5.1 Introduction

Liquidity refers to the ability of a firm to meet its short term financial obligations. Accordingly, attention is focused on the size of the firm's reservoir of liquidity assets related to its maturing abilities. Liquidity measures are believed to be of prime interest to short term lenders such as commercial banks and merchandise suppliers. A firm should ensure that it does not suffer from lack of liquidity and also that it is not too much highly liquid.

Profitability Ratios are designed for evaluation of the firm's operational performance. There are many measures of profitability. Each relates to the return of the firm to it, sales, assets or equity. As a growth these measures allow the analyst to evaluate the firm's earnings with respect to a given level of sales, a certain level of assets, or the owner investment. Without profits, a firm could not attract outside capital, moreover, present owners and creditors would become concerned about the company's future and attempt to recover their funds. Management plays close attention to boosting profits due to the great importance placed on earnings in the market price.
A company will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of its company in terms of profits.

5.2 Component-wise Analysis

5.2.1 Current Ratio = Current Asset to Current Liability

The Current Ratio gives the analyst a general picture of the adequacy of the working capital of a company and of the company's ability to meet its day to day obligations. A relatively high value of the 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 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 2:1 (Current assets twice of current liabilities) or more is considered to be satisfactory. In a worst situation, even if the value of current assets becomes half, the firm will be able to meet its obligation. The current ratio represents a margin of safety, i.e., a "cushion" of protection for creditors. However, an arbitrary standard of 2-to-1 current ratio should not be blindly followed. Firms with less than 2-to-1 current ratio may be doing well, while firms with 2-to-1 or even higher current ratios may be finding great difficulties in paying their bills. This is so because the current ratio is a test of quantity, not quality. However, the current ratio is a crude-and-quick measure of the firm's liquidity.
### Industry wise Ration of the Total Sample from 1997-2007

<table>
<thead>
<tr>
<th>Industry</th>
<th>CurRatio</th>
<th>NetWorth</th>
<th>DebtEqt</th>
<th>SalesGrFixed</th>
<th>GrProfSales</th>
<th>NetProfNetWorth</th>
<th>GrProfNetAssets</th>
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<td>93.48</td>
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<td>16.66</td>
<td>18.32</td>
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### Component wise Ratio of the Total samples from 1997-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>CU_Ratio</th>
<th>Networth</th>
<th>D.E.Q</th>
<th>sal.Gr.FA</th>
<th>GrPr.Sales</th>
<th>ROI</th>
<th>G.P.TMA</th>
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<td>39.43</td>
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<td>110.21</td>
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<td>70.97</td>
<td>107.46</td>
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<td>2002</td>
<td>1.32</td>
<td>37.54</td>
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<td>107.23</td>
<td>11.2</td>
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<td>10.4</td>
<td>12.30</td>
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<td>2004</td>
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<td>40.05</td>
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<td>2006</td>
<td>1.46</td>
<td>42.61</td>
<td>56.71</td>
<td>128.09</td>
<td>15.68</td>
<td>19.91</td>
<td>12.87</td>
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Select Liquidity Capital Structure, Turnover & Profitability Ratios of selected Industries

<table>
<thead>
<tr>
<th>Current Debt Equity Ratio</th>
<th>Sales to Gross Fixed Assets</th>
<th>Gross Profit/Total Net Assets</th>
<th>Return on Equity</th>
</tr>
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<tr>
<td>1.35:46</td>
<td>56.71</td>
<td>8.44</td>
<td>9.7</td>
</tr>
<tr>
<td>93.9</td>
<td>70.76</td>
<td>19.9</td>
<td>111.6</td>
</tr>
</tbody>
</table>

Per Cent
The industry in the total samples of the companies showed an average current ratio of 1.38 per cent during the period of study which indicates the inadequacy of working capital faced by the industries. The current ratios of the Industry average 1.35 per cent in 1997-98 to 1.46 in 2006-07. The average current ratio of individual industries are Sugar (1.11), Cotton (1.1), Engineering (1.43), Electrical (1.36), Chemical (1.25), Pharmaceutical (1.66), Cement (1.02), Paper (1.07), Construction (1.19), Computer (2.61). It is further observed that Cement and Paper Industry had negative working capital during few years which indicate the acute shortage of working capital faced by such industries.

5.2.2 Debt Equity Ratio = Long-term Debt to Shareholders Equity

Debt Equity Ratio helps the analyst to measure the relative claims of creditors and owners against the firm’s assets. It is calculated as long-term debt (non-cement liabilities) divided by shareholders equity. Whatever the debt equity ratio is calculated, it shows the extent to which debt financing has been used in the business. A high ratio shows that the claims of creditors are greater than those of owners. A very high ratio is unfavourable from the firm’s point of view. This introduces inflexibility in the firm’s operations due to the increasing interference and pressure from creditors. A low debt-equity ratio implies a greater claims of owner than creditors. From the point of view of creditors, it represents a
satisfactory capital structure of the business since a high proportion of equity provides a larger margin of safety for them. During the period of low profits, the debt servicing will prove to be less burdensome for a company with low debt equity ratio. However, from the shareholders' point of view, there is disadvantage during the periods of good economic activities if the firm employs a low amount of debt.

Companies in the total sample showed a substantial decrease of the Debt Equity (E/E) Ratio from 70.76 percent in 1997-98 to 86.71 percent in 2006-07. The Cement industry witnessed a highest D/E 112.24 per cent, whereas a Computer industries recorded lowest i.e. 16.39 (which is favourable). The other annual average ratio of individual industries is Sugar (81.19 per cent), Cotton (106.27 per cent), Paper (91.85 per cent), Engineering (45.35 per cent), Chemical (59.76 per cent), Pharmaceutical (33.19 per cent) and Electrical (48.4 per cent). Thus, Cement and Cotton industry have growing dependence on long-term debt in relation to shareholders' fund. During the period of low profits this suffers great strains. As a result, their pressure and control are further tightened. Thus, this ratio indicates some risk aspects associated with both lenders and stockholders.

