CHAPTER – III
THEORITICAL FRAMEWORK

3.1 Introduction

This chapter seeks to analyse and identify trend, financial ratio and funds flow of the selected Joint Stock Companies in India from the year 1997-98 to 2006-07. It is based on a sample of 10 selected manufacturing industries consisting of 1397 companies and attempt has also been made to study trends in long term funds and short term funds in the relation to the total capital employed i.e. Total tangible assets.

The chapter is divided into two parts. The first part deals with the theoretical framework and the financial relationship of the variables in the study. The second party deals with the data analysis and interpretation of various financial ratios.

A Company’s success depends upon management awareness. Every businessman must know the full potential of his company and thoroughly aware of the means by which this potential can be guide his organization to ultimate success. And no manager can consider himself entirely informed about the position of his company, or his industry unless he understands financial statements and the information they contain. ¹
The two most important financial statements which are generally available to public are income statement (profit and loss account) and financial position statement (balance sheet).

The Income Statement which is also known as the profit and loss account is a statement of showing revenue and expenses of a business to determine profit or loss incurred during an accounting year. The analysis of the statement enables the evaluation of profitability of the business operations. The income statement measures performance over a period of time. The income statement equation is: Revenue — Expenses = Income.

The Balance Sheet is a statement of the liabilities and assets to determine financial position of an enterprise as on a particular date. The analysis of the balance sheet communicates the financial strength and weakness of an enterprise. The value of the firm's assets is equal to the sum of its liabilities and owner's equity.

Assets = Liabilities + Owner's Equity

The information contained in the above two statements is used by management, creditors, investors and others to form judgement about the operating performance and financial position of the firm. Users of financial
Financial analysis is the process of identifying the financial strength and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account.

Financial statement analysis involves how relationships change over time or trend analysis, and how a particular firm compares with another firm or to industry average. Financial analysis can be undertaken by management of the firm or by parties outside the firm, viz. owners, creditors, investors and others. The nature of analysis will differ depending on the purpose of the analyst. For example, trade creditors are interested in the fact that the firm should be able to meet their claims over a very short period of time. Their analysis will, therefore, confine to the evaluation of the firm's liquidity position. The suppliers and long term debt, on the other hand, one interested in firm's long term solvency and survival. They analyse the firm's profitability over time, if ability to generate cash to be able to pay interest and return. Their claims and the relationship between various sources and uses of funds (capital structure relationship).
3.2 Trend Analysis

In financial analysis the direction of change over a period of years is of crucial importance. Trend analysis of ratios indicates the direction of change. This kind of analysis is particularly applicable to the items of profit and loss account. It is advisable that trends of sales and net income may be studied in the light of two factors: the rate of fixed expansion in secular trend in the growth of the business and the general price level. It might be found that in practice a number of firms would show a persistent growth over a period of years. But to get a true trend of growth, the sales figures should be adjusted by a suitable index of general price. In other words, sales figures should be deflated for rising price level. When the resulting figures are graphed, we will get trend of growth devoid of price change.

For trend analysis, the use of index number is generally advocated. The procedure followed is to assign the number 100 to items of the base year.

The financial analyst can compare a present ratio with past and expected future ratios for the same company. When financial ratios are computed over a period of years, the analyst can study the composition of change and determine whether there has been an improvement or a deterioration in the financial condition and performance of the firm over time. Financial ratios can be
computed for projected or proforma statement and compared with present and past ratios. If a variable is setting at some level or maintaining its trends additional information regarding the industry must be obtained.

3.3 Ratio Analysis

Ratio analyzing is a powerful tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expressions" and as "the relationship between two or more things". In financial analysis, a ratio is used as an index or yardstick for evaluating the financial position and performance of a firm. The relationship between two accounting figures, expressed mathematically, is known as financial ratio (as simply as a ratio). A ratio may be taken as a symptom like the blood pressure, the pulse or temperature of an individual. Financial Ratio have been classified in several ways. For our purpose, we shall divide them into five types as follows:

3.3.1 Liquidity Ratio
3.3.2 Leverage Ratio
3.3.3 Turnover Ratio
3.3.4 Profitability Ratios
3.3.5 Valuation Ratios
3.3.1 Liquidity Ratio

Liquidity ratios measure the firm's ability to meet current obligations.

