Chapter 5: Working Capital management Ratio Analysis

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Importance of Ratio analysis</td>
</tr>
<tr>
<td>5.2</td>
<td>Working capital analysis</td>
</tr>
<tr>
<td>5.3</td>
<td>Profitability analysis</td>
</tr>
<tr>
<td>5.4</td>
<td>Condition analysis</td>
</tr>
<tr>
<td>5.5</td>
<td>Capacity research analysis</td>
</tr>
<tr>
<td>5.6</td>
<td>An analytical evaluation of working capital management</td>
</tr>
</tbody>
</table>
5.1 Importance of Ratio Analysis

Ratio analysis is an important technique of financial analysis. It is a means for judging the financial health of a business enterprise. It determines and interprets the liquidity, solvency, profitability, etc. of a business enterprise.

(i) It becomes simple to understand various figures in the financial statements through the use of different ratios. Financial ratios simplify, summarize, and systemize the accounting figures presented in financial statements.

(ii) With the help of ratio analysis, comparison of profitability and financial soundness can be made between one industry and another. Similarly comparison of current year figures can also be made with those of previous years with the help of ratio analysis and if some weak points are located, remedial measures are taken to correct them.

(iii) If accounting ratios are calculated for a number of years, they will reveal the trend of costs, sales, profits and other important facts. Such trends are useful for planning.

(iv) Financial ratios, based on a desired level of activities, can be set as standards for judging actual performance of a business. For example, if owners of a business aim at earning profit @ 25% on the capital which is the prevailing rate of return in the industry then this rate of 25% becomes the standard. The rate of profit of each year is compared with this standard and the actual performance of the business can be judged easily.

(v) Ratio analysis discloses the position of business with different viewpoint. It discloses the position of business with liquidity viewpoint, solvency viewpoint, profitability viewpoint, etc. with the help of such a study, we can draw conclusion regarding the financial health of business enterprise.
Advantages

Ratio analysis is an important and age-old technique of financial analysis. The following are some of the advantages of ratio analysis:

1. Simplifies financial statements: It simplifies the comprehension of financial statements. Ratios tell the whole story of changes in the financial condition of the business.

2. Facilitates inter-firm comparison: It provides data for inter-firm comparison. Ratios highlight the factors associated with successful and unsuccessful firm. They also reveal strong firms and weak firms, overvalued and undervalued firms.

3. Helps in planning: It helps in planning and forecasting. Ratios can assist management, in its basic functions of forecasting. Planning, co-ordination, control and communications

4. Makes inter-firm comparison possible: Ratios analysis also makes possible comparison of the performance of different divisions of the firm. The ratios are helpful in deciding about their efficiency or otherwise in the past and likely performance in the future.

5. Help in investment decisions: It helps in investment decisions in the case of investors and lending decisions in the case of bankers etc.

Limitations

The ratios analysis is one of the most powerful tools of financial management. Though ratios are simple to calculate and easy to understand, they suffer from serious limitations.

1. Limitations of financial statements: Ratios are based only on the information which has been recorded in the financial statements. Financial statements themselves are subject to several limitations. Thus ratios derived, there from, are also subject to those limitations. For example, non-financial changes though important for the business are not relevant by the financial statements. Financial statements are affected to a very great extent by accounting conventions and concepts. Personal judgment plays a great part in determining the figures for financial statements.
2. Comparative study required: Ratios are useful in judging the efficiency of the business only when they are compared with past results of the business. However, such a comparison only provide glimpse of the past performance and forecasts for future may not prove correct since several other factors like market conditions, management policies, etc. may affect the future operations.

3. Problems of price level changes: A change in price level can affect the validity of ratios calculated for different time periods. In such a case the ratio analysis may not clearly indicate the trend in solvency and profitability of the company. The financial statements, therefore, be adjusted keeping in view the price level changes if a meaningful comparison is to be made through accounting ratios.

4. Lack of adequate standard: No fixed standard can be laid down for ideal ratios. There are no well accepted standards or rule of thumb for all ratios which can be accepted as norm. It renders interpretation of the ratios difficult.

5. Limited use of single ratios: A single ratio, usually, does not convey much of a sense. To make a better interpretation, a number of ratios have to be calculated which is likely to confuse the analyst than help him in making any good decision.

6. Personal bias: Ratios are only means of financial analysis and not an end in itself. Ratios have to interpret and different people may interpret the same ratio in different way.

7. Incomparable: Not only industries differ in their nature, but also the firms of the similar business widely differ in their size and accounting procedures etc. It makes comparison of ratios difficult and misleading.

   i. Ratios make the related information comparable. A single figure by itself has no meaning, but when expressed in terms of a related figure, it yields significant interferences. Thus, ratios are relative figures reflecting the relationship between related variables. Their use as tools of financial analysis involves their comparison as single ratios, like absolute figures, are not of much use.

   ii. Ratio analysis has a major significance in analysing the financial performance of a company over a period of time. Decisions affecting product prices, per unit costs, volume or efficiency have an impact on the profit margin or turnover ratios of a company.
iii. Financial ratios are essentially concerned with the identification of significant accounting data relationships, which give the decision-maker insights into the financial performance of a company.

iv. The analysis of financial statements is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance.

v. The first task of financial analyst is to select the information relevant to the decision under consideration from the total information contained in the financial statements. The second step is to arrange the information in a way to highlight significant relationships. The final step is interpretation and drawing of inferences and conclusions. In brief, financial analysis is the process of selection, relation and evaluation.

vi. Ratio analysis in view of its several limitations should be considered only as a tool for analysis rather than as an end in itself. The reliability and significance attached to ratios will largely hinge upon the quality of data on which they are based. They are as good or as bad as the data itself. Nevertheless, they are an important tool of financial analysis.

   It refers to the systematic use of ratios to interpret the financial statements in terms of the operating performance and financial position of a firm. It involves comparison for a meaningful interpretation of the financial statements.

   In view of the needs of various uses of ratios the ratios, which can be calculated from the accounting data are classified into the following broad categories

   A. Liquidity Ratio
   B. Turnover Ratio
   C. Solvency or Leverage ratios
   D. Profitability ratios
A. Liquidity Ratio

It measures the ability of the firm to meet its short-term obligations, that is capacity of the firm to pay its current liabilities as and when they fall due. Thus these ratios reflect the short-term financial solvency of a firm. A firm should ensure that it does not suffer from lack of liquidity. The failure to meet obligations on due time may result in bad credit image, loss of creditors confidence, and even in legal proceedings against the firm on the other hand very high degree of liquidity is also not desirable since it would imply that funds are idle and earn nothing. So therefore it is necessary to strike a proper balance between liquidity and lack of liquidity.

The various ratios that explains about the liquidity of the firm are

1. Current Ratio
2. Acid Test Ratio / quick ratio
3. Absolute liquid ration / cash ratio

1. Current Ratio

The current ratio measures the short-term solvency of the firm. It establishes the relationship between current assets and current liabilities. It 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 balances, marketable securities, inventory, and debtors, excluding provisions for bad debts and doubtful debtors, bills receivables and prepaid expenses. Current liabilities includes sundry creditors, bills payable, short-term loans, income-tax liability, accrued expenses and dividends payable.