5.2.3 Net Worth to Total Net Assets

This ratio brings out the owner's fund in relation to total investment in the industry. In advanced control, the owner's stake is considered reasonable if they
meet 50 per cent of the total investment in assets which under India. Industries considered 40 per cent as a reasonable stake of the owner's for medium size projects\(^4\) shows a upward trend of ratio from 38.28 per cent in 1997-98 to 42.0 per cent in 2007-08 of the total Industries.

The annual average ratio of the individual industries are Sugar (27.83 per cent), Cotton (29.88 per cent), Paper (34.47 per cent), Cement (32.64 per cent), Construction (27.28 per cent), Engineering (44.58 per cent), Chemical (39.6 per cent), Pharmaceutical (49.59 per cent), Electrical (38.65 per cent) and Computer (66.3 per cent). Computer industry represents highest i.e. 66.3 per cent whereas Cement industry stands lowest i.e. 27.28 per cent. However, Engineering Industry, Pharmaceutical and Computer Industry had approached the accepted norms of 40 per cent of the owner's stake by Indian industries.

5.2.4 Sales to Gross Fixed Asset

Sales to Gross fixed assets turnover ratio indicates the utilization of fixed assets in generating sales. Generally, a high fixed assets turnover ratio represents efficient utilization of fixed assets in generating sales, while a low ratio indicates inefficient management and utilization of fixed assets. However, the analyst should be cautious in deriving conclusions from the fixed asset turnover ratio. To obtain fixed asset turnover ratio, sales are divided by fixed assets, not the mark value. Thus, a firm whose plant and machinery has considerably
depreciate may show a higher fixed assets turnover ratio than the firm which has purchased plant and machinery recently.

By comparing the fixed assets turnover ratios, it is concluded that Pharmaceutical industry has the highest record, i.e., 185.38 per cent, and the Electrical Industry 38.05 per cent as the lowest record, but in average, it is 111.26 per cent. The average sales to gross fixed assets of other individual industries are Sugar (117.86 per cent), Cotton (93.48 per cent), Paper (78.75 per cent), Cement (70.67 per cent), Construction (183.42 per cent), Engineering (162.12 per cent), Chemical (120.16 per cent), Computer (66.3 per cent). It is further observed that in overall industries, represents efficient utilization of fixed assets.

5.2.5 Gross Profit to Total Net Asset

The return over assets is a useful measure of the profitability of all financial resources invested in the firm's assets. It evaluates the total sources and uses of funds. This ratio is particularly useful to evaluate the performance of divisions in a multi-divisional firm. Generally, these divisions have the responsibility towards the raising and utilizing funds. Higher in the ROI is better for the firm. But this ratio can be seriously distorted by changes in capital structure (the proportion of long-term debt to owner's equity). Hence, the gross...
earning power of the capital employed in the business is internally consistent and more meaningful.

The companies in the total sample showed an increase in the return from 8.44 per cent in 1997-98 to 12.87 per cent in 2006-07. However, on average, it stands 9.65 per cent. Gross profit to total net asset of the individual industries are: Sugar (8.46 per cent), Cotton (4.54 per cent), Paper (6.51 per cent), Cement (7.64 per cent), Construction (6.81 per cent), Engineering (10.84 per cent), Chemical (10.04 per cent), Pharmaceutical (14.39 per cent), Electrical (7.72 per cent), Computer (19.57 per cent). The deteriorating of gross profit to total asset ratio of cotton and paper industries are underutilization of productive capacity and shortage of raw material supplied due to government policy to conserve the forest resource.

5.2.6 Gross Profit to Sales

The Gross Profit Margin reflects the efficiency with which management produce each unit of product. This ratio indicates the average spread between the cost of goods sold and the sales revenue when we subtract the gross profit margin from 100 per cent, we obtain the ratio of cost of good sold and sales. Both these ratios show profits relative to sales after the deductions of production costs and indicate the relation between production cost and selling price. A high
gross profit margin relative to industry average implies that the firm is able to produce at relative lower cost

A high gross profit margin ratio is a sign of good management. A gross margin ratio may increase due to any of the following factors:

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

The analysis of these factors reveals to the management how a depressed gross profit margin can be improved.

A low gross profit margin ratio should be carefully investigated. It may reflect a higher cost of goods sold due to the firm's inability to purchase at favourable terms, inefficient utilization of plants and machinery, or over investment in plant and machinery, resulting a higher cost of productions. The ratio will be low due to fall in prices in the market, or marked reduction in selling price by the firm in an attempt to obtain large sales volume, the cost of goods sold remaining unchanged. The financial manager must be able to detect the causes of falling gross margin and initiate action to improve the situation.
The total sample companies implied an increased in gross profit margin 10.97 per cent in 1997-98 to 15.68 per cent in 2006-07. In average it represents 11.9 per cent. Gross profit recorded higher in Computer Industry i.e. 22.28 per cent and lower in Cotton Industry i.e. 6.19 per cent. The ratios for other individual industries are Sugar (11.34 per cent), Paper (8.83 per cent), Cement (10.94 per cent), Construction (11.53 per cent), Engineering (10.22 per cent), Chemical (12.45 per cent), Pharmaceutical (16.66 per cent), Electrical (8.7 per cent). It is further observed that gross profit margin of all industries except cotton, paper and electrical are able to produce at lower cost.