Current Ratio: The current ratio is calculated by dividing current assets by current liabilities:

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

Current Assets include cash and bank balance and those assets which can be converted into cash within a year, such as marketable securities, sundry debtors and stock (inventories), prepaid expenses and other misc. current.

Current Liabilities includes creditors, bank barrowing, bills payable, loans and advance, sundry creditors, provision for taxation and other misc. current liabilities and provisions.
The current ratio is a measure of the firm's short-term solvency. A relatively high value of current ratio is considered as an indication that the firm is liquid and has the ability to pay its bills. On the other hand, a relatively low value of the current ratio is considered as an indication that the firm will find difficulty in paying its bills.

As a conventional rule, a current ratio of 2-to-1 (current asset twice of current liabilities) or more is considered to be satisfactory. It represent a margin of safety, i.e. a 'cushion' of protection for creditors. The higher the current ratio, the greater the margin of safety, the larger the ability to meet its current obligation.

Blind reliance on a 2-to-1 standard is an indication of over simplification. This sort of over simplification is very dangerous. Because the current ratio is a test of quantity, not quality. The current ratio measures only total rupees 'worth of current assets and total rupees' worth of current liabilities. It does not measure the quality of assets. Liabilities are not subject to any fall in current assets consist of doubtful and slow paying debtors and unsalable stock of goods. Thus, too much reliance should not be placed on the current ratio; further investigations about the quality of current asset should be carried. However the current ratio is a crude and quick measure of the firm's liquidity.
**Acid test Ratio**: The Acid Test Ratio also called the quick ratio is a more refined measure of the firm's liquidity. The Acid Test Ratio is found out by dividing the total of the quick assets by total of current liabilities.

\[
\text{Acid ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}
\]

Quick Assets = Current Asset - (Inventory + Prepaid Expenses)

Generally, a quick ratio of 1-to-1 is considered to represent a satisfactory current financial condition. Although the quick ratio is more penetrating test of liquidity than current ratio, yet it should be used continuously.

A quick ratio of 1-to-1 or more does not necessarily imply sound liquidity position. Similarly, a low quick ratio does not necessarily imply sound liquidity position. Similarly, a low quick ratio does not necessarily imply had liquidity position. Because a company with a high value of quick ratio can flounder if it has shown paying doubtful in book debt etc. On the other hand, a company with a low value of quick ratio may really be prospering and paying its current obligation in time, if it has been managing its inventories very efficiently with a continuous stability. Some times problem arises with respect to receipt value.

\[
\text{Cash Ratio} = \frac{\text{Quick Assets - Receivable}}{\text{Current Liabilities}}
\]
So, the liquidity ratios - the current ratio and the quick ratio - have not yet outlived their utility. They are still important in the financial analysis. However, analyst must keep note of the following points:

1. The liquidity ratio should be subjected qualitative tests. The major components of current assets - receivables and inventories - must be carefully assessed to determine their quality; otherwise the ratio may be misleading.

2. The liquidity ratios are subject to the influence of other financial forces which can improve or deteriate the ratio in no time. These ratios fluctuate not only because of movement of receivables and inventory but are also affected by change in fixed asset investment, sales and profit and loss.

3. The 2-to1 current ratio on the 1 to 1 quick ratio should not be relied blindly. Each industry or firm has its own operating and financial characteristics. A current ratio of 1.5 to 1 may be perfectly acceptable in one time of business, whereas a 3-to-1 ratio may be typical of another.

Workers capital is found out by deducting current liabilities from current assets. The amount of working capital is sometimes used as a measure of firms
liquidity. It is considered that, between the two firms; the one having the larger amount of working capital has the greater ability to meet the current obligation.

3.3.2 Leverage (Capital Structure) Ratios

Leverage ratios show the proportions of debt and equity in financing the firm's assets. To judge the long term financial position of the firms leverage, or capital structure ratio are calculated. These ratios indicate the funds provided by owners and creditors. As a general rule, there should be an 'appropriate' mix of debt and owners' equity in financing the firm's assets. The firm has legal obligation to pay interest to the debt holders. Employment of debts is advantageous to shareholders in two ways. (a) They can retain control of the firm with limited stake and (b) their earnings will be magnified, when the firm earns a rate higher than the interest rate on the investment of funds. The process of magnifying the shareholders' return through employment of debt is called trading in equity".