2. Acid Test Ratio / Quick Ratio

It has been an important indicator of the firm’s liquidity position and is used as a complementary ratio to the current ratio. It establishes the relationship between quick assets and current liabilities. It is calculated by dividing quick assets by the current liabilities.
Acid Test Ratio = Quick Asset/Current liabilities

Quick assets are those current assets, which can be converted into cash immediately or within reasonable short time without a loss of value. These include cash and bank balances, sundry debtors, bill’s receivables and short-term marketable securities.

3. **Absolute Liquid Ratio / Cash Ratio**

It shows the relationship between absolute liquid or super quick current assets and liabilities. Absolute liquid assets include cash, bank balances, and marketable securities.

Absolute liquid ratio = Absolute liquid assets/Current liabilities

**B. Turnover Ratio**

Turnover ratios are also known as activity ratios or efficiency ratios with which a firm manages its current assets. The following turnover ratios can be calculated to judge the effectiveness of asset use.

1. **Inventory Turnover Ratio**
2. **Debtor Turnover Ratio**
3. **Creditor Turnover Ratio**
4. **Assets Turnover Ratio**

1. **Inventory Turnover Ratio**

This ratio indicates the number of times the inventory has been converted into sales during the period. Thus it evaluates the efficiency of the firm in managing its inventory. It is calculated by dividing the cost of goods sold by average inventory.

Inventory Turnover Ratio = Cost of goods sold/Average Inventory

The average inventory is simple average of the opening and closing balances of inventory. (Opening + Closing balances / 2). In certain circumstances opening balance of the inventory may not be known then closing balance of inventory may be considered as average inventory.
2. **Debtor Turnover Ratio**

   This indicates the number of times average debtors have been converted into cash during a year. It is determined by dividing the net credit sales by average debtors.

   \[
   \text{Debtor Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Trade Debtors}}
   \]

   Net credit sales consist of gross credit sales minus sales return. Trade debtor includes sundry debtors and bill’s receivables. Average trade debtors (Opening+Closing balances/2)

   When the information about credit sales, opening and closing balances of trade debtors is not available then the ratio can be calculated by dividing total sales by closing balances of trade debtor

   \[
   \text{Debtor Turnover Ratio} = \frac{\text{Total Sales}}{\text{Trade Debtors}}
   \]

3. **Creditor Turnover Ratio**

   It indicates the number of times sundry creditors have been paid during a year. It is calculated to judge the requirements of cash for paying sundry creditors. It is calculated by dividing the net credit purchases by average creditors.

   \[
   \text{Creditor Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Creditor}}
   \]

   Net credit purchases consist of gross credit purchases minus purchase return

   When the information about credit purchases, opening and closing balances of trade creditors is not available then the ratio is calculated by dividing total purchases by the closing balance of trade creditors.

   \[
   \text{Creditor Turnover Ratio} = \frac{\text{Total Purchases}}{\text{Total Trade Creditors}}
   \]

4. **Assets Turnover Ratio**

   The relationship between assets and sales is known as assets turnover ratio. Several assets turnover ratios can be calculated depending upon the groups of assets, which are related to sales.

   a) Total asset turnover.

   [8]
b) Net asset turnover

c) Fixed asset turnover

d) Current asset turnover

e) Net working capital turnover ratio

a. **Total Asset Turnover**

This ratio shows the firm’s ability to generate sales from all financial resources committed to total assets. It is calculated by dividing sales by total assets.

\[
\text{Total asset turnover} = \frac{\text{Total Sales}}{\text{Total Assets}}
\]

b. **Net Asset Turnover**

This is calculated by dividing sales by net assets.

\[
\text{Net asset turnover} = \frac{\text{Total Sales}}{\text{Net Assets}}
\]

Net assets represent total assets minus current liabilities. Intangible and fictitious assets like goodwill, patents, accumulated losses, deferred expenditure may be excluded for calculating the net asset turnover.

c. **Fixed Asset Turnover**

This ratio is calculated by dividing sales by net fixed assets.

\[
\text{Fixed asset turnover} = \frac{\text{Total Sales}}{\text{Net Fixed Assets}}
\]

Net fixed assets represent the cost of fixed assets minus depreciation.

d. **Current Asset Turnover**

It is divided by calculating sales by current assets

\[
\text{Current asset turnover} = \frac{\text{Total Sales}}{\text{Current Assets}}
\]
e. **Net Working Capital Turnover Ratio**

A higher ratio is an indicator of better utilization of current assets and working capital and vice-versa (a lower ratio is an indicator of poor utilization of current assets and working capital). It is calculated by dividing sales by working capital.

\[
\text{Net working capital turnover ratio} = \frac{\text{Total Sales}}{\text{Working Capital}}
\]

Working capital is represented by the difference between current assets and current liabilities.

C. **Solvency or Leverage Rations**

The solvency or leverage ratios throws light on the long term solvency of a firm reflecting it’s ability to assure the long term creditors with regard to periodic payment of interest during the period and loan repayment of principal on maturity or in predetermined installments at due dates. There are thus two aspects of the long-term solvency of a firm.

a. Ability to repay the principal amount when due

b. Regular payment of the interest.

The ratio is based on the relationship between borrowed funds and owner’s capital it is computed from the balance sheet, the second type are calculated from the profit and loss a/c. The various solvency ratios are

1. Debt equity ratio
2. Debt to total capital ratio
3. Proprietary (Equity) ratio
4. Fixed assets to net worth ratio
5. Fixed assets to long term funds ratio
6. Debt service (Interest coverage) ratio
1. **Debt Equity Ratio**

Debt equity ratio shows the relative claims of creditors (Outsiders) and owners (Interest) against the assets of the firm. Thus this ratio indicates the relative proportions of debt and equity in financing the firm’s assets. It can be calculated by dividing outsider funds (Debt) by shareholder funds (Equity)

\[
\text{Debt equity ratio} = \frac{\text{Outsider Funds (Total Debts)}}{\text{Shareholder Funds or Equity}}
\]

The outsider fund includes long-term debts as well as current liabilities. The shareholder funds include equity share capital, preference share capital, reserves and surplus including accumulated profits. However fictitious assets like accumulated deferred expenses etc should be deducted from the total of these items to shareholder funds. The shareholder funds so calculated are known as net worth of the business.

2. **Debt To Total Capital Ratio**

Debt to total capital ratio = Total Debts/Total Assets

3. **Proprietary (Equity) Ratio**

This ratio indicates the proportion of total assets financed by owners. It is calculated by dividing proprietor (Shareholder) funds by total assets.

Proprietary (equity) ratio = \( \frac{\text{Shareholder funds}}{\text{Total assets}} \)

4. **Fixed Assets to Net worth Ratio**

This ratio establishes the relationship between fixed assets and shareholder funds. It is calculated by dividing fixed assets by shareholder funds.

Fixed assets to net worth ratio = \( \frac{\text{Fixed Assets}}{\text{Net Worth}} \times 100 \)

The shareholder funds include equity share capital, preference share capital, reserves and surplus including accumulated profits. However fictitious assets like accumulated deferred expenses etc should be deducted from the total of these items to
shareholder funds. The shareholder funds so calculated are known as net worth of the business.

5. **Fixed Assets to Long Term Funds Ratio**

Fixed assets to long term funds ratio establishes the relationship between fixed assets and long-term funds and is calculated by dividing fixed assets by long term funds.

Fixed assets to long term funds ratio = \( \frac{\text{Fixed Assets}}{\text{Long-term Funds}} \times 100 \)

6. **Debt Service (Interest Coverage) Ratio**

This shows the number of times the earnings of the firms are able to cover the fixed interest liability of the firm. This ratio therefore is also known as Interest coverage or time interest earned ratio. It is calculated by dividing the earnings before interest and tax (EBIT) by interest charges on loans.

Debt Service Ratio = \( \frac{\text{Earnings before interest and tax (EBIT)}}{\text{Interest Charges}} \)

5.2 **Working Capital Analysis**

Net working capital is a financial metric a business owner can use in order to help measure the cash and operating liquidity position of the business firm.

The net working capital metric is directly related to the current ratio. If you look at the calculation of the current ratio, you see that you use the same balance sheet data to calculate net working capital.


If a business firm has current assets of $200 and current liabilities of $100, then:

- Net Working Capital = Current Assets - Current Liabilities
- \( = $200 - $100 \)
=Net Working Capital=$100

This firm can pay its short-term debt obligations and still have $100 left over as a cash or operating liquidity cushion. It has twice the current assets ($200) as current liabilities ($100).

Compare this to the current ratio. If you calculate the current ratio for this example, you would use the current ratio formula:

- Current Ratio = Current Assets/Current Liabilities
- $200/$100 = 2.00X
- Current ratio = 2.00X

You can see the relationship between the two financial metrics.

Cash management and the management of operating liquidity is important for the survival of the business firm. A firm can make a profit, but if they have a problem with their cash position, they won't survive. This is why it is important for a business owner to use all the financial metrics and measures available to manage liquidity and cash.

Implementing an effective working capital management system is an excellent way for many companies to improve their earnings. The two main aspects of working capital management are ratio analysis and management of individual components of working capital. A few key performance ratios of a working capital management system are the working capital ratio, inventory turnover and the collection ratio. Ratio analysis will lead management to identify areas of focus such as inventory management, cash management, accounts receivable and payable management.

1.3 Profitability Analysis

Profitability Ratios

The profitability ratio of the firm can be measured by calculating various profitability ratios. General two groups of profitability ratios are calculated.

a. Profitability in relation to sales.

b. Profitability in relation to investments.

c. Profitability in relation to sales
d. Gross profit margin or ratio  
e. Net profit margin or ratio  
f. Operating profit margin or ratio  
g. Operating Ratio  
h. Expenses Ratio  

1. **Gross Profit Margin or Ratio**

   It measures the relationship between gross profit and sales. It is calculated by dividing gross profit by sales.

   \[
   \text{Gross profit margin or ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100
   \]

   Gross profit is the difference between sales and cost of goods sold.

2. **Net Profit Margin or Ratio**

   It measures the relationship between net profit and sales of a firm. It indicates management’s efficiency in manufacturing, administrating, and selling the products. It is calculated by dividing net profit after tax by sales.

   \[
   \text{Net profit margin or ratio} = \frac{\text{Earnings after tax}}{\text{Net Sales}} \times 100
   \]

3. **Operating Profit Margin Or Ratio**

   It establishes the relationship between total operating expenses and net sales. It is calculated by dividing operating expenses by the net sales.

   \[
   \text{Operating profit margin or ratio} = \frac{\text{Operating expenses}}{\text{Net sales}} \times 100
   \]

   Operating expenses includes cost of goods produced/sold, general and administrative expenses, selling and distributive expenses.
4. Expenses Ratio

While some of the expenses may be increasing and other may be declining to know the behavior of specific items of expenses the ratio of each individual operating expense to net sales should be calculated. The various variants of expenses are

\[
\text{Cost of goods sold} = \frac{\text{Cost of goods sold}}{\text{Net Sales}} \times 100
\]

\[
\text{Administrative Expenses Ratio} = \frac{\text{Administrative Expenses}}{\text{Net sales}} \times 100
\]

\[
\text{Selling and distribution expenses ratio} = \frac{\text{Selling and distribution expenses}}{\text{Net sales}} \times 100
\]

2. Operating Profit Margin or Ratio

Operating profit margin or ratio establishes the relationship between operating profit and net sales. It is calculated by dividing operating profit by sales.

\[
\text{Operating profit margin or ratio} = \frac{\text{Operating Profit}}{\text{Net sales}} \times 100
\]

Operating profit is the difference between net sales and total operating expenses. (Operating profit = Net sales – cost of goods sold – administrative expenses – selling and distribution expenses.)

Profitability In Relation To Investments

1. Return on gross investment or gross capital employed
2. Return on net investment or net capital employed
3. Return on shareholder’s investment or shareholder’s capital employed.
4. Return on equity shareholder investment or equity shareholder capital employed.
1. **Return on Gross Capital Employed**

   This ratio establishes the relationship between net profit and the gross capital employed. The term gross capital employed refers to the total investment made in business. The conventional approach is to divide Earnings After Tax (EAT) by gross capital employed.

   $$\text{Return on gross capital employed} = \frac{\text{Earnings after Tax (EAT)}}{\text{Gross capital employed}} \times 100$$

2. **Return On Net Capital Employed**

   It is calculated by dividing Earnings before Interest & Tax (EBIT) by the net capital employed. The term net capital employed in the gross capital in the business minus current liabilities. Thus it represents the long-term funds supplied by creditors and owners of the firm.

   $$\text{Return on net capital employed} = \frac{\text{Earnings Before Interest & Tax (EBIT)}}{\text{Net capital employed}} \times 100$$

3. **Return On Share Capital Employed**

   This ratio establishes the relationship between earnings after taxes and the shareholder investment in the business. This ratio reveals how profitability the owners’ funds have been utilized by the firm. It is calculated by dividing Earnings after tax (EAT) by shareholder capital employed.

   $$\text{Return on share capital employed} = \frac{\text{Earnings after tax (EAT)}}{\text{Shareholder capital employed}} \times 100$$

4. **Return on Equity Share Capital Employed**

   Equity shareholders are entitled to all the profits remaining after the all outside claims including dividends on preference share capital are paid in full. The earnings may be distributed to them or retained in the business. Return on equity share capital investments or capital employed establishes the relationship between earnings after tax and preference dividend and equity shareholder investment or capital employed or net
worth. It is calculated by dividing earnings after tax and preference dividend by equity shareholder’s capital employed.

Return on equity share capital employed = Earnings after tax (EAT), preference dividends X 100 Equity share capital employed

**Earnings per Share**

It measures the profit available to the equity shareholders on a per share basis. It is computed by dividing earnings available to the equity shareholders by the total number of equity share outstanding

Earnings per share = Earnings after tax – Preferred dividends (if any) / Equity shares outstanding

**Dividend per Share**

The dividends paid to the shareholders on a per share basis in dividend per share. Thus dividend per share is the earnings distributed to the ordinary shareholders divided by the number of ordinary shares outstanding.

Dividend per share = Earnings paid to the ordinary shareholders / Number of ordinary shares outstanding

**Dividends Pay Out Ratio (Pay out Ratio)**

It measures the relationship between the earnings belonging to the equity shareholders and the dividends paid to them. It shows what percentage shares of the earnings are available for the ordinary shareholders are paid out as dividend to the ordinary shareholders. It can be calculated by dividing the total dividend paid to the equity shareholders by the total earnings available to them or alternatively by dividing dividend per share by earnings per share.

Dividend pay out ratio (Pay out ratio) = Total dividend paid to equity shareholders/Total earnings available to equity share holders

- Dividend per share
- Earnings per share
Dividend and Earnings Yield

While the earnings per share and dividend per share are based on the book value per share, the yield is expressed in terms of market value per share. The dividend yield may be defined as the relation of dividend per share to the market value per ordinary share and the earning ratio as the ratio of earnings per share to the market value of ordinary share.

\[
\text{Dividend Yield} = \frac{\text{Dividend Per share}}{\text{Market value of ordinary share}}
\]

\[
\text{Earnings yield} = \frac{\text{Earnings per share}}{\text{Market value of ordinary share}}
\]

Price Earnings Ratio

The reciprocal of the earnings yield is called price earnings ratio. It is calculated by dividing the market price of the share by the earnings per share.

\[
\text{Price earnings (P/E) ratio} = \frac{\text{Market price of share}}{\text{Earnings per share}}
\]

5.4 Condition Analysis

Financial condition may be defined as the ability of a local government or school district to balance recurring expenditure needs with recurring revenue sources, while providing services on a continuing basis. A community in good financial condition generally maintains adequate service levels during fiscal downturns, identifies and adjusts to long-term economic or demographic changes, and develops resources to meet future needs. Conversely, a community in fiscal stress usually struggles to balance its budget, suffers through disruptive service level declines, has a difficult time adjusting to socioeconomic forces, and has limited resources to finance future needs. Maintaining or restoring sound financial condition requires local officials to adjust to long-term
socioeconomic and demographic changes, respond to the economic impact of the business cycle, and plan for the future.

There is no single measure that fully captures the financial condition of a local government or school district. Rather, local governments need to take a comprehensive approach that focuses on both external and internal fiscal indicators that are easy to measure, evaluate and understand. Ideally, you want a financial indicator system that is comprehensive enough to match the complexity of your government (suburban counties might have a very different fiscal indicator system than rural towns), but that is operationally manageable and produces regular, reliable reports for decision making.

Financial condition is affected by a combination of environmental, fiscal and organizational factors, including decisions and actions of the governing board. For example, a steady population decline can lead to an erosion of the property tax base (a negative environmental trend). However, the ways in which local officials respond to this decline (such as cutting services, increasing tax rates, or engaging in economic development) also affect the financial condition of the local government.

Environmental factors include measures of community needs and resources such as population, property value and poverty, and economic factors such as inflation, personal income and employment. These environmental indicators often provide the best “early warning” of future fiscal stress. Research by OSC has concluded that there is a strong correlation between environmental factors and financial condition, and that fiscal stress is often apparent in these measures before it is evident in the financial data.

Finding out where your finances are going often starts by analyzing where you’ve been. The first step in assessing the financial condition of your municipality is to begin gathering information that is correlated to these environmental and organizational factors. Some of this information should be available using your own accounting and budgeting systems, but other data will have to be assembled from third-party sources. This data should be examined over a reasonable time horizon, typically 5-10 years. Appendix C provides a listing of possible data sources for certain statistical information that may be helpful for this analysis.

Examples of environmental factors you may want to examine include:

a. Population trends
b. Median household income levels

c. Unemployment rates

d. Property full value trends

e. Educational attainment, such as population with at least high school education equivalency

f. Age characteristics, such as population over 65

g. Poverty indicators, such as numbers of single heads of households or school lunch recipients as a percentage of your community’s population.

Financial trends that may be useful to examine include the following:

a. Recurring major revenues (sales tax, property tax, State aid)

b. Recurring major expenditures by object (salaries, fringes, contractual)

5.5 Capacity Research Analysis

i. The Indian cement industry is the 2nd largest market after China accounting for about 8% of the total global production. It had a total capacity of about 347 million tons (MT) as of financial year ended 2012-13. Cement is a cyclical commodity with a high correlation with GDP. The housing sector is the biggest demand driver of cement, accounting for about 67% of the total consumption. The other major consumers of cement include infrastructure (13%), commercial construction (11%) and industrial construction (9%).

ii. The Indian cement industry grew at a commendable rate in the last decade, registering a compounded growth of about 8%. However, the growth has slowed down in recent years owing to the sluggishness in the economy. Moreover, the per capita consumption of cement in India still remains substantially poor when compared with the world average.

iii. This underlines the tremendous scope for growth in the Indian cement industry in the long term. Cement, being a bulk commodity, is a freight intensive industry and transporting it over long distances can prove to be uneconomical. This has resulted in cement being largely a regional play with the industry divided into five main regions viz. north, south, west, east and the central region. The Southern
region of India has the highest installed capacity, accounting for about one-third of the country's total installed cement capacity.

iv. Given the high potential for growth, quite a few foreign transnational companies have ventured into the Indian markets. Already, while companies like Lafarge, Heidelberg and Italicementi have made a couple of acquisitions, Holcim has increased its stake in domestic companies Ambuja Cements and ACC to over 50% to gain controlling interest. Consolidation has taken place with the top two cement groups controlling nearly one-third of the total domestic capacity. However, the balance capacity still remains quite fragmented.

The Aditya Birla Group is the ninth-largest cement producer in the world. Grasim Industries Limited, a flagship company of the Group, along with its subsidiary UltraTech Cement Limited, is a leading cement player in India with a capacity of 49 million tons per annum, 11 composite plants, 11 split grinding units, five bulk terminals and 69 ready-mix concrete plants.

The Aditya Birla Science and Technology Company (ABSTC) works in association with the cement business research and development team at Khor, in Madhya Pradesh, India. The overall objective is to improve the profitability of the business. Enhancing productivity, new product development, reducing energy consumption and environmental impact, and technology revamping are the focus areas for cement research.

The research strategy involves application of advanced science, technology and engineering platforms comprising of fundamental process analysis, computational fluid dynamics, process modeling and simulation, process control, process development and laboratory experiments.

5.6 An Analytical Evaluation of Working Capital Management

Ratio analysis is such a significant technique for financial analysis. It indicates relation of two mathematical expressions and the relationship between two or more things.

Financial ratio is a ratio of selected values on an enterprise's financial statement.

There are many standard ratios used to evaluate the overall financial condition of a corporation or other organization. Financial ratios are used by managers within a firm,
by current and potential stockholders of a firm, and by a firm’s creditor. Financial analysts use financial ratios to compare the strengths and weaknesses in various companies.

Values used in calculating financial ratios are taken from balance sheet, income statement and the cash flow of company, besides Ratios are always expressed as a decimal values, such as 0.10, or the equivalent percent value, such as 10%.

**Essence of ratio analysis:**

Financial ratio analysis helps us to understand how profitable a business is, if it has enough money to pay debts and we can even tell whether its shareholders could be happy or not.

Financial ratios allow for comparisons:

1. Between companies
2. Between industries
3. Between different time periods for one company
4. Between a single company and its industry average

To evaluate the performance of one firm, its current ratios will be compared with its past ratios. When financial ratios over a period of time are compared, it is called time series or trend analysis. It gives an indication of changes and reflects whether the firm’s financial performance has improved or deteriorated or remained the same over that period of time. It is not the simply changes that has to be determined, but more importantly it must be recognized that why those ratios have changed. Because those changes might be result of changes in the accounting polices without material change in the firm’s performances.

Another method is to compare ratios of one firm with another firm in the same industry at the same point in time. This comparison is known as the cross sectional analysis. It might be more useful to select some competitors which have similar operations and compare their ratios with the firm’s. This comparison shows the relative financial position and performance of the firm. Since it is so easy to find the financial
statements of similar firms through publications or Medias this type of analysis can be performed so easily.

To determine the financial condition and performance of a firm, its ratios may be compared with average ratios of the industry to which the firm belongs. This method is known as the industry analysis that helps to ascertain the financial standing and capability of the firm in the industry to which it belongs.

Industry ratios are important standards in view of the fact that each industry has its own characteristics, which influence the financial and operating relationships. But there are certain practical difficulties for this method. First finding average ratios for the industries is such a headache and difficult. Second, industries include companies of weak and strong so the averages include them also. Sometimes spread may be so wide that the average may be little utility. Third, the average may be meaningless and the comparison not possible if the firms with in the same industry widely differ in their accounting policies and practices. However if it can be standardized and extremely strong and extremely weak firms be eliminated then the industry ratios will be very useful.

In isolation, a financial ratio is a useless piece of information. In context, however, a financial ratio can give a financial analyst an excellent picture of a company's situation and the trends that are developing. A ratio gains utility by comparison to other data and standards.

Financial ratios quantify many aspects of a business and are an integral part of financial statement analysis. Financial ratios are categorized according to the financial aspect of the business which the ratio measures. Although these categories are not fixed in all over the world however there are almost the same, just with different names:

i. Profitability ratios which use margin analysis and show the return on sales and capital employed.

ii. Rate of Return Ratio (ROR) or Overall Profitability Ratio: The rate of return ratios are thought to be the most important ratios by some accountants and analysts. One reason why the rate of return ratios is so important is that they are the ratios that we use to tell if the managing director is doing their job properly.

iii. Liquidity ratios measure the availability of cash to pay debt, which give a picture of a company's short term financial situation.
iv. Solvency or Gearing ratios measures the percentage of capital employed that is financed by debt and long term finance. The higher the gearing, the higher the dependence on borrowing and long term financing. The lower the gearing ratio, the higher the dependence on equity financing. Traditionally, the higher the level of gearing, the higher the level of financial risk due to the increase

v. Volatility of profits. It should be noted that the term —Leverage‖ is used in some texts.

vi. Turn over Ratios or activity group ratios indicate efficiency of organization to various kinds of assets by converting them to the form of sales.

vii. Investors’ ratios usually interested by investors.

Financial Overview of Ultratech Cement Limited Table 5.1

Balance Sheet

<table>
<thead>
<tr>
<th></th>
<th>31-03-2008</th>
<th>31-03-2009</th>
<th>31-03-2010</th>
<th>31-03-2011</th>
<th>31-03-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Block</td>
<td>4304.29</td>
<td>4605.38</td>
<td>4784.7</td>
<td>4972.60</td>
<td>7,401.02</td>
</tr>
<tr>
<td>Net Block</td>
<td>2548.9</td>
<td>2537.21</td>
<td>2517.28</td>
<td>2500.46</td>
<td>4,635.69</td>
</tr>
<tr>
<td>Capital WIP</td>
<td>48.18</td>
<td>141.03</td>
<td>696.95</td>
<td>2283.15</td>
<td>677.28</td>
</tr>
<tr>
<td>Investment</td>
<td>184.79</td>
<td>172.39</td>
<td>483.45</td>
<td>170.90</td>
<td>1,034.80</td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>283.71</td>
<td>379.57</td>
<td>433.58</td>
<td>609.76</td>
<td>691.97</td>
</tr>
<tr>
<td>Debtors</td>
<td>171.95</td>
<td>172.55</td>
<td>183.50</td>
<td>216.61</td>
<td>186.18</td>
</tr>
<tr>
<td>Other Current Assets</td>
<td>381.99</td>
<td>220.4</td>
<td>343.09</td>
<td>477.52</td>
<td>483.46</td>
</tr>
<tr>
<td>Balance Sheet Total</td>
<td>3619.52</td>
<td>3623.11</td>
<td>4657.85</td>
<td>6258.40</td>
<td>7709.38</td>
</tr>
</tbody>
</table>

[24]
<table>
<thead>
<tr>
<th>Liabilities</th>
<th>Rs. Cr.</th>
<th>Rs. Cr.</th>
<th>Rs. Cr.</th>
<th>Rs. Cr.</th>
<th>Rs. Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders’ Funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity Share Capital</td>
<td>124.40</td>
<td>124.40</td>
<td>124.49</td>
<td>124.49</td>
<td>124.49</td>
</tr>
<tr>
<td>Share Capital Suspense</td>
<td>-</td>
<td>0.09</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employees Stock Option</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.77</td>
<td>1.68</td>
</tr>
<tr>
<td>Outstanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserves and Surplus</td>
<td>942.73</td>
<td>913.78</td>
<td>1639.29</td>
<td>2571.73</td>
<td>3475.93</td>
</tr>
<tr>
<td>Loan Funds</td>
<td>1531.38</td>
<td>1451.83</td>
<td>1578.63</td>
<td>1740.50</td>
<td>2141.63</td>
</tr>
<tr>
<td>Deferred Tax</td>
<td>581.71</td>
<td>576.96</td>
<td>560.26</td>
<td>542.35</td>
<td>722.93</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creditors</td>
<td>224.67</td>
<td>318.13</td>
<td>463.99</td>
<td>776.79</td>
<td>723.09</td>
</tr>
<tr>
<td>Other Current Liab./Prov.</td>
<td>214.63</td>
<td>237.92</td>
<td>291.19</td>
<td>501.77</td>
<td>519.63</td>
</tr>
<tr>
<td>Balance Sheet Total</td>
<td>3619.52</td>
<td>3623.11</td>
<td>4657.85</td>
<td>6258.40</td>
<td>7709.38</td>
</tr>
</tbody>
</table>

**Summarized P&L Account**

<table>
<thead>
<tr>
<th>As On</th>
<th>31-03-2008</th>
<th>31-03-2009</th>
<th>31-032010</th>
<th>31-03-2011</th>
<th>31-03-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>2,681.05</td>
<td>3,299.45</td>
<td>4,910.83</td>
<td>5,509.22</td>
<td>6,383.08</td>
</tr>
<tr>
<td>Operating</td>
<td>272.81</td>
<td>554.26</td>
<td>1,417.81</td>
<td>1,720.06</td>
<td>1,760.29</td>
</tr>
<tr>
<td>Profit PBIDT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBIT</td>
<td>51.03</td>
<td>338.23</td>
<td>1191.56</td>
<td>1482.83</td>
<td>1437.29</td>
</tr>
<tr>
<td>Gross profit (PBDT)</td>
<td>188.18</td>
<td>501.62</td>
<td>1392.44</td>
<td>1744.24</td>
<td>1684.46</td>
</tr>
<tr>
<td>PBT</td>
<td>43.24</td>
<td>285.59</td>
<td>1166.19</td>
<td>1507.01</td>
<td>1361.46</td>
</tr>
<tr>
<td>PAT (net profit)</td>
<td>2.85</td>
<td>229.76</td>
<td>782.28</td>
<td>1,007.61</td>
<td>977.02</td>
</tr>
<tr>
<td></td>
<td>323.00</td>
<td>237.23</td>
<td>226.25</td>
<td>216.03</td>
<td>221.78</td>
</tr>
</tbody>
</table>
Dividend

<table>
<thead>
<tr>
<th>As On</th>
<th>31-Mar-05</th>
<th>31-Mar-06</th>
<th>31-Mar-07</th>
<th>31-Mar-08</th>
<th>31-Mar-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity dividend</td>
<td>9.33</td>
<td>21.79</td>
<td>49.79</td>
<td>62.24</td>
<td>-</td>
</tr>
<tr>
<td>Preference dividend</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Ratio of Ultratech Cement Limited

Liquidity Ratios

The two liquidity ratios, the current ratio and the acid test ratio, are the most important ratios in almost the whole of ratio analysis and they are also the simplest to use. Liquidity ratios provide information about a firm’s ability to meet its short-term financial obligations. They are of particular interest to those extending short term credit to the firm. Two frequently-used liquidity ratios are current and quick ratio.

While liquidity ratios are most helpful for short-term creditors/suppliers and bankers, they are also important to financial managers who must meet obligations to suppliers of credit and various government agencies. A company's ability to turn short-term assets into cash to cover debts is of the utmost importance when creditors are seeking payment. Bankruptcy analysts and mortgage originators frequently use the liquidity ratios to determine whether a company will be able to continue as a going concern. A complete liquidity ratio analysis can help uncover weaknesses in the financial position of the business. Generally, the higher the value of the ratio, the larger the margin of safety that the company possesses to cover short-term debts.
1. Current Ratio:

Current Ratio = \frac{\text{Current Asset}}{\text{Current Liabilities}}

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Asset</td>
<td>837.65</td>
<td>772.52</td>
<td>960.17</td>
<td>1303.89</td>
<td>1361.61</td>
</tr>
<tr>
<td>Current Liabilities</td>
<td>439.30</td>
<td>556.05</td>
<td>755.18</td>
<td>1278.56</td>
<td>1242.72</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>1.91</td>
<td>1.39</td>
<td>1.27</td>
<td>1.02</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Comments

The ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). The higher the current ratio, the more capable the company is of paying its obligations. A ratio in each year suggests that the company would be able to pay off its obligations if they came due at that point, but the company has shown constant decreasing trend in its financial health in subsequent years. Since low current ratio does not necessarily mean that the firm will go bankrupt, but it is definitely is not a good sign. Short term creditors prefer a high current ratio since it reduce their risk.

2. Quick or Acid-Test Ratio

The essence of this ratio is a test that indicates whether a firm has enough short-term assets to cover its immediate liabilities without selling inventory. So it is the backing available to liabilities that must be paid almost immediately. There are two terms of liquid asset and liquid liabilities in this formula, Liquid asset is all current assets except the inventories and prepaid expenses, because prepaid expenses cannot be converted to cash. The liquid liabilities include all current liabilities except bank overdraft and cash credit since they are not required to be paid off immediately.
Quick Ratio = Liquid Asset/Liquid Liabilities

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Asset</td>
<td>553.94</td>
<td>392.95</td>
<td>526.59</td>
<td>694.13</td>
<td></td>
</tr>
<tr>
<td>Liquid Liabilities</td>
<td>439.30</td>
<td>556.05</td>
<td>755.18</td>
<td>1278.56</td>
<td>1242.72</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>1.26</td>
<td>0.70</td>
<td>0.70</td>
<td>0.54</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Comments:

The acid-test ratio is far more forceful than the current ratio, primarily because the current ratio includes inventory assets which might not be able to turn to cash immediately. Companies with ratios of less than 1 cannot pay their current liabilities and should be looked at with extreme caution. Furthermore, if the acid-test ratio is much lower than the current ratio, it means current assets are highly dependent on inventory.

Turn Over Ratios

Accounting ratios that measure a firm's ability to convert different accounts within their balance sheets into cash or sales. Companies will typically try to turn their production into cash or sales as fast as possible because this will generally lead to higher revenues. Such ratios are frequently used when performing fundamental analysis on different companies.

1. Fixed Assets Turn Over Ratio:

It shows how the company uses its fixed assets to achieve sales. The formula is as follows:

Fixed Asset Turn Over Ratio = Net Sales/Fixed Assets

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET SALES</td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td>FIXED ASSETS</td>
<td>2597.08</td>
<td>2678.24</td>
<td>3214.23</td>
<td>4783.61</td>
<td>5312.97</td>
</tr>
<tr>
<td>FIXED ASSETS TURN OVER RATIO:</td>
<td>1.032</td>
<td>1.23</td>
<td>1.53</td>
<td>1.15</td>
<td>1.20</td>
</tr>
</tbody>
</table>
Comments:

A high fixed asset turnover ratio indicates the capability of the firm to earn maximum sales with the minimum investing in fixed assets. So it shows that the company is using its assets more efficiently. As it is shown in above the Company is using its assets specially fixed assets more efficiently each year although it had a light decrease in efficiency in 2011 and 2012 compared to 2010.

2. Current Assets Turn Over Ratio:

It is almost like the fixed asset turnover ratio, it calculates the capability of organization to earn sales with usage of current assets. So it indicates with what ratio current assets are turned over in the form of sales.

This ratio is calculated as:

\[
\text{Current Asset Turn Over Ratio} = \frac{\text{Net Sales}}{\text{Current Assets}}
\]

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET SALES</td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td>CURRENT ASSETS</td>
<td>837.65</td>
<td>772.52</td>
<td>960.17</td>
<td>1303.89</td>
<td>1361.61</td>
</tr>
<tr>
<td>CURRENT ASSETS TURN OVER RATIO:</td>
<td>3.20</td>
<td>4.27</td>
<td>5.11</td>
<td>4.22</td>
<td>4.69</td>
</tr>
</tbody>
</table>

Comments:

In this formula current assets are balance sheet accounts that represent the value of all assets that are reasonably expected to be converted into cash within one year in the normal course of business. A higher current assets turnover ratio is more desirable since it shows the better financial position of company and better usage of these current assets. It can be seen from above figure that the company has shown high ratio in 2008, 2009, 2010, and 2012, never mind the slight decrease in 2011. It means the company is using its current assets more efficiently. The comparison between two ratios over the same period of time, also shows that company has used its current assets better than its fixed assets.
3. **Working Capital Turn Over Ratio:**

As its name suggests it is the relationship between turnover and working capital. It is a measurement comparing the depletion of working capital to the generation of sales over a given period. This provides some useful information as to how effectively a company is using its working capital to generate sales.

A company uses working capital to fund operations and purchase inventory. These operations and inventory are then converted into sales revenue for the company. The working capital turnover ratio is used to analyze the relationship between the money used to fund operations and the sales generated from these operations.

The formula related is: \( \text{Working Capital Turn Over Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}} \)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NET SALES</strong></td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td><strong>CAPITAL WORKING</strong></td>
<td>398.35</td>
<td>216.47</td>
<td>204.99</td>
<td>25.33</td>
<td>118.89</td>
</tr>
<tr>
<td><strong>CAPITAL TURN OVER RATIO</strong></td>
<td>6.73</td>
<td>15.24</td>
<td>23.96</td>
<td>217.48</td>
<td>53.69</td>
</tr>
</tbody>
</table>

**Comments**

The term working capital is a measure of both a company's efficiency and its short-term financial health. The working capital ratio is calculated as:

\[ \text{Working Capital} = \text{Current Asset} - \text{Current Liabilities} \]

In a general sense, the higher the working capital turnover, the better because it means that the company is generating a lot of sales compared to the money it uses to fund the sales.

4. **Capital Employed Turnover Ratio**

The capital employed turnover ratio tells us the state of the relationship between the shareholders' investment in the business and the sales that the management of the business has been able to generate from it.
Capital Employed Turnover Ratio = \( \frac{\text{Net sales}}{\text{Capital Employed}} \)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET SALES CAPITAL</td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td>Employed Capital</td>
<td>2598.84</td>
<td>2490.01</td>
<td>3342.41</td>
<td>4436.72</td>
<td>5742.05</td>
</tr>
<tr>
<td>Employed Turnover ratio</td>
<td>1.032</td>
<td>1.33</td>
<td>1.47</td>
<td>1.24</td>
<td>1.11</td>
</tr>
</tbody>
</table>

**Comments**

Capital employed can be expressed in different terms, all generally refer to the investment required for a business to function. By "employing capital" you are making an investment. So, capital employed indicated the long term funds supplied by creditors and owners of the firms. So it can be computed as:

\[
\text{Capital Employed} = \text{share capital} + \text{Long term liabilities} + \text{reserve and surpluses}
\]

This ratio shows the efficiency of the firm with which the capital employed is being utilized. A high ratio is a sign of capability of firm to earn maximum sales with minimum amount of capital employed and this firm is constantly improving its ratio from 2008 to 2010 except for 2011 and 2012 it is due to current economic slowdown prevailing in the country as well as in the world.

**Solvency or Gearing Ratios:**

Gearing is concerned with the relationship between the long terms liabilities that a business has and its capital employed. The idea is that this relationship ought to be in balance. It is a general term describing a financial ratio that compares some form of owner's equity (or capital) to borrowed funds. The shareholders and lenders of long term loans may be interested in this ratio.

1. **Debt Equity ratio:**

This ratio reflects the relative claims of creditors and share holders against the assets of the firm, debt equity ratios establishment relationship between borrowed funds
and owner capital to measure the long term financial solvency of the firm. The ratio indicates the relative proportions of debt and equity in financing the assets of the firm.

It is calculated as

Debt equity ratio = Debt/shareholder’s fund

<table>
<thead>
<tr>
<th>DEBT EQUITY RATIO</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.43</td>
<td>1.40</td>
<td>0.90</td>
<td>0.65</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Comments

In this ratio shareholders’ fund is the share capital plus reserve and surpluses. In case of high debt equity it would be obvious that the investment of creditors is more than owners. And if it is so high then it brings the firm in a risky position. Or if it is too low it might indicate that the organization has not utilized its capacity of borrowing which must be utilized and that is because the borrowing from outsiders is a good source of fund for business with lower returns in compare to equity. The Ultratech Cement Ltd. is trying to lower its debt equity ratio by lowering its liabilities and increasing its equity. So it wants to improve its position since, a relatively lower ratio is favorable.

2. Proprietary ratio:

`It is primarily the ratio between the proprietor’s funds and total assets. It indicates the relationship between owners fund and total assets. And shows the extent to which the owner s’ fund are sunk in assets or different kinds of it.

proprietary Ratio = Proprietors Funds/Total Assets

NOTE: Owner’s funds is equal to Shareholders Funds

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner’s fund</td>
<td>1067.13</td>
<td>1038.27</td>
<td>1763.78</td>
<td>2696.99</td>
<td>3602.1</td>
</tr>
<tr>
<td>Total Asset</td>
<td>3619.52</td>
<td>3623.11</td>
<td>4657.85</td>
<td>6258.40</td>
<td>7709.38</td>
</tr>
<tr>
<td>Proprietary Ratio</td>
<td>3.39</td>
<td>3.49</td>
<td>2.64</td>
<td>2.32</td>
<td>2.14</td>
</tr>
</tbody>
</table>
Comments

This ratio indicates the proportion of proprietor’s funds used for financing the total assets. As a very rough measure, it is suggested that 2/3rd to 3/4th of the total assets should be financed through borrowings. A high ratio will indicate high financial strength but a very high ratio will indicate that the firm is not using external funds adequately.

Profitability Ratio

As the name itself suggests, this ratio is calculated to determine profitability of the firm. The basic objective of almost every business is to earn profit which is essential for survival of the business.

A business needs profits not only for its existence but also for its expansion and diversification. The investors want an adequate return on their investments, workers want higher wages, creditors want higher security for interest and loan and the list could continue.

It is a class of financial metrics that are used to assess a business’s ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well.

1. Gross Profit Ratio:

The gross profit margin ratio tells us the profit a business makes on its cost of sales. It is a very simple idea and it tells us how much gross profit our business is earning. Gross profit is the profit we earn before we take off any administration costs, selling costs and so on. So we should have a much higher gross profit margin than net profit margin. High ratios are favorable in this, since it indicates the business is earning a good return on the sale of its merchandise.
Gross Profit Ratio = \( \frac{\text{GrossProfit}}{\text{NetSales}} \times 100 \)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET SALES</td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td>GROSS PROFIT</td>
<td>265.02</td>
<td>501.62</td>
<td>1392.44</td>
<td>1507.01</td>
<td>1684.46</td>
</tr>
<tr>
<td>GROSS PROFIT RATIO</td>
<td>9.88</td>
<td>15.20</td>
<td>28.35</td>
<td>27.36</td>
<td>26.40</td>
</tr>
</tbody>
</table>

**Comments**

This ratio indicates the relation between production cost and sales and the efficiency with which goods are produced or purchased. If it has a very high gross profit ratio it may indicate that the organization is able to produce or purchase at a relatively lower cost. Gross profit is the profit we earn before we take off any administration costs, selling costs and so on. Here company has achieved very good efficiency in 2010 compared to other financial years.

2. **Net Profit Ratio:**

This shows the portion of sales available to owners after all expenses. A high profit ratio is higher profitability of the firm. This ratio shows the earning left for shareholder as percentage of Net sales.

Net Margin Ratio measures the overall efficiency of production, Administration selling, financing, pricing and Taste Management.

Net Profit Ratio = \( \frac{\text{Net Profit After Tax}}{\text{Net Sales}} \times 100 \)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
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<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET SALES</td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td>NET PROFIT</td>
<td>2.85</td>
<td>229.76</td>
<td>782.28</td>
<td>1007.61</td>
<td>977.02</td>
</tr>
<tr>
<td>NET PROFIT RATIO</td>
<td>0.11</td>
<td>6.96</td>
<td>15.93</td>
<td>18.29</td>
<td>15.30</td>
</tr>
</tbody>
</table>
Comments

It is depicted from the above diagram that company has been trying to improve its profitability year by year except for 2012 because of environmental instability which includes the economic meltdown in the country and whole world.

3. Operating Net Profit Ratio

This ratio establishes the relation between the net sales and the operating net profit. The concept of operating net profit is different from the concept of net profit operating net profit is the profit arising out of business operations only. This is calculated as follows:

Operating net profit = Net Profit + Non operating expenses – non operating income.

Alternatively, this profit can also be calculated by deducting only operating expenses from the gross profit.

This ratio is calculated with help of the following formula.

operating n.p. ratio= Operating Net Profit/NetSales X100

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NET SALES</strong></td>
<td>2681.06</td>
<td>3299.45</td>
<td>4910.83</td>
<td>5508.78</td>
<td>6,383.08</td>
</tr>
<tr>
<td><strong>OPERATING PROFIT</strong></td>
<td>272.81</td>
<td>554.26</td>
<td>1,417.81</td>
<td>1,720.06</td>
<td>1,760.29</td>
</tr>
<tr>
<td><strong>OPERATING PROFIT RATIO</strong></td>
<td>10.18</td>
<td>16.80</td>
<td>28.87</td>
<td>31.22</td>
<td>27.57</td>
</tr>
</tbody>
</table>

Overall Profitability or Roar Ratios:

The ROI is perhaps the most important ratio of all. It is the percentage of return on funds invested in the business by its owners. In short, this ratio tells the owner whether or not all the effort put into the business has been worthwhile. If the ROI is less than the rate of return on an alternative, the owner may be wiser to sell the company, put the money in risk-free investment such as a bank savings account, and avoid the daily struggles of small business management.
Investors Ratios

1. Earnings Per Share:

   EPS measures the profit earned per share. The higher EPS will attract more investors to acquire shares in the company as it indicates that the business is more profitable enough to pay the dividends in time. So it is of utmost importance to investors in order to decide the prospects. It is calculated as:

   \[
   \text{EPS} = \frac{\text{N.P.A.T.} - \text{Preference Dividend}}{\text{Number of equity shares Outstanding}}
   \]

<table>
<thead>
<tr>
<th>EPS</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.22</td>
<td>18.47</td>
<td>62.84</td>
<td>80.94</td>
<td>78.5</td>
<td></td>
</tr>
</tbody>
</table>

   Comments:

   As mentioned above, EPS is one of the important criteria for measuring the performance of a company. If EPS increases, the possibility of a higher dividend per share also increases. However, the dividend payment depends on the policy of the company. Market price of shares of a company may also show an upward trend. If the EPS is showing a rising trend. However, it should be remembered that EPS of different companies may vary from company to company due to the following different practices by different companies regarding stock in trade, depreciation, source of raising finance, tax-planning measures etc.

Dividend Payout Ratio

EPS described above indicates the amount of profit available for equity share shareholders. Dividend Payout Ratio indicates the percentage of profit distributed as dividends to the shareholders. It measures the relationship between the earning belonging to the equity shareholders and the amount finally paid to them:

\[
\text{DPR Ratio} = \frac{\text{DPS}}{\text{EPS}} \times 100
\]
<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS</td>
<td>0.75</td>
<td>1.75</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>EPS</td>
<td>0.22</td>
<td>18.47</td>
<td>62.84</td>
<td>80.9</td>
<td>78.5</td>
</tr>
<tr>
<td>DPR</td>
<td>341</td>
<td>9.47</td>
<td>6.36</td>
<td>6.18</td>
<td>6.37</td>
</tr>
</tbody>
</table>

Comments: This ratio indicates the policy of management to pay cash dividend. A higher ratio indicates that the organization is following the liberal dividend policy regarding the dividend while a lower ratio indicates a conservative approach of the management towards the dividend.

### Summary of Ratios

Table 5.2 of Financial Ratios of ULTRATECH CEMENT LTD. for last Five Years

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>1.91</td>
<td>1.39</td>
<td>1.27</td>
<td>1.02</td>
<td>1.10</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>1.26</td>
<td>0.70</td>
<td>0.70</td>
<td>0.54</td>
<td>0.54</td>
</tr>
<tr>
<td>Fixed Asset Turn Over Ratio</td>
<td>1.032</td>
<td>1.23</td>
<td>1.53</td>
<td>1.15</td>
<td>1.20</td>
</tr>
<tr>
<td>Current Asset Turn Over Ratio</td>
<td>3.20</td>
<td>4.27</td>
<td>5.11</td>
<td>4.22</td>
<td>4.69</td>
</tr>
<tr>
<td>Working Capital Turnover Ratio</td>
<td>6.73</td>
<td>15.24</td>
<td>23.96</td>
<td>217.48</td>
<td>53.69</td>
</tr>
<tr>
<td>Capital Employed Turnover Ratio</td>
<td>1.032</td>
<td>1.33</td>
<td>1.47</td>
<td>1.24</td>
<td>1.11</td>
</tr>
<tr>
<td>Debt Equity ratio</td>
<td>1.43</td>
<td>1.40</td>
<td>0.90</td>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>Proprietary Ratio</td>
<td>3.39</td>
<td>3.49</td>
<td>2.64</td>
<td>2.32</td>
<td>2.14</td>
</tr>
<tr>
<td>G.P. Ratio</td>
<td>9.88</td>
<td>15.20</td>
<td>28.35</td>
<td>27.36</td>
<td>26.40</td>
</tr>
<tr>
<td>N.P. Ratio</td>
<td>0.11</td>
<td>6.96</td>
<td>15.93</td>
<td>18.29</td>
<td>15.30</td>
</tr>
<tr>
<td>Operating N.P. Ratio</td>
<td>10.18</td>
<td>16.80</td>
<td>28.87</td>
<td>31.22</td>
<td>27.57</td>
</tr>
<tr>
<td>Return on Asset Ratio</td>
<td>0.07</td>
<td>6.34</td>
<td>16.79</td>
<td>16.10</td>
<td>12.67</td>
</tr>
<tr>
<td>ROCE Ratio</td>
<td>1.96</td>
<td>13.58</td>
<td>35.65</td>
<td>33.42</td>
<td>25.02</td>
</tr>
<tr>
<td>ROE Ratio</td>
<td>0.26</td>
<td>22.13</td>
<td>44.35</td>
<td>37.36</td>
<td>27.12</td>
</tr>
<tr>
<td>EPS</td>
<td>0.22</td>
<td>18.47</td>
<td>62.84</td>
<td>80.94</td>
<td>78.5</td>
</tr>
<tr>
<td>Dividend Payout Ratio</td>
<td>341</td>
<td>9.47</td>
<td>6.36</td>
<td>6.18</td>
<td>6.37</td>
</tr>
</tbody>
</table>

[37]
Observation and Findings

Based on the ratios and calculations made on my project I can analyze S.S.V. as follows:

1. The year 2010 could be called the peak on the business during last five year which almost divides the ratios into two parts, before 2007 and after that.

2. Liquidity ratios shows that the firm has been facing some problems regarding paying short term liabilities for 3 years, but it is trying to improve the situation.

3. The usage ratio of the company had followed a comparable pattern. The overall efficiency of the company to use its assets, capital or the working capital had increased from 2008 to 2010. However in the later years, it is declining and falling to a lower level of efficiency, for which we can blame the environmental conditions of the country, and that involves the economical and political challenges of India and the world.

4. The Company fails to increase its profitability in the last year, though it should be mentioned that we see a noticeable net profit point in the 2011. It also fails to give satisfactory rate of return in the two years compared to 2010.

References