5.2.7 Net Profit to Net Worth

Net Profit to Net worth (shareholder, equity) measures how well the firm has used the resources of the owners. In fact, this ratio is one of the most important relationships in ratio analysis. The earning of a satisfactory return is the most desirable objective of a business. The ratio of net profit to owner’s equity reflects the extent to which this objective has been accomplished. This ratio is, thus, of great interest to present as well as prospective shareholders and also of great concern to management, which has the responsibility of maximizing the owner’s welfare.
The ratio is calculated as net after tax divided by shareholders equity. The return on owner's equity of the company should be compared with the ratios for other similar companies and industry average. This has revealed the relative performance and relative strength of the company in attracting future investment.

The ratio for total sample companies increased from 9.72 per cent in 1997-98 to 19.91 per cent in 2006-07. This ratio of computer industry is stands highest return i.e., 23.27 per cent (favourably) whereas Cotton Industry represents lowest i.e., 3.71 per cent during the same period. However, the annual average ratio for other individual industry are Sugar (8.27 per cent), Paper (7.32 per cent), Cement (9.73 per cent), Construction (11.79 per cent), Engineering (13.14 per cent), Chemical (12.33 per cent), Pharmaceutical (18.32 per cent), Electrical (8.74 per cent). During the period of study, computer industry records higher return i.e., 30.3 per cent in 2000-2001.

5.3 Industry-wise Analysis

5.3.1 Sugar Industry

India is the fourth major Sugar producing country in the world, the first three being Russia, Brazil and Cuba in that order. India has now emerged as the largest Sugar producing country in the world, with a 22 per cent share of the world's sugar production. Sugar industry is the second largest agro-based
industry in the country. About 45 million sugarcane farmers, their dependents and a large agricultural force, constituting 7.5 percent of the rural population, is involved in Sugar cane cultivation, harvesting and ancillary activities. Besides, about 0.5 million skilled and semi-skilled workers, mostly from rural areas are engaged in the Sugar industry. The Sugar industry in India has a focal point for socio-economic development in the rural areas by mobilizing rural resources, generating employment and higher income, transport and communication facilities. Production of sugar shot up to 51.48 lakh tones in 1980-81 and further to the record level of 132.77 lakh tones in 1991-92. Sugar production in 2005-06 sugar season stood at 193 lakh tones and this shot up to 280 lakh tones in 2006-07.

Fig. 5.2

Select Liquidity Capital Structure, Turnover & Profitability Ratios of Sugar Industry

Source: Appendix - III
On the liquidity position of the Sugar industry, it is found that a constant current ratio of 1 12 per cent on less during the period of study which inadequacy of working capital faced by the industries. A current ratio of 2 1 is considered to be satisfactory on this ground that in an adverse situation, even if the value of current is reduced half, the company will be able to meet its current obligations. This is because the current ratio is a test of quantity, not test of quality, other assets that are considered, relatively, liquid are debtors, bills receivable and marketable. Quick ratio showed rising tendency from 8.6 per cent in 1997-98 to 34.7 per cent in 2006-07 which can be converted into cash immediately without loss a value. Sundry creditors to current assets increased from 21.7 per cent in 1997-98 to 34.7 per cent in 1997-98 to 29.7 per cent in 2006-07 which helps the firm/industry for easy finance. Sundry creditors to net working capital declined 172.8 per cent in 1997-98 to 282.9 per cent in 2001-02 and 788.9 in 2002-03 to 168.5 per cent in 2006-07 which indicate a sign of over trading and potentially a dangerous situation of the shortage of working capital. On the other hand, a lower ratio indicates that working capital is not efficiently utilized.

An analyst of capital structure ratios reveals that net fixed assets to total net assets increased at a higher rate of 52.7 per cent in 2005-06 against 41.7 per cent in the year 1997-98. Net worth to total net assets displayed continuous improvement from 28.9 per cent in 1997-98 to 33.6 per cent in 2006-07. Debt to equity ratio increased from 77.5 per cent in 1997-98 to 90.9 per cent 1999-00.
after that it declined 68.9 per cent to 66.1 per cent in 2002-03 then it grew by 33.6 per cent in 2006-07. The outside liabilities to net worth revealed gradual decline from 246.3 per cent in 1997-98 to 197.7 per cent in 2006-07. Higher ratio helps to judge the long-term financial position of the firm. It also measure the relative claims of creditor and owner.

Turnover ratio as a percentage of sales to total net assets was also marginally higher at 74.2 per cent in 2006-07 than 70.2 per cent in 1997-98. Sales to gross fixed asset revealed gradually decline from 115.3 per cent in 1997-98 to 106.3 per cent in 2006-07. Inventories to sales revealed gradual decline from 60.2 per cent in 1997-98 to 25.2 per cent in 2006-07.

Sundry debtor to sales was marginally increased from 2.8 per cent in 1997-98 to 6.0 in 2006-07. Hence inventory turnover shows how rapidly the inventory is turning into receivable through sales.

Gross profit to total net asset ratio increased at a higher rate of 9.4 per cent in 2005-07 against 9.2 per cent in 1997-98. Gross profit to sales was marginally lower at 12.7 per cent in 2006-07 than 13.1 per cent in 1997-98. Profit after tax to net worth increased from 3 per cent in 1997-98 to 16.8 per cent in 2006-07. Profit retained to profit after tax marginally higher at 80.6 per cent in 2006-07 than 32.1 per cent in 1997-98. Dividend to net worth was also marginally higher at 3 per cent in 2006-07 to 2.1 per cent in 1997-98. A high gross profit
margin ratio is a sign of good management. Therefore a large number of present and potential investors are more interested in the dividend per share rather than earnings per share.