Leverage Ratio

(i) Debt Equity Ratio (ii) Debt Asset Ratio (iii) Interest Coverage Ratio

Structural Ratios
Debt equity Ratio:

The debt equity ratio is the measure of relative claims of creditors and owners against the firm's assets.

This ratio is calculated as long term debt divided by the share holders equity (i.e. equity plus preference share holder)

\[
\text{Debt equity Ratio} = \frac{\text{Long term debt}}{\text{Share holder equity}}
\]

The debt equity ratio indicates the relationship between the long term funds provided by creditors and those provided by firm's owners. This ratio, indicating the firm's capital structure (leverage) is also a measure of the financial risk associated with the equity shares.

In general, the lower the debt equity ratio, the higher the degree of protection enjoyed by the long term creditors. This ratio is used mostly by the term lending institutions or others who lend for term purpose. An industry average is a good figure to use when comparing a debt equity ratio.
**Debt Assets Ratio:**

Debt Assets Ratio measures the company's ability to meet both its short-term and long-term obligation.

\[
\text{Debt Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Tangible Assets}}
\]

The numerator of this ratio includes all liabilities, short-term as well as long-term, and the denominator of this ratio is total asset by intangible and factious assets. Generally, the lower the debt asset ratio is 1:2 or a decline in this ratio indicates a healthy sign from the angle of creditors.

**Interest Coverage Ratio:**

The interest coverage ratio or the times-interest earned is one of most conventional coverage ratios used to test the firm's debt servicing capacity.

The interest coverage ratio is the sum of net profit before interest and tax divided by interest charges.

\[
\text{Interest Coverage} = \frac{\text{Net profit before interest and tax}}{\text{Interest charge}}
\]
The ratio indicates how many times the interest charges are covered by funds that are ordinarily available to pay the interest charges. The income tax should be included in the numerator because it is calculated after paying the interest.

Generally, interest coverage ratio of high is considered to represent satisfactory. But too high ratio indicates that the firm is very conservative in using debt, and that it is not using credit to the best advantage of shareholders. A lower ratio indicates excessive use of debt, or inefficient operation. They, the firm should make effecting to improve the operating efficiency or to retire debt to have a comfortable coverage ratio.

One of the limitations of the interest coverage ratio is that it does not considered fixed obligations like preference dividend and repayment of principal.

3.3.3 Turnover Ratio

Turnover ratios, also referred to as activity ratios or asset management ratios, measure how effectively a firm is managing its assets.

These ratios are based on the relationship between the level of activity, represented by sales or cost of goods sold, and level of various assets.
**Inventory (Stock) Turnover Ratio:**

The inventory turnover ratio means the efficiency of the firm's inventory management. It is calculated by dividing the cost of goods sold by the average inventory.

\[
\text{Inventory turnover} = \frac{\text{Cost of Goods sold}}{\text{Average inventory}}
\]

Cost of goods sold = Total opening investor + Manufacturing cost (including cost of purchase - Loss closing investor

\[
\text{Average investors} = \frac{\text{Opening investor} + \text{Closing investor}}{2}
\]

But there are practical difficult in obtaining information about the cost of goods sold and average inventory, therefore inventory turnover may be calculated as sales divided by closing inventory.
Generally, a high inventory turnover is indicative of good inventory management and a low inventory turnover suggests an inefficient inventory management. A too high inventory turnover may be the result of a very low level of inventory which results in frequent stock only. On the other hand a low ratio point out the likelihood that some unsalable material is included in the book figure for inventory and the portability that a write-off will result.

**Average Collection Period:**

The average collection period, or average age at account receivable, is useful in evaluating credit and collection policies. The figure used in the numerator generally represents the debtors balance at the end of the year. Average collection period may be calculated debtors divided by average sales periods.

\[
\text{Average collection period} = \frac{\text{Debtors}}{\text{Average sales per day}} \quad \text{or} \quad \frac{\text{Debtors} \times 360}{\text{Sales}}
\]
The average collection period measures the quality of debtors since it indicates the rapidity or slowness of their collectibility. The shorter the average collection period, the better the quality of debtors, as a short collection period implies the prompt payment by debtors.

The average collection period should be compared with the industry norms. If the company's average collection period is more than that in the industry, the trend is adverse and calls for action on the part of the marketing and finance personnel.

