales} - \text{Gross profit} \\ &= ₹ 4,00,000 - (20\% \text{ on } ₹ 4,00,000) \\ &= ₹ 4,00,000 - ₹ 80,000 \\ &= ₹ 320,000 \end{aligned}$$

$$\begin{aligned} \text{Average Inventory} &= \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2} \\ &= \frac{38,500 + 41,500}{2} = \frac{80,000}{2} \\ &= ₹ 40,000 \\ \text{Inventory turnover Ratio} &= \frac{₹ 3,20,000}{₹ 40,000} = 8 \text{ times} \end{aligned}$$

Illustration 9

From the following information calculate opening inventory and closing inventory:

Revenue from operations (sales) during the year	=	₹ 2,00,000
Gross profit on sales	=	50%
Inventory turnover ratio	=	4 times

If closing inventory was ₹ 10,000 more than the opening inventory what will be the amount for the opening inventory and closing inventory?

Solution :

Revenue from Operations (Sales)	=	₹ 2,00,000 (given)
Gross profit on sales	=	50% (given)

*Notes*



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$$\begin{aligned} \text{Gross profit} &= 2,00,000 \times \frac{50}{100} = 1,00,000 \\ \text{Cost of Revenue from operation} &= \text{Sales} - \text{Gross profit} \\ &= ₹ 2,00,000 - ₹ 1,00,000 \\ &= ₹ 1,00,000 \end{aligned}$$

$$\begin{aligned} \text{Inventory Turnover Ratio} &= \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}} \\ 4 &= \frac{1,00,000}{\text{Average Inventory}} \end{aligned}$$

∴ By cross multiplying

$$\text{Average Inventory} = \frac{₹ 1,00,000}{4} = ₹ 25,000$$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

Let opening inventory be x

$$\text{Closing Inventory} = x + 10,000$$

$$\text{Average Inventory} = \frac{x + x + 10,000}{2} = 25,000 \text{ (given)}$$

$$\text{or } x + x + 10,000 = 50,000$$

$$\text{or } 2x = 50,000 - 10,000$$

$$\text{or } 2x = 40,000$$

$$\text{or } x = 20,000$$

$$\text{Hence, Opening Inventory} = ₹ 20,000$$

$$\text{Closing Inventory} = ₹ 20,000 + ₹ 10,000$$

$$= ₹ 30,000$$



INTEXT QUESTIONS 32.2

Fill in the blanks with suitable word/words :

- (i) Inventory turnover ratio is divided by average inventory.

$$(ii) \text{ Average inventory} = \frac{\text{Opening Inventory} + \dots\dots\dots}{2}$$

$$(iii) \text{ Inventory turnover ratio} = \frac{10,000}{?} = 5 \text{ times}$$

$$(iv) \text{ Inventory turnover ratio} = \frac{30,000}{10,000} =$$

*Notes***(ii) Trade Receivable Turnover Ratio (Debtors Turnover ratio)**

This ratio establishes a relationship between cost of revenue from operations and average trade receivables i.e. average trade debtors and bill receivables. The objective of computing this ratio is to determine the efficiency with which the trade receivables are managed. This ratio is also known as Ratio of Revenue from Operations (Net Sales) to Average Trade Receivables. It is calculated as under

Trade Receivable Turnover Ratio =

$$\frac{\text{Credit Revenue from Operations (Net Credit Sales)}}{\text{Average Trade Receivables}}$$

In case, figure of credit revenue from operations (net credit sale) is not available then the sales are treated as credit sales :

Average Trade Receivables =

$$\frac{\text{Opening Debtors \& Bills Receivable} + \text{Closing Debtors \& Bills Receivable}}{2}$$

Note : If opening trade receivables are not available, then closing trade receivables are taken as average trade receivables.

Significance

Debtors turnover ratio is an indication of the speed with which a company collects its debts. The higher the ratio, the better it is because it indicates that debts are being collected quickly. In general, a high ratio indicates the shorter collection period which implies prompt payment by debtor and a low ratio indicates a longer collection period which implies delayed payment for debtors.



Notes

Illustration 10

Find out trade receivable turnover from the following information for one year ended 31st March 2014.

	31st March 2014
Annual credit revenue from operations	500000
Trade receivable in the beginning	80000
Trade receivable at the end	100000

Solution

$$\text{Average Trade Receivables} = \frac{\text{Opening Trade Receivable} + \text{Closing Trade Receivable}}{2}$$

$$\text{Trade Receivables Turnover} = \frac{\text{Credit Revenue from Operations}}{\text{Average Trade Receivables}}$$

$$\text{Average Trade Receivables} = \frac{80,000 + 1,00,000}{2} = ₹ 90,000$$

$$\text{Trade Receivable Turnover Ratio} = \frac{5,00,000}{90,000} = 5.56 \text{ times}$$

(iii) Trade Payables Turnover Ratio (Creditors Turnover Ratio)

It is a ratio between net credit purchases and average trade payables (i.e creditors and Bill payables). In the course of business operations, a firm has to make credit purchases. Thus a supplier of goods will be interested in finding out how much time the firm is likely to take in repaying the trade payables. This ratio helps in finding out the exact time a firm is likely to take in repaying to its trade payables. This ratio establishes a relationship between credit purchases and average trade payables.