5.3.2 Cotton Industry

The cotton textile industry is the largest single oldest and most firmly established major industry. There are about 1100 mill in the country (900 spinning mills and 200 composite mill) with 28 million spindles and 2 lakh looms. The most important problem facing the industry today is cotton prices in recent years have been steadily going up with every year. Though prices of cloth and
yarn were periodically raised, the increased cost of production could not be fully covered. The growth of production of fabrics in cotton textile industry is in 2005-06 production of cloth (in million sq. metres) 1656 mill sector, 47921 decentralised sector i.e. 3 per cent mill sector and 97 per cent decentralized sector in comparison to 1950-59, 79% mill sector 21 per cent decentralized sector.

The liquidity ratio of Cotton industry showed a constant current ratio of 1.1 per cent during 1997-98 to 2006-07 which is far below the generally accepted norm of 2:1 but it is 50 per cent of current ratio, hence in an adverse situation, the industry will be able to meet its current obligations. But in the 2000-01 current ratio is 0.9 which had negative working capital and indicate the acute shortage of working capital. The quick ratio declined to 36.5 per cent in 2006-07 from 42.9 per cent in 1997-98. Sundry creditor to current assets was the highest at 23.5 per cent in 2003-04 against 19.9 per cent in 1997-98 but it again declined to 18.6 per cent in 2006-07. Sundry creditors to net working capital grew to 240.1 per cent in 2006-07 against 89.6 per cent in 1997-98. However, this high turnover of working capital is a sign of over trading or potential a dangerous situation of the shortage of working capital.

The capital structure ratios of Sugar industry showed that net fixed assets to total net assets growth picked up to 58.7 per cent in 2001-02 against 47.3 per cent in 1997-98 but it again started declining and reached to 53.6 per cent in
2006-07 The net worth to total net assets declined from the peak of 38.3 per cent in 1997-98 to 24 7 per cent in 2000-01. This ratio also increased 31.8 per cent and subsequently declined to 26 9 per cent in 2006-07. Thus, the cotton had not approached the accepted norms of 40% of owner’s stake by Indian industries.

Debt equity ratio is the measure of the relative claims of creditors and owners against the company’s assets. The debt equity ratio, i.e. debt as percentage of equity showed rising tendency from 70.1 per cent in 1997-98 to 131.7 per cent in 2006-07. A high ratio shows that the claims of creditors are greater than those of owners. So, a very high ratio is unfavourable from the firm’s point of view.

Sales to total net assets ratio (from turnover ratio) growth rate fluctuated sharply from year to year But the net result was increasing 74.2 per cent in 2006-07 against 70.2 per cent in 1997-98.

The ratio of sales to gross fixed asset declined from 115 3 per cent in 1997-98 to 106.3 per cent in 2006-07. A low ratio indicates inefficient management and utilization of fixed asset. But this high fixed asset turnover ratio indicate efficient utilization of fixed asset in generating sales.
Inventories to sales ratio accounted for 60.2 per cent in the year 1997-98 and it declined to 53.8 per cent and it also increased up to 72.6 per cent in the year 2000-01 then it gradually declined to 25.2 per cent in the year 2006-07. Sundry debtors to sales increased up to 15.9 per cent in 1998-99 against it was 15 per cent in 1997-98. Then it gradually declined to 13.8 per cent in 2006-07. It measures the quality of the debtors since it indicate the rapidity or slowness of their collectibility.

Gross profits to total assets declined gradually from 6.8 per cent in 1997-98 to 2.7 per cent in 2001-02 then it increased up 6.4 per cent in 2002-03, finally, it reduced to 3.8 per cent in 2006-07. This ratio particularly useful to evaluate the performance of divisions in a multi-divisional firm. The higher the ratio, the more efficient the firm in using funds entrusted to it. Gross profit to Sales decreased to 3.7 per cent in 2001-02 and it was at 8.8 per cent in 2002-03, after that it reduced to 5.5 per cent in 2006-07. It measures the overall efficiency of production, administration, selling etc. Net profit to net worth (ROE) accounted from 7.4 per cent then gradually it declined to 6.6 per cent in 2006-07. The ratio indicates how well the industry has used the sources of the owners. Profit retained to profit after tax recorded 71.8 per cent in 1997-98 then it gradually increased up to 84.6 per cent. Divisional to net worth registered at 2.1 per cent in 1997-98 then fluctuately decreased up to 1.9 per cent in 2006-07.
5.3.3 Engineering Industry

The Engineering industry has a major role in the industrial development of the country. It has made great strides in the post independence period and has now a well diversified production. Engineering Industry (especially automobile) has moved into the highly competitive world of international market with success.

![Fig. 5.4]

Select Liquidity Capital Structure, Turnover & Profitability Ratios of Engineering Industry

The current ratio of this industry increased to 1.7 per cent in 2002-03 and it was at 1.3 per cent in 1997-98. Then it also increased to 1.5 per cent in 2006-07 against 1.3 per cent in 2003-04. In adverse point of view it may meet the financial obligation even though there is standard rule 2:1. Quick ratio increased...
upto 87.9 per cent or 0.88 in 2006-07 and it was at 59.2 or 0.59 per cent in 1997-98.

Sundry creditors to current asset gradually increased from 28.2 per cent in 1997-98 to 31.4 per cent in 2006-07. Where as sundry creditors to net working capital declined from 139.2 per cent in 1997-98 to 89.5 per cent in 2006-07.

Net fixed asset to total net assets declined 43.4 per cent to 32.2 per cent. Net worth to total net assets increased up to 35.6 per cent in 1997-98 to 47.6 per cent in 2006-07. But Debt equity ratio declined from 69.7 in 1997-98 to 34.8 per cent in 2006-07 with an average growth of 45.35 per cent. This high ratio shows that the claims of creditors are greater than those of owners. So a very high ratio is unfavourable from the firm's point of view.