**Fixed Asset Turnover Ratios:**

Fixed assets turnover ratio is that which measures the efficiency by which the firm is utilizing its investment in fixed assets, such as land, building, plant and machinery, furniture etc. According to William, Hunt & Donaldson the investment in fixed assets involves commitment of funds for a the longer period into the future and usually are difficult and costly to reverse, often these are in large increments.\(^3\) It also shows the adequacy of sales in relation to the investment in fixed assets. The fixed assets turnover ratio is sales divided by net fixed assets. (i.e. the depreciated value of fixed assets)
Fixed assets turnover = \frac{Sales}{Net fixed assets}

Generally, a high ratio indicates a high degree of efficiency in the use of fixed assets and a low ratio indicates inefficient use of fixed assets.

**Receivable Turnover Ratio:**

Receivable turnover ratio on debtor velocity indicates the number of times the debtors are turned over during a year.

Receivable Turnover Ratio = \frac{Net Sales}{Receivables}

Generally, the higher the receivable turnover ratio the more efficient is the management of debtors or more liquid are the debtors. Similarly, low receivables turnover ratio impulses are efficient management of receivable and less liquid debtors.
3.3.4 Profitability Ratio

Profitability ratios are those ratios, which measures the overall performance and effectiveness of the firm.

Gross Profit Margin

Gross Profit Margin : The first profitability ratio in relation to sales is the gross profit margin (or simply gross margin). It is calculated by dividing the gross profit by sales.

\[
\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}}
\]

\[
\text{Gross Profit} = \text{Sales} - \text{Cost of goods sold}
\]

Generally, a high gross profit margin is a sign of good management. A high gross profit margin relative to the industry average implies that the firm is able to produce as relatively lower cost.
A gross margin ratio may increase due to any of the following factors:

1. Higher Sales price, Cost of good sold remain constant.
2. Lower cost of good sold, sales price remaining constant.
3. A combination of variations in sales prices and costs.
4. An increase in the proportionate volume of higher margin items.

On the other hand, a low gross profit margin shows high cost of good sold due to unfavourable purchasing policies, lesser sales, lower selling prices, excessive competitions and over investment in plant and machinery.

Net Profit Margin: Net profit is obtained when operating expenses and income tax are subtracted from the gross profit. The net profit margin ratio is measured by dividing net profit after tax by sales.

\[
\text{Net Profit Margin} = \frac{\text{Net Profitable Tax}}{\text{Sales}}
\]

Generally, a firm with high net profit margin can make better use of favourable conditions, such as raising sales prices, falling cost of production or increasing demand for the product. On the other hand, if the net margin is inadequate, the firm will fail to achieve satisfactory return on owners' equity.
Return on Investment (ROI):

The profitability of the firm is also measured in relation to investment. The Return on Investment (ROI), which is often called the firm's return on total assets, measures the overall effectiveness of management in generating profit with its available assets.

\[
\text{Return on Investment (ROI)} = \frac{\text{Net Profit}}{\text{Total Assets}}
\]

Generally, higher is the ROI, better it is for the firm.

Return on Equity (ROE):

The return on shareholders equity (or return as net worth) is net profit after tax divided by the total of preference shareholders equity and common shareholders equity (i.e. net worth)

\[
\text{Return Equity} : ROE = \frac{\text{Net Profit}}{\text{Net worth}}
\]
The net profit to net worth ratio measure the profit return on investment, the reward for assumption of ownership risk.

Generally, the higher the ratio, the better of the owners.

3.3.5 Valuation Ratio

Valuation ratios shows how the equity shares of the company is assessed in the capital market.

The changes in market prices may provide important due to what market participants think above corporate action and their likely impact on shareholder wealth.
Price Earning Ratio:

Price Earning Ratio (P/E) ratio is commonly used to assess the owners' appraisal of the value of the firm are earnings. The P/E ratio represents the amount investors are willing to pay for each rupee of the firm earnings. The level of P/E ratio indicates the degree of confidence (or, certainly) that investors have in the firm's future performance.

\[
\text{PER} = \frac{\text{Market Price Per Share}}{\text{Earnings Per Share}}
\]

Generally, the higher the P/E ratio, the greater investor confidence in the firm's future.

Pay-Out Ratio:

This ratio is calculated by dividing the dividend per share by the earning per share.

\[
\text{Pay Out Ratio (P.O.R.)} = \frac{\text{Dividend Per Share}}{\text{Earnings Per Share}}
\]
The ratio expresses the equity dividend as a percentage of earnings available for equity share.

Generally, a ratio lowers than 100% indicates retention of earnings in the firm whereas a ratio higher than 100% indicates distribution of a part of reserves by way of dividends.

Pay out ratio is a test of managerial ability and reputations.

The following important selected ratios have been used in the research work:

Liquidity Ratio

1. Current assets to current liabilities
2. Quick assets to current liabilities
3. Sundry creditors to current assets
4. Sundry creditors to net working capital

Capital Structure Ratio

1. Net fixed assets to total net assets
2. Net worth to total net assets
3. Debt to equity
4. Total outside liabilities to net worth
Assets Utilisation and Turnover Ratio

1. Sales to total net assets
2. Sales to gross fixed assets
3. Inventories to sales
4. Sundry debtors to sales

Profitability and Profit Allocation Ratio

1. Gross profits to total net assets
2. Gross profits to sales
3. Profits after tax to net worth
4. Profits retained to profits after tax
5. Dividends to net worth

3.3.6 Significance of Ratio Analysis

The ratio analysis is the most powerful tool of the financial analysis. One can determine the following points with the help of ratios:

1. The ability of the firm to meet its current obligations.
2. The efficiency with which the firm is utilizing its various assets in generating sales revenues.
3. The extent to which the firm has used its long term solvency by borrowing funds.

4. The overall operating efficiency and performance of the firm.

A short term creditor will be interested in current financial positions of the firms while a long term creditor will pay more attention to the solvency of the firm.

In credit analysis, the analyst will usually select current ratio or quick asset ratio to judge the firm’s liquidity or debt paying ability.

The ratio analysis is also useful in security analysis. The major focus in security analysis is on the long term profitability.

3.3.7 Limitations of Ratio Analysis

The ratio analysis is a widely used technique to evaluate the financial position and performance of a business. The following are some of the limitations of the ratio analysis.

1. It is difficult to decide on the proper basis for comparison.

2. The comparison is rendered difficult because of differences in situations of two companies or of one company over years.
3. The price level changes make the interpretations of ratios invalid.

4. The differences in the definitions of items in the balance sheet and the income statement make the interpretation of ratios difficult.

5. The ratios calculated at a point of time are less informative and defective as they suffer from short term change.

6. The ratios are generally calculated from past financial statement and, thus are no indicators of future.

Ratios of a company have meaning only when they are compared with some standards. It is difficult to find out a proper basis of comparison. Usually it is recommended that ratios should be compared with the industry average. But the industry average are not available. In India, for example, no systematic and comprehensive industry ratios are complied.

Financial statements record past transactions. They are, thus an index of what happened in the past. They do not parry the current position of the business and much less the future position. So, it is difficult to guide for decision making.

Financial statement analysis is useful but analysis should be aware of window dressing and accounting problems and make adjustments as necessary. Financial statement analysis conduct in a mechanical, unthinking manner is
dangerous. Ratios are not an end in themselves but on a selective basis they may help to answer some significant questions of the financial analyst.

3.4 Funds Flow Analysis

The Funds Flow Statement summarizes the events of an accounting period from a different standpoint. It describes the sources from which additional funds were derived and the uses to which these funds were employed. This statement is also called "statement of sources and application of funds".

The funds flow statement is essentially derived from an analysis of changes that have occurred in asset and equities items between two balance sheet dates.

Fund means "Purchasing Power" which is either cash or credit. Hence funds flow is defined as flow of total purchasing power of the business arising out of cash, credit or even barter transactions during a given period of time.

3.4.1 Concept of Funds Flow Statement

The statement of changes in financial position is usually referred to as Funds Flow Statement or Statement of Sources and application of funds.
Funds Flow

Sources of Funds (in flows)  Uses of Funds (out flows)

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>USES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in owner's equity</td>
<td>Decrease in owner's equity</td>
</tr>
<tr>
<td>Increase in a liability</td>
<td>Decrease in a liability</td>
</tr>
<tr>
<td>Decrease in an asset</td>
<td>Increase in an asset</td>
</tr>
</tbody>
</table>
3.4.2 Procedure for Preparing Funds Flow Statement

Funds Flow Statement is prepared by comparing two balance sheets and with the help of other information derived from the accounts as may be needed.

For preparation of a fund flow statement consist of two parts:

(a) Statement or schedule of changes in working capital
(b) Statement of sources and application funds

Statement or schedule of changes in working capital:

Working capital means the excess of current assets over current liabilities. Statement of changes in working capital is prepared to show the changes in the working capital between two balance sheet dates.

\[
\text{Net Working Capital} = \text{Current Assets} - \text{Current Liabilities} \\
\text{NWC} = CA - CL \\
\text{Change in NWC} = \text{Change in CA} - \text{Change in CL} \\
or \quad ? \text{NWC} = ? \text{CA} - ? \text{CL}
\]
So,

(i) An increase in current asset - increases working capital
(ii) A decrease in current asset - decreases working capital
(iii) An increase in current liabilities decreases working capital
(iv) A decrease in current liabilities increases working capital

It is to be remembered that net working capital does not get affected:

(i) If transactions affected only current items i.e. CA / CL; or
(ii) If transactions affect only non-current assets.

Therefore, increase in working capital is an application of funds and decrease in working capital is a source of funds. A typical proforma of Schedule of changes in working capital is given below:
### Proforma of Schedule of changes in Working Capital

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Previous Year</th>
<th>Current Year</th>
<th>Effect on working capital</th>
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<tbody>
<tr>
<td></td>
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<td>Increase</td>
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<td><strong>Current Assets:</strong></td>
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<tr>
<td>Cash in hand</td>
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<tr>
<td>Cash at bank</td>
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<tr>
<td>Bills Receivable</td>
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<tr>
<td>Sundry Debtors</td>
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<tr>
<td>Short-term Investment</td>
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<tr>
<td>(Marketable Securities)</td>
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<tr>
<td>Stock</td>
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<td>Prepaid expenses</td>
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<td>Advances</td>
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<td>Accrued Income</td>
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<td><strong>Total Current Assets</strong></td>
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<td><strong>Current Liabilities:</strong></td>
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<tr>
<td>Bills payable</td>
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<tr>
<td>Sundry Creditors</td>
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<tr>
<td>Outstanding Expenses</td>
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<td>Bank Overdraft</td>
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<tr>
<td>Dividends payable</td>
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<tr>
<td>Proposed Dividends</td>
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<tr>
<td>Provision for taxation</td>
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<tr>
<td><strong>Total Current Liabilities</strong></td>
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</table>

Working Capital = CA - CL
Net Increase (or) Decrease in W.C.
Proforma of Funds Flow Statement is given below: Funds Flow Statement
For the year ended .............

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<tbody>
<tr>
<td>Internal Sources (Own sources)</td>
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<td></td>
<td>1. Gross fixed assets</td>
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<td>1. Paid-up Capital</td>
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<td>2. Reserves and Surplus</td>
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<td>of which: Depreciation provision</td>
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<td>External sources (Other than own sources)</td>
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<td>4. Paid-up Capital</td>
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<td>of which: Premium on shares</td>
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<td>5. Borrowings</td>
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<tr>
<td>of which: i) Debentures</td>
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<tr>
<td>ii) Loans and advances</td>
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<td>of which: From Banks</td>
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<tr>
<td>6. Trade dues and other current liabilities</td>
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**Calculation of Funds from Operations**

(A) Net Profit (or Loss) as shown in the profit and loss account.
(B) ADD non-fund and non-operating items which have been already debited to P/L A/C.

(i) Depreciation and Depletion.
(ii) Amortisation of fictitious and intangible Assets such as; goodwill, patents, trademark, deferred revenue expenditure, discount or share issue expenses.
(iii) Loss on sale of fixed assets
(iv) Interim dividend and proposed dividend if it is an appropriation of profit and not taken as a current liability.
(v) Provision for taxation if it is not taken as current liability.

(C) LESS non-fund and non-operating items which have already been credited to P/L A/C

(i) Profit on sale of fixed assets.
(ii) Appreciation in the value of fixed assets.
(iii) Dividends and interest received.

\[(A + B - C) = \text{Funds from operations.}\]
3.4.3 Utility of Funds Flow Statement to Different Parties

The versatile utility of Funds Flow Statement to different parties can be summarized as follows:

1. **Management**: The historical Funds Flow Statement (Statements of the earlier years) provides the information how the funds were available and their use in the past. They provide the means to understand why the targets of the earlier years were not achieved. That would be useful information to avoid recurrence, in future. Funds Flow Statements can be prepared for future too. Planning can be more effective with their help. They provide the necessary hints to the management whether it is necessary for them to review and recast their plans, in a more realistic way, in case the future inflows are not adequate to meet the anticipated outflows.

2. **Financial Institutions**: Commercial banks require them to assess the working capital needs of the firm. Term-lending institutions want to satisfy the repayment capacity of the firm. Funds Flow Statement provides the information how the firm used the funds, earlier. Instances of diversion of sanctioned working capital for acquisition of fixed assets, contrary to the terms of sanction, would be known. The lenders would know firm's style of
functioning. The borrowings may be secured by the assets, but the financial institutions want to satisfy with the financial integrity of the borrower too. **Financial institutions would know the ways the funds were used, earlier, and future ways of use to judge their repaying ability.**

3. **Debenture holders**: Debenture holders too are long-term creditors of the firm. Their stake is similar to financial institutions. They would get back their money after several years, dependant on the maturity period of the debentures. Debenture holders look for redemption and projected Funds – Flow Statement shows the position of availability of funds when the debentures fall due for payment. To continue to hold the debentures till such time or not. Funds Flow Statement is useful for them to take a suitable decision.

4. **Trade Creditors**: They are the suppliers of goods and services and look for short-term liquidity for payment. Liquidity of the firm and operating profits assure the repayment schedule. Statement of Working Capital Position indicates how far the firm is liquid to meet the promised payment schedule to review their credit policy.

5. **Shareholders**: Shareholder are basically interested about the financial position of the firm and their future investment plans that generate
operating profits. This holds well to the existing as well as potential shareholders. Future investment plans and the operating profits that are likely to generate would be known from the Funds Flow Statement.

3.4.4 Limitations of Funds Flow Statement

Funds Flow Statement is an important tool for analysis and serves several useful purposes. However, its limitations cannot be ignored and they are:

1. It is not an original statement. It is only a rearrangement of data taken from the financial statements (Profit and Loss Account and Balance Sheet).

2. It is based on the financial statements and so the limitations of financial statement are equally applicable to them.

3. It is essentially historic in nature and projected statement cannot be prepared with much accuracy.

4. Funds Flow Statement is not a substitute for basic financial statements like profit and loss account and balance sheet. At best, it can be a supplementary statement to explain the changes in working capital.
Despite the above limitations, Funds Flow Statement serves the basic purpose of explaining the causes for changes in the financial position of the firm between two periods.

3.5 Statistical Techniques

3.5.1 Correlation Coefficient

A correlation coefficient is a number between –1 and 1 which measures the degree to which two variables are linearity related. If there is perfect linear relationship with positive slope between the two variables, we have a correlation coefficient of 1; if there is positive correlation, whenever one variables has a high (low) value, so does the other, if there is a perfect linear relationship with negative slope between the two variables, we have a correlation coefficient of -1; if there is negative correlation, whenever one variable has a high (low) value, the other has a low (high) value. A correlation coefficient of 0 means that there is no linear relationship between the variables.

There are a number of different correlation coefficients that might be appropriate depending on the kinds of various being studied.
3.5.2 Multiple Regression

The multiple regression correlation coefficient, $R^2$, is a measure of the proportion of variability explained by, or due to the regression (linear relationship) in a sample of paired data. It is a number between zero and one and a value close to zero suggests a poor model.

A very high value of $R^2$ can arise even though the relationship between the two variables is non-linear. The fit of a model should never simply be judged from the $R^2$ value.

3.5.3 ‘F’ Test

The term ‘Analysis of Variance’ can be defined as “a statistical measure that analyses the variance of two, or more comparable series or samples through the F-test technique to ascertain whether the difference in the mean values is significant or not, and whether the different samples under study are drawn from the same universe, or from different universes is with the same variance or not.”

Statistical package for Social Science study SPSS-IV : 13.0 version, MS-Excel, Database for data organization, processing and generating the graphs are determined by used in the computer.
References:

