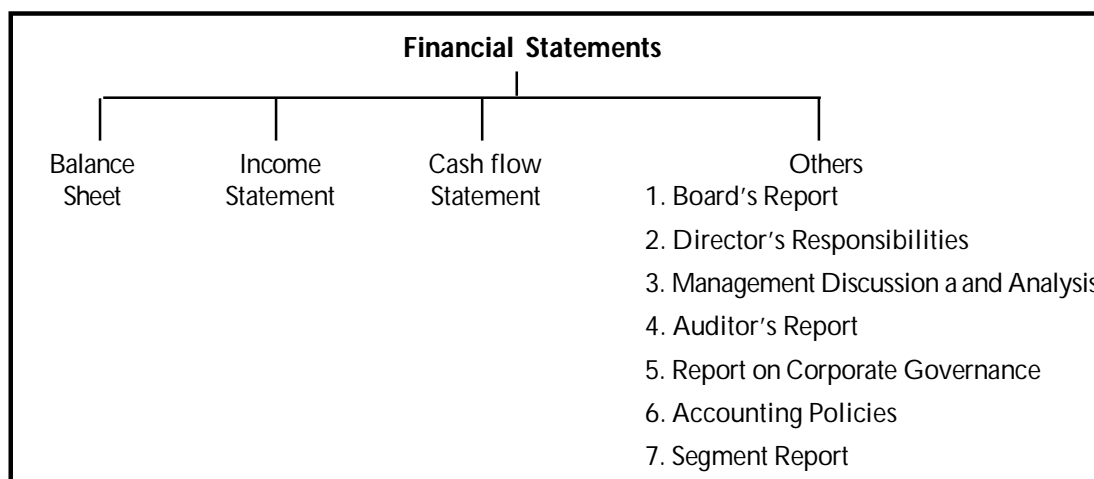


FINANCIAL STATEMENTS

A financial statement is a compilation of data, which is logically & consistently organized according to accounting principles. Its purpose is to convey an understanding of some financial aspects of a business firm. It may show a position at a moment in time, as in the case of a balance sheet, or may reveal a series of activities over a given period of time, as in the case of an income statement. Financial statements are the major means through which firms present their financial situation to stockholders, creditors, and the general public. The majority of firms include extensive financial statements in their annual reports, which receive wide distribution.



Format of Vertical Balance Sheet

Vertical Balance Sheet as on _____

Particulars			
Sources of Funds:			
1. Shareholder's Funds:			
(A) Share Capital:			
___% ___ Preference Share of ` ___ each ` ___ paid up	XX		
___ Equity Shares of ` ___ each ` ___ paid up	XX	XXX	
(B) Reserves and Surplus:			
Profit & Loss A/c	XX		
General Reserve	XX		
Capital Reserve	XX		
Less: Fictitious Assets: (to the extent not w/off)			
Discount on Issue of Shares	XX		
Underwriting Commission	XX		
Preliminary Expenses	XX	(XX)	XXX
Total Shareholder's Funds (A + B)			XXX
2. Borrowed Funds:			
(A) Secured loans:			
___% Debentures			
Long-term Loans	XX		
Loan from Bank	XX		
Public Deposits	XX	XXX	
(B) Unsecured Loans:			
Short-term Loans		XX	
Total Borrowed Funds (A + B)			XXX
Total Sources of Funds (1 + 2)			XXX

Particulars			
Application of Funds:			
1. Fixed Assets:			
(A) Intangible Assets:			
Goodwill	XX		
Patents	XX		

Copy Right		XX		
Trade Marks		XX	XXX	
(B) Tangible Assets:				
Land & Building		XX		
Plant & Machinery		XX		
Furniture & Fitting		XX		
Motor Vehicle		XX		
Long/Trade Investment		XX	XXX	
Total Fixed Assets (A + B)				XXX
2. Investments (Only Investment)				XXX
3. Working Capital:				
(A) Current Assets:				
(i) Quick Current Assets:				
Cash/Bank	XX			
Bills Receivable	XX			
Debtors (net)	XX			
Loans and Advance	XX			
Loose Tools	XX			
Short-term/Marketable Investment	XX	XX		
(ii) Non – Quick Current Assets:				
Closing Stock/Inventory	XX			
Prepaid Expenses	XX	XX		
Total Current Assets (i + ii)			XXX	
(B) Less: Current Liabilities:				
(i) Quick Current Liabilities:				
Creditors	XX			
Bills Payable	XX			
Outstanding Expenses	XX			
Provision for Tax	XX			
Unclaimed/Proposed Dividend	XX	XX		
(ii) Non – Quick Current Liabilities:				
Bank Overdraft		XX		
Total Current Liabilities (i + ii)			(XXX)	
Total Working Capital (A – B)				XXX
Total Application of Funds (1 + 2 + 3)				XXX

Format of Vertical Profit and Loss Account

_____ and Co.
Vertical Revenue Statement for the year ended _____

Particulars			
Sales:			
Cash Sales		XX	
Credit Sales		XX	
Total Gross Sales			XXX
<i>Less: Returns & Allowance</i>			XX
Total Net Sales			XXX
<i>Less: Cost of Goods Sold:</i>			
1. Raw Material Consumed (RMC):			
Opening Stock of Raw – Material	XX		
<i>Add: Purchase of Raw – Material</i>	XX		
<i>Less: Purchase Return</i>	(XX)	XX	
<i>Add: Freight/Carriage Inward</i>		XX	
		XXX	
<i>Less: Closing Stock of Raw – Material</i>		(XX)	
Raw Material Consumed			XXX
2. Work – In – Progress:			
Opening Stock of Work – In – Progress	XX		
<i>Add: Direct Expenses:</i>			
Factory Expenses	XX		
Depreciation on Factory Assets	XX	XX	
		XXX	
<i>Less: Closing Stock of Work – In – Progress</i>		(XX)	
Cost of Production			XXX
3. Finished Goods:			
Opening Stock of Finished Goods	XX		
<i>Less: Closing Stock of Finished Goods</i>	(XX)	XX	
Total Cost of Goods Sold (1 + 2 + 3)			(XXX)
Gross Margin			XXX
<i>Add: Operating Income:</i>			
Discount Received		XX	
Bad – Debts Received		XX	XX
Balance c/f			XXX

Particulars			
Balance b/f			XXX
Less: Operating Expenses:			
1. Administrative Expenses:			
Salaries to staff	XX		
Office Rent, Rates and Taxes	XX		
Depreciation on Furniture & Fixtures	XX		
Postage & Telegram	XX		
Printing & Stationery	XX		
Director's Remuneration	XX		
Audit Fees	XX	XX	
2. Selling & Distribution Expenses:			
Salaries to Salesmen	XX		
Showroom's Rent	XX		
Depreciation on Delivery Van	XX		
Travelling Expense of Salesmen	XX		
Carriage Outward	XX		
Advertisement & Publicity	XX		
Bad – Debts	XX	XX	
3. Finance Expenses:			
Cash Discount to customers	XX		
Bank Charges	XX	XX	
Total Operating Expenses (Except Interest) (1 + 2 + 3)			XXX
Operating Profit Before Interest			XXX
Less: Interest:			
Interest on Debentures		XX	
Interest on Bank Loan		XX	
Interest on Other Loan		XX	(XX)
Net Operating Profit (After Interest)			XXX
Add: Non – Operating Income:			
Dividend on Shares		XX	
Interest on Debentures		XX	
Interest on Investment/Loan given		XX	
Profit on sale of Investment/Assets		XX	XX
			XXX

<i>Less: Non – Operating Expenses:</i>			
Loss on sale of Investment/Assets		XX	
Goods lost by fire/theft		XX	
Legal Penalty		XX	(XX)
Net Profit Before Tax (NPBT) c/f			XXX

Particulars			
Net Profit Before Tax b/f			XXX
<i>Less: Provision for Tax</i>			XX
Net Profit After Tax (NPAT)			XXX
<i>Add: Profit of Last year (or less loss of last year)</i>			XX
Profit Available for Appropriation			XXX
<i>Less: Appropriation:</i>			
Transfer to General Reserve		XX	
Transfer to Other Reserve		XX	(XX)
Profit Available for Dividend			XXX
<i>Less: Dividend:</i>			
Interim Dividend paid		XX	
Preference Dividend		XX	
Proposed Equity Dividend		XX	(XX)
Retained Earning			XXX

The Nature of Financial Statement Analysis: Financial statement analysis consists of the application of analytical tools and techniques to the data in financial statements in order to derive from them measurements and relationships that are significant and useful for decision making. The process of financial analysis can be described in various ways, depending on the objectives to be obtained. Financial analysis can be used as a preliminary screening tool in the selection of stocks in the secondary market. It can be used as a forecasting tool of future financial conditions and results. It may be used as a process of evaluation and diagnosis of managerial, operating, or other problem areas. Above all, financial analysis reduces reliance on intuition, guesses and thus narrows the areas of uncertainty that is present in all decision making processes. Financial analysis does not lessen the need for judgment but rather establishes a sound and systematic basis for its rational application.

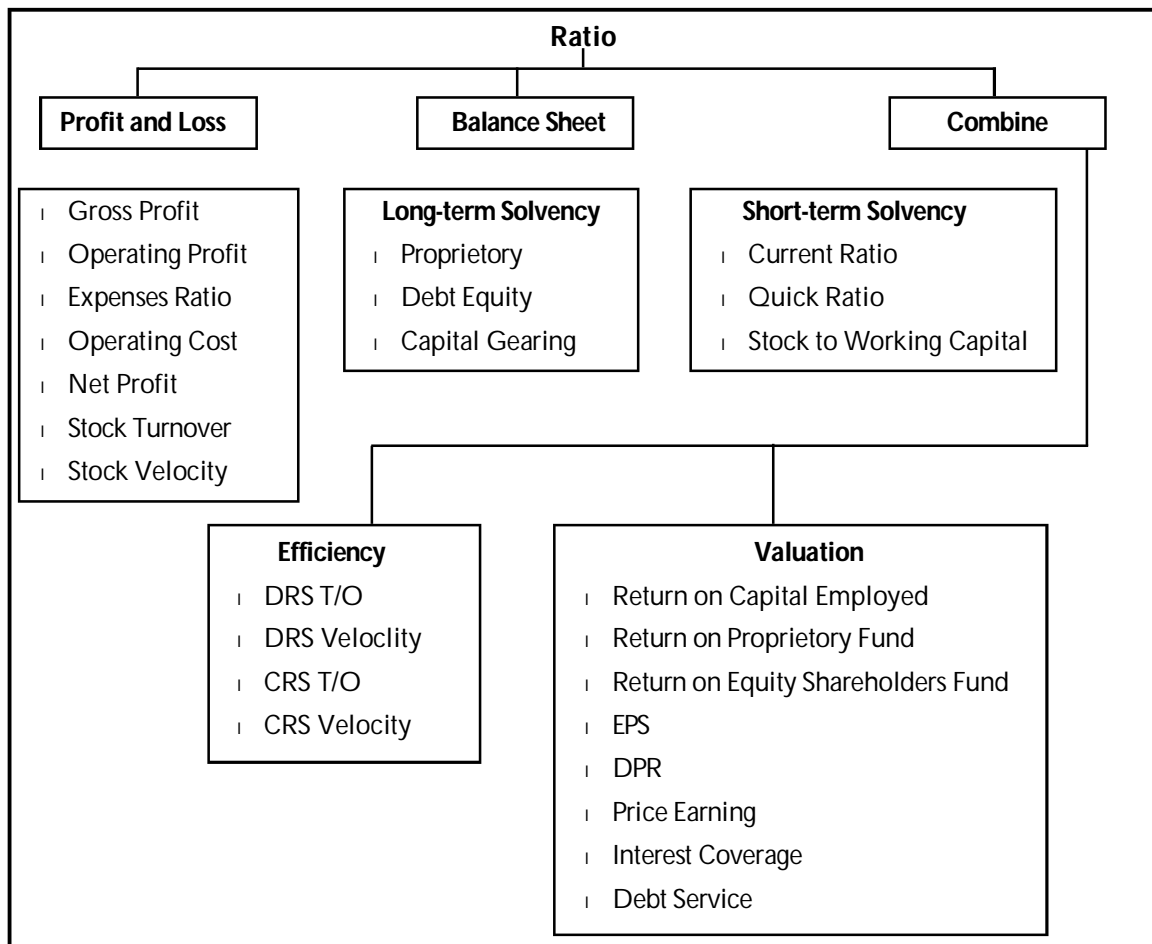
Sources of Financial Information: The financial data needed in the financial analysis come from many sources. The primary source is the data provided by the firm itself in its annual report and required disclosures. The annual report comprises the income statement, the balance sheet, and the statement of cash flows, as well as footnotes to these statements. Besides this, information such as the market prices of securities of publicly traded corporations can be found in the financial press and the electronic media daily. The financial press also provides information on stock price indices for industries and for the market as a whole.

The development of this chapter on financial statement analysis is carried out with the help of balance sheets and profit & loss accounts.

The Principal Tools of Analysis: In the analysis of financial statements, the analyst has a variety of tools available from which he can choose those best suited to his specific purpose. The following are the important tools of analysis.

1. Ratio analysis
2. Funds flow analysis, Cash Flow etc.

Ratio Analysis: Ratios are well known and most widely used tools of financial analysis. A ratio gives the mathematical relationship between one variable and another. Though the computation of a ratio involves only a simple arithmetic operation, its interpretation is a difficult exercise. The analysis of a ratio can disclose relationships as well as bases of comparison that reveal conditions and trends that cannot be detected by going through the individual components of the ratio. The usefulness of ratios is ultimately dependent on their intelligent and skillful interpretation.



Absolute numbers tell very little. Assume that two companies A and B, operating within the same industry submit the information:

	Company A	Company B
NET PROFIT	10,000	1,00,000

One can easily say that Company B makes the most profit. But which company is most profitable? The answer for this will naturally call for further additional information relating to profit such as size of the company, the total sales it generates or to how much capital is invested in it. Hence, an assessment or a judgment is made based on making some sort of comparison. Extending the example

	Company A	Company B
NET PROFIT	10,000	1,00,000
SALES	2,00,000	5,00,000
NET WORTH (CAPITAL RESERVE)	1,00,000	2,00,000

If net profit is compared with Sales, an assessment can be made on which company generates the most net profit per Re. 1 received from customers.

Return on Capital Employed:

	Company A	Company B
Net Profit/Sales × 100	5%	20%
Net Profit/Net Worth × 100	10%	25%

Ratio can be expressed in the following three forms:

1. As proportion
2. As percentage
3. As turnover rate

Simple or pure ratio is merely a quotient arrived by simple division of one number by another. When the current assets of a business firm are ₹ 60,000 and current liabilities is ₹ 15,000.

- ▶▶ The ratio is derived by dividing ₹ 60,000 by ₹ 15,000. It will be expressed as 4:1.
- ▶▶ Ratios are expressed as percentage relations when the simple or pure ratios are multiplied by 100. ($4 \times 100 = 400\%$).
- ▶▶ Ratios are expressed as rates which refer to ratios over a period of time. Example: Stock has turned over 6 times a year.

Ratio Analysis is "separation or breaking up of anything into its elements or component parts". Ratio analysis is therefore a technique of analysis and interpreting various ratios for helping in making certain decisions. It involves the methods of calculating and interpreting financial ratios to assess the firm's performance and status. The ratio analysis is one of the

most powerful tools of financial analysis. The analysis is not restricted to any one aspect but takes into account all aspects such as earning capacity of the firm, financial obligation, liquidity and solvency aspects, liquidity and profitability concepts.

Ratios are used by different people for various purposes. As ratio analysis mainly helps in valuing the firm in quantitative terms, two groups of people are interested in the valuation of the firm and they are creditors and shareholders. Creditors are again divided into short-term creditors and long-term creditors.

Short-term creditors hold obligations that will soon mature and they are concerned with the firm's ability to pay its bills promptly. In the short run, the amount of liquid assets determines the ability to clear off current liabilities. These persons are interested in liquidity. Long-term creditors hold bonds or mortgages against the firm and are interested in current payments of interest and eventual repayment of principal. The firm must be sufficiently liquid in the short-term and have adequate profits for the long-term. These persons examine liquidity and profitability.

In addition to liquidity and profitability, the owners of the firm (shareholders) are concerned about the policies of the firm that affect the market price of the firm's stock. Without liquidity, the firm cannot pay cash dividends. Without profits, the firm would not be able to declare dividends. With poor policies, the common stock would trade at low prices in the market.

Considering the above category of users financial ratios fall into three groups:

- ▶▶ Liquidity ratios
- ▶▶ Profitability or efficiency ratios.
- ▶▶ Ownership ratios
 - K Earnings ratios
 - K Dividend ratios
 - K Leverage ratios
 - K Capital structure ratios
 - K Coverage ratios

Steps in Ratio Analysis

Ratio analysis can provide you with this information in three steps:

1. Calculate the firm's ratios for the current or recent period. Ratios are calculated from the firm's income statement or balance sheet. It is helpful and sometimes necessary to have the financial statement independently audited.
2. Compare these ratios to those calculated in past records. The purpose of this comparison is to identify tendencies in the firm's ratios. This is known as trend analysis.
3. Compare the ratios to industry averages to show how the company compares to firms of the same size in its industry. This process is known as Cross-sectional analysis.