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

$$\text{Average Trade Payables} = \frac{\text{Opening Creditors} + \text{Opening Bill Payables} + \text{Closing Creditors} + \text{Closing Bills Payables}}{2}$$

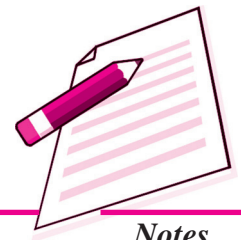
Significance

Trade Payables turnover ratio helps in judging the efficiency in getting the benefit of credit purchases offered by suppliers of goods. A high ratio indicates the shorter payment period and a low ratio indicates a longer payment period.

Illustration 11

Calculate trade payables turnover ratio from the following information :

	₹		₹
Cash purchases	1,00,000	Total purchases	4,07,000
Opening creditors	25,000	Closing creditors	50,000
Closing bill payables	25,000	Opening bill payables	20,000
Purchase returns	7,000		

*Notes***Solution :**

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

$$\begin{aligned} \text{Net purchases} &= \text{Total purchases} - \text{Purchase returns} \\ &= ₹ 4,07,000 - ₹ 7,000 = ₹ 4,00,000 \end{aligned}$$

$$\begin{aligned} \text{Net credit purchases} &= \text{Net purchases} - \text{cash purchases} \\ &= ₹ 4,00,000 - ₹ 1,00,000 \\ &= ₹ 3,00,000 \end{aligned}$$

$$\begin{aligned} \text{Average Trade Payables} &= \frac{\text{Opening Creditors} + \text{Opening Bill Payables} + \text{Closing Creditors} + \text{Closing Bills Payables}}{2} \\ &= \frac{₹25,000 + ₹20,000 + ₹50,000 + ₹25,000}{2} \\ &= \frac{₹1,20,000}{2} = \text{Rs } 60,000 \end{aligned}$$

$$\text{Trade Payables Turnover Ratio} = \frac{₹3,00,000}{₹60,000} = 5 \text{ times}$$

Illustration 12

Calculate trade payables turnover ratio.

Credit purchases during the year	₹ 14,40,000
Closing creditors	₹ 1,44,000
Closing Bill payables	₹ 96,000

Solution :

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$



Notes

$$= \frac{₹14,40,000}{₹1,44,000 + ₹96,000}$$

$$= \frac{₹14,40,000}{₹2,40,000} = 6 \text{ times}$$

Note : Where opening creditors and opening bill payables are not given then closing creditors and bill payables are taken as average trade payables.

Working Capital Turnover Ratio

Working capital of a concern is directly related to revenue from operations (sales). The current assets like debtors, bill receivables, cash, stock etc, change with the increase or decrease in revenue from operations.

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Working capital turnover ratio indicates the speed at which the working capital is utilised for business operations. It is the velocity of working capital ratio that indicates the number of times the working capital is turned over in the course of a year. This ratio measures the efficiency at which the working capital is being used by a firm. A higher ratio indicates efficient utilisation of working capital and a low ratio indicates the working capital is not properly utilised.

This ratio can be calculated as

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$$

$$\text{Average Working Capital} = \frac{\text{Opening Working Capital} + \text{Closing Working Capital}}{2}$$

If the figure of cost of revenue from operations is not given, then the figure of revenue from operations (sales) can be used. On the other hand if opening working capital is not given then working capital at the year end will be used.

Illustration 13

Find out working capital turnover ratio for the year 2014.

	₹
Cash	10,000
Bills receivable	5,000
Sundry debtors	25,000
Inventory	20,000

Sundry creditors	30,000
Cost of Revenue from Operations	1,50,000

Solution :

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$$

$$\begin{aligned} \text{Current Assets} &= ₹10,000 + ₹5,000 + ₹25,000 + ₹20,000 \\ &= ₹60,000 \end{aligned}$$

$$\text{Current Liabilities} = ₹30,000$$

$$\begin{aligned} \text{Net working capital} &= \text{CA} - \text{CL} = ₹60,000 - ₹30,000 \\ &= ₹30,000 \end{aligned}$$

$$\text{So, Working Capital Turnover Ratio} = \frac{₹1,50,000}{₹30,000} = 5 \text{ times}$$

*Notes***INTEXT QUESTIONS 32.3**

I. Fill in the blanks with suitable word or words.

(i) Low trade receivables turnover ratio indicates collection.