Sales to total net assets increased up to 128.2 per cent in 2006-07 and it was at 72.8 per cent in 1997-98. Sales to gross fixed assets was also increased up to 216.3 per cent in 2006-07 and it was at 121.5 per cent in 1997-98 with an average growth 162.12 per cent. Inventory to sales declined from 20.6 per cent in 1997-98 to 10.6 per cent in 2006-07. Sundry debtors to sales was also declined from 25.6 per cent in 1997-98 to 9.3 per cent in 2006-07. It helps the analyst with significant measurement of debtors i.e. (i) he can initially test a company's collection period against its own credit and to determine the credit and collection efficiency.
Gross profiting to total net assets increased upto 14.2 per cent in 2006-07 against 7.7 per cent in 1997-98 with an average growth 10.22 per cent. Gross profit to sales was also marginally increased from 10.5 in 1997-98 per cent to 11.0 per cent in 2006-07. Profit after tax to net worth grew from 6.4 per cent in 1997-98 to 20.7 per cent in 2006-07. Profit retained to profit after tax declined from 56.8 per cent in 1997-98 to 38.2 per cent in 1999-2000 and it increased upto 76.6 per cent in 2006-07. Dividend to net worth substantially increased from 2.8 per cent in 1997-98 to 4.9 per cent 2006-07. A large number of present and potential investors are more interested in divided per share rather than earning per share.

5.3.4 Electrical Industry

Electricity and power play a crucial role in economic development. As noted by the draft Fifth Five Year Plan "Electricity is the more versatile form of energy and provides an important infrastructure for economic development. So electrical machines and tools important role in electricity departments."
The current ratio of electrical industry shows a constant ratio 1.36 per cent from 1997-98 to 2006-07 with a marginal difference in 2002-03. But quick ratio substantially increased from 73.6 per cent in 1997-98 to 83.2 per cent in 2006-07. Sundry creditors to current assets increased gradually from 28.7 per cent in 1987-88 to 30.4 per cent in 2006-07. Sundry creditors to net working capital register high records with a marginal decline from 108.1 per cent in 1997-98 to 101.6 per cent in 2006-07.

In capital structuring ratio of electrical industry implies that net fixed assets to total net assets declined 34.0 per cent in 1997-98 to 21.0 per cent in 2006-07.
Net worth to total net asset was increased from 36.3 per cent 1997-98 to 41.6 per cent in 2006-07. Debt to equity ratio declined 53.1 per cent in 1997-98 to 24.6 per cent in 2006-07. Total outside liabilities to net worth significantly declined from 175.6 per cent in 1997-98 to 140.7 per cent in 2006-07.

The turn over ratios of electrical industry shows that sales to net assets increased from 79.6 per cent in 1997-98 to 100.8 per cent in 2006-07. Sales to gross fixed assets was significantly increased from 162.9 per cent o 271.4 per cent. Inventory to sales declined marginally from 20.6 per cent in 1997-98 to 17.7 per cent in 2006-07. Sundry debtors to sales declined 33.8 per cent in 1997-98 to 29.8 per cent in 2006-07.

From the profitability ratio of electrical industry it is found that gross profit to total net assets increased 7.3 per cent to 13.2 per cent from 1997-98 to 2006-07 with an average ratio of 8.7 per cent. Gross profit to sales also increased from 9.1 per cent in 1997-98 to 13.1 per cent in 2006-07. Net profit to net worth ratio increased from 4.7 per cent to 22.1 per cent between 1997-98 to 2006-07. It measure the net profit to share holders’ funds. However the annual average ratio 8.74 per cent which is in optimizing industry’s profit. Profit retained to profit after tax increased 41.9 per cent in 1997-98 to 85.8 per cent in 2006-07. Dividends to net worth maintain constant ratio upto 1990-08 at 2.8 per cent then it declined upto 2002-03 then it became 4.2 per cent in 2003-04 and 3.7 per cent 2006-07.
5.3.5 Chemical Industry

Chemical industry is the fourth largest manufacturing industry in the country. With the growth of Petrochemical industry and the growing demand for modern chemicals, the industry's future indeed look very high. Pollution control and safety measures are other vital aspects of chemical industry which require careful consideration.

The current ratio of chemical industry declined from 1.3 per cent in 1997-98 to 11.1 per cent in 2001-02. After that it increased up to 1.3 per cent in 2006-07 with an annual average growth 1.25 per cent quick ratio increased from 51.7 per cent in 1997-98 to 59.7 per cent in 2006-07. Sundry creditors to current
assets marginally declined from 26.3 per cent to 24.4 per cent between 1997-98 to 2007-08. Sundry creditors to net working capital increased 102.1 per cent in 1997-98 to 107.2 per cent in 2006-07.

Net fixed assets to total net assets declined 51.5 per cent in 1997-98 to 36.5 per cent in 2006-07. Net worth to total net assets marginally increased from 41.5 per cent to 43.4 per cent between 1997-98 to 2006-07. Debt to equity declined 64.6 per cent to 41.6 per cent between 1997-98 to 2006-07. Total outside liabilities to net worth also declined 141.1 per cent to 130.5 per cent between 1997-98 to 2006-07.

Sales to total net assets increased from 71.6 per cent to 83.6 per cent from 1997-98 to 2006-07. Sales to gross fixed asset increased up to 145.9 per cent in 2006-07 against 100.8 per cent in 1997-98. Inventory to sales declined 20.7 per cent to 18.2 per cent between 1997-98 to 2006-07. Sundry debtors to sales picked at 21.3 per cent in 2000-01 then gradually declined to 17.3 per cent 2006-07.

Gross profit to total assets stood of 10.3 per cent in 1997-98 and declined to 8.5 per cent in 2002-03. Then it increased to 12.6 per cent gross profit to sales increased 14.4 per cent in 1997-98 to 15.1 per cent in 2006-07 with an average 12.45 per cent. Profit after tax to net worth increased 11.4 per cent to 21.0 per cent between 1997-98 to 2006-07 with an annual average 12.33 per cent profit.
Pharmaceutical industry is highly research oriented and the technology, inventory control, price control and R&D played an important role. The technology adopted for the production covers intricate and sophisticated fermentation technology, synthetic operation and extraction and purification of active principles contained in the plants and animal kingdom. The Hathi Committee under the Chairmanship of Mr. Baisukhlal Hathi (1974) laid emphasis of the Indiaisation of drug and pharmaceutical industry. The industry is
surprisingly very young, having rushed through adolescence to husky maturity within a short span of time"

Current ratio of pharmaceutical remain constant with a small margin i.e 1.6 per cent in 1997, 1.8 per cent in 1998-99 and 1.7 per cent in 2006-07. The average current ratio is 1.66 per cent during the period 1997-98 to 2006-07. Quick ratio increased upto 101.4 per cent in 2005-06 against 61.4 per cent in 1997-98 after that it declined to 89.0 per cent in 2006-07. Sundry creditors to current assets increased gradually 26.9 per cent to 19.5 per cent from 1997-98 to 2006-07. Sundry creditors to net working capital declined from 72.7 per cent in 1997-98 to 47.3 per cent in 2006-07 [S. C Kuchhal, “Industrial Economy of India”, Chaitanya Publishing House, Allapad, 1987 (Rev.ed.)]. Net fixed asset to total net assets fluctuates year to year and declined from 36.8 per cent in 1997-98 to 31.6 per cent in 2006-07. Net worth to total net assets increased upto 53.0 per cent in 2006-07 against 46.0 per cent in 1997-98. Debt to equity declined 38.9 per cent to 29.9 per cent during the period. Total outside liabilities to net worth also declined from 117.2 per cent in 1997-98 to 88.6 per cent in 2006-07.

Sales to total net assets declined from 99.6 per cent to 71.2 per cent from 1997-98 to 2006-07. Sales to gross fixed assets increased from 197.9 per cent to 216.1 per cent and then decreased to 168.9 per cent in 2006-07. Inventories to sales remain constant with a marginal increase i.e 21.2 in 1997-98 to 21.8 per
cent in 2006-07 Sundry debtors to sales substantially increased from 18.7 per cent to 22.8 per cent during the study period.

Gross profits to net assets increased from 13.7 per cent to 15.8 per cent from 1997-98 to 2006-07. Gross profit to sales also increased up to 22.2 per cent in 2006-07 against 13.7 per cent in 1997-98. Similarly profit after tax to net worth increased 14.8 per cent to 22.4 per cent which indicate a sign of good management of the business profit retained to profit after tax increased from 68.2 per cent in 1997-98 to 70.2 per cent in 2006-07. Dividend to net worth also increased from 4.7 per cent to 5.5 per cent. It measure the quality of debtors since it indicates the rapidity of their collectivity.

5.3.7 Cement Industries

At present, there are 130 large Cement plants in the country with an installed capacity of 163.45 million tones per annum. Besides, there are about 332 mini-cement plants with an estimated installed capacity 11.10 million tones per annum. The production of cement was 21 million tones in 1981-82. This rose to 45.8 million tones in 1989-90 and 154.7 million tones in 2006-07 a substantial expansion by all means. Now India is the second largest producer of cement in the world after China. However, it is distant second.
The current ratio of Sugar industry reveals that the ratio for the total sample was 1.02 : 1 which is far below the generally accepted norm of 2 : 1. In adverse situation, the industry will be able to meet its current obligation from 1997-98 to 2006-07 except those years (i.e. 2000-01, 2001-02, 2002-03) in which shortage of working capital, it make dangerous situation and a sign of over trading. Quick assets ratio declined from 45.3 per cent in 1997-98 to 24.8 per cent in 2002-03 and increased upto 65.3 per cent in the year 2006-07. Sundry creditors to current assets increased 22.9 per cent in 1997-98 to 26 per cent in 2006-07 between the study period, other ratio fluctuate 18.9 per cent to 34.8 per cent. Sundry creditors to net working capital declined 206.8 per cent in 1999-98 to 164.7 per cent in 1998-99.
Net fixed assets to total net assets declined gradually from 64.2 per cent in 1997-98 to 54.2 per cent in 2006-07. Net worth to total net asset registered an average record 32.64 per cent. But it increased up from 29.9 per cent in 1997-98 to 43.8 per cent in 2006-07. Debt to equity declined 137.5 per cent in 1997-98 to 63.0 per cent in 2006-07. This trend of long-term debt brought certain risk aspects both to the lenders as well as shareholders but it measures the relative proportions of outsider's fund and shareholder's fund invested in the industry in the year 2005-06 and 2006-07. Total outside liabilities to net worth declined 234.9 per cent in 1997-98 to 128.4 per cent in 2006-07.

Sales to total net assets grew 82.5 per cent in the year 2006-07 against 64.6 per cent in 1997-98. But sales to gross fixed asset was also increased from 68.9 per cent in 1997-98 to 94.2 per cent in 2006-07. The average sales to gross fixed assets is 70.67 per cent. Inventory to sales declined 11.2 per cent in 2006-07 from 17.4 per cent in 1997-98. Sundry debtors to sales also declined gradually from 11.7 per cent to 5.2 per cent from 1997-98 to 2006-07.