Illustration 1. The following financial statements of KR Ltd. will be used for computing the different ratios:

Income Statement for the year ending 31-03-2011

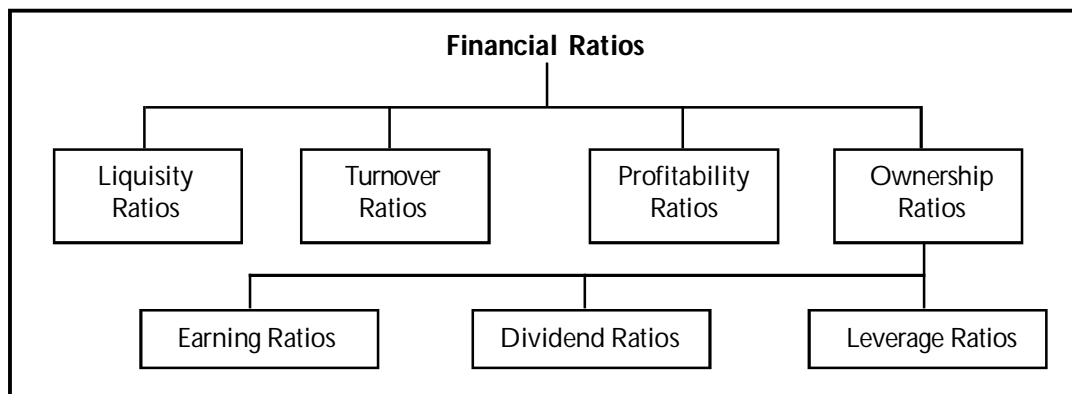
		In `
Net Sales		
Credit:	7,20,000	
Cash:	4,80,000	12,00,000
<i>Less: Cost of Goods Sold</i>		
Opening Stock	2,00,000	
<i>Add: Purchases</i>	6,00,000	
<i>Less: Closing Stock</i>	2,40,000	
Wages	1,60,000	7,20,000
Gross Profit		4,80,000
Operating Expenses		
Office & Administration Exp.	1,72,000	
Selling & Distribution Exp.	1,50,000	3,12,000
Operating Profit		1,68,000
Interest		8,000
Profit Before Tax		1,60,000
Tax		80,000
Profit After Tax		80,000

Balance Sheet of KR Ltd. as on 31-3-2011

Current Liabilities	L/Y	C/Y	Current Assets	L/Y	C/Y
Accounts Payable	1,00,000	1,20,000	Cash	1,20,000	1,60,000
Wages and taxes outstanding	60,000	40,000	Accounts receivable	1,20,000	1,20,000
Income tax payable	40,000	80,000	Inventories	2,00,000	2,40,000
Long-term liabilities: 4% mortgage debentures	1,60,000	1,60,000	Prepaid Expenses	40,000	40,000
Share Capital (12,000 shares of ` 20 each fully paid)	2,40,000	2,40,000	Fixed assets: Land	1,20,000	1,20,000
Retained earnings	2,40,000	2,80,000	Building and structures	4,80,000	4,80,000
			<i>Less: accumulated depreciation on building and structures</i>	2,80,000	2,80,000

			Net buildings and structures	2,00,000	2,00,000
			Other assets: Goodwill and Patents:	40,000	40,000
Total Liabilities	8,40,000	8,40,000	Total Assets	8,40,000	8,40,000

Financial Ratios



Financial ratios can be broadly classified into four categories:

- (a) Liquidity ratios
- (b) Turnover ratios
- (c) Profitability ratios
- (d) Ownership ratios.

(a) Liquidity Ratios: It is the ability of a firm to satisfy its short-term obligations as they become due for payment. The liquidity is a prerequisite for the very survival of a firm. It reflects the short-term financial strength or solvency of the firm. The ratios which indicate the liquidity of the firm are:

1. Net Working Capital
2. Current Ratios
3. Acid test/Quick ratio
4. Super quick ratio
5. Cash flow from operations ratio

1. Net Working Capital: It represents the excess of current assets over current liabilities.

$$\text{Net working capital} = \text{Current Assets} - \text{Current Liabilities}$$

Although NWC is really not a ratio, it is frequently employed as a measure of a company's liquidity position. The greater is the amount of NWC, the greater is the liquidity of the firm. Inadequate working capital is the first sign of financial problems for a firm.

2. Current Ratio: Current ratio measures the short-term solvency of the firm. It is computed as: $\frac{\text{Current Assets}}{\text{Current Liabilities}}$.

$$\text{For KR Ltd., Current ratio} = \frac{5,60,000}{2,40,000} = 2.33$$

Here, current assets include cash and assets like marketable securities, sundry debtors, inventories etc. that can be converted into cash within one year. Current liabilities include obligations like sundry creditors, bills payable, accrued expenses, short-term bank loan etc., that have to be repaid within a year.

- ▶ The Current assets of a firm include cash and bank balances, marketable securities, inventory of raw materials, semi-finished and finished goods, debtors net of provision for bad and doubtful debts, bills receivable and prepaid expenses.
- ▶ The Current liabilities include trade creditors, bills payable, bank credit, provision for taxation dividends payable and outstanding expenses.
- ▶ As a measure of short-term financial liquidity, it indicates the rupees of current assets available for each rupee of current liability payable.
- ▶ Higher ratio, i.e., more than 2:1 indicates sound solvency position but at the same time it may be indicative of slack management policies and practices as it might signal excessive inventories or poor credit management.
- ▶ Lower ratio i.e., less than 2:1 indicates inadequate working capital. In capital rich countries, where long-term funds from capital market are available in abundance firms dependence on current liabilities may be less. For public utility companies such as BSNL, MTNL current ratio is usually very low as they required fewer current assets.

3. Quick Ratio: Quick ratio is also known as liquid ratio or acid test ratio. One defect of the current ratio is that it fails to convey any information on the composition of the current assets of the firm. A rupee of cash is considered equivalent to a rupee of inventory or receivable which may not be so. The acid test ratio is a measure of liquidity designed to overcome this defect by measuring those current assets that can be quickly converted into cash to meet the short-term obligations of current liabilities. In a way it excludes inventory that are not easily and readily converted into cash.

While computing current ratio, inventory is included as a part of current assets. But inventory normally requires some time for being converted into cash, because of which the true picture of liquidity is not given by current ratio. Quick ratio provides a better measure of liquidity unlike current ratio; it does not take inventories into account. It is computed as:

$$\frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

$$\text{For KR Ltd., Quick ratio} = \frac{3,20,000}{2,40,000} = 1.33.$$

- ▶▶ Acid test ratio of 1:1 is considered satisfactory. This ratio is a more rigorous and penetrating test of the liquidity position of a firm.
- ▶▶ Higher ratio i.e., more than 1:1 indicates sound financial position.
- ▶▶ Lower ratio, i.e., less than 1:1 indicates financial difficulty.

4. Super Quick/Cash Ratio: This ratio is calculated by dividing the super quick assets by the current liabilities of a firm. The super quick current assets are cash and marketable securities. This ratio is the most rigorous and conservative test of a firm's liquidity position.

$$\text{Super Quick Ratio} = \frac{\text{Cash and Marketable Securities}}{\text{Current Liabilities}}$$

5. Cash Flow from Operations Ratio: This ratio measures liquidity of a firm by comparing actual cash flows from operations (in lieu of current and potential cash inflows from current assets) with current liability.

$$\text{Cash Flow from Operations ratio} = \frac{\text{Operations from Flow Cash}}{\text{Current Liabilities}}$$

6. Bank Finance to Working Capital Gap: Working capital gap is the difference between current assets and current liabilities (other than short-term borrowings). The bank finance to working capital gap ratio indicates the extent to which the firm relies on short-term bank finance for financing its working capital. It is computed as: $\frac{\text{Short - term Bank Finance}}{\text{Working Capital Gap}}$.

Activity Ratios or Efficiency Ratios: They are concerned with measuring the efficiency in asset management. The efficiency with which the assets are used would be reflected in the speed and rapidity with which assets are converted into sales.

(b) Turnover Ratio: This ratio examines how quickly inventory is converted into cash. This ratio helps the financial manager to evaluate in inventory policy. The ratio reveals the number of times finished stock is turned over during a given accounting period. The three relevant turnover ratios are: (i) Inventory turnover ratio, (ii) Debtors turnover ratio, and (iii) Creditors turnover ratio.

They are also referred to as activity ratios and they indicate the efficiency of the firm in dealing with the current assets. They indicate the pace at which the assets are turned into sales.

1. Average Receivables (Debtors) Turnover Ratio: Accounts receivables indicate the credit sales of the company. The debtors turnover ratio or the receivables turnover ratio gives the number of times receivables are generated and collected during the year. It is

computed as: $\frac{\text{Net Credit Sales}}{\text{Average Accounts Receivables}}$.

$$\text{For KR Ltd., Average receivables turnover ratio} = \frac{7,20,000}{(2,00,000 + 2,40,000)/2} = 10$$

- ▶▶ Net Credit sales consist of gross credit sales minus returns from customers. It also includes bills receivables.
- ▶▶ A high ratio is indicative of shorter time lag between credit sales and cash collection.

- ▶▶ A low ratio indicates that debts are not being collected rapidly.
- ▶▶ Debt collection period is calculated by any of the following ratios:

The speed at which accounts receivables are collected can be computed using the receivables turnover ratio in the following manner:

$$\begin{aligned}\text{Average Collection Period} &= \frac{360}{\text{Average Accounts Receivable}} \\ &= \frac{360}{10} \\ &= 36 \text{ days.}\end{aligned}$$

The average collection period helps in measuring the creditworthiness of the debtors as it indicates the time by which the debtors pay back their obligation arising on account of credit sales.

The higher the turnover Ratio and the shorter the average collection period, indicates better trade credit management and the better the liquidity of debtors.

2. Inventory Turnover Ratio: It indicates the efficiency of the firm in producing and selling its product. It is computed as: $\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$

where the average inventory is arrived at by taking the average of opening and closing inventory balances.

$$\text{For KR Ltd., inventory turnover ratio} = \frac{7,20,000}{(2,00,000 + 2,40,000)/2} = 3.27.$$

To judge whether the ratio of a firm is satisfactory or not, it should be compared over a time on the basis of trend analysis.

Inventory Holding Period = 12 months/Inventory Turnover Ratio

$$\text{For KR Ltd., inventory Holding Period} = 12/3.27 = 3.67 \text{ times}$$

3. Creditors Turnover Ratio: It is the ratio between net credit purchase and the average amount of creditors outstanding during the year.

Creditors Turnover Ratio = Net Credit Purchase/Average Creditors

For KR Ltd., Creditor turnover ratio =

Creditors Collection Period = 12 months/Creditors Turnover Ratio

A higher ratio shows that the creditors are not paid in time.

A lower ratio shows that the business is not taking the full advantage of credit period allowed by the creditors.

4. Assets Turnover Ratio: It indicates the efficiency with which firm uses all its assets to generate sales. It is based on the relationship between cost of goods sold and assets of a firm.

This ratio indicates the firm's ability in generating sales from all financial resources committed to total assets. It is computed as: $\frac{\text{Sales}}{\text{Average Assets}}$.

$$\text{For KR Ltd. asset turnover ratio} = \frac{12,00,000}{(8,40,000 + 9,20,000)/2} = 1.36.$$

Total assets turnover = Cost of goods sold/Average total assets

Fixed asset turnover = Cost of goods sold/Average fixed assets

The total assets and fixed assets are net of depreciation and the assets are exclusive of fictitious assets. Higher the ratio, greater is the intensive utilization of fixed assets. Lower ratio means under utilization of total and fixed assets.

5. Capital Turnover Ratio: Cost of goods sold/Average capital employed

Lower ratio shows lower profit and higher ratio shows higher profit.

Illustration 2: Birla Cements Ltd provides the following:

Stock: Opening ` 75,000; Closing ` 1,00,000; Credit Sales ` 2,00,000; Cash Sales ` 50,000. Gross Profit 25%. Calculate the Inventory Turnover Ratio

Solution: Net Sales = Cash Sales + Credit Sales
 $= 2,00,000 + 50,000 = \mathbf{2,50,000}$

Gross Profit = 25% of 2,50,000 (Net Sales) = **62,500**

COGS = Net Sales – Gross Profit = 2,50,000 – 62,500 = **1,87,500**

Average Inventory = (Opening + Closing stock)/2
 $= (75,000 + 1,00,000)/2 = \mathbf{87,500}$

Inventory Turnover Ratio = COGS/Average Inventory = 1,87,500/87,500 = **2.14 times**

Illustration 3: Total sales of a firm ` 5,00,000 of which the credit sales are ` 3,65,000. Sundry Debtors and Bills receivable are ` 50,000 and ` 2,000 respectively. Calculate the Debtors Velocity.

Solution: Debtors Turnover Ratio = Net Credit Sales/(Debtors + Bills Receivables)
 $= 3,65,000/(50,000 + 2,000) = 7.02$

Debtors Velocity = No. of days in a year/Debtors turnover ratio
 (Debtors collection period) = 365/7.02 = **52 days**

Note: No. of days in a year is taken as 365 days.

Illustration 4: Total purchases ` 1,00,000. Cash purchases ` 20,000. Discount Provision on creditors ` 1,000. Purchase returns ` 2,000. Creditors at close ` 30,000. Bills payable at close ` 25,000. Calculate Creditors Velocity.

Solution: Credit purchases = Total purchase – cash purchase – purchase return
= 1,00,000 – 20,000 – 2,000 = ₹ **78,000**

Creditors Turnover Ratio = Net credit purchases/(Creditors + Bills Payable)
= 78000/(30000 + 25000) = 1.42

Creditors Velocity = No. of days in a year/Creditors turnover ratio (Creditors collection period)
= 365/1.42 = 257 days

Note: The Reserve for discount on creditors should not be considered for calculating the net credit sales.

Illustration 5: Total sales of a firm ₹ 5,00,000 of which the credit sales are ₹ 3,65,000. Sundry Debtors and Bills receivable are ₹ 50,000 and ₹ 2,000 respectively. Calculate the Debtors Velocity.

Solution: Debtors Turnover Ratio = Net Credit Sales/(Debtors + Bills Receivables)
= 3,65,000/(50000 + 2000) = 7.02

Debtors Velocity = No. of days in a year/Debtors turnover ratio (Debtors collection period)
= 365/7.02 = **52 days**

Note: No. of days in a year is taken as 365 days.

Illustration 6: Total purchases ₹ 1,00,000. Cash purchases ₹ 20,000. Discount Provision on creditors ₹ 1,000. Purchase returns ₹ 2,000. Creditors at close ₹ 30,000. Bills payable at close ₹ 25,000. Calculate Creditors Velocity.

Solution: Credit purchases = Total purchase – cash purchase – purchase return
= 1,00,000 – 20,000 – 2,000 = ₹ **78,000**

Creditors Turnover Ratio = Payable Bills Creditors (purchases credit Net) ?
= 78000/(30000 + 25000)
= 1.42

Creditor's Velocity = Period Collection Creditors (year a in days of No.)
(Creditors collection period)
= 365/1.42 = 257 days

Note: The Reserve for discount on creditors should not be considered for calculating the net credit sales.

(c) Profitability Ratios: The management of the firm is interested in the financial soundness of a firm. They are designed to provide answers to questions such as: (i) Is the profit earned by the firm adequate? (ii) What rate of return does it represent? (iii) What is the

rate of profit for various divisions and segments of the firm? (iv) What was the amount paid in dividends? (v) What was the amount paid in dividends? (vi) What is the rate of return to equity-holders?

Profitability ratios help in measuring the operating efficiency of the firm. Besides the management of the company, creditors, owners and shareholders are also interested in the profitability of the firm. There are two categories of profitability ratios: gross profit margin and b) net profit margin

1. Profit in Relation to Sales

Gross Profit Margin: It measures the percentage of each sales rupee remaining after the firm has paid for its goods. The gross profit margin or gross margin measures the relationship between profit and sales. There are two types of margins- gross profit margin and net profit margin. It indicates the efficiency with which the firm produces each unit of the product. It

is computed as:
$$\frac{\text{Sales} - \text{Cost of Goods Sold}}{\text{Net Sales}} = \text{Gross Profit/Net Sales} \times 100.$$

Where, net sales = Sales – Excise duty

For KR Ltd., Gross Profit Margin = $\frac{4,80,000}{12,00,000} = 0.40$ i.e., 40%.

A high ratio of gross profit to sales is a sign of good management as it implies that the cost of production is relatively low. A relatively low gross margin is definitely a danger signal, a need for careful and detailed analysis of the factors responsible for it.

Net Profit Margin: It indicates the overall efficiency of the firm in manufacturing, administering and selling the product. It is computed as: Net Profit/Net Sales × 100

For KR Ltd., Net Profit Margin = $\frac{80,000}{12,00,000} = 0.067$ i.e., 6.7%.

This measures the relationship between net profits and sales of a firm. It measures the percentage of each sales rupee remaining after all costs and expenses including interest and taxes have been deducted.

Operating Profit Ratio = EBIT/Net Sales × 100

For KR Ltd., Operating Profit Ratio =

Net Profit Ratio = EAT/Net Sales × 100

The net profit margin is indicative of management's ability to operate the business with sufficient success not only to recover all the cost but also to leave a margin of reasonable compensation to the owners. Higher the ratio of net operating profit to sales better is the operational efficiency of the concern.

Expenses Ratio: These ratios indicate the relationship of various expenses to net sales. It is computed by dividing expenses by sales. Operating expenses include cost of goods sold, administrative expenses, selling, distribution expense and financial expenses but excludes taxes, dividends and extraordinary losses.

Operating Ratio = Cost of Goods sold + Operating expenses/Net Sales × 100

Cost of Goods Sold = Opening Stock + Purchase – Closing Stock

Operating Expenses = Administrative Expenses + Financial Expenses + Selling Expenses

The expenses ratio should be compared over a period of time with the industry average. A low ratio is preferable to high one is unfavorable. For manufacturing concern an operating ratio between 75% and 80% is expected.

Expense Ratio = Admin. Exp. or S&D Exp. or Finc. Exp./Net Sales × 100

Earning Power: It is a measure of a firm's operating performance. It is equal to $\frac{\text{Earnings Before Interest and Taxes}}{\text{Average Total Assets}}$.

For KR Ltd., earning power = $\frac{1,68,000}{(8,40,000 + 9,20,000)/2} = 0.19$.

Return on Equity (ROE): ROE indicates how well the firm has used the resources of the owners. It is computed as: $\frac{\text{Net Income}}{\text{Average Equity}}$.

A higher return on equity indicates the efficiency of the firm in utilizing the shareholder's resources.

For KR Ltd., ROE = $\frac{80,000}{(4,80,000 + 5,20,000)/2} = 0.16$.

Return on Capital Employed: It refers to long-term funds supplied by the lenders and owners of the firm. The capital employed provides a test of profitability related to the source of long-term funds. A comparison of this ratio with similar firms, with the industry average and over time would provide sufficient insight into how efficiently the long-term funds of owners and lenders are being used.

ROCE = EBIT/Capital employed × 100

The higher the ratio, the more efficient use of the capital employed and better is the financial position.

Return on Shareholders' Equity: It measures the return on the total equity funds of ordinary shareholders. This ratio judges whether the firm has earned a satisfactory return for its equity holders or not.

ROEF = Net profit after tax – Preference dividends/Shareholders' Equity or Net worth × 100

Illustration 7. Ranjandas Ltd provides the following information.

Cash Sales ` 8,00,000; Credit Sales ` 10,00,000; COGS ` 15,80,000 and Return Inwards ` 20,000. Calculate Gross Profit Ratio and ratio of COGS.