(ii) Debtors turnover ratio = $\frac{\quad}{\text{Average Trade Paybles}}$

(iii) ? = $\frac{\text{Net Credit Purchases}}{\text{Average Trade Paybles}}$

(iv) Trade Receivable Turnover Ratio = $\frac{?}{50,000} = 4$

(v) Trade Receivable turnover ratio = $\frac{1,50,000}{?} = 3$

(vi) Trade Payables turnover ratio = $\frac{75,000}{15,000} = ?$

(viii) Trade Payables turnover ratio = $\frac{1,00,000}{?} = 4$

II. Fill in the blanks with suitable word or words :

(i) Working capital = - current liabilities

(ii) = $\frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$



Notes

(iii) Average working capital =
$$\frac{\text{Opening Working Capital} + \text{Closing Working Capital}}{?}$$

(iv) Working Capital Turnover Ratio =
$$\frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$$



WHAT YOU HAVE LEARNT

- The term ratio means an arithmetical relationship between two numbers.
- Advantages and uses of Ratio Analysis
 - (i) Useful in Analysis of Financial Statements.
 - (ii) Useful in Simplifying Accounting Figures.
 - (iii) Useful for Forecasting.
 - (iv) Useful in Locating the Weak spots.
- Liquidity ratios assesses the capacity of the firm to repay short term liability. It measures the ability to fulfil short term commitments out of liquid assets.
- The important liquidity ratios are :
 - (i) Current Ratio : It measures the short term solvency of a business

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$
 - (ii) Liquid Ratio : It measures the ability of the firm to pay current liabilities immediately

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

Liquid assets = Current assets – (Inventory + Prepaid expenses)
- Activity or turnover ratios measures the effectiveness with which a concern uses resources at its disposal.
- The important activity ratios are
 - (i) Inventory turnover ratio : It measures the efficiency with which the Inventory is managed.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

- (ii) Trade Receivable turnover ratio : It is calculated to indicate the efficiency of the company to collect its debts.

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Revenue from Operations}}{\text{Average Trade Receivables}}$$

- (iii) Trade Payable turnover ratio : It indicates the efficiency with which suppliers are paid.

$$\text{Trade Payable Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$



Notes

**TERMINAL EXERCISE**

- What are the Advantages and uses of ratio analysis? Explain in detail.
- Explain the significance of trade receivable turnover ratio and liquid ratio.
- Explain the meaning and significance of the following ratios.
 - Current ratio
 - Trade Payables turnover ratio
 - Inventory turnover ratio
- From the following compute current ratio and quick ratio :

	₹
Fixed Assets	100000
Inventory	30000
Debtors	20,000
Cash	40,000
Prepaid expenses	10,000
Creditors	30,000
Reserves	10,000

5. Following figures have been extracted from the books of XY Ltd. as on 31st December 2013 is

	₹		₹
Equity share capital	100000	Cash in hand	20000
7% debentures	100000	Cash at Bank	20,000

MODULE - 6

Analysis of Financial Statements



Notes

Accounting Ratios - I

Bank overdraft	40,000	Bill receivables	100000
Creditors	60000	Investment	10000
Debtors	50000	General reserve	30000
Inventory	150000		

Cost of Revenue from operations during the year 2014 were ₹ 4,70,000. Calculate inventory turnover ratio.

6. Given : Current ratio 5 : 2

Liquidity ratio 3 : 2

working capital ₹ 60,000

Calculate (a) current liabilities (b) current assets (c) Liquid assets (d) stock

7. XYZ Ltd. supplies you following information regarding the year ending 31st, December 2013.

Cash sales	₹ 80,000
Credit sales	₹ 2,00,000
Return inward	₹ 10,000
Opening inventory	₹ 25,000
Closing inventory	₹ 30,000

Gross profit ratio is 25%. Calculate inventory turnover ratio.



ANSWERS TO INTEXT QUESTIONS

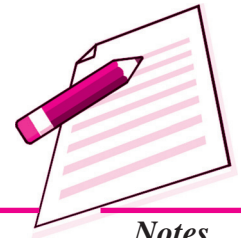
- 32.1** I. Cash at Bank, inventory, short term investment, Bills receivable, debtors, prepaid expenses, cash in hand
II. (i) current assets (ii) 2 : 1 (iii) 1 : 1 (iv) current assets
III. (i) False (ii) False
- 32.2** (i) Cost of revenue from operations (ii) Closing inventory
(iii) 2000 (iv) 3 times
- 32.3** I. (i) Delay in collection of debt
(ii) Net credit revenue from operations
(iii) Trade Payables turnover ratio
(iv) 2,00,000 (v) 50,000 (vi) 5 times (vii) 25,000

- II. (i) Current assets (ii) Working capital turnover ratio
(iii) 2 (iv) Average working capital



ANSWERS TO TERMINAL EXERCISE

4. Current Ratio 3.33 : 1, Quick Ratio 2.337 : 1
5. 3.13 times
6. (a) 40,000 (b) 1,00,000 (c) 60,000 (d) 40,000
7. 7.36 times



Notes