Gross profits to total net assets increased up from 3.6 per cent to 18.8 per cent from 1997-98 to 2006-07 and its average is 7.64 per cent. Gross profit to sales also increased up from 5.6 per cent to 22.8 per cent during the same period. Profit after tax to net worth picked up 30.3 per cent in the year 2006-07 against 1.2 per cent 1998-99. This helps the management of efficiency use of resources in the business. Profit retained to profit after tax increased from 50.4
per cent in 2000-01 to 85.0 per cent in 2006-07. Dividend to net worth increased 2.0 per cent in 1997-98 to 4.6 per cent in 2006-07.

5.3.8 Computer Industry

![Select Liquidity Capital Structure, Turnover & Profitability Ratios of Computer Industry](image)

Source: Appendix - III

At present Computer industry plays vital role for communication and socio-economic development in India. During 2006-07 Computer industry registered higher sale growth of 38.3 per cent Computer and related activities recorded higher profit margin over last three years. Lower effective tax rates were registered for computer industry in India.
The current ratio of Computer industry increased from 2.0 per cent 1997-98 to 4.2 per cent in 2001-02 and at the end it stood 2.8 per cent in 2006-07. This average ratio 2.61 per cent is favourable / satisfactory because it meet the conventional rate 2 : 1 or more is considered to be satisfactory. On the other hand quick ratio increased 134.7 per cent in 1997-98 to 216.7 per cent in 2006-07. Sundry creditors to current assets declined from 15.2 per cent to 9.7 per cent during the same period. Sundry creditors to net working capital also declined to 15.1 per cent in 2006-07 against 31.1 per cent in 1997-98.

Net fixed assets to total net assets declined to 19.6 per cent in 2006-07 compared with 37.4 per cent in 1997-98. But net worth to total net asset increased from 54.2 per cent to 73.5 per cent during the same period. The average debt equity ratio of computer industry was 16.39 per cent between 1997-98 to 2006-07. But actually it reduced from 28.2 per cent in 1997-98 to 7.2 per cent in 2006-07. Total outside liabilities to net worth declined 84.6 per cent in 1997-98 to 36.1 per cent in 2006-07. However, in overall capital structure ratio it represents a satisfactory capital structure of business since a high proportion of equity provides a larger margin of safety for them.

Sales to total net assets declined from 100 per cent in 1997-98 to 93.5 per cent in 2006-07 but it picked up 108.0 per cent in 1998-99. Sales to gross fixed assets increased 209.3 per cent in 1997-98 to 299.0 per cent in 2006-07. But
inventory to sales declined from 7.1 per cent in 1997-98 to 0.9 per cent in 2006-07. Sundry debtors to sales also declined from 29.9 per cent to 24.0 per cent during the same period. From the turnover point of view, this high fixed assets turnover ratio indicates efficient utilization of fixed asset in generating sale.

Gross profit to total net assets increased from 18.8 per cent in 1997-98 to 22.2 per cent in 2006-07 with an average ratio of 19.57 during the same period. Similarly gross profits to sales increased from 18.8 per cent to 23.7 per cent between 1997-98 to 2006-07. Profit after tax to net worth marginally increased by 25.0 per cent in 1997-98 to 25.3 per cent in 2006-07. Profit retained to profit after tax declined from 83.1 per cent to 75.8 per cent during the same period. Dividends to net worth increased marginally from 4.2 per cent to 6.1 per cent between 1997-98 to 2006-07. However, gross profit margin is satisfactory.

5.3.9 Construction Industry

At present, construction is a key factor in economic development. The industry has tremendous potential for development of house, roads, bridge and other project. The industry ‘Construction’ registered high sale growth during 2006-07. The industry increased their bank borrowings by 127.5 per cent in 2006-07. This industry also revealed continued improvement in profit margin in 2005-06 and 2006-07 and also earned much higher margin than the overall one.
The current ratio of the Construction industry in 2006-07 against 1.1 per cent in 1997-98. The average current ratio shows 1.19 per cent during the same period. In adverse situation the industry can meet its current obligation. Quick ratio increased up to 47.5 per cent in 2006-07 against 45.4 per cent in 1997-98. Sundry creditors to current assets declined from 33.0 per cent in 1997-98 to 22.8 per cent in 2006-07. Similarly, sundry creditors to net working capital declined 335.8 per cent in 1997-98 to 100.4 per cent in 2006-07.

Net fixed assets to total net assets declined 53.3 per cent in 1997-98 to 13.9 per cent in 2006-07. Net worth to total net assets also declined to 28.1 in 2006-07 against 33.3 per cent in 1997-98. Debt-to-equity ratio revealed that this
ratio declined from 82.8 per cent to 60.7 per cent during the same period. Total outside liabilities to net worth picked up 255.6 per cent in 2006-07 from 200.3 per cent in 1997-98. However, from the creditors' point of view, it represents a satisfactory capital structure of the business since a high proportion of equity provides a larger margin of safety for them.

Sales to total net asset increased by 49.8 per cent in 2006-07 against 40.9 per cent in 1997-98. Sales to gross fixed assets picked up to 265.8 per cent in 2006-07 against 67.9 per cent in 1997-98. Inventory to sales increased gradually from 33.5 per cent to 43.9 per cent during the same period. Sundry debtors to sales increased from 23.6 per cent in 1997-98 to 36.0 per cent in 2006-07.