Solution:

Gross Sales = Cash Sales + Credit Sales = 8,00,000 + 10,00,000 = 18,00,000

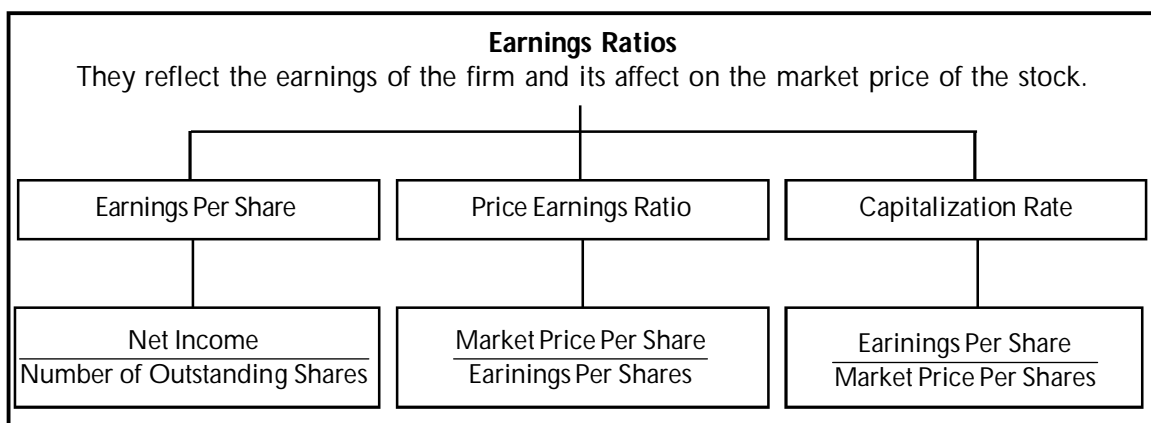
Net Sales = Gross Sales – Return Inwards = 18,00,000 – 20,000 = 17,80,000

Gross Profit = Net Sales – COGS = 17,80,000 – 15,80,000 = 2,00,000

1. Gross Profit Ratio = (Gross Profit/Net Sales) × 100 = [2,00,000/17,80,000] × 100 = **11.2%**
2. Ratio of COGS = 100 – GP ratio = 100 – 11.2 = **88.8%**

(d) Ownership Ratios: Ownership ratios help in analyzing the value of the shareholders' investments in the firm. They help in evaluating the firm's value with respect to different aspects like earnings of the firm, dividends declared, debt employed by the firm, market price of the firm, etc. Ownership ratios can be divided into three different categories:

1. Earnings Ratios
2. Leverage Ratios
3. Dividend Ratios



1. Earnings Ratios: These ratios help in indicating the earnings of the firm and its effect on the price of the share.

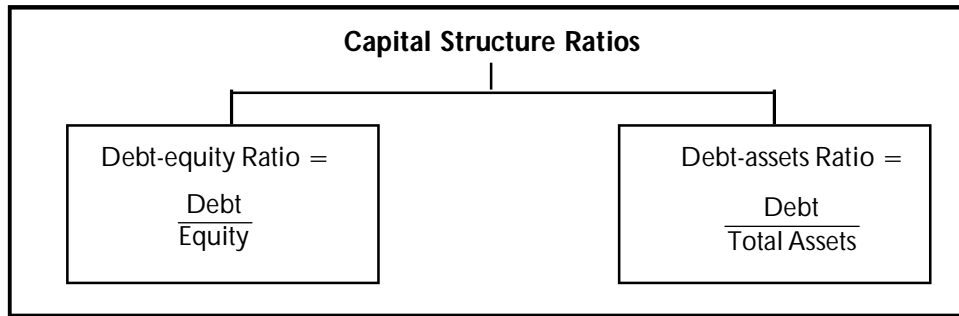
Earnings per Share (EPS): EPS helps in computing the profitability of shareholder's investments in the firm. It is computed as: $\frac{\text{Profit After Tax}}{\text{Number of Outstanding Shares}}$.

$$\text{For KR Ltd., EPS} = \frac{80,000}{12,000} = 6.67.$$

Price-earnings Ratio (P/E Ratio): P/E ratio helps in studying the affect of the earnings of the firm on the market price of the share. It is calculated as: $\frac{\text{Market Price of the Share}}{\text{Earnings Per Share}}$.

Capitalization Rate: It is the reciprocal of P/E ratio. It indicates the rate of return expected by the investors.

2. Leverage Ratios: Leverage ratios help in analyzing the long-term solvency of the firm. They are divided into two categories: Capital structure ratios and coverage ratios



Solvency/Capital Structure Ratios: These ratios indicate the proportions of debt and equity in the capital structure of the firm. Debt-Equity ratio and Debt-Assets ratio fall under this category.

The long-term lenders/creditors would judge the soundness of a firm on the basis of the long-term financial strength measured in terms of its ability to pay the interest regularly as well as repay the installment of the principal on due dates or in one lump sum at the time of maturity. There are two aspects of the long-term solvency of a firm: (i) the ability to repay the principal when due, and (ii) regular payment of the interest. Accordingly there are two different but mutually dependent and interrelated types of leverage ratios.

Balance Sheet Ratios	Capital Structure Ratios
Debt – Equity ratio	Interest coverage ratios
Debt – Asset ratio	Dividend coverage ratios
Equity – Asset/Proprietors fund ratio	Total fixed charges coverage ratios
	Cash flow coverage ratios
	Debt services coverage ratios

Debt-Equity Ratio: It describes the lender’s contribution in the capital structure in relation to that of the owner. It is computed as: $\frac{\text{Debt}}{\text{Equity}}$.

In the above ratio, debt in the numerator includes both long-term as well as current liabilities and the denominator is composed of net worth and preference capital that is not redeemable within one year

For KR Ltd., debt-equity ratio = $\frac{4,00,000}{5,20,000} = 0.77$.

The D/E ratio is an important tool to appraise the financial structure of a firm. The ratio reflects the relative contribution of creditors and owners of business in its financing. If

D/E ratio is 1:2 it implies that for every rupee of outside liability (debt) the firm has two rupees of owner's capital or the stake of the creditors is one-half of the owners. Therefore a safety margin of 66.67 per cent is available to the creditors of the firm. A higher debt-equity ratio say 2:1 implies low safety margin to the creditors. It would lead to inflexibility in the firm's operation.

Treatment of Preference Share Capital in D/E ratio: The inclusion or exclusion of preference share capital depends upon the purpose for which the D/E ratio is computed. If the objective is to examine the financial solvency of a firm in terms of its ability to avoid financial risk, preference capital should be clubbed with equity capital. On the other hand, if D/E ratio is calculated to show the effect of the use of fixed-interest/dividend sources of funds on the earnings available to the ordinary shareholders, preference capital should be clubbed with debt.

Trading on Equity: A high debt-equity ratio denotes the use of larger proportion of debt capital in the financial structure of the firm. The debt capital is cheaper to equity capital because interest on debt is a tax deductible expense. The equity shareholders stand to gain for two reasons: (i) Higher returns, (ii) Limited stake would enable them to retain control. Trading on equity or leverage is the use of borrowed funds in expectation of higher returns to equity shareholders.

Debt Assets Ratio: It helps in finding the extent to which the assets of the firm are funded by borrowed funds. **Debt Asset Ratio** = Total Debt/Total assets.

$$\text{For KR Ltd., Debt Assets ratio} = \frac{4,00,000}{9,20,000} = 0.43.$$

- ▶ A low ratio of debt to total assets is desirable from the point of creditors/lenders as there is sufficient margin of safety available to them.
- ▶ A high ratio would expose the creditors to high risk. The implications of the ratio of equity capital to total capital are exactly opposite to that of the debt to total assets. A firm should have neither a very high ratio nor a very low ratio.

Proprietary Ratio: This ratio indicates the proportion of total assets financed by the owners.

$$\text{Proprietary Ratio} = \frac{\text{Fund's Proprietor}}{\text{Assets Total}}$$

- ▶ Higher ratio, say more than 75% shows lesser dependence on external sources.
- ▶ Lower ratio, say less than 60% shows more dependence on external sources.

Capital Gearing Ratio: It shows the mix of finance employed in the firm.

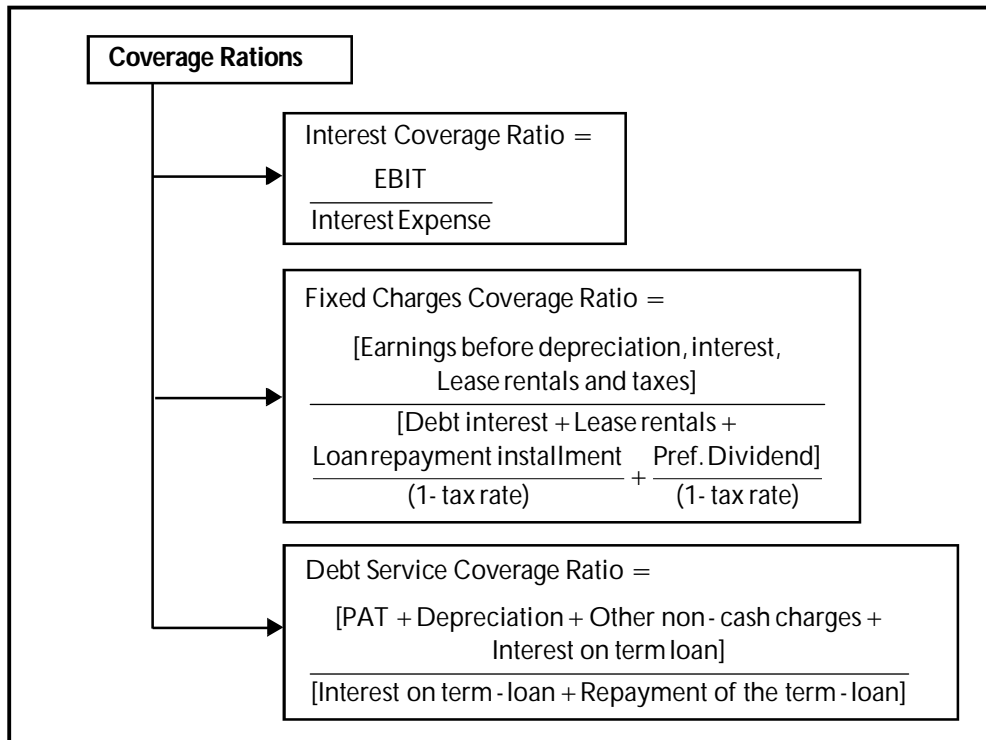
$$\text{Capital gearing Ratio} = \frac{\text{Fixed Income bearing securities}}{\text{Total Equity}}$$

Important Concepts

Equity Capital = Loan Capital = Even Gear

Equity Capital > Loan Capital = Low Gear = **Over Capitalization**

Equity Capital < Loan Capital = Higher Gear = **Under Capitalization**



Coverage Ratios: These ratios help in evaluating the ability of the firm to meet its financial obligations. Interest Coverage Ratio, Fixed Charges Coverage Ratio and Debt Service Coverage Ratio come under this category. These ratios measure the firm's ability to pay certain fixed charges. In the ordinary course of business, the obligations of the creditors are met out of the earnings or operating profits. These claims consist of: (i) interest on loans, (ii) preference dividend, and (iii) amortization of principal or repayment of the installment of loans or redemption of preference capital on maturity. The important coverage ratios are: (i) interest coverage, (ii) dividend coverage, (iii) total coverage, (iv) total cash flow coverage, and (v) debt service coverage ratio.

Interest Coverage Ratio: It indicates the ability of the firm to meet the interest payments associated with debt. It is computed as: $\frac{\text{EBIT}}{\text{Interest Expense}}$

It can also be computed as: $\frac{\text{Earnings Before Depreciation, Interest and Taxes}}{\text{Interest Expense}}$.

An interest coverage of five times indicates that a fall in EBIT level to one-fifth of the present level, the operating profits available for servicing the interest on loan would still be equivalent to the claims of the lenders. From the lenders point of view higher the coverage, better is the position of long-term creditors. It also highlights the ability of the firm to raise additional funds in future.

Fixed Charges Coverage Ratio: It is a more comprehensive ratio as it measures the ability of the firm to pay its interest charges as well as principal repayments, lease payments and preference dividends. It is computed as:

$$\frac{\text{Earnings Before Depreciation, Interest and Taxes}}{\text{Debt Interest} + \text{Lease rentals} + \frac{\text{Loan Repayment Installment}}{(1 - \text{taxrate})} + \frac{\text{Preference Dividends}}{(1 - \text{taxrate})}}$$

Debt-Service Coverage Ratio: It is considered a more comprehensive and apt measure to compute debt service capacity of the firm. It is the ability of a firm to make the contractual payments required on a scheduled basis over the life of the debt. It helps in measuring the ability of the post-tax earnings to meet the total obligations of the firm. It is calculated as:

$$\frac{\text{PAT} + \text{Depreciation} + \text{Other non-cash charges} + \text{Interest on term-loan}}{\text{Interest on term-loan} + \text{Repayment of the term-loan}}$$

The higher the ratio, the better it is. A ratio of less than one may be taken as a sign of long-term solvency problem as it indicates that the firm does not generate enough cash internally to service debt. Financial Institutions consider 2:1 as satisfactory ratio.

3. Dividend Coverage: It measures the ability of a firm to pay dividend on preference shares which carry a stated rate of return. Higher the coverage better is the position.

Dividend Coverage (Preference) = Net Profit after Tax/Preference Dividend

Dividend Coverage (Equity) = EBIT - Preference Dividend/Equity Dividend

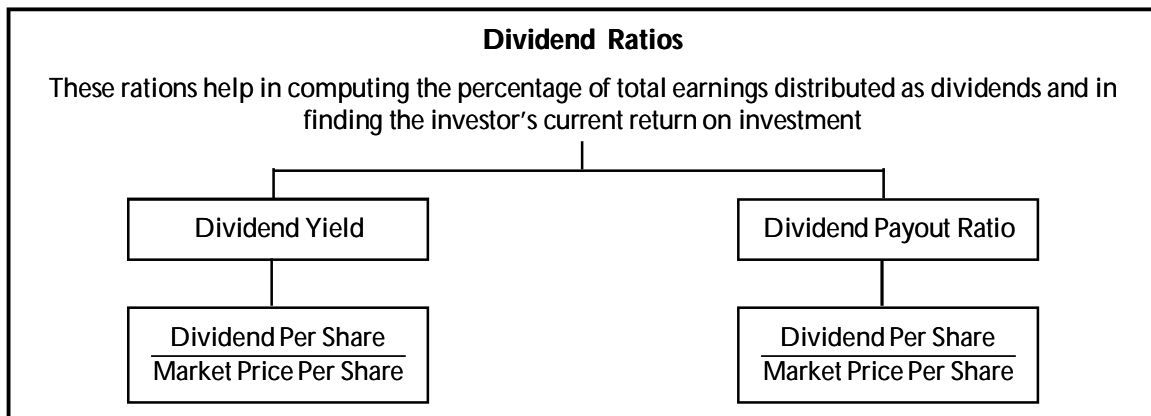
Illustration 8: The Balance Sheet of Dravid Ltd., is as follows:

Assets: Fixed Assets	10,00,000
Current Assets	5,00,000
Represented by:	
Liabilities: Trade creditors	1,00,000
Reserves and surplus	1,00,000
10% Debentures	2,00,000
6% Preference Share capital	3,00,000
Equity Share capital	8,00,000

Calculate the Debt Ratio and Debt-equity ratio.

Solution:

1. Debt Ratio = Total Liabilities to outsiders/Total assets
 = (Debentures + Trade creditors)/(Fixed + current assets)
 = (2,00,000 + 1,00,000)/(10,00,000 + 5,00,000)
 = 3,00,000/15,00,000 = **1:5**
2. Debt – Equity Ratio = Outsiders funds/equity shareholders or
 = (Debentures + Trade Creditors)/(Eq. Sh. capital + Pref. Sh. cap +Reserves)
 = 3,00,000/12,00,000 = **1:4**



Dividend Ratios: The equity holders of a firm are interested in the dividend policy of the firm. The two dividend ratios i.e., Dividend Payout ratio (D/P ratio) and the Dividend Yield ratio help the shareholders in evaluating the dividend policy of the firm.

Dividend Pay-out Ratio: It indicates the proportion of total earnings that are declared as dividends to shareholders. It is computed as: $\frac{\text{Dividend Per Share}}{\text{Earnings Per Share}}$.

Dividend Yield: This ratio helps in analyzing dividends with respect to the market price of the share. It indicates the current return earned by the shareholder on his investment. It is computed as: $\frac{\text{Dividend Per Share}}{\text{Market Price of the Share}}$.

Advantages of Ratio Analysis

The various advantages of ratio analysis are as follows:

- (a) **Financial Forecasting and Planning:** Ratio analysis helps in the financial forecasting and planning activities. Ratios based on the past sales are useful in planning the financial position. Based on these future trends are set.
- (b) **Decision Making:** Ratio analysis throws light on the degree of efficiency. It is also concerned with the management and utilization of the assets. Thus, it enables for making strategic decisions.

- (c) **Comparison:** With the help of ratio analysis, ideal ratios can be composed. These can be used for comparison in respect of the firm's progress and performance, inter-firm comparison with industry average.
- (d) **Financial Solvency:** It indicates the trends in the financial solvency of the firm. Long-term solvency refers to the financial liability of a firm. It can also evaluate the short-term liquidity position of the firm.
- (e) **Communication:** The financial strength and weaknesses of a firm are communicated in a more easy and understandable manner by the use of ratios. The information contained in the financial statements is conveyed in a meaningful manner. It thus helps in the communication and enhances the value of the financial statements.
- (f) **Efficiency Evaluation:** It evaluates the overall efficiency of the business entity. Ratio analysis is an effective instrument which, when properly used, is useful to assess important characteristics of business liquidity, solvency, profitability. A critical study of these aspects may enable conclusions relating to capabilities of business.
- (g) **Control:** It helps in making effective control of the business. Actual results can be compared with the established standard and to take corrective action at the right time.
- (h) **Other uses:** Financial ratios are very helpful in the early and proper diagnosis and financial health of the firm.

Limitations of Ratio Analysis

Undoubtedly, ratios are precious tools in the hands of the analyst. But its significance comes from proper use of these ratios. Misuse or mishandling of these ratios and using them without proper context may lead the analyst or management to a wrong direction. The limiting factors are:

1. The user should possess the practical knowledge about the concerns and the industry in general.
2. Ratios are not an end. They are only means to an end.
3. A single ratio in itself is not important. The trend is more significant in the analysis. Comparison of ratios should be made.
4. For comparative purposes, there should be a standard ratio. There are no such standards prescribed for the ratios.
5. The accuracy and correctness of ratios are totally dependent upon the reliability of the data contained in the financial statement on the basis of which ratios are calculated.
6. To use ratios, first of all there should be uniformity in the accounting plan used by both the firms. In addition. There must be consistency in the preparation of financial statement and recording the transactions from year to year within that concern.
7. Ratios become meaningless if detached from the details from which they are derived. They should be used as supplementary and not substitution of the original absolute figures.

8. Time lag in calculation and communicating the same should not be unnecessarily too much.
9. The method of presentation should be precise and without any ambiguity.
10. Price level changes make the ratio analysis meaningless.
11. Inter-firm comparison should never be undertaken in the case of concerns which are not associated or comparable.
12. All techniques concerning the ratio analysis should be taken into account.

Summary Accounting Ratios

Sr.	Ratios	Formula	Expressed As	Suitability	Purpose	Remarks
1	Gross Profit Ratio	$\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$	Percentage%	High Ratio Company	To Judge Profitability	Operating Efficiency of
2	Net Profit Ratio					
	(a) Op. Net Profit Ratio	$\frac{\text{Op. Net Profit}}{\text{Net Sales}} \times 100$	Percentage%	High Ratio	To Judge Profitability	
	(b) Net Profit Before Tax Ratio	$\frac{\text{NPBT}}{\text{Net Sales}} \times 100$	Percentage%	High Ratio	To Judge Profitability	
	(c) Net Profit After Tax Ratio	$\frac{\text{NPAT}}{\text{Net Sales}} \times 100$	Percentage%	High Ratio	To Judge Profitability	
3	Op Ratio	$\frac{\text{Cos.} + \text{Op. Exp.}}{\text{Net Sales}} \times 100$	Percentage%	Low Ratio	To know Op. cost & Profit	
4	Expense Ratio	$\frac{\text{Adm. Exp./S \& D Exp./Fin. Exp./Dep. Exp.}}{\text{Net Sales}} \times 100$	Percentage%	Low Ratio	To know Op. cost & Profit	All Operating Expenses
		$\frac{\text{Total Op. Exp.}}{\text{Net Sales}} \times 100$	Percentage%	Low Ratio	To know Op. cost & Profit	
5	Stock T/O Ratio (stock Velocity Ratio)	$\frac{\text{COS}}{\text{Average R M Stock}}$	Times	High Ratio	To know Stock Turnover & Management	

	(a) Raw Material T/O Ratio	$\frac{\text{Raw Material Consumed}}{\text{Average R M Stock}}$	Times	High Ratio	To know Stock Turnover & Management	
	(b) Work In Progress T/O Ratio	$\frac{\text{COP}}{\text{Average WIP Stock}}$	Times	High Ratio	To know Stock Turnover & Management	Cost of Production
6	Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	Pure Ratio (std 2:1)	High Ratio	To know short-term Solvency	
7	Quick Ratio	$\frac{\text{Quick Assets}}{\text{Quick Liabilities}}$	Pure Ratio (std 1:1)	High Ratio	To know immediate Solvency (LiquidRatio)	CA-STK-PP EXP CL- BankOD- C.C.
8	Stk Working Capital Ratio	$\frac{\text{Closing Stock}}{\text{Working Capital}} \times 100$	Percentage% (std < 100%)	Low Ratio	To know extent of WC invested in stock	WC = CA - CL (net WC)
9	Proprietary Ratio/Equity Ratio	$\frac{\text{Prop's Funds}}{\text{Total Assets (Excl. Misc. Exp.)}} \times 100$	Percentage% (std > 50%)	High Ratio	To judge Long-term Solvency & Stability of Co.	FA + CA + Inv.
10	Debt/Equity Ratio	$\frac{\text{Debt. (Long - term Loans)}}{\text{Equity (Shareholders Funds)}}$	Pure Ratio (std < 2:1)	Low Ratio	To judge Long-term Solvency & Stability of Co.	
11	Capital Gearing Ratio	$\frac{\text{Funds with Fix Interest}}{\text{Funds with Fluctuating Interest}}$	Pure Ratio (std < 1)	Low Ratio	To judge Long-term Solvency & Stability of Co.	Fix Int. = Loans + Pref Sh non Fix Int = Eq Sh - Pref Sh

12	Return on Investment/Capital Employed	$\frac{\text{OpNet Profit} + \text{Int. Capital Employed}}{(\text{SHF} + \text{Long-term Loans})} \times 100$	Percentage%	Low Ratio	To know overall Pprofitability Earned compared to T.F.	(Share holders Funds + Long-term Loans)
13	Return on Total Assets/Total Resoures	$\frac{\text{N.P.B.T.} + \text{Interest Total Assets (Except Misc. Exp)}}{(\text{Total Resources})}$	Percentage%	High Ratio	To know overall Pprofitability Earned to T.F.	Total Assets = FA + Inv + CA OR SHF + LTL + CL
14	Return on Prop. Funds	$\frac{\text{NPAT} + \text{Interest}}{\text{Shareholders Fund}} \times 100$	Percentage%	High Ratio	% of Profit Earned on Prop Funds	
15	Return on Eq. Sh. Holders Funds	$\frac{\text{NPAT} - \text{Pref. Dividend}}{\text{Prop. Fund} - \text{Pref. Sh. Cap.}}$	Percentage%	High Ratio	% of Profit Earned on Eq. Sh. H. Fund	
16	Debtors Turn Over Ratio	$\frac{\text{Net Credit Sales Average}}{\text{Drs. and Bills Rec.}}$	Times	High Ratio	Collection From Debtors in Year	OpDRS + cl Drs/2 IF no op DRs given, take Cl Drs
	Avg Colletion Period/Age of Drs	$\frac{\text{Avg. Drs. \& B.R.}}{\text{Net Credit Sales}} \times 365D$	D/M	Short Period	Credit Period Allowed to Debtors	OR divide by 12 M/52 Weeks
17	Creditors Turn Over Ratio	$\frac{\text{Net Credit Purchases}}{\text{Average Crs. \& Bills Pay}}$	Times	High Ratio	Payments to Creditors in Year	
	Avg Payent Period/Age of Crs	$\frac{\text{Avg. Drs. \& B.R.}}{\text{Net Credit Sales}} \times 365D$	Times	High Ratio	Cr. Period Allowed by Creditors	OR divide by 12 M/52 Weeks

18	Earning Per Share (E.P.S.)	$\frac{\text{NPAT} - \text{Pref. Dividend}}{\text{No of Equity Shares}}$	Rs	High Ratio	To Know Profit & Kt Price of Shares	
19	Price Earning Ratio (P.E.)	$\frac{\text{Market Price of Shares}}{\text{E.P.S}}$	Times	Low Ratio	Provide guidene for investments	
20	Dividend Pay Out Ratio (D/P Ratio)					
	(a)	$\frac{\text{Total Dividend on Eq. \& Pref. Shares}}{\text{NPAT}} \times 100$	Percentage%	High Ratio	% of NP distributed by way of Dividend High Ratio ~ Liberal Dividend Policy and Low Ratio ~ Conservative dividend Policy	
	(b)	$\frac{\text{Eq. Dividend Pre Shares}}{\text{EPS}} \times 100$				
21	Yield Ratio					
	(a) Dividend Yield Ratio	$\frac{\text{Eq. Dividend Pre Shares}}{\text{MKT Price}} \times 100$	Percentage%	High Ratio	it gives dividend and earning % on the MKT Price of the shares; also represents the real dividend rate/earning rate	
	(b) Earning Yield Ratio	$\frac{\text{EPS}}{\text{MKT Price}} \times 100$				

22	Debt Service Coverage Ratio	$\text{NPAT} + \text{Dep. \& other non cash EXP} + \text{Int. Interest} + \text{Loan Installment p.a.}$	> 1 or < 1	High Ratio	To Judge the capacity of Borrower to pay int. and Loan Instal	
23	Interest Coverage Ratio	$\frac{\text{NPBT} + \text{Interest}}{\text{Interest}}$	Times	High Ratio	To Judge Profit availabvle for paying interst and Installment	NPBT-TAX & int. = NPAT + TAX Int. on Loans
24	FA Turn Over Ratio	$\frac{\text{Sales/COS}}{\text{Net FA}}$				
25	Capital Turnover Ratio	$\frac{\text{Sales/COS}}{\text{Capital Employed}}$				
26	Working Capital TO Ratio	$\frac{\text{Sales/COS}}{\text{Working Capital}}$				
27	Assets T/O Ratio	$\frac{\text{Sales Average}}{\text{Assets}}$				
28	Pref Dividend Coverage Ratio	$\frac{\text{NPAT (before Pref Div.)}}{\text{Pref Dividend}}$				
29	Eq. Dividend Coverage Ratio	$\frac{\text{NPAT} - \text{Pref.Div.}}{\text{EQ Dividend}}$				
30	FA to SHFund Ratio	Fixed Assets Shareholders Funds				
31	Debt Assets Ratio	Debt Assets				
32	Return on Assets Ratio	Net Profit Average Assets or Sales				

Illustration 9. The income statement of Vignesh Ltd., is as follows:

[CA Inter Modified]

To Opening Stock	2,00,000	By Sales	12,00,000
Purchases	8,00,000	Closing Stock	1,00,000
Direct Expenses	1,00,000		
Gross Profit	2,00,000		
	13,00,000		13,00,000
To Admn Expenses	1,00,000	By Gross Profit	2,00,000
Selling Expenses	80,000	Profit on Sale of Investments	60,000
Non-operating Exp.	40,000	Dividends Received	40,000
Net Profit	80,000		
	3,00,000		3,00,000

Calculate the Gross Porfit Ratio, Net Profit Ratio, Operating Ratio, Operating Profit Ratio and Expense Ratio.

Solution:

- Gross Profit Ratio = $\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$
 $= \frac{2,00,000}{12,00,000} \times 100 = \mathbf{16.67\%}$
- Net Profit Ratio = $\frac{\text{Net Profit after tax}}{\text{Net Sales}} \times 100$
 $= \frac{80,000}{12,00,000} \times 100 = \mathbf{6.67\%}$
- COGS = Sales – Gross Profit
 $= 12,00,000 - 2,00,000 = 10,00,000$
- Operating Ratio = $\frac{\text{COGS} + \text{operating expenses}}{\text{Net Sales}} \times 100$
 $= \frac{10,00,000 + (1,00,000 + 80,000)}{12,00,000} \times 100 = \mathbf{98.33\%}$
- Operating Profit Ratio = $100 - 98.33\% = \mathbf{1.67\%}$
- Expenses Ratio = $\frac{\text{Operating Expenses}}{\text{Net sales}} \times 100$
 $= \frac{1,80,000}{12,00,000} \times 100 = \mathbf{15.00\%}$

Illustration 10. The capital structure of M/s. NDW and M/s. GDF Ltd., are as follows:
[CS Inter Modified]

	NDW	GDF
Equity Share Capital (₹)	10,00,000	6,00,000
6% Preference Share Capital	3,00,000	4,00,000
7% Debentures	–	2,00,000
Reserves and Surplus	2,00,000	2,00,000

Calculate Capital Gearing Ratio?

Solution:

Capital Gearing Ratio = Fixed Income bearing Securities/Total Equity

$$\text{NDW} = 3,00,000/12,00,000 = \mathbf{0.25}$$

$$\text{GDF} = 6,00,000/8,00,000 = \mathbf{0.75}$$

The capital of NDW is low geared when compared to GDF.

Illustration 11: The capital structure of Arvind Ltd., is as follows:

[CIMA London Modified]

Equity Share Capital	10,00,000
Redeemable Preference Capital	5,00,000
6% Debentures	3,00,000
Long-term liabilities	2,00,000
Reserves and surplus	2,00,000

Calculate the Capital Gearing Ratio and Ratio of Total Investment to Long-term liabilities.

Solution: Capital Gearing Ratio = Fixed Cost bearing securities/Total Capital

$$= 10,00,000/12,00,000 = \mathbf{0.83:1}$$

Total Investment to LTL = Total Liabilities/Long-term Liabilities

$$= 22,00,000/10,00,000 = \mathbf{2.2:1}$$

Illustration 12. Following is the Profit and loss a/c of Prem chopra Ltd. For the year ended 31st march, 2012. You are required to prepare vertical income statement for the purpose of calculation of – Gross profit ratio – Operating cost ratio -Stock turnover ratio – Expenses ratio – Net profit ratio.

[CA Inter Modified]

Particulars	Amount (in `)	Particulars	Amount (in `)
To Opening stock	7,00,000	By Sales	
To Purchases	9,00,000	Cash	5,20,000
To Wages	1,50,000	Credit	15,00,000
To Factory expenses	3,50,000		<u>20,20,000</u>
To Office salaries	25,000	Less: Returns	20,000
To Office rent	39,000	By Closing stock	6,00,000
To Postage & telegram	5,000	By Dividend on Investment	10,000
To Director's Fees	6,000	By Profit on sale of Investment	20,000
To Salesman salaries	12,000		
To Advertising expenses	18,000		
To Delivery expenses	20,000		
To Debenture interest	20,000		

To Depreciation:			
On office furniture	10,000		
On Plant	30,000		
On Delivery van	20,000		
To Loss on sale of van	5,000		
To Income tax	1,75,000		
To Net profit	1,45,000		
Total	26,30,000		26,30,000

Solution:

In the books of Prem Chopra Ltd.
Vertical Revenue statement for the year ended 31st March, 2012

Particulars			
Cash sales	5,20,000		
Credit sales	15,00,000		
Gross sales		20,20,000	
Less: Returns & Allowance		20,000	
Net Sales			20,00,000
Less: Cost of goods sold		7,00,000	
Opening stock		9,00,000	
Add: Purchases		1,50,000	
Wages		3,50,000	
Factory expenses		30,000	
Depreciation on plant		21,30,000	
Less: Closing stock		6,00,000	
Cost of goods sold			15,30,000
Gross profit			4,70,000
Less: Operating expenses			
1. Administrative Expenses			
Office salaries	25,000		
Office rent	39,000		
Postage & telegrams	5,000		
Depreciation on office furniture	10,000		
Director's fees	6,000		
Total Administrative expenses		85,000	

2. Selling & Distribution expenses			
Salesman salaries	12,000		
Advertising	18,000		
Depreciation on delivery van	20,000		
Delivery expenses	20,000		
Total selling & Distribution expenses		70,000	
3. Financial Expenses			
Debenture interest	20,000		
Total Financial expenses		20,000	
Total operating expenses			1,75,000
Operating net profit			2,95,000
<i>Add: Non –operating income</i>			
Dividend on Investment		10,000	
Profit on sale of Furniture		20,000	30,000
<i>Less: Non operating expenses</i>			
Loss on sale of van			5,000
Net profit before tax			3,20,000
<i>Less: Income tax</i>			1,75,000
Net profit after tax			1,45,000

$$\begin{aligned}
 1. \text{ Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 \\
 &= \frac{4,70,000}{20,00,000} \times 100 \\
 &= 23.5\%
 \end{aligned}$$

$$\begin{aligned}
 2. \text{ Operating Ratio} &= \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100 \\
 &= \frac{15,30,000 + 1,75,000}{20,00,000} \times 100 \\
 &= 85.25\%
 \end{aligned}$$

$$\begin{aligned}
 3. \text{ Stock Turnover Ratio} &= \frac{\text{Cost of Goods Sold}}{\text{Average Stock}} \times 100 \\
 \text{Average stock} &= \frac{\text{Opening Stock} + \text{Closing Stock}}{2} \times 100 \\
 &= \frac{7,00,000 + 6,00,000}{2} = \frac{13,00,000}{2} = 6,50,000
 \end{aligned}$$

$$= \frac{15,30,000}{6,50,000} \times 100$$

$$= 2.35 \text{ times}$$

$$4. \text{ Expenses Ratio} = \frac{\text{Operating Expenses}}{\text{Net Sales}} \times 100$$

$$= \frac{1,75,000}{20,00,000} \times 100$$

$$= 8.75\%$$

$$5. \text{ Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{1,45,000}{20,00,000} \times 100$$

$$= 7.25\%$$

Illustration 13. Following is the profit and loss account and Balance sheet of Karishma Ltd. **[MBA Modified]**

Profit and Loss account for the year ended 31st December, 2012

Particulars	Amount	Particulars	Amount
To cost of sales		By Sales	4,00,000
Opening stock	30,000		
<i>Add:</i> Purchases	3,00,000		
	3,30,000		
<i>Less:</i> Closing Stock	50,000		
Gross profit c/d	1,20,000		
Total	4,00,000	Total	4,00,000
To Expenses	20,000	By Gross profit b/d	1,20,000
To Net profit c/d	1,00,000		
Total	1,20,000	Total	1,20,000
To Provision for tax	40,000	By Net profit b/d	1,00,000
To Dividend	20,000		
To Net profit	40,000		
Total	1,00,000	Total	1,00,000

Balance Sheet as on 31st December 2012

Liabilities	Amount	Assets	Amount
Share capital (₹ 10)	2,00,000	Plant & Machinery	80,000
Reserve	10,000	Land & Building	20,000
Profit & loss a/c	30,000	Stock	50,000
Creditors	50,000	Debtors	80,000
		Cash & Bank	60,000
Total	2,90,000	Total	2,90,000

Market price of an equity share is ₹ 5. Calculate the following ratios:

1. Stock turnover ratio
2. Debtor turnover ratio
3. Creditors turnover ratio
4. Return on capital employed
5. Return on proprietor's Fund
6. Earnings per share
7. Dividend payout ratio

Solution:

$$1. \text{ Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\begin{aligned} \text{Average Stock} &= \frac{\text{Opening Stock} + \text{Closing Stock}}{2} \\ &= \frac{30,000 + 50,000}{2} = \frac{80,000}{2} = 40,000 \\ &= \frac{2,80,000}{40,000} \\ &= 7 \text{ times} \end{aligned}$$

$$2. \text{ Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

$$\begin{aligned} &= \frac{4,00,000}{80,000} \\ &= 5 \text{ times} \end{aligned}$$

$$\begin{aligned} \text{Collection Period} &= \frac{\text{No. of Days in a Year}}{\text{Debtors Turnover}} \\ &= \frac{365}{5} \\ &= 73 \text{ days} \end{aligned}$$

$$\begin{aligned} 3. \text{ Creditors turnover period} &= \frac{\text{Credit Purchases}}{\text{Average Creditors}} \\ &= \frac{3,00,000}{50,000} \\ &= 6 \text{ times} \end{aligned}$$

$$\begin{aligned} \text{Average Age of Creditors} &= \frac{\text{No. of Days in a Year}}{\text{Creditors Turnover}} \\ &= \frac{365}{6} \\ &= 61 \text{ days} \end{aligned}$$

$$\begin{aligned} 4. \text{ Return on Capital Employed} &= \frac{\text{Net Profit before Interest and Tax}}{\text{Capital Employed}} \\ \text{Capital employed} &= \text{Equity Capital} + \text{Reserves} + \text{Profit and Loss a/c} \\ &= 2,00,000 + 10,000 + 30,000 \\ &= 2,40,000 \\ &= \frac{1,40,000}{2,40,000} \times 100 = 41.67\% \end{aligned}$$

$$5. \text{ Return on proprietors Fund} = \frac{\text{Net Profit After Tax}}{\text{Proprietor's Fund}}$$

$$\begin{aligned} \text{Net Profit after Tax} &= 1,00,000 - 40,000 \\ &= 60,000 \end{aligned}$$

$$\begin{aligned} \text{Proprietors Fund} &= \text{Equity Capital} + \text{Reserves} + \text{Profit and Loss a/c} \\ &= 2,00,000 + 10,000 + 30,000 \\ &= 2,40,000 \\ &= \frac{60,000}{2,40,000} \times 100 \\ &= 25\% \end{aligned}$$

$$\begin{aligned}
 6. \text{ Earnings Per Share} &= \frac{\text{Net Profit After Tax} - \text{Preference Dividend}}{\text{No. of Equity Shares}} \\
 &= \frac{60,000}{20,000} \\
 &= ₹ 3
 \end{aligned}$$

$$7. \text{ Dividend Payout Ratio} = \frac{\text{Dividend Per Equity Share}}{\text{Earning Per Equity Shares}}$$

$$\begin{aligned}
 \text{Dividends for Equity Shares} &= \frac{\text{Total Dividend}}{\text{No. of Equity Shares}} \\
 &= \frac{20,000}{20,000} \\
 &= 1 \\
 &= \frac{1}{3} \\
 &= 0.33
 \end{aligned}$$

Illustration 14. From the following balance sheet of Subhash LTD. Calculate:

1. Liquid ratio
2. Proprietary ratio
3. Stock turnover ratio
4. Capital gearing ratio
5. Debtors turnover ratio

[TYB.Com Modified]

Balance Sheet as on 31st March, 2012

Liabilities	Amount	Assets	Amount
Equity share capital	2,00,000	Fixed assets	12,00,000
Preference share capital	5,00,000	Stock	5,40,000
Reserves	10,00,000	Sundry debtors	8,00,000
Secured loan	4,00,000	Advance Income tax	1,20,000
Current liabilities	5,40,000	Advance income tax	1,20,000
Provisions	8,10,000	Cash at bank	7,90,000
Total	34,50,000	Total	34,50,000

Total sales during the year was ₹ 77,76,000 (including cash sales ₹ 5,76,000) which yielded a gross profit of 25% on sales. The stock on 31st march, 2009 was ₹ 4,32,000 Assume for your working 360 days for the year.

Solution:

1. Liquid Ratio = $\frac{\text{Quick Asset}}{\text{Quick Liabilities}}$

$$= \frac{\text{Current Asset} - \text{Stock} - \text{Advance Tax}}{\text{Current Liabilities} - \text{Bank Overdraft}}$$

$$= \frac{22,50,000 - 5,40,000 - 1,20,000}{13,50,000 - \text{NIL}}$$

$$= 1.18:1$$
2. Proprietary Ratio = $\frac{\text{Proprietor's Funds}}{\text{Total Assets}} \times 100$

$$= \frac{\text{Equity Share Capital} + \text{Preference Share Capital} + \text{Reserve}}{\text{Fixed Assets} + \text{Current Assets}} \times 100$$

$$= \frac{2,00,000 + 5,00,000 + 10,00,000}{12,00,000 + 22,50,000} \times 100$$

$$= \frac{17,00,000}{34,50,000} \times 100$$

$$= 48.28\%$$
3. Stock Turnover Ratio = $\frac{\text{Cost of Sales}}{\text{Average Stock}}$

$$= \frac{\text{Sales} - \text{Gross Profit}}{\frac{(\text{Opening Stock} - \text{Closing Stock})}{2}}$$

$$= \frac{77,76,000 - 19,44,000}{\frac{(4,32,000 - 5,40,000)}{2}}$$

$$= \frac{58,32,000}{4,86,000}$$

$$= 12 \text{ times}$$
4. Capital Gearing Ratio = $\frac{\text{Preference Capital} + \text{Debentures} + \text{Term Loans}}{\text{Equity Capital} + \text{Reserves}}$

$$= \frac{4,00,000 + 2,00,000}{5,00,000 + 10,00,000}$$

$$= 0.40:1$$

$$\begin{aligned}
 5. \text{ Debtors Turnover ratio} &= \frac{\text{Average Debtors} \times 360}{\text{Credit Sales}} \\
 &= \frac{8,00,000 \times 360}{77,76,000 - 5,76,000} \\
 &= 40 \text{ days}
 \end{aligned}$$

Illustration 15. The consolidated Balance Sheet of Y Ltd. as on 31st 3. 2012 is as follows:

Liabilities		Assets	
Equity Share Capital	6,00,000	Fixed Assets	9,00,000
Reserves	2,00,000	Stock	3,00,000
6% Debentures	5,00,000	Marketable Investments	1,00,000
Current Liabilities	2,00,000	Debtors	1,50,000
Bank Overdraft	1,00,000	Cash & Bank Balance	1,00,000
		Preliminary Expenses	50,000
	16,00,000		16,00,000

Re-arrange the above balance sheet in vertical form and calculate the following ratios:

- Current Ratio
- Liquid Ratio
- Proprietary Ratio
- Stock-working Capital Ratio

(M.U.TYBAF)

Solution:

Balance Sheet of Y Ltd. as on 31-3-2012

Particulars		
Sources of Funds		
1. Share Holder's Fund:		
Equity Share Capital	6,00,000	
Reserves	2,00,000	
	8,00,000	
Less: Preliminary Expenses	50,000	7,50,000
2. Borrowed Funds:		
6% Debentures		5,00,000
Total Funds		12,50,000
Invested as under:		
Fixed Assets		9,00,000
Investment		-

Working Capital:		
(A) Current Assets		
Stock	3,00,000	
Marketable Investment	1,00,000	
Debtors	1,50,000	
Cash & Bank Balances	1,00,000	
		6,50,000
(B) Less: Current Liabilities:		
Current Liabilities	2,00,000	
Bank Overdrafts	1,00,000	
	3,00,000	3,50,000
Total		12,50,000

(b) Ratio Analysis:

(i) Current Ratio:

$$= \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{6,50,000}{3,00,000} = 2.17$$

(ii) Liquid Ratio:

$$= \frac{\text{Liquid Current Assets}}{\text{Liquid Current Liabilities}} = \frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities} - \text{Bank Overdraft}}$$

$$= \frac{6,50,000 - 3,00,000}{3,00,000 - 1,00,000} = \frac{3,50,000}{2,00,000} = 1.75$$

(iii) Proprietor Ratio:

$$= \frac{\text{Proprietor's Fund}}{\text{Total Assets}} = \frac{7,50,000}{9,00,000 + 6,50,000}$$

$$= \frac{7,50,000}{15,50,000} = 0.48 \text{ or } 48\%$$

(iv) Stock Working Capital Ratio:

$$= \frac{\text{Stock}}{\text{Working Capital}} = \frac{3,00,000}{3,50,000} = 0.857 = 86\%$$

Illustration 16. Following is the Balance Sheet of Yuvraj Ltd. as on 31st March, 2012:

Liabilities		Assets	
Share Capital	3,00,000	Goodwill	40,000
Share Premium	10,000	Land	1,60,000
General Reserve	1,20,000	Plant	88,000

Profit and Loss A/c	34,000	Furniture	6,000
11% Debentures	1,00,000	Trade Investments	1,60,000
Bank Loan	70,000	Accounts Receivable	1,40,000
Bank Overdraft	40,000	Inventories	1,20,000
Sundry Creditors	1,20,000	Prepaid Expenses	10,000
Provision for Taxation	20,000	Cash at Bank	80,000
		Preliminary Expenses	10,000
	8,14,000		8,14,000

Convert the above Balance Sheet in vertical form and find out the value of: 1. Fixed Assets, 2. Intangible Assets, 3. Fictitious Assets, 4. Quick Assets, 5. Current assets, 6. Net worth, 7. Long-term liabilities, 8. Quick liabilities, 9. Working Capital.

(TYBBI, Sem-V; April. 2007, M.U.)

Solution:

M/s. Yuvraj Ltd.
Vertical Balance Sheet as on 31st March, 2012

Particulars			
(I) Sources of Funds			
1. Share Holder's Fund			
(a) Share Capital		3,00,000	
(b) Reserves and Surplus			
(i) Profit and Loss a/c	1,34,000		
(ii) General Reserve	1,20,000		
(iii) Share Premium	10,000	1,64,000	
Net Worth			4,64,000
2. Loan Funds:			
(a) 11% Debentures		1,00,000	
(b) Bank Loan		70,000	1,70,000
Total Sources of Funds			6,34,000
(II) Application of Funds			
1. Fixed Assets			
(a) Intangible Assets			
Goodwill		40,000	
(b) Tangible Assets			
(i) Land	1,60,000		
(ii) Plant	88,000		

(iii) Furniture	6,000	2,54,000	2,94,000
2. Investment			1,60,000
3. Working Capital:			
(a) Current Assets, Loans and Advances			
(i) Inventories	1,20,000	3,00,000	
(ii) Sundry Debtors	1,40,000		
(iii) Cash & Bank Balances	80,000		
(iv) Prepaid Expenses	10,000		
		3,50,000	
Less: (b) Current Liabilities:			
(i) Current Liabilities	1,60,000		
(ii) Bank Overdrafts	40,000		
(iii) Provisions	20,000	1,80,000	
Net Working Capital			1,70,000
4. Miscellaneous Expenditure (to the extent not written off)			
Preliminary Expenses		10,000	10,000
Total Application of Funds			6,34,000

1. Fixed Assets	∩ 2,94,000
2. Intangible Assets (Goodwill)	∩ 40,000
3. Fictitious Assets (Preliminary Expenses)	∩ 10,000
4. Quick Assets (Current Assets – Inventories – Prepaid Expenses)	∩ 2,30,000
5. Current assets	∩ 3,50,000
6. Net worth	∩ 4,64,000
7. Long-term liabilities (Loan Funds)	∩ 1,70,000
8. Quick liabilities (Current Liabilities – Bank Overdraft)	∩ 1,40,000
9. Working Capital	∩ 1,70,000

Illustration 17: Given: Current Ratio is 2.5 and working capital is ∩ 1,80,000. Calculate the Current Assets and current liabilities. **[CA Final Modified]**

Solution: Current Ratio = CA/CL

$$2.5 = CA/1$$

CA = 2.5 (In the absence of any value, the current liability is always taken as 1 unit)

$$\begin{aligned}\text{Working Capital} &= \text{CA} - \text{CL} \\ &= 2.5 - 1\end{aligned}$$

$$\text{Working Capital} = 1.5$$

For 1.5 WCR = ` 1,80,000 (Working Capital value)

For 2.5 CAR, = ` 1,80,000 \times 2.5/1.5

1. Current Assets = ` 3,00,000
For 1.0 CLR = ` 1,80,000 \times 2.5/1
2. Current Liabilities = ` 1,20,000

Illustration 18: Given Current ratio 1.5:1; Quick ratio 1:1 and Current liabilities ` 50,000. Calculate current assets, quick assets and inventory. **[CIMA London Modified]**

Solution:

1. Current Ratio = 1.5:1 [CA/CL]
Current liabilities = ` 50,000
Current Ratio (1.5) = CA/50,000
Current Assets = ` 75,000
2. Quick Assets (QR) = QA/1 [QA/CL]
1 = QA/50,000
Quick Assets = ` 50,000
3. Inventory = CA – QA
= ` 75,000 – ` 50,000
Inventory = ` 25,000

Illustration 19: From the following information provided Sarawath Ltd., draw up the Balance Sheet. **[CA Final Modified]**

- (a) Current Ratio: 2.50
- (b) Liquidity Ratio: 1.50
- (c) Net Working Capital: ` 3,00,000
- (d) Stock Turnover Ratio: 6 times
- (e) Ratio of Gross Profit to Sales: 20%
- (f) Fixed Asset Turnover Ratio: 2 times
- (g) Average Debt collection period: 2 Months
- (h) Fixed Assets to Net Worth: 0.80
- (i) Reserve and Surplus to Capital: 0.50

Solution:**Balance Sheet**

Liabilities		Assets	
Capital	5,00,000	Fixed Assets	6,00,000
Reserves & Surplus	2,50,000	Inventories	2,00,000
Long-term Debt	1,50,000	Debtors	2,50,000
Current Liabilities	2,00,000	Bank	50,000
Total	11,00,000	Total	11,00,000

Working Notes

If Current Liabilities	= 1	
Current Assets	= 2.5	
Working Capital (2.5 – 1)	= 1.5	= 3,00,000
Therefore Current Assets (2.5/1.5) × 3,00,000		= 5,00,000
Current Liabilities (1/1.5) × 3,00,000		= 2,00,000

Liquidity Ratio	= 1.5	
Current Liabilities	= 2,00,000	
Therefore Liquid Asset (2,00,000 × 1.5)		= 3,00,000
Inventories (Current Asset – Liquid Asset)		= 2,00,000

Stock Turnover Ratio	= 6 times	
Cost of sales (6 × 2,00,000)		= 12,00,000

Gross Profit Ratio	= 20%	
Gross Profit		
If Sales is 100; Gross Profit is 20		
Hence Cost of Sales is (100 – 20) = 80		
Therefore Gross Profit is (20/80) × 12,00,000		= 3,00,000
Sales (Cost of Sales + Gross Profit)		= 15,00,000

Fixed Asset Turnover Ratio	= 2 times	
(cost of sales/fixed assets)		
Therefore Fixed Assets (12,00,000/2)		= 6,00,000

Debtors Collection Period (months in a year/debtors turnover)	= 2 months	
Debtors Turnover Ratio (12/2) (sales/debtors)	= 6 times	
Debtors (15,00,000/6)		= 2,50,000
Fixed Assets to Shareholders' Net Worth	= 0.80	
Shareholders' Net Worth (6,00,000/0.80)		
Reserves & Surplus to Capital	= 0.50	
If capital is 1: reserves & surplus is 0.5		
Reserves & Surplus + Capital = Shareholders' Net Worth (0.5 + 1 = 1.5)		
Reserves & Surplus (75,00,000 × (0.5/1.5))		= 2,50,000
Therefore Share Capital		= 5,00,000

ESTIMATION OF WORKING CAPITAL 1

A company is having 2 types of capital viz., fixed capital and working capital

Fixed Capital: Capital which is used for purchase of fixed assets is known as fixed capital these are the long-term capital and permanent

Working Capital: Capital which is invested in current assets is known as working capital .this is the capital which is require for day to day operation of the organization

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable and payable, and cash.

Why Firms Hold Cash

The finance profession recognizes the three primary reasons offered by economist John Maynard Keynes to explain why firms hold cash. The three reasons are for the purpose of speculation, for the purpose of precaution, and for the purpose of making transactions. All three of these reasons stem from the need for companies to possess liquidity.

Speculation

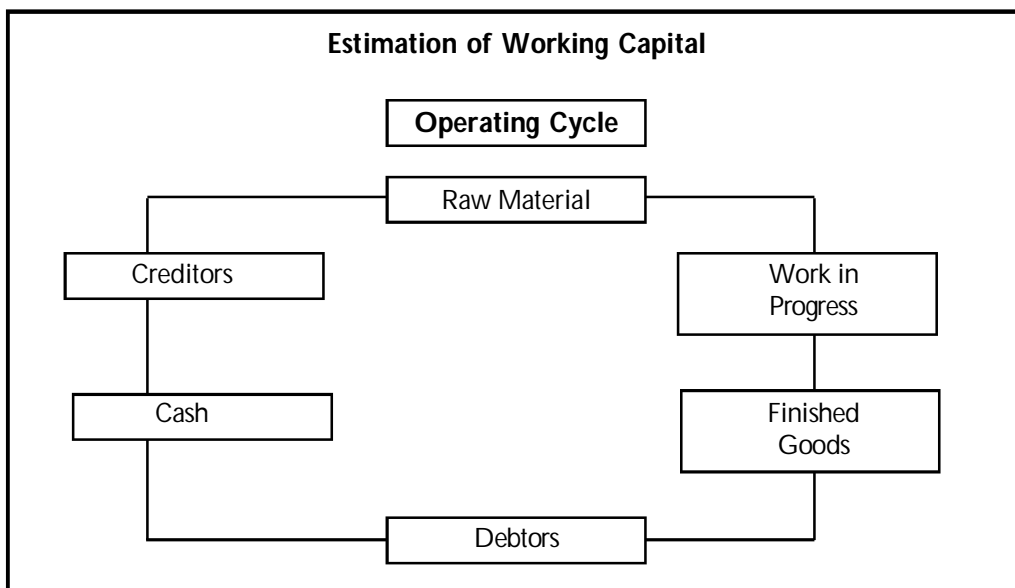
Economist Keynes described this reason for holding cash as creating the ability for a firm to take advantage of special opportunities that if acted upon quickly will favor the firm. An example of this would be purchasing extra inventory at a discount that is greater than the carrying costs of holding the inventory.

Precaution

Holding cash as a precaution serves as an emergency fund for a firm. If expected cash inflows are not received as expected cash held on a precautionary basis could be used to satisfy short-term obligations that the cash inflow may have been benchmarked for.

Transaction

Firms are in existence to create products or provide services. The providing of services and creating of products results in the need for cash inflows and outflows. Firms hold cash in order to satisfy the cash inflow and cash outflow needs that they have.



Cost Structure

Raw Material	x
(+) Wages	x
(+) Factory Overheads	x
Total Cost of Production	x
(+) Administration Expenses	x
(+) Selling Expenses	x
Total Cost	x
+ Profit	x
Selling Price	x

	CA			
	Stock			
	RM	Prod. × RM Price × Period/12	xx	
	WIP	Prod. × WIP Price × Period/12	xx	
F	FG	Prod. × Total Cop. × Period/12	xx	xxx
O	DRS	Prod. × SP × Period/12		xxx
	Cash			xxx
R	Advances	Prod. × RM Price × Period/12		xxx
M	Total Gross Working Capital		(1)	xxx
A	CL			
	CRS	Prod. × RM Price × Period/12		xxx
T	O/S Expenses	Prod. × Exp. Rate × Period/12		xxx
	Bank Overdraft			xxx
	Total CL		(2)	xxx
	Working Capital		1 – 2	xxx
	+ Safety Margin			xxx
	Net Working Capital			xxx

FUNDS FLOW ANALYSIS

Introduction: Financial statements as an aid to evaluate past and/or present performance of a business concern is unquestionable and beyond any dispute. The Income Statement reports the revenues earned and expenses incurred or outstanding. The Balance Sheet conveys about the deployment of funds in various assets and equities. International Accounting Standards 7 reads as:

“A statement of changes in financial position should be included as an integral part of financial statements. The statement of changes in financial position should be presented for each period for which the income statement is prepared”. The inclusion of such a statement, therefore, is very helpful to improve the understanding of the operations and activities of an enterprise for the reporting period.

Meaning of Fund Flow Statement: Funds Flow Statement is essentially derived from the analysis of changes which have occurred in assets and equities between two accounting periods. Funds Flow Statement being a toll of Management accountant can be prepared at point in time. This statement does not form a part of financial statement but acts as a valuable tool for the management in decision making.

Funds flow statement is very useful in working capital management, deciding the capital structure of the firm, financial planning and forecasting.

According to the International Accounting Standard 7, the term „Fund refers to cash, to cash and cash equivalent, or to working capital. The term “flow” refers to change and therefore the term “Funds flow” refers to “change in funds” or “change in working capital”. In other words, any increase or decrease in working capital means “flow of funds”.

Fund Flow Statement enables us to identify and recognize the changes in assets and asset sources which are not readily evident in the income statement or financial statement. It reveals how funds were obtained to pay off its long-term debts, how the firm managed to pay regular dividends during volatile period, how the funds from equity issue were utilized etc.

However Funds flow statement is not a substitute to comprehensive income statement (Profit and Loss account) and statement of Financial Position (Balance Sheet). It facilitates additional information regarding movement of funds during a particular period.

There are two concepts of working capital – gross concept and net concept.

Gross working capital refers to the firm’s investment in current assets. Net working capital means excess of current assets over current liabilities.

Working capital = Current Assets – Current Liabilities

Current Assets are those which are held or receivable within a year or within the operating cycle of the business. They are intended to be converted into cash within a short period of time.

Current Liability is that obligation which has to be satisfied within a year.

Non-current Assets refers to those assets other than current assets that are realizable in cash or sold or consumable after one year or after a considerable period of time. Fictitious assets are those expenses which could not be written off during the period of their incidence. For example, promotional expenses of a company which could not be treated as expenditure in the year of incidence are shown as fictitious asset.

Non-current Liabilities refers to all those obligations other than current liabilities that are likely to mature after one year period.

Statement of Sources and Uses of Funds or Funds Flow Statement is a statement which depicts the sources from which funds are obtained and how they have been utilized. When a transaction results in increase of funds it is termed as “**Source of Fund**” and when it results in decrease of fund it is termed as “**Application of Fund**”.

However there are certain transactions that do not result in either increase or decrease of fund. Such transactions are termed as Non fund Transaction. Eg: If the funds are ₹ 10,000 and a fixed asset of ₹ 5,000 is purchased by issuing shares of ₹ 5,000 the funds position will not change and therefore this transaction will be taken as a non-fund transaction.

There are certain transactions which are not apparent and are hidden. Such transactions have to be located in order to know their effect on the funds. In such circumstances the relevant ledger accounts should be prepared for all non-current assets and liabilities to find out the hidden information.

Ascertainment of Flow of Funds

The flow of fund can be ascertained from Balance Sheet, Profit and Loss account and from the hidden information. A few **independent transactions** are given below and the effect of each of the transaction on flow of funds is determined.

Balance Sheet as on

Non-current Liabilities		Non-current Asset	
Share Capital:		Goodwill	50,000
16% Redeemable Preference Shares of ` 10 each	1,00,000	Buildings	1,00,000
		Plant	1,00,000
		Furniture	50,000

Equity shares of ` 10 each	1,00,000	Long-term Investment	50,000
Long-term Loans:			
12% Debenture	1,00,000		
Loan on Mortgage	50,000		
Reserves & Surplus:			
General Reserve	1,00,000		
Profit & Loss A/c	50,000		
Total Non-current Liabilities	5,00,000	Total Non-current Assets	3,50,000
Current Liabilities		Current Assets	
Sundry Creditors	50,000	Sundry Debtors	80,000
Bills Payable	50,000	Bills Receivable	50,000
Bank Overdraft	25,000	Inventories	1,00,000
Outstanding Expenses	25,000	Pre-paid Expenses	50,000
		Cash Balance	20,000
Total Current Liabilities	1,50,000	Total Current Assets	3,00,000
Total Liabilities	6,50,000	Total Assets	6,50,000

Computation of working capital:

Current Assets	₹ 3,00,000
Current Liabilities	₹ 1,50,000
Net Working Capital	<u>1,50,000</u>

There will be flow of funds on account of change in working capital position.

1. The company realizes ` 20,000 from its debtors.

Debtors will reduce from ` 80,000 to ` 60,000

Cash balance will increase from ` 20,000 to ` 40,000



Current Assets	` 3,00,000
Current Liabilities	` 1,50,000
Working Capital	<u>1,50,000</u>

This transaction will not bring any change in the working capital because it is simply conversion of one current asset into another current asset.

2. The company pays to its creditors a sum of ` 10,000 out of the cash balance.

Cash balance gets reduced from ` 20,000 to ` 10,000

Sundry creditors will stand reduced from ` 50,000 to ` 40,000



Current Assets	` 2,90,000
Current Liabilities	` 1,40,000
Working Capital	<u>1,50,000</u>

There will be no change in working capital position

3. The company purchases furniture of ` 10,000 by raising long-term loans of ` 10,000.



This transaction will not have any effect on working capital position, since the transaction involves non-current asset and a non-current liability which are not the constituents of working capital.

4. The company redeems preference shares of ` 1,00,000 by issuing 12% debentures of ` 1,00,000.



This transaction will not involve any change in the working capital since both the accounts involved are not the constituents of the working capital.

5. The company raises ` 50,000 in cash by issue of new shares.

This transaction will increase the cash balance of the company from ` 20,000 to ` 70,000. The working capital position will be:

Current Assets	` 3,50,000
Current Liabilities	` 1,50,000
Working Capital	<u>2,00,000</u>

This transaction will involve flow of funds



6. The company sells its building having a book value of ₹ 50,000 for a sum of ₹ 60,000. This transaction will increase the cash balance with the company from ₹ 20,000 to ₹ 80,000.

Current Assets	₹ 3,60,000
Current Liabilities	₹ 1,50,000
Working Capital	<u>2,10,000</u>

This transaction will increase the W.C.



Note: Each transaction is independent and not linked to the previous example.

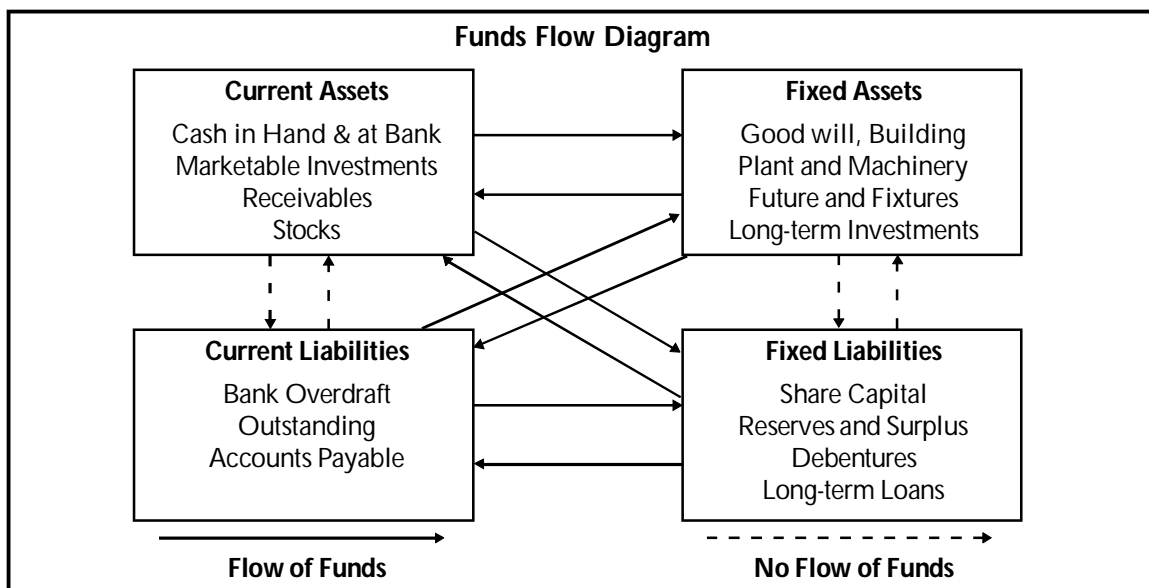
From the above, the following general rules can be formed:

1. There will be flow of funds if a transaction involves:

- ▶▶ Current assets and fixed assets, e.g., purchase of building for cash
- ▶▶ Current assets and capital, e.g., issue of shares for cash
- ▶▶ Current assets and fixed liabilities, e.g., redemption of debentures in cash
- ▶▶ Current liabilities and fixed liabilities, e.g., Creditors paid off in debentures
- ▶▶ Current liabilities and capital, e.g., creditors paid off in shares.
- ▶▶ Current liabilities and fixed assets, e.g., building transferred to creditors in satisfaction of their claims

2. There will be no flow of funds if a transaction involves.

- ∅ Current assets and current liabilities, e.g., payment made to creditors through cash
- ∅ Fixed assets and fixed liabilities, e.g., building purchased and payments made in debentures.
- ∅ Fixed assets and capital, e.g., building purchased and payment made in shares



Techniques of Preparing a Funds Flow Statement

Like other accounting statements, the structure of Fund Flow Statement is based on the equality of financial assets and liabilities including capital. The basic understanding is that the funds are obtained through profit, external borrowings or by issue of shares. If funds are not available readily from these sources, the other alternative available is to sell the fixed assets and investments.

Steps in Preparation of Funds Flow Statement

There are three steps involved in the preparation of a Fund Flow Statement (FFS). They are as follows:

- (a) Preparation of Statement of changes in working capital or Schedule of changes in working capital.
- (b) Preparation of Adjusted Profit and Loss Account (APL)
- (c) Statement of changes in Financial position as per AS – 7

Schedule of Changes in Working Capital

It is also known as “Comparative change in Working Capital Statement” or “Working Capital Variation Statement”. The net change in working capital is projected here in the place of individual changes in all the current assets and current liabilities in the Funds Flow Statement. The statement indicates the amount of working capital at the end of two years. It shows the increase or decrease in the individual items of current assets and current liabilities.

The effect of the changes in the individual items of the current assets and current liabilities on working capital is also presented clearly and precisely. The difference in the amount of working capital at the end of two years will depict either the increase or decrease in working capital. While ascertaining the increase or decrease in individual items of current assets and current liabilities and its impact on working capital, the following Rules should be taken into account.

Rules for preparing the Schedule of Changes in Working Capital:

- ▶▶ Increase in a current asset, results in increase (+) in “working capital”
- ▶▶ Decrease in a current asset, results in decrease (-) in “working capital”
- ▶▶ Increase in a current liability, results in decrease (-) in “working capital”
- ▶▶ Decrease in a current liability, results increase (+) in “working capital”.

Format of Schedule of Changes in Working Capital

Particulars	Previous Year	Current Year	Increase	Decrease
Current Assets				
Cash in Hand				
Cash at Bank				
Sundry Debtors				
Bills Receivable				
Stock or Inventory				
Prepaid Expenses				
Temporary Investments				
Accrued Incomes				
Total Current Assets (A)				
Current Liabilities				
Sundry Creditors				
Bills Payable				
Bank Overdraft				
Income Received in Advance				
Provision for Taxation*				
Proposed Dividends*				
Total Current Liabilities (B)				
Net Working Capital (A) – (B)				
Increase/Decrease in Working Capital (Balancing Figure)				
Total				

***Provision for Taxation: It can be treated in two ways:**

- 1. Treated as current liability:** when there is no income tax paid or additional provision made it is treated as current liability. It can be taken to schedule of changes in working capital. No further treatment is required.
- 2. Treated as non-current liability:** A ledger account (Provision for taxation a/c) is prepared. Sometimes we may have to arrive at income tax paid during the year from the given information. These are hidden transactions which are not apparent and are hidden.

***Proposed Dividend: It can be treated in two ways:**

- 1. Treated as current liability:** Proposed dividend may be taken as Current liability since declaration of dividends by share holders is simply a formality. It is taken to schedule of changes in working capital with no further treatment.

- 2. Treated as non-current liability:** Proposed dividend can be taken as an appropriation of profit. In such a case, proposed dividend for the current year will be added back to current year's profit in order to find out funds from operations if such amount of dividend has already been charged to profit. Payment of dividend will be shown as an application of fund.

Adjusted Profit and Loss account: Revenue transactions such as depreciation, amortization, Profit/Loss on sale of assets etc appearing in Profit and Loss account does not belong to either current or non-current category. All such non-operating incomes and non-operating expenses appear in Adjusted Profit and Loss account to ascertain the „Funds from Operations“.

Funds from Operations: Profit earned by the concern during the current year is deemed to be the source of funds. It is very important source of funds inflow. Net profit is arrived at by deducting cost of goods sold and other expenses from total sales revenue. However, the profit so calculated is seldom equal to the funds from operations because there are many items which are debited or credited in the Profit and Loss Account which do not affect working capital. Therefore, in calculating the funds from operations, the following adjustments must be kept in mind:

Items to be added back to Net Profit:

- (a) **Non-fund revenue deductions:** These are items which are debited to Profit and Loss account. These do not cause outflow of funds such as depreciation and depletion on non-current assets, amortization of fictitious and intangible assets, preliminary expenses, redemption of preference shares or debentures, deferred charges, advertising suspense account written off. If non fund expenditures do not affect the current assets such as unexpired insurance, do not add back. So also, all allowances for income tax payable in future years are excluded.
- (b) **Non-trading charges or losses:** These items which were debited to Profit and Loss account reduce the profits but they do not cause any outflow of funds. Hence, profit should be corrected by adding back all such charges and losses. These include appropriation of retained earnings such as general reserve, dividend equalization fund, and reserve for contingencies, sinking fund. In addition the dividend on shares must be added back since it is an appropriation and not trading charge. The losses arising out of sale of land, buildings, machinery, long-term investments which were written off to the profit and loss account must be added back. Do not add the loss arising out of sale of a current asset such short-term investments. It is a trading loss and hence it will not require any adjustment. The amount set aside as provision for current taxation will also be added back. This will be considered only when the provision for taxation is treated as a charge on profits.

Items that are to be deducted from Net Profit:

The non fund and non trading revenue receipts or incomes must be deducted from net profit in order to compute funds from operations. The items are:

- (a) **Dividend received or receivable:** Although this transaction increases the current assets such as cash and debtors, it is not a trading income. Hence, it should be deducted from the net profits to determine the funds from operations.
- (b) **Retransfer of excess provisions:** Where the provisions made for taxation, depreciation, doubtful debts exceed the genuine requirements, the excess amount is transferred back to the Profit and loss account. It does not create any inflow of funds since it is an accounting entry. Hence, deduct it.
- (c) **Profit on sale of non current assets:** It is a non trading income. Hence it must be eliminated from the amount of profit.
- (d) **Appreciation in fixed assets:** The amount of appreciation on revaluation of fixed assets is normally credited to the profit and loss account. If it is so, deduct it from the profit to compute the funds from operations.

Adjusted Profit and Loss A/c

To	By
Depreciation written off	Balance b/d (Opening bal.)
Preliminary exp written off	Profit on sale of investments
Goodwill written off	Profit on sale of fixed assets
Discount on issue of shares	Dividend and interest received
Loss on sale of fixed assets	Funds from operations (bal. fig.)
Loss on sale of trade investments	
Transfer to general reserve	
Provision for tax	
Provision for Proposed dividend	
Balance c/d (Net profit) Closing balance	
Total	Total

Note:

- ▶▶ If debit total of Adjusted Profit and Loss a/c is more than the credit total, the difference is Funds generated from Operation
- ▶▶ If credit total of Adjusted Profit and Loss a/c is more than the debit total, the difference is funds lost in operations.

Funds Flow Statement: This forms the final step in funds flow analysis. It consist of two components – the source of funds and the application of funds. This statement reveals the overall creditworthiness of the enterprise. A Funds Flow Statement differs from an Income Statement in the following aspects:

1. Funds flow statement reveals how the funds were obtained and how they were utilized whereas the income statement discloses the results of the business activity.

2. A funds flow statement matches the "funds raised" with "funds utilized"
3. Income statement which discloses the results of operations cannot accurately furnish funds from operations because non-fund items such as depreciation, writing off fictitious assets etc are included in it.

Format of Funds Flow Statement

Sources of Funds		
Funds from Operations		
Non-trading Incomes		
Issue of Shares		
Issue of Debentures		
Borrowing of Loans		
Acceptance of Deposits		
Sale of Fixed Assets		
Sale of Investments		
Decrease in Working Capital		
Application of Funds		
Funds Lost in Operations		
Non-operating expenses		
Redemption of Preference Shares		
Redemption of Debentures		
Repayment of Loans		
Repayment of Deposits		
Purchase of Fixed Assets		
Purchase of Long-term instruments		
Increase in Working Capital		

Illustration 1: XYZ Ltd. provides the following Information

	January 1	December 31
Sundry Debtors	65,000	1,05,000
Cash in Hand	13,000	20,000
Cash at Bank	15,000	20,000
Bills Receivable	16,000	30,000
Inventory	90,000	84,000
Bills Payables	12,000	8,000
Outstanding Expenses	6,000	5,000

Sundry Creditors	30,000	58,000
Bank Overdraft	30,000	42,000
Short-term Loans	32,000	36,000

Prepare a schedule of changes in working capital

Solution:

Schedule of changes in Working Capital

**Balance as on
Effect of WC**

Details	Jan 1	Dec 31	Increase	Decrease
Current Assets				
Cash in Hand	13,000	20,000	7,000	
Cash at Bank	15,000	20,000	5,000	
Sundry Debtors	65,000	1,05,000	40,000	
Bills Receivable	16,000	30,000	14,000	
Inventory	90,000	84,000	–	6,000
Total Current Assets (A)	1,99,000	2,59,000		
Current Liabilities				
Sundry Creditors	30,000	58,000	–	28,000
Bills Payables	12,000	8,000	4,000	–
Outstanding Expenses	6,000	5,000	1,000	–
Bank Overdraft	30,000	42,000	–	12,000
Short-term Loans	32,000	36,000	–	4,000
Total Current Liabilities (B)	1,10,000	1,49,000		
Working Capital (A) – (B)	89,000	1,10,000		
Net Increase in Working Capital (Balancing Figure)	21,000			21,000
	1,10,000	1,10,000	71,000	71,000

Illustration 2: The following are the summarized Balance Sheets of Anderson Ltd.

Balance Sheet as on.....

Liabilities	2006	2007	Asset	2006	2007
Share Capital	5,00,000	6,00,000	Fixed Assets	10,00,000	11,20,000
Reserves	1,50,000	1,80,000	Less: Dep.	(3,70,000)	4,60,000)
P&L Account	40,000	65,000	Stock	2,40,000	3,70,000

Debentures	3,00,000	2,50,000	Book Debts	2,50,000	2,30,000
Creditors	1,70,000	1,60,000	Cash	1,00,000	75,000
Prov. for IT	60,000	80,000			
	12,20,000	13,35,000		12,20,000	13,35,000

Prepare a Funds Flow Statement

Solution:

Statement of Changes in Working Capital

Particulars	2006	2007	Increase	Decrease
Current Assets				
Cash	1,00,000	75,000		
Stock	2,40,000	3,70,000	1,30,000	–
Book Debts	2,50,000	2,30,000	–	20,000
Total CA (A)	5,90,000	6,75,000		
Current Liabilities				
Creditors for Goods	1,70,000	1,60,000	10,000	–
Provision for Income Tax	60,000	80,000	–	20,000
Total CL (B)	2,30,000	2,40,000		
Working Capital (A – B)	3,60,000	4,35,000		
Increase in Working Capital	75,000	–	–	75,000
Total	4,35,000	4,35,000	1,40,000	1,40,000

Adjusted Profit and Loss Account

To		By	
Reserve	30,000	Opening Balance	40,000
Depreciation	90,000	Funds from Operation	1,45,000
Closing Balance	65,000		
Total	1,85,000	Total	1,85,000

Funds Flow Statement

Sources		Application	
Issue of Share Capital	1,00,000	Redemption of Debentures	50,000
Funds from Operation	1,45,000	Purchase of Fixed Assets	1,20,000
		Increase in Working Capital	75,000
	2,45,000		2,45,000

Notes:

1. The increase in General Reserve is due to transfer a part of profit of the current year and hence the difference is transferred to Adjusted Profit and Loss account since it's a non-cash item
2. The difference in depreciation is charged to Adjusted P&L, since it's a non-cash item.
3. Increase in Equity Share capital is assumed to be the fresh issue which is a cash item. It is recorded in Funds Flow Statement as source.
4. The difference in debenture is the redemption. It is taken to Funds Flow Statement as application of funds.
5. Purchase of fixed asset is difference between the opening and closing balance of fixed assets. It is application of funds and taken to Funds Flow Statement.

[**Note:** We have given above two examples to clear the fundamental of Fund Flow Analysis among students but as per syllabus practical problem on this topic neither to be thought in the class nor it should not asked in the examination.]

CASH FLOW ANALYSIS**Introduction**

The funds flow analysis deal with the flow of funds within and outside the organization. However the main focus of funds flow statement is to explain the changes which have taken place in net working capital during the period under consideration. It fails to explain the changes in cash balance. The movement of cash is of vital importance to the management. The organization may become directionless if the cash inflows are not sufficient to meet the cash outflows. Many a time, a management is posed with the paradox of huge profits and yet impossible to pay dividends or even taxes. This is due to the ground realities that cash is either not received or the cash received is drained out in other items. Hence, it has become a necessity to have a cash flow analysis on periodic intervals say every quarter. The statement shows the items resulting in cash inflows and cash outflows.

Meaning of Cash Flow Statement: Cash flow statement, also known as "Statement Accounting for variations in cash", Where Got Where Gone Statement. It shows the movement of cash and their causes during the period under consideration. The statement is significant to the stakeholders of the company and is prepared to show the impact of financial policies and procedures on the cash position. It takes into account all the transactions that have a direct impact upon cash and cash equivalent.

Purpose of Cash Flow Statement: According to Accounting Standard 3, it is mandatory to prepare and present Cash flow statement along with Statement of financial Position and Statement of Income position at the end of accounting period. Unlike Fund Flow statement, cash flow statement explains in depth the inflow and outflow of cash and cash equivalent in three categories viz Net cash flow from operating activities, Net cash flow investment activities

and Net cash flow from financing activities. It answers some of the important questions on the company such as:

- ▶ How much cash has been spent on investment activities such as purchase of new plant and machinery, purchase of land?
- ▶ Have long-term source of cash both internally generated plus raised externally adequate to finance purchase of new long-term fixed assets?
- ▶ What is the liquidity position of the company? Has it improved?
- ▶ How the company is handling large dividend payment? Is it managing with its reserves or is it borrowing?

Preparation of Cash Flow Statement: According to Accounting Standard 3 (Revised) method cash flow statement is sub divided into three parts: (i) cash flow from operating activities, (ii) cash flow from investing activities, and (iii) cash flow from financing activities.

1. Cash flow from Operating Activities: Operating activities are the principal revenue producing activities of the enterprise. Therefore, they generally result from the transactions and other events that enter into the determination of net profit or loss.

The amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the enterprise have generated sufficient cash flows to maintain the operating capability of the enterprise, pay dividends, repay loans and make new investments without recourse to external source of financing. Information about the specific components of future operating cash flows is useful in conjunction with other information in forecasting future operating cash flows.

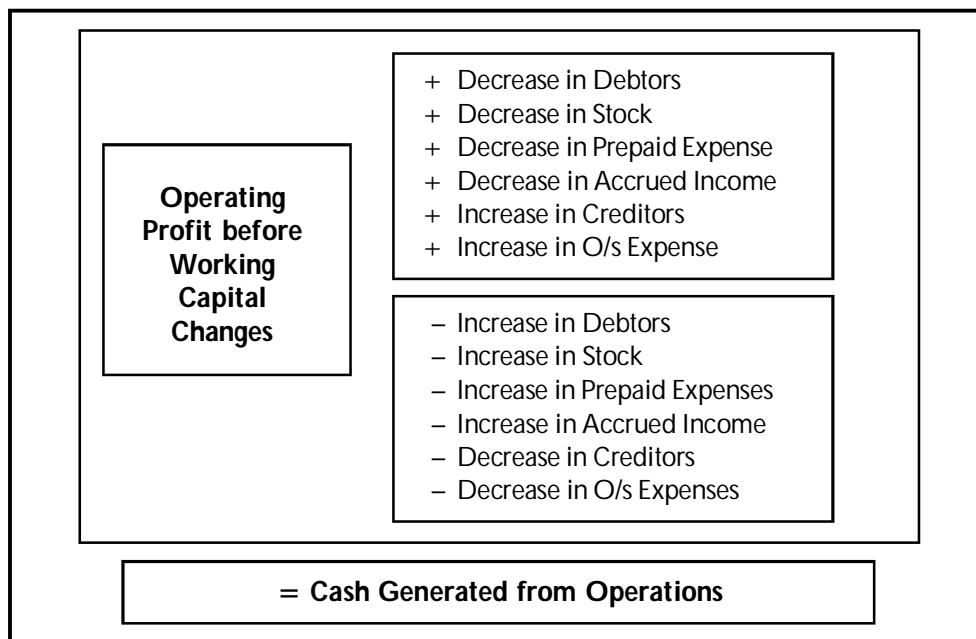
Computation of Operating Profit before Working capital changes: The Net Profit shown in the Profit and Loss Account will have to be adjusted for non-cash items for find out operating profit before working capital changes. Some if these items are as follows:

- (i) **Depreciation:** Depreciation does not result in outflow of cash and, therefore, net profit will have to be increased by the amount of depreciation or development rebate charged, in order to find out the real cash generated from operations.
- (ii) **Amortization of intangible assets:** Goodwill, preliminary expenses, etc., when written off should therefore, be added back to profits to find out the cash from operations.
- (iii) **Loss on Sale of fixed assets:** It does not result in outflow of cash and, therefore, should be added back of profits.
- (iv) **Gains from sale of fixed assets:** Since a sale of fixed assets is taken as a separate source of cash, it should be deducted from net profits.
- (v) **Creation of reserves:** If profit for the year has been arrived at after charging transfers to reserves, such transfers should be added back to profits. If cash operations show a net loss, such net loss after making adjustments for non-cash items will be shown as an application of cash.

Thus cash from operations is computed on the pattern of computation of "Funds" from operations.

Cash Generated from Operations: To find the cash from operations, adjustments will have to be made for „changes in current assets and current liabilities arising on account of operations.

- ▶ Any decrease in current assets or any increase in current liabilities between two periods should be added back to Operating profit before working capital changes.
- ▶ Likewise any increase in current assets or any decrease in current liabilities should be deducted from Operating profit before working capital changes to arrive at cash generated from Operations.



Computation of Net Cash Flow from Operating Activities: From cash generated from operations Income tax paid, cash flow from extraordinary items (if any) should be adjusted (subtracted) to arrive at Net cash flow from operating activities.

2. Cash Flow from Investing Activities: Transactions like purchase or sale of fixed assets, proceeds from sale of equipments, Interest on Investment received, Dividends received are recorded.

3. Cash Flow from Financing Activities: Transactions such as proceeds from issue of shares, debentures, proceeds from long-term loans, repayment of long-term loans, Interest paid on debentures, dividend payment to equity, preference share holders are shown to arrive at net cash used in financing activities.

Purchase of plant and machinery on lease or hire purchase should be shown separately as deferred credit. However the cost of machinery purchased will be shown as application of cash.

Computation of Net Increase in Cash and Cash Equivalent: The net cash flow from operating, investing and financing activities are added to arrive at net increase in cash and cash equivalent. To this cash and cash equivalent at the beginning of the period is added to get cash and cash equivalent at the end of the period.

Format of Cash Flow Statement [As 3: (Revised) Method]

Cash Flow Statement (Indirect Method) For the year ending on....

1. Cash Flow from Operating Activities		
Net Profit before Taxation and Extraordinary Items:		
Adjustments for:		
┆ Depreciation		
┆ Foreign Exchange Loss		
┆ Interest Income		
┆ Dividend Income		
┆ Interest Expenses		
Operating Profit before Working Capital Changes		
(+) Decrease/(-) Increase in Sundry Debtors		
(+) Decrease/(-) Increase in Inventories		
(-) Decrease/(+) Increase in Sundry Creditors		
Cash Generated form Operations		
Income Tax Paid		
Cash Flow from Extraordinary Items		
Proceeds from Earthquake Disaster Settlement		
Net Cash Flow from Operating Activities (i)		
Cash Flow from Investing Activities		
Purchase of Fixed Assets		
Proceeds from Sale of Equipment		
Interest Received		
Dividends Received		
Net Cash Flow from Investing Activities (ii)		
Cash Flow from Financing Activities		
Proceeds from Issuance of Share Capital		
Proceeds from Long-term Borrowings		
Repayment of Long-term Loans		

Interest Paid		
Dividends Paid		
Net Cash used in Financing Activities (iii)		
Net Increase in Cash and Cash Equivalent (i) + (ii) + (iii)		
(+) Cash and Cash Equivalents at the beginning of the Period		
= Cash and Cash Equivalents at the End of the Period		

The closing balance of Cash and cash equivalent should tally with cash and bank balance of Balance Sheet.

Uses of Cash Flow Statement: The cash flow statement, being one of the important financial documents a firm has to possess, reveals the effective uses. First of all, it explains in depth the reasons for the low cash balance available at a particular time. Based on this, it is possible to find the reasons for such a situation. It also shows the major sources and uses of cash. By effectively maintaining the cash and controlling the outflow of cash, it is possible to set in motion the smooth functioning of the organization. It helps the financial decisions more effectively with regard to short-term liquidity position of an organization. Projections of cash inflows and outflows can be regulated based on the records available in the past. Proper projections can be made once the reasons are analyzed. Based on this, it is possible to liquidate the short-term obligations without much fun-fare. Short-term obligations need to be serviced so that the credit worthiness of an organization can be carried on unabated.

Difference between Cash Flow Analysis and Funds Flow Analysis: Following are the points of difference between Cash Flow Analysis and a Funds Flow:

Cash Flow Analysis	Fund Flow Analysis
1. It is concerned only with the change in cash position	1. Is concerned with change in working capital position between; two balance sheet dates.
2. It merely a record of cash receipts and disbursements	2. In fund flow statements net effect of receipts and disbursements are recorded.
3. It is more useful to the management as a tool of financial analysis in short period.	3. It is concerned with the total provision of funds.

EXERCISE

Ratio Analysis

Self Assessment Questions

1. Analysis of performance between two companies can be made using ratios. State true or false.
2. Ratios can be expressed in three forms _____, _____ and _____.
3. "Stock has turned over 3 times a year – the ratio is expressed as _____"

4. For capital rich countries, the current ratio is usually _____.
5. In quick ratio _____ and _____ are excluded because they cannot be readily converted into cash.
6. _____ ratio is the most rigorous and conservative test of all liquidity ratios.
7. _____ ratio reflects the relative contribution of creditors and owners of the business in its financing.
8. In debt equity ratio if the objective is to examine the financing solvency of the firm preference share capital is _____.
9. _____ is the use of borrowed funds is to enhance higher returns to equity shareholders.
10. _____ is the ability of a firm to make the contractual payments required on a scheduled basis over the life of the debt.
11. A high debtors turnover ratio indicates _____ time lag between credit sales and cash collection.
12. _____ is indicative of management s ability to operate the business with sufficient success not only to recover all the cost but also to leave a margin of reasonable compensation to the owners.
13. _____ is based on the relationship between cost of goods sold and assets of a firm.

Answer for SAQ's

1. True
2. Proportion, Percentage, Turnover rate
3. Turnover rate
4. Low
5. Inventory and prepaid expenses
6. Super quick/cash
7. Debt equity
8. Included with equity capital
9. Trading on equity
10. Debt service coverage ratio
11. Shorter
12. Net Profit margin
13. Asset Turnover ratio

Fund Flow Analysis

Self Assessment Questions

1. Flow of Funds refers to change in funds or _____.
2. _____ Working Capital refers to the firm's investment in current assets.
3. _____ are those expenses which could not be written off during the period of their incidence.
4. When a transaction results in decrease of funds it is termed as _____.
5. When cash is collected from debtors there is flow of funds. State true or false.
6. When there is sale of fixed assets and cash is obtained there is flow of funds since it involves non-current asset and current asset. State true or false.
7. X Ltd., transfers ₹ 10 lakhs of its profits to Redemption Reserve account. Does it involve flow of funds? State yes or no
8. Y Ltd., writes off goodwill during the current accounting period. This transaction involves flow of funds. State true or false.
9. A firm accepts bills payable drawn by its creditors. Will transaction have effect on flow of funds? Why?
10. Give one transaction which involves one current liability and noncurrent liability.
11. Give one transaction which involves one current liability and noncurrent asset.
12. The difference in General Reserve between two accounting period shown in the Balance Sheet is transferred to Adjusted Profit and Loss account since it is a _____.
13. Any increase in Equity Share capital shown in the balance sheet is recorded as _____ in Funds Flow Statement.
14. Purchase of Fixed Asset is considered as application of fund. How do you ascertain the amount if provision for depreciation is shown separately?
15. While preparing the schedule of changes in working capital:
 - (a) Increase in current asset and decrease in current liability results in _____ in working capital.
 - (b) Decrease in current asset and increase in current liability results in _____ in working capital.

Answer Self Assessment Questions

1. Change in Working Capital
2. Gross
3. Fictitious Assets
4. Application of Funds
5. False

6. True
7. No
8. False
9. This transaction will not have any effect on flow of funds because it involves only current liability.
10. Creditors paid off by issue of debentures
11. Building transferred to creditors in satisfaction of their claims.
12. Non cash items
13. Source
14. If provision for depreciation is shown separately the difference between closing fixed asset (gross) and opening fixed asset (gross) is taken as additional purchase made during the year.
15. (a) increase, (b) decrease.

Activity 1: Give suitable examples (other than given in the SLM) if there is flow of funds for the following transactions

1. Current assets and fixed assets, e.g.
2. Current assets and capital, e.g.
3. Current assets and fixed liabilities, e.g.
4. Current liabilities and fixed liabilities, e.g.
5. Current liabilities and capital, e.g.
6. Current liabilities and fixed assets, e.g.

Terminal Question

1. What type of transactions affect flow of funds in funds flow statement?
2. What types of transactions are unaffected in the funds flow?
3. Distinguish between funds flow and income statement
4. Briefly explain the steps involved in preparation of funds flow statement

Cash Flow Analysis

Self Assessment Questions

1. Preparation and submission of Cash Flow Statement is mandatory according to _____.
2. Cash Flow Statement has three sub division- _____, _____ and _____.
3. Since depreciation, a component of internal source does not result in outflow of cash; the depreciation amount is _____ to the Net Profit.

4. Give any three internal sources of cash that does not result in outflow of cash.
5. Decrease in liability denotes _____ of cash.
6. Purchase of Plant and Machinery on deferred payment basis is shown separately as source of cash or _____.
7. Income Tax paid is _____ activity (operating/investing/financing).
8. Purchase of fixed assets is cash flow from _____ activity (financing/investing).
9. Repayment of long-term loans, dividend paid are _____ activity (financing/investing).
10. Net Increase in cash and cash equivalent + _____ = Cash and cash equivalent at the end of the period
11. Decrease in Sundry Debtors should be _____ to Operating profit before working capital changes
12. Increase in Sundry Creditors should be _____ to Operating profit before working capital changes.
13. Dividend received is _____ activity because income is received from investment in shares of another company.
14. Dividend paid is _____ activity.

Answer Self Assessment Questions

SAQ 1:

1. AS3
2. a. Net cash flow from operating activities
1. b. Net cash flow from investment activities
2. c. Net cash flow from financing activities
3. Added back
4. Depreciation, Amortization of intangible assets, Gains from sale of fixed assets
5. Outflow
6. Deferred credit
7. Operating
8. Investing
9. Financing
10. Cash and cash equivalent at the beginning of the year
11. Added
12. Added
13. Investment
14. Financing

Terminal Questions

1. What is cash flow statement and how is the cash flow statement subdivided?
2. Bring out the draft format of cash flow statement as per AS3 (revised) method?
3. What is cash flow from operating activities?
4. Bring out the difference between cash flow analysis and funds flow analysis.

Terminal Questions

1. Calculate Current ratio, acid test ratio from the following information:
Cash in hand ` 3,000. Cash at Bank ` 65,000. Bills receivable ` 10,000. Stock ` 1,20,000, Debtors ` 80,000. Prepaid expenses ` 2,000. Creditors ` 1,20,000. Bills payable ` 20,000.
2. Calculate Debt equity Ratio and Proprietary ratio from the following information:

Balance Sheet as on.....

Equity share capital	5,00,000	Fixed assets	10,00,000
Preference share capital	3,00,000	Current assets	4,00,000
Reserves & Surplus	2,00,000		
8% Debentures	3,00,000		
Current Liabilities	1,00,000		
Total	14,00,000	Total	14,00,000

3. The current assets and current liabilities were ` 16,00,000 and ` 8,00,000 respectively. What is the effect of each of the following transactions individually and totally on the current ratio:
 - (a) Purchase of new machinery for ` 5,00,000
 - (b) Purchase of new machinery for ` 10,00,000 on a medium term loan from a bank with 20% margin.
 - (c) Payment of a dividend of ` 2,00,000 of which ` 0.47 lakh was tax deducted at source.
 - (d) Materials purchased costing ` 5,00,000 in respect of which bank financed ` 3,00,000.
4. The current ratio is 2:1. Which of the following suggestions would improve the ratio, which would reduce it and which would not change it?
 - (a) to pay a current liability
 - (b) to sell a motor car for cash at a slight loss
 - (c) to borrow money for short time on an interest bearing promissory note
 - (d) to purchase stock for cash
 - (e) to give an interest bearing promissory note to a creditor to whom money was to be paid.

Answer for Terminal Questions

1. Current ratio 2:1 and Acid test ratio 1.14:1
2. Debt Equity ratio 0.4:1; Proprietary Ratio 0.5:1
3. (a) Decrease (b) decrease (c) decrease (d) increase
4. (a) increase (b) increase (c) decrease (d) no change (e) no change.
5. Following are the balance sheets of XYZ Ltd. and ABC Ltd. as on 31st March, 2012, together with supplement information for the year ended on that date:

XYZ LTD

Liabilities		Assets	
Paid up capital	2,00,000	Goodwill	30,000
Reserves	50,000	Building	1,20,000
Profit & loss A/c	12,750	Plant & machinery	29,000
Bank overdraft	11,250	Stock	66,000
Provision for taxation	20,000	Debtors	85,000
Creditors	36,000		
	3,30,000		3,30,000

ABC LTD

Liabilities		Assets	
Paid up capital	3,50,000	Goodwill	50,000
Reserves	60,000	Building	2,40,000
Profit & loss A/c	15,000	Plant & machinery	42,000
Bank overdraft	1,02,000	Stock	93,000
Provision for taxation	58,000	Debtors	1,75,000
Creditors	15,000		
	6,00,000		6,00,000

Additional information:

	XYZ LTD	ABC LTD
Sales for the year	8,40,000	10,50,000
Average stock on hand	63,000	1,00,000
Gross profit	2,10,000	2,50,000

You are required to rearrange the balance sheet of the two companies and to compute the following accounting ratios:

- (a) Current Ratio
 (b) Liquid Ratio
 (c) Proprietary ratio
 (d) Stock turnover ratio
 (e) Turnover of debtors ratio
6. The following are the extracts from the financial statements of M/s. Efficients & Effects Ltd. as on 31st March, 2011 and 2012 respectively.

	2011 `	2012 `
Stock	10,000	25,000
Debtors	20,000	20,000
Bills receivable	10,000	5,000
Advance	2,000	
Cash in hand	18,000	15,000
Creditors	25,000	30,000
Bills payable	15,000	20,000
Bank overdraft		2,000
9% debentures	50,00,000	5,00,000
Sales of the year	3,50,000	3,00,000
Gross profit	70,000	50,000

You are required to compute for both these years:

- (i) Current ratio;
 (ii) Liquid Ratio
 (iii) Stock turnover ratio;
 (iv) Number of days outstanding of debtors;
 (v) Stock working capital ratio.
7. The following is the balance sheet of sunrise Co. Pvt. Ltd.

Balance sheet as at 31st March, 2012

Liabilities			Assets		
Equity share Capital	2,00,000		Fixed assets:		3,24,000
7 1/2% preference share capital	1,00,000	3,00,000	Current assets		
Reserves		60,000	Stock	44,000	
			Debtors	1,02,000	

13-1/2% Debentures		40,000	Bills receivable	4,000	
Current liabilities:			Cash	24,000	1,74,000
Creditors	68,000				
Tax provision	30,000	98,000			
		4,98,000			4,98,000

Ascertain:

1. Current ratio;
2. Liquid ratio;
3. Capital gearing ratio
4. Proprietary ratio;
5. Stock – working capital ratio & comment on each of them.

8. The summarized balance sheet of D. Ltd. as on 30th September, 2012 is as follows:

Liabilities		Assets	
Equity share	60,000	Fixed assets	90,000
Reserves	20,000	Inventory	30,000
6% debentures	50,000	Marketable investment	10,000
Current liabilities	30,000	Debtors	15,000
		Cash & bank balances	10,000
		Preliminary expenses	5,000
	1,60,000		1,60,000

The net profit before tax for the year was ₹ 7,500. Assume tax 40%.

Prepare a statement suitable for analysis & indicate the soundness of the financial position of the company by calculating the following ratios together with your comments on the same:

- (i) Current Ratio
 - (ii) Liquid Ratio
 - (iii) Proprietary Ratio
 - (iv) Return on Capital Employed
 - (v) Return on Proprietary Fund
 - (vi) Return on Equity Share Capital
9. From the following manufacturing, trading and profit and loss accounts of XYZ Ltd., for the year ended 31st December, 2012 make an analysis of the operations and the results and ascertain the:
- (i) Operating Ratio
 - (ii) Gross Profit Ratio;

- (iii) Net Operating Profit Ratio
- (vi) Return on Capital Employed
- (v) Selling and Distribution Expenses to Sales Ratio.

**Manufacturing Trading & Profit and Loss A/c
For the ended 31st December, 2012**

Particulars	`	`	Particulars	`
Material consumed			By cost of production c/d	22,000
To opening stock	3,000			
Purchase	8,000			
	11,000			
Less: closing stock	1,000	10,000		
To work in progress:				
Opening	2,000			
Closing	1,000	1,000		
To wages		8,000		
To factory overheads		3,000		
		22,000		22,000

Particulars	`	`	Particulars	`
To opening stock of Finished goods	3,000		By sales	30,000
To cost of production b/d	22,000		By stock of finished goods	5,000
To gross profit c/d	10,000			
	35,000			35,000
To office & Admn. Expenses	2,000		By gross profit b/d	10,000
To selling & distribution Expenses	2,500		By dividend received	200
To interest	300			
To net profit	5,400			
	10,200			10,200

10. From the following annual statements of pioneer Ltd. calculate the following ratios:

- (a) Gross profit ratio.
- (b) Current ratio.
- (c) Liquid ratio.
- (d) Debt-equity ratio and
- (e) Return on investment ratio.

Particulars			Particulars		
To material consumed			By sales		85,000
Opening stock	9,050		By profit on sale of:		
Purchase	54,525		Investment		600
	<u>63,575</u>		By interest on investment		300
(-) closing stock	14,000	49,575			
To carriage inwards		1,425			
To office expenses		15,000			
To sales expenses		3,000			
To financial expenses		1,500			
To loss on sale of assets		400			
To net profit		15,000			
		85,900			85,900

Balance sheet as on 31st December, 2012

Liabilities			Assets		
Share capital			Fixed assets:		
2,000 equity share shares of ` 10 each fully paid		20,000	Building	15,000	23,000
Reserves		9,000	Plant	<u>8,000</u>	
Profit & loss Account		6,000	Current assets:		
Bank overdraft		3,000	Stock in trade	14,000	
Sundry creditors:			Debtors	7,000	
For expenses	2,000		Bills receivable	1,000	
For others	8,000	10,000	Bank balances	3,000	25,000
	48,000			48,000	

11. The following are abridge accounting reports prepared for P. Ltd.

Revenue Statement For the year ended 30th June, 2012

Particulars (` '000)		
Sales (all Credit)		300
Less: Cost of goods sold		
Opening inventory	100	
Purchases	205	
	305	
Less: Closing inventory	80	225

Gross margin		75
Operating expenses		57
Net Profit before taxation		18
Provision for taxation		8
Net Profit		10

Balance Sheet as on 30th June, 2012

(` '000)

Liabilities			Assets		
Current Liabilities			Current Assets		
Accounts payable	87		Cash	30	
Provision for taxation	8		Accounts receivable	60	
Accrued expenses	5	100	Inventory	80	170
Long-term liabilities			Fixed Assets		
Loan on mortgage		25	Land & Building		65
Shareholder's funds			Plant	40	
Paid up capital	80		Less: Provision for depreciation	25	15
Reserves	30				
Un appropriated profits	15	125			
		250			250

Name & calculate the ratios which indicate:

- (a) The rapidity with which accounts receivable are collected.
 - (b) The ability of the company to meet its current obligations.
 - (c) What mark-up has been attained;
 - (d) The efficiency with which funds represented by inventories are being utilised & managed;
 - (e) The ability of the company to meet quickly demands for payment of amounts due.
 - (f) The relation of proprietorship & liabilities as sources of funds.
- 12.** The current ratio of a manufacturing company is 2:1 State giving reasons, which of the following suggestions would improve the ratio, which would reduce it & which would not change it at all.
- (i) Paying off current liabilities using available cash balance.
 - (ii) Selling a car for cash at book value.
 - (iii) Borrowing money on a promissory note 3 months.
 - (iv) Purchasing raw materials for cash.
 - (v) Giving promissory note to a creditor to whom money owed on current account.

- (b) Assuming an excess of current liabilities, indicate the effect of the following on the current ratio:
- (i) Collection of an account receivable.
 - (ii) Payment of an account payable.
 - (iii) Acquisition of merchandise for cash.
 - (iv) Acquisition of merchandise on account.
 - (v) Acquisition of machinery on account.
- (c) Name the ratios which should be determined in the following cases:
- (i) To find out short term financial strength.
 - (ii) To find out capacity of the business to meet its obligations immediately.
 - (iii) Over or under investments in stocks.
 - (iv) Over investments in Debtors.
 - (v) To find out whether credit policy & functioning of credit department is efficient.
 - (vi) To determine the maximum use of outside resources.
 - (vii) To ascertain profitability of the concern.
 - (viii) To ascertain which of the expenses more than what the net sales of the business are would justify.
 - (ix) Whether return on capital invested by the proprietor is sufficient or not.
- 13.** Mr. T. Munim is made an offer by the promoter of Svargiya Enterprise Ltd. to invest in the project of the company by purchasing a substantial portion of the share capital. He is promised good returns by way of dividends & capital appreciation.

Mr. Munim desires that you compute the following ratios for financial analysis. Working should form part of your answer.

- (i) Return on Investment Ratio
- (ii) Net profit ratio
- (iii) Stock Turnover Ratio
- (iv) Current Ratio
- (v) Debt Equity Ratio

The Figures given to him are as under:

	(₹ 000s)
Sales	16,000
Raw Materials consumed	7,800
Consumables	800
Direct Labour	750

Other Direct Expenses	480
Administrative Expenses	1,200
Selling Expenses	260
Interest	1,440
Fixed Assets	14,000
Income-tax	50%
Depreciation	700
Share Capital	5,000
Reserves & Surplus	1,500
Secured Term Loans	12,000
Unsecured Term loans	1,500
Trade Creditors	3,350
Investments	400
Inventories	6,000
Receivables	3,700
Cash in hand & at Bank	100
Provisions	650
Other Current Liabilities	200

14. Following is the Profit & Loss Account & Balance Sheet of Sudipa Ltd. Profit & Loss Account for the year ended 31st March 2012.

Particulars	₹	₹	Particulars	₹
To Cost of Sales:			By Sales	4,00,000
Opening Stock	30,000			
Credit purchases	3,00,000			
	3,30,000			
Less: Closing Stock	50,000	2,80,000		
To Gross Profit c/d.		1,20,000		
		4,00,000		4,00,000

To Expenses	20,000	By Gross Profit b/d.	1,20,000
To Net Profit C/d.	1,00,000		
	1,20,000		1,20,000

To Provision for Taxation	40,000	By Net Profit b/d.	1,00,000
To Equity Dividend	20,000		
To Net Profit	40,000		
	1,00,000		1,00,000

Balance Sheet As at 31st March 2012.

Liabilities		Assets	
Equity Share Capital (of ₹ 10 each)	2,00,000	Plant & Machinery	80,000
Reserves & Surplus	10,000	Land & Building	20,000
Profit & Loss Account	30,000	Stock	50,000
Creditors	50,000	Debtors	80,000
		Cash & Bank	60,000
	2,90,000		2,90,000

Ascertain the following Balance Sheet & Revenue Statement Ratios:

- (i) Stock Turnover ratio;
- (ii) Debtor's Turnover Ratio;
- (iii) Creditor's Turnover Ratio
- (iv) Return on Capital Employed;
- (v) Return on Equity capital;
- (vi) Dividend pay out Ratio.

15. Following items appear in the accounts as on 31st March 2012 of M/s You Do It Ltd.

Particulars	
Cash	38,600
Prepaid Expenses	10,000
Land & Building (cost)	8,00,000
Deposits given (to others)	62,000
Stock	2,72,800
Income receivable on investments	1,000
Creditors	4,05,750
General reserve	1,00,000
Debtors	5,40,000
Provision for Doubtful Debts	15,000

Provision for Discounts on Debtors	2,000
Bills Receivable	22,600
Plant & Machinery (cost)	7,00,000
Provision for Depreciation on Plant & Machinery	1,56,000
10% Debentures	1,50,000
11% Unsecured Loans	1,00,000
Bank Overdraft	50,000
Outstanding Expenses	2,000
Income received in advance	1,000
Equity Share Capital	8,00,000
9% preference share capital	2,00,000
Profit & Loss A/c.	2,20,000
Preliminary Expenses	3,000
Proposed Dividend	86,250
Trade Investments	5,000
Marketable Investments	15,000
Provision for Tax	2,64,000
Advance Tax paid	1,00,000
Bills Payable	18,000
Sales	4,00,000

You are required to prepare Vertical Balance Sheet & Calculate Balance Sheet ratios & debtors Turnover Ratio, assuming sales as ₹ 40,000.

- 16.** (a) Calculate Return on Capital employed & return on proprietors or shareholders funds or net worth from the following information: (figures in Rupees lakhs)
- (i) Share Capital ₹ 200.00
 - (ii) General Reserve ₹ 150.00
 - (iii) Investment Allowance Reserve ₹ 50.00
 - (iv) 15% Long-term ₹ 300.00 (through the year)
 - (v) Net Profit after tax ₹ 56.00 & tax rate 60%.
 - (vi) Proposed Dividends ₹ 10.00
- (b) Calculate the average collection period & frequency of turnover of debtors from the following information:
- (i) Average inventory ₹ 3, 60,000
 - (ii) Debtors ₹ 2,30,000
 - (iii) Inventory Turnover Ratio 6 times

- (iv) Gross Profit Ratio 10%.
- (v) Credit Sales to total sales 20%
- (vi) Assume 360 days to an year.

17. You are given the following figures:-

Current Ratio	2.5
Liquidity Ratio	1.5
Net Working Capital	₹ 3,00,000
Stock Turnover Ratio	6
Ratio of Gross Profit of Sales	20%
Ratio of Cost of Sales to Fixed Assets (net)	2
Average Debt Collection Period	2 Months
Fixed Assets to Net Worth	0.08
Reserves & Surplus to Capital	0.5

Draw up the Balance Sheet of the concern to which the figures relate.

18. The asset of ABC Ltd. consists of fixed assets & current liabilities comprise Bills Payable & Trade credit in the ratio of 2:1. From the following figures relating to the company for the year 2011-12, prepare its balance sheet showing the details of working:

Share Capital	₹ 1, 99,500
Working Capital	₹ 45,000
Gross Margin	20%
Inventory Turnover	6
Average Collection Period	2 months
Current Ratio	1.5
Quick Ratio	0.9
Reserves & Surplus to Cash	3

19. From the following data prepare the Balance Sheet of ABC Co. Ltd., as at 31st March, 2012:

Current Ratio	1.75
Liquid Ratio (Current Assets less Stock to Current Liabilities Ratio)	1.25
Gross Profit Ratio	25%
Debt Collection	1.5 months
Sales for the year	1,20,00,000
Stock Turnover Ratio (with Closing Stock)	9

Capital Gearing Ratio (Long-term Debts/Share Capital)	0.06
Fixed Assets to Net Worth	1.25
Cost of Sales to Fixed Assets	1.20
Reserves & Surplus to Share Capital	0.20
(Assume all sales are on credit, & the year is of 360 operating days)	

20. The final statements of Dadashib Ltd., for the year 2012 reveal the following information:

Current Ratio	1.75:1
Liquid Ratio	1.25:1
Working Capital	₹ 7,50,000
Paid up Share Capital	₹ 10,00,000
Fixed Assets as% of Owners' Equity	60%
Debtors' Turnover	weeks
Returns on Equity Capital	15%
Stock Turnover	4.6 times
G.P. Turnover	25%

On 31st Dec., 2012 there were no current assets other than stock, debtors & bank balance & no liabilities other than share capital & current liabilities. Prepare financial statements.

21. Following are the ratios relating to the trading activities of an organisation:

Debtors Velocity	3 months
Stock Velocity	6 months
Creditors Velocity	2 months
Gross Profit ratio	20%

Gross profit for the year ended 31st March 2012 was ₹ 500 lakhs. Stock as on 31st March 2012 was ₹ 20 lakhs more than it was on 1st April 2011. Bills Payable & Bills Receivable were ₹ 36.667 lakhs & 60 lakhs respectively. You are to ascertain figures of:

- Sale
- Debtors
- Creditors
- Stock