Gross profits to total net assets revealed an improvement in the performance viewed from the growth rate 4 per cent in 1997-98 to 9.8 per cent in 2006-07. During the same period the average ratio was 6.81 per cent. Similarly, gross profit to sales increased by 9.8 per cent in 1997-98 to 19.6 per cent in 2006-07. Net profit to net worth also increased 5.1 per cent to 19.9 per cent during the same period. Profit retained to profit after tax increased substantial from 79.9 per cent in 1997-98 to 80.2 per cent in 2006-07. Dividend to net worth increased 1 per cent to 4 per cent during the study. Thus the gross profit reflects the efficiency with which management produces each unit of product. This ratio is a sign of good management.
5.3.10 Paper Industry

The first paper mill was set up in India more than 100 years ago. There are at present 515 registered paper mills producing paper and paper board in the private sector with installed capacity of 51 lakh tones. These units are diverse in size, type and magnitude. There are about 30 large integrated mills, well organized and well equipped and these are about 270 small units, which are too small and too moderate equipped. Actually, the last decade witnessed a phenomenal growth in the small paper sector (a small paper mill has installed capacity of 24000 tonnes per annum), actively promoted by the Government. As a result, the small sector now accounts for 50 per cent of the installed capacity and of production of paper in the country. As many as 194 paper mills, particularly small mills are either sick or lying closed.

Fig. 5.11

Select Liquidity Capital Structure, Turnover & Profitability Ratios of Paper Industry
The liquidity ratio of the paper industry revealed that the current ratio has declined from 1.3 per cent in 1997-98 to 1.0 per cent in 2006-07. It also showed an average ratio of 1.07 per cent during this period. But there was a negative working capital at 0.9 per cent in the year 1999-00 to 2002-03 in which the industry will not meet the current obligation. Quick ratio was also declined from 52.0 per cent in 1997-98 to 45 per cent in 2006-07. Sundry creditors to current assets declined from 30.1 per cent in 1997-98 to 26.4 per cent in 2006-07. Similarly, sundry creditors to net working capital declined from 140.2 per cent in 1997-98 to 130.6 per cent in 2000-01 with a sudden grew 191.2 per cent between the four years. Net fixed assets to total net assets increased marginally from 61.1 per cent in 1997-98 to 62.3 per cent in 2006-07. But net worth to total net asset declined gradually from 38.8 per cent to 34.6 per cent with an average 34.47 per cent between the same period. Debt to equity ratio fluctuated 85.2 per cent in 1997-98 to 98.1 per cent & 108.6 per cent in 1998-99 & 1999-02. Again it declined to 94.6 and suddenly increased to 117.1 per cent after that it gradually declined to 85.7 per cent in 2006-07. However, the total outside liabilities to net worth picked up from 157.7 per cent to 188.6 per cent during the same period. Thus, unhealthy current and debt-equity ratio have emerged in the industries.

Sales to total net assets increased 60.8 per cent in 1997-98 to 80.3 per cent in 2006-07. Sales to gross fixed assets also increased from 72.3 per cent to 85.8 per cent with an average 78.75 per cent between same periods. But
inventories to sales declined 20.4 per cent to 14.6 per cent. Sundry debtors to sales declined 17.8 per cent in 1997-98 to 14.5 per cent in 2006-07.

Gross profits to total net assets increased 3.0 per cent in 1997-98 to 8.9 per cent in 2006-07. Gross profit to sales grew 11.1 per cent 2006-07 against 5.0 per cent in 1997-98. Profit after tax (net profit) to net worth substantial increased 20.8 per cent in 2001-02 to 21.9 per cent in 2006-07. Profit retained to profit after tax also increased from 65.4 per cent to 80.9 per cent during the same period. Dividend to net worth increased marginally from 0.7 in 1997-98 to 13.6 per cent in 2006-07. In over all, gross profit margin revealed that there was good management in the industry.

5.4 Summary

The ratio may be taken as a symptom like the blood pressure, the pulse or temperature of an individual.¹ Accountingly, ratios describe the significant relationships which exist between figures shown in a balance sheet, in a profit and loss account, in a budgetary control system or any other part of accounting organization.²

The liquidity ratio (i.e. Current Asset to Current Liabilities) has increased from 1.35 per cent in 1997-98 to 1.46 per cent in 2006-07. The average annual capital structure ratio (i.e. Net worth to total net assets) and debut equity ratio

¹

²
worked out to 39.2 per cent and 66.58 per cent respectively. Net worth to total net assets growth picked up to 42.61 per cent in 2006-07 for against 38.28 per cent in 1997-98. But debt equity ratio started declining from 70.76 per cent in 1997-98 to 56.71 per cent in 2006-07.

The average annual turnover ratio (Sales to Gross Fixed Asset) was 111.62. Sale to gross fixed assets increased by 128.09 per cent from 93.95 per cent in 93.95 per cent.

The average annual growth of gross profit ratios (i.e. gross profit to total net assets, gross profit to sales and net profit to net worth) were 9.65 per cent, 11.91 per cent and 11.71 per cent respectively. Gross profit to total net assets has increased from 8.44 per cent in 1997-98 to 12.87 per cent in 2006-07. Gross profit to sales has also increased from 10.97 per cent in 1997-98 to 15.68 per cent in 2005-06 after which there was a slow down to 11.91 per cent in 2006-07. The return on equity (i.e. net profit to net worth) has gradually increased from 9.73 per cent in 1997-98 to 19.0 per cent in 2005-06 after which there was a flow down to 11.71 per cent in 2006-07.

The current ratio of 2.61 per cent recorded as highest in Computer industry which is more than the accepted norm of 2:1. Other industry below 2:1 per cent but more 1 per cent, which symbolizes the inadequate working capital faced by such industries. It is more than half so it can meet the current obligation.
Net worth to net asset was highest 66.3 per cent in Computer industry and lowest was at 27.28 per cent. Debt equity ratio of Cement industry records 112.24 per cent and sales to gross fixed asset 183.42 per cent in construction industry. Gross profit to total net asset 19.57 per cent and gross profit to sales 22.28 per cent have recorded highest in Computer industry. Return on investment in 19.91 in Computer industry was note worth record during 1997-98 to 2006-07.
References:


