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# Liquidity Management in Indian Electrical Equipment Companies (A Comparative Study of Companies Listed in Nifty 50)

**Dharmendra Kumar[a] Charu Agarwal[b*]**

*aDepartment of Commerce, Government PG College, Lohaghat, U.K.,India*
*Email Id: dr.dheeraj1972@gmail.com*
*bDepartment of Commerce, Kumaun University, Nainital, U.K. India*
*Email Id: Charuagarwal.mba@gmail.com*

## Abstract

*Liquidity is perceived as the debt paying ability of a going concern. Liquidity refers to how quickly and cheaply an asset can be converted into cash. Liquidity is the ability of a company to meet the short term obligations. To keep a constant eye on liquidity position of a company, it is of utmost importance as without it a company cannot survive. In this paper a comparative study on the liquidity position of capital goods industry i.e., Indian Electrical Equipment Industry has been done to know the liquidity position of the companies listed in Nifty 50 under this segment. The techniques of mean, standard deviation, coefficient of variation, ratio analysis, and Motaal's ultimate rank test has been applied to conclude. The major findings of the paper are the current assets, liquid assets, current liabilities, net working capital and quick net working capital of BHEL and Suzlon Energy Ltd. shows a positive growth rate which indicates that the liquidity position of the company was safe during the period of study except ABB Ltd. and Siemens Ltd whose quick net working capital growth rate is negative which indicates towards unsound liquidity position. The major components of current assets of all the companies are Inventories and Sundry debtors except Suzlon Energy Ltd. whose major component is loans and advances. According to Motaal's Ultimate Rank Test the liquidity position of Siemens Ltd. seems to be sound among the selected companies.*

***Keywords:*** *Liquidity Management, Components of Working Capital, Ratio Analysis, Motaal's Ultimate Rank Test*

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**Corresponding Author*

## 1. INTRODUCTION

In a "perfect" world, there would be no necessity for liquidity. In such a world, there would be no uncertainty, no transaction costs, information search costs, scheduling costs, or production and technology constraints. The unit cost of producing goods would not vary with the amount produced. Firms would borrow and lend at the same interest rate. Capital, labour, and product markets would reflect all available information and would be perfectly competitive. In such a world, a firm does not have any advantage to invest in short run.

But the world in which the firm has to function is not perfect, it is characterized by uncertainty, transaction cost, information cost, variability of cost associated with producing goods for sale. Firms are also facing limitation on production capacity and technology. These real world characteristics introduce problems to the firm to deal with.

In a dynamic economy, active or latent threats to and opportunities for the business originate with some kind of change: change in consumer behaviour, technology, competitor's action, or change within the business itself. Usually, where change is anticipated, the threat can be avoided and the opportunity can be seized. Since it is important to ensure that all changes are anticipated **(Marques, Maria Manuela Farelo Athayde, 1988).** Cash and liquidity management has become more important than ever before. Companies are realizing that it is difficult to maintain the adequate cash flow and profit margins in a global economic crisis.

Liquidity is the ability to meet expected and unexpected demands for cash through ongoing cash flow or the sale of an asset at fair market value. Liquidity risk is the risk which at some time an entity will not have enough cash or liquid assets to meet its cash obligations. A firm in order to remain in existence and sustain its activities as a going concern must remain liquid and meet its obligations as and when they become due. Even though firms traditionally are focused on long term capital budgeting and capital structure, the recent trend is that many companies across different industries focus on working capital management efficiency **(Barad Mahesh M., 2010).** The existence of an adequate liquidity and its careful management can make substantial difference between the success and failure of an enterprise.

It is often observed that whenever a financial analysis of companies is done, more emphasis is given on the profitability of the business rather than on its liquidity. Of course, this is quite obvious, as the most important financial objective of any business is to earn profit. So, the managers lay more emphasis towards profitability. But another significant variable is liquidity which means the ability of a company to honour short term financial obligations. If the company which is not able to honour its short-term financial obligations, it moves a step ahead towards its bankruptcy. Liquidity management, therefore, involves the amount of investments in liquid assets to meet the short-term maturing obligation of creditors and others.

Liquidity is having enough money in the form of cash, or near-cash assets, to meet the financial obligations. In business, cash is king, particularly during tough economic times or when the markets are turbulent. Without cash, company cannot pay its bills nor carry out growth plans, and it may find it difficult to get credit or take advantage of business opportunities **(Dr.,W. Villagio)**. A company that cannot pay its creditors on time and continue not to honour its obligations to the suppliers of credit, services, and goods can be declared a sick company or bankrupt company.

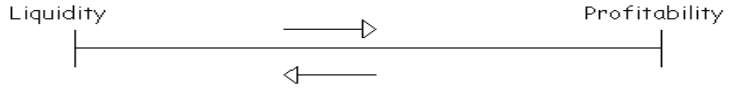
According to H. Bhattacharya, "a firm can maintain liquidity if it holds assets that could be shifted or sold quickly with minimum transaction cost and loss in value."

It must be remembered that different items of current assets have different degree of liquidity. Cash is the most liquid asset. For other types of current assets, liquidity concept has two dimensions, i.e., Time and Risk. The speed with which current assets other than cash can be converted into cash is known as time dimension of liquidity consideration. More quickly and rapidly current assets are converted into cash, more liquid those current assets shall be. Probably due to this factor, liquid assets are also called quick assets. At the same time, liquidity has also risk dimension, this is kind of loss in value by conversion of current assets into cash.

If all the current obligations are met without any delay as and when these become due, creditors and all others will have a feeling of confidence in the financial strength of the organization and this will sustain the credit standing of the organization. But failure to meet such obligations on continuous basis would cause an adversely affect on the credit standing and market reputation resulting in more difficult to finance the level of current assets from the short-term sources. Keeping liquidity is usually costly, but helps avoiding negative effects of unexpected cash-flow shocks.

**The Liquidity versus Profitability Principle**

There is a trade-off between liquidity and profitability; gaining more of one ordinarily means giving up some of the other.




As in the above picture "*Liquidity*" as being on one end of a straight line and "*Profitability*" on the other end. If one steps forward on the line and move toward one, then automatically move away from the other. In other words, there is the trade-off between liquidity and profitability.

Similarly, there is a direct relationship between higher risk and higher return. A company taking higher risk could endanger its liquidity position. However, if a company has a higher return then it will increase its profitability.

One should try neither to maximize nor minimize the liquidity ratios; one should try to optimize them in relation to the objective, which in case of a commercial company is probably the maximization of profit on capital employed. The lower the liquidity ratios are, the more vulnerable the company is to pressure from creditors which it unable to meet and vice versa. Therefore, one should seek to have as little working capital as is consistent with not being unduly vulnerable to pressure from creditors.

## 2. REVIEW OF LITERATURE

**Mohan, Reddy, P.(1995),** in his study on "Management of working capital", studies various issues related to working capital management among selected (six companies) private large – scale companies in the state of Andhra Pradesh during the period from 1977 to 1986 . The study revealed that investment in current assets was more than that of fixed assets and inventories constituted highest percentage of total current assets. Study also pointed out that the liquidity and solvency position of sample units was found to be highly unsatisfactory. The study is based on

his findings, suggested the direct need for improvement of liquidity and solvency position of sample companies failing which the situation would lead to serious liquidity crunch.

**Romero, R. Richard (1995)**, in the study on "Invest working capital for better returns" felt that the investment in working capital has to be capitalized. They said that the goals of investment in working capital were threefold: to find income producing opportunities for cash that is temporarily idle, to maximize yield and to maintain the liquidity of the investment. With his experience as associate financial consultant with Merrill Lynch's Private client group in Arlington Mr. Romero felt that the firms have to have concrete formula of optimum investment in working capital.

**Bhattacharya, Hrishikes (1995),** in his book on "*Total Management by Ratios*" says that problem of liquidity management is more acute for companies which are growing at a fast rate. The rising cash flow (profit) curves gives a euphoric feeling of "all being well everywhere'', which makes the managers to press the growth button faster. What they lose sight of is the real cash position of the company which might be showing a downward trend and hence, pushing the company the slowly and then vigorously towards a severe liquidity crisis despite the company making high profit. Unfortunately, once an enterprise-manager presses the growth buttons, it is difficult for them to retract the steps. The continuous erosion of liquidity ultimately makes a high-growth company sick. There is nothing wrong in making profit, in fact, that is the purpose of business, but unless there is cash coming through profit, an enterprise will soon be dead.

**Abuzar M.A. Elijelly (2004),** in the study on "Liquidity – profitability tradeoff: An empirical investigation in an emerging market" empirically examined the relation between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia. The study found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio."

**Chakraborty (2008)**, in the study on "Working Capital and Profitability: An Empirical Analysis of Their Relationship with Reference to Selected Companies in the Indian Pharmaceutical Industry" evaluated the relationship between working capital and profitability of Indian pharmaceutical companies. He pointed out that there were two distinct schools of thought on this issue: according to one school of thought, working capital is not a factor of improving profitability and there may be a negative relationship between them, while according to the other school of thought, investment in working capital plays a vital role to improve corporate profitability, and unless there is a minimum level of investment of working capital, output and sales cannot be maintained - in fact, the inadequacy of working capital would keep fixed asset inoperative.

**Kaiser Kevin and Young David S (2009),** in their article on "Need Cash? Look Inside Your Company" had taken a hard look at the way company manages its working capital. He identified that a lot of capital tied up in receivables and inventory could be turned into cash by challenging the working capital practices and policies of the company. He had explored six common mistakes that companies make in managing working capital. He says that the simple act of correcting them could free up enough cash to make the difference between failure and survival in the current recession.

**Moraes, Sherin,(2010)** in her article on " Liquidity v/s profitability - Striking the right balance" writes about the implications of liquidity and profitability in a pharmaceutical company.A firm is

required to maintain a balance between liquidity and profitability while conducting its day to day operations. Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers. A proper management of the same could result in the desired impact on either profitability or liquidity.

**Chandrabai T,Rao Janardhan Venkata K. Dr. (2011)** in their paper on " Working Capital Management of Indian Electrical Equipment Manufacturers-A Comparative study" found that the companies in the electrical equipment industry have performed fairly well for financial year 2010. The sales of most of the companies have increased. The management of Working Capital is one of the most important and challenging aspect of the overall performance of the organization. Merely more effective and efficient management of working capital can ensure survival of a business enterprise. Working Capital Management is concerned with the problems that arise in attempting to manage the Current Assets, Current Liabilities and the interrelation that exists between them. This study analyses the comparative study of working capital management in Indian Electrical Equipment Industry and it is limited to the companies BHEL and ABB Ltd represent public and private sector enterprises respectively. Relevant data has been extracted from the consecutive annual reports between financial years 2005-06 to 2009-10 of both the companies

**Nandi Chandra Kartik (2012)** in his paper on "Trends in Liquidity Management and Their Impact on Profitability: A Case Study" makes an attempt to assess the trends in liquidity management and their impact on profitability. An attempt has been made to establish the linear relationship between liquidity and profitability with the help of a multiple regression model. On the basis of overall analysis, it is therefore important to state that the selected company always tries to maintain adequate amount of net working capital in relation to current liabilities so as to keep a good amount of liquidity throughout the study period.

## 3. PROFILE OF ELECTRICAL EQUIPMENT INDUSTRY

Power is a necessary fuel for a growing economy. The electrical equipment industry in India caters to the needs of the power generation, transmission, distribution and energy management sectors. The Indian electrical equipment industry has reported a decelerated growth to 6.6% in 2011-12 as compared to 11.3% and 13.7% in 2009-10 and 2010-11, respectively, according to data compiled by the Indian Electrical and Electronics Manufacturers' Association (IEEMA). The industrial sector, due to increasing capacity additions, has the highest demand for electricity, as compared to others sectors (domestic, commercial and agriculture).

**The companies that are listed in NIFTY 50 under this industry and which come under the area of the study are:**

- ✓ ABB Ltd.
- ✓ BHEL
- ✓ Siemens Ltd.
- ✓ Suzlon Energy Ltd.

Brief company profiles of all the above companies are as follows:

### 3.1. ABB Ltd.

The Company was incorporated on 24.12.1949 as The Hindustan Electric Company Limited. On 24.09.1965, the Company's name was changed to Hindustan Brown Boveri Limited (HBB).

Pursuant to the Scheme of Amalgamation of Asea Limited with HBB with effect from 1st January 1989, the name was further changed to Asea Brown Boveri Limited, with effect from 13.10.1989. Effective 16.04.2003, the name was further changed to ABB Limited.
ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The company business is present in around 100 countries.
ABB Ltd. is engaged in the power transmission, distribution, and power-plant automation. It operates through six segments: Power Products, Power Systems, Discrete Automation and Motion, Low Voltage Products, Process Automation, and Corporate and other.
ABB's motto "Power and productivity for a better world" reflects our vision that "our products and services must not only support our customers in their business objectives, but that these products are symbiotically embedded within the wider perspective of society and the world in which we live."

**3.2. BHEL**

**BHEL** was founded in 1950s. **Bharat Heavy Electricals Limited-BHEL**, has today emerged as the largest engineering and manufacturing enterprise of its kind in India and ranks amongst the top ten power generation equipment manufacturers in the world. With a massive network of 14 manufacturing Units , **BHEL** manufactures almost all critical high technology products required for power sector like Gas Turbines, Steam Turbines, Turbogenerators, Boilers, Pumps and Heat exchangers, Pulverisers and electrical switch gears. The mission of the company is "To be an Indian Multinational Engineering Enterprise providing Total Business Solutions through Quality Products, Systems and Services in the fields of Energy, Industry, Transportation, Infrastructure and other potential areas."

**3.3. Siemens Ltd.**

Siemens Ltd. is a German multinational conglomerate company headquartered in Munich, Germany. It is the largest Europe-based electronics and electrical engineering company. Siemens was founded in Berlin by Werner von Siemens in 1847.
Siemens Limited provides technology-enabled solutions operating in the core business segments of industry, energy and healthcare. It operates in eleven segments: Industry Automation, Drive Technologies, Building Technologies, Industry Solutions, Mobility, Fossil Power Generation, Oil & Gas, Power Transmission, Power Distribution, Healthcare and Real Estate.
For over 160 years, Siemens` motto has been to always stay one step ahead. Our aim is "a sustainable business environment, which we`re promoting on a global level."

**3.4. Suzlon Energy Ltd.**

Beginning with a wind farm project in the Indian state of Gujarat in 1995, with a capacity of just 3 MW – the founder set forth to acquire the basic technology and varied expertise to set up **Suzlon Energy Limited - India's first home-grown wind technology company.**
**The Suzlon Group** is ranked as the world's fifth largest wind turbine supplier, in terms of cumulative installed capacity, at the end of 2010. The company's global spread extends across Asia, Australia, Europe, Africa and North and South America. The Group offers one of the most comprehensive product portfolios–ranging from sub-megawatt on-shore turbines at 600 Kilowatts

(KW), to the world's largest commercial 6.15 MW offshore turbine – built on a vertically integrated, low-cost, manufacturing base. The vision of the company is "To be the technology leader in the wind sector".

## 4. OBJECTIVES OF THE STUDY

1. To know the overall quantum of liquid assets maintained by the selected companies.
2. To study the components of working capital and to find the major component responsible for change in it.
3. To study the liquidity position of the companies under study.
4. To compare the liquidity position of the selected companies under the Electrical Equipment Industry

## 5. RESEARCH METHODOLOGY

The samples selected for the study are the companies listed in Nifty 50 under Electrical Equipment Industry which is four companies namely, ABB, BHEL, Siemens, Suzlon. This study is based on secondary data. The data required for this study have been collected from the published annual reports of the selected companies. The study covered a period of five years starting from 2007 to 2011. This study covers mainly the following aspects of the Liquidity Management (i) Components of Working Capital, (ii) Trends of Working Capital, (iii) Trends of Current Assets (CA) and Current Liabilities (CL) with their indices. The techniques applied in the study are Percentage method, mean, standard deviation, coefficient of variation, Ratio Analysis, Motaal's Ultimate Rank Test.

## 6. DATA ANALYSIS

To analyse the liquidity position of a particular company it is essential to know the overall quantum of liquid assets maintained by a company and to find out the change in this quantum during the period under study.

**Table 1: Liquidity Position of ABB Ltd.**

| Year | Current Assets | Liquid Assets | Current Liabilities | Woking Capital (net) | Change in net working capital | Working Capital (Quick) | Change in Quick working capital |
|---|---|---|---|---|---|---|---|
| **2007** | 4110.70 | 3621.99 | 2999.31 | 1111.39 | _ | 622.68 | _ |
| **2008** | 4699.83 | 4057.18 | 3321.52 | 1378.31 | 266.92 | 735.66 | 112.98 |
| **2009** | 4749.27 | 4019.86 | 3131.98 | 1617.29 | 238.98 | 887.88 | 152.23 |
| **2010** | 4926.22 | 4228.37 | 3347.69 | 1578.53 | -38.76 | 880.68 | -7.21 |
| **2011** | 4960.04 | 4034.49 | 3750.94 | 1209.10 | -369.43 | 283.55 | -597.13 |
| Mean | 4689.21 | 3992.38 | 3310.29 | 1378.92 | | 682.09 | |
| Growth Rate (%) | 20.66 | 11.39 | 25.06 | 8.79 | | -54.46 | |
| S.D. | 342.02 | 223.39 | 284.69 | 221.97 | | 248.51 | |
| C.V (%) | 7.29 | 5.6 | 8.60 | 16.1 | | 36.43 | |

Source: Annual Reports of ABB Ltd.

It is evident from Table 1 that current assets of ABB Ltd. increased from Rs. 4110.70 crore in 2007 to Rs. 4960.04 crore in 2011. On average, the company had current assets of Rs. 4689.21 crore with

a growth rate of 20.66%. The standard deviation of current assets was Rs. 342.02 crore and the coefficient of variation was 7.29%, which shows a steady growth of current assets during the period of the study.

Liquid assets also increased from Rs. 3621.99 crore in 2007 to Rs. 4034.49 crore in 2011 with an average of Rs. 3992.38 crore. The growth rate of liquid assets was 11.39% showing a sufficient liquidity position during the period of the study. The standard deviation was Rs. 223.39 crore and the coefficient of variation was 5.6%, which shows less variability in liquid assets during the period under reference.

Current liabilities increased with a growth of 25.06% during the study period from Rs. 2999.31crore in 2007 to Rs. 3750.94 crore in 2011. The overall average was Rs. 3310.29 crore and the coefficient of variation was 8.6%, which is more than the growth of current assets and liquid assets evidencing more flexibility in current liabilities during the study period.

Of the several measures, net working capital (NWC) itself provides the one, which indicates a 'margin of safety' or cushion of protection provided for creditors. Such a margin or cushion of protection provided by the company is exhibited in table 1. The table shows that the company had positive net working capital throughout the period of the study. The greater the amount of net working capital, the greater is the liquidity of the firm. NWC increased form Rs. 1111.39 crore in 2007 to Rs. 1209.1 crore in 2011; on average it was Rs. 1378.92 crore.

The net working capital of ABB Ltd. did not show any definite trend of rise and fall. It varied between Rs. 1111.39 crore in 2007 to Rs. 1617.29 crore in 2009. NWC registered a growth of 8.79%, which evidences that the working capital increased less than the current assets and liabilities. The standard deviation of net working capital is Rs. 221.97 crore and the coefficient of variation was 16.1%, which is more than the coefficient of variation of current assets and liabilities.

With a view to indicating whether or not there was growth in NWC, a growth index, as exhibited in Table 1, has been prepared. The Table reveals that there was a growth in net working capital during the period of the study.

In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e., quick/ liquid assets less current liabilities, has been adopted as more relevant than the measure of NWC. Quick assets refer to current assets less inventory. The QNWC figures computed for the company are presented in Table 1, which clearly shows that the selected company had a positive 'margin of safety' or 'cushion' of protection provided for the creditors from quick/ liquid assets throughout the period of the study. The quick net working capital of ABB Ltd. also does not show any definite trend of rise and fall. The growth rate of QNWC is declining. On average, the company had positive QNWC. Hence, the measure of QNWC evidences the capability of the company to pay current debts in all the years of the study.

**Table 2: Liquidity Position of BHEL Ltd.**

| Year | Current Assets | Liquid Assets | Current Liabilities | Working Capital (net) | Change in net working capital | Working Capital (Quick) | Change in Quick working capital |
|---|---|---|---|---|---|---|---|
| **2007** | 20979.96 | 16762.29 | 14337.09 | 6642.87 | _ | 2425.20 | _ |
| **2008** | 27906.18 | 22169.78 | 20022.30 | 7883.88 | 1241.01 | 2147.48 | -277.72 |
| **2009** | 36901.07 | 29064.05 | 28332.90 | 8568.17 | 684.29 | 731.15 | -1416.33 |
| **2010** | 42914.31 | 33678.85 | 32441.72 | 10472.59 | 1904.42 | 1237.13 | 505.98 |
| **2011** | 43277.86 | 32425.81 | 24938.68 | 18339.18 | 7866.59 | 7487.13 | 6250.00 |
| Mean | 34395.88 | 26820.16 | 24014.54 | 10381.34 | | 2805.62 | |
| Growth Rate (%) | 106.28 | 93.44 | 73.95 | 176.07 | | 208.72 | |
| S.D. | 9744.64 | 7181.34 | 7073.02 | 4659.31 | | 2704.53 | |
| C.V (%) | 28.33 | 26.78 | 29.45 | 44.88 | | 96.40 | |

Source: Annual Reports of BHEL Ltd.

It is evident from Table 2 that current assets of BHEL Ltd. increased from Rs. 20979.96 crore in 2007 to Rs. 43277.86 crore in 2011. On average, the company had current assets of Rs. 34395.88 crore with a growth rate of 106.28%. The standard deviation of current assets was Rs. 9744.64 crore and the coefficient of variation was 28.33%, which shows an excellent growth of current assets during the period of the study.

Liquid assets also increased from Rs. 16762.29 crore in 2007 to Rs. 32425.81 crore in 2011 with an average of Rs. 26820.16 crore. The growth rate of liquid assets was 93.44% showing a sufficient liquidity position during the period of the study. The standard deviation was Rs. 7181.34 crore and the coefficient of variation was 26.78%, which shows high variability in liquid assets during the period under reference.

Current liabilities increased with a growth of 73.95% during the study period from Rs. 14337.09 crore in 2007 to Rs. 24938.68 crore in 2011. The overall average was Rs. 24014.54 crore and the coefficient of variation was 29.45%, which is more than the growth of current assets and liquid assets evidencing more flexibility in current liabilities during the study period.

Of the several measures, net working capital (NWC) itself provides the one, which indicates a 'margin of safety' or cushion of protection provided for creditors. Such a margin or cushion of protection provided by the company is exhibited in table 2. The table shows that the company had positive net working capital throughout the period of the study. The greater the amount of net working capital, the greater is the liquidity of the firm. NWC increased form Rs. 6642.87 crore in 2007 to Rs. 18339.18 crore in 2011; on average it was Rs. 10381.34 crore.

The net working capital of BHEL Ltd. shows an increasing trend. It increased from Rs. 6642.87 crore in 2007 to Rs. 18339.18 crore in 2011. NWC registered a growth of 176.07%, which evidences that the working capital increased more than the current assets and liabilities. The standard deviation of net working capital is Rs. 4659.31 crore and the coefficient of variation was 44.88%, which is more than the coefficient of variation of current assets and liabilities and very high also, which shows that the liquidity position of the company is variable and also good during the period of the study.

With a view to indicating whether or not there was growth in NWC, a growth index, as exhibited in Table 2, has been prepared. The Table reveals that there was a growth in net working capital during the period of the study.

In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e., quick/ liquid assets less current liabilities, has been adopted as more relevant than the measure of NWC. Quick assets refer to current assets less inventory. The QNWC figures computed for the company are presented in Table 2, which clearly shows that the selected company had a positive 'margin of safety' or 'cushion' of protection provided for the creditors from quick/ liquid assets throughout the period of the study. The quick net working capital of BHEL Ltd. also does not show any definite trend of rise and fall. On average, the company had positive QNWC. Hence, the measure of QNWC evidences the capability of the company to pay current debts in all the years of the study.

**Table 3: Liquidity Position of Siemens Ltd.**

| Year | Current Assets | Liquid Assets | Current Liabilities | Working Capital (net) | Change in net working capital | Working Capital (Quick) | Change in Quick working capital |
|---|---|---|---|---|---|---|---|
| **2007** | 4098.72 | 3349.66 | 3558.25 | 540.46 | _ | -208.59 | _ |
| **2008** | 5739.25 | 4977.14 | 4927.96 | 811.30 | 270.84 | 49.18 | 257.77 |
| **2009** | 6921.17 | 5948.98 | 5328.05 | 1593.12 | 781.83 | 620.93 | 571.74 |
| **2010** | 7928.26 | 7245.97 | 5950.51 | 1977.75 | 384.63 | 1295.46 | 674.54 |
| **2011** | 8550.50 | 7742.66 | 6341.49 | 2209.01 | 231.26 | 1401.17 | 105.71 |
| Mean | 6647.58 | 5852.88 | 5221.25 | 1426.33 | | 631.63 | |
| Growth Rate (%) | 108.61 | 131.15 | 78.22 | 308.73 | | -771.74 | |
| S.D. | 1778.89 | 1771.60 | 1078.16 | 725.86 | | 720.80 | |
| C.V (%) | 26.76 | 30.27 | 20.65 | 50.89 | | 114.12 | |

Source: Annual Reports of Siemens Ltd.

It is evident from Table 3 that current assets of Siemens Ltd. increased from Rs. 4098.72 crore in 2007 to Rs. 8550.50 crore in 2011. On average, the company had current assets of Rs. 6647.58 crore with a growth rate of 108.61%. The standard deviation of current assets was Rs. 1778.89 crore and the coefficient of variation was 26.76%, which shows an excellent growth of current assets during the period of the study.

Liquid assets also increased from Rs. 3349.66 crore in 2007 to Rs. 7742.66 crore in 2011 with an average of Rs. 5852.88 crore. The growth rate of liquid assets was 131.15% showing a sufficient liquidity position during the period of the study. The standard deviation was Rs. 1771.60 crore and the coefficient of variation was 30.27%, which shows high variability in liquid assets during the period under reference.

Current liabilities increased with a growth of 78.22% during the study period from Rs. 3558.25 crore in 2007 to Rs. 6341.49 crore in 2011. The overall average was Rs. 5221.25 crore and the coefficient of variation was 20.65%, which is less than the growth of current assets and liquid assets evidencing less flexibility in current liabilities during the study period.

Of the several measures, net working capital (NWC) itself provides the one, which indicates a 'margin of safety' or cushion of protection provided for creditors. Such a margin or cushion of protection provided by the company is exhibited in table 3. The table shows that the company had positive net working capital throughout the period of the study. The greater the amount of net working capital, the greater is the liquidity of the firm. NWC increased from Rs. 540.46 crore in 2007 to Rs. 2209.01 crore in 2011; on average it was Rs. 1426.33 crore.

The net working capital of Siemens Ltd. shows an increasing trend. It increased from Rs. 540.46 crore in 2007 to Rs. 2209.01 crore in 2011. NWC registered a growth of 308.73%, which evidences that the working capital increased more than the current assets and liabilities. The standard deviation of net working capital is Rs. 725.86 crore and the coefficient of variation was 50.89%, which is more than the coefficient of variation of current assets and liabilities and very high also, which shows that the liquidity position of the company is variable and also good during the period of the study.

With a view to indicating whether or not there was growth in NWC, a growth index, as exhibited in Table 3, has been prepared. The Table reveals that there was a growth in net working capital during the period of the study.

In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e., quick/ liquid assets less current liabilities, has been adopted as more relevant than the measure of NWC. Quick assets refer to current assets less inventory. The QNWC figures computed for the company are presented in Table 3, which clearly shows that the selected company does not have a 'margin of safety' or 'cushion' of protection provided for the creditors from quick/ liquid assets in the year 2007 after that the company had shown a good performance. The quick net working capital of Siemens Ltd. shows a increasing trend. On average, the company had positive QNWC. Hence, the measure of QNWC evidences the capability of the company to pay current debts in all the years of the study.

**Table 4: Liquidity Position of Suzlon Energy Ltd.**

| Year | Current Assets | Liquid Assets | Current Liabilities | Working Capital (net) | Change in net working capital | Working Capital (Quick) | Change in Quick working capital |
|---|---|---|---|---|---|---|---|
| **2007** | 4994.61 | 3619.36 | 1501.98 | 3492.63 | _ | 2117.38 | _ |
| **2008** | 6954.47 | 5471.24 | 2582.05 | 4372.42 | 879.79 | 2889.19 | 771.81 |
| **2009** | 9039.91 | 7656.29 | 3766.04 | 5273.87 | 901.45 | 3890.25 | 1001.06 |
| **2010** | 8438.23 | 7640.43 | 3886.23 | 4552.00 | -721.87 | 3754.20 | -136.05 |
| **2011** | 8668.30 | 7653.35 | 3998.52 | 4669.78 | 117.78 | 3654.83 | -99.37 |
| Mean | 7619.10 | 6408.13 | 3146.96 | 4472.14 | | 3261.17 | |
| Growth Rate (%) | 73.55 | 111.46 | 166.22 | 33.70 | | 72.61 | |
| S.D. | 1667.35 | 1822.23 | 1081.67 | 643.74 | | 748.40 | |
| C.V (%) | 21.88 | 28.44 | 34.37 | 14.39 | | 22.95 | |

Source: Annual Reports of Suzlon Energy Ltd.

It is evident from Table 4 that current assets of Suzlon Energy Ltd. increased from Rs. 4994.61 crore in 2007 to Rs. 8668.30 crore in 2011. On average, the company had current assets of Rs. 7619.10 crore with a growth rate of 73.55 %. The standard deviation of current assets was Rs. 1667.35 Crore and the coefficient of variation was 21.88%, which shows an excellent growth of current assets during the period of the study.

Liquid assets also increased from Rs. 3619.36 crore in 2007 to Rs. 6408.13 crore in 2011 with an average of Rs. 6408.13 crore. The growth rate of liquid assets was 111.46% showing a sufficient liquidity position during the period of the study. The standard deviation was Rs. 1822.23 crore and the coefficient of variation was 28.44%, which shows high variability in liquid assets during the period under reference.

Current liabilities increased with a growth of 166.22% during the study period from Rs. 1501.98 crore in 2007 to Rs. 3998.52 crore in 2011. The overall average was Rs. 3146.96 crore and the coefficient of variation was 34.37%, which is more than the growth of current assets and liquid assets evidencing more flexibility in current liabilities during the study period.

Of the several measures, net working capital (NWC) itself provides the one, which indicates a 'margin of safety' or cushion of protection provided for creditors. Such a margin or cushion of protection provided by the company is exhibited in table 4. The table shows that the company had positive net working capital throughout the period of the study. The greater the amount of net working capital, the greater is the liquidity of the firm. NWC increased form Rs. 3492.63 crore in 2007 to Rs. 4669.78 crore in 2011; on average it was Rs. 4472.14 crore.

The net working capital of Suzlon Energy Ltd. does not show any definite trend. It varied from Rs. 3492.63 crore in 2007 to Rs. 5273.87 crore in 2009. NWC registered a growth of 33.70%, which evidences that the working capital increased less than the current assets and liabilities. The standard deviation of net working capital is Rs. 643.74 crore and the coefficient of variation was 14.39%, which is less than the coefficient of variation of current assets and liabilities, which shows that the liquidity position of the company is less variable during the period of the study.

With a view to indicating whether or not there was growth in NWC, a growth index, as exhibited in Table 4, has been prepared. The Table reveals that there was a growth in net working capital during the period of the study.

In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e., quick/ liquid assets less current liabilities, has been adopted as more relevant than the measure of NWC. Quick assets refer to current assets less inventory. The QNWC figures computed for the company are presented in Table 4, which clearly shows that the selected company does have a 'margin of safety' or 'cushion' of protection provided for the creditors from quick/ liquid assets throughout the period of the study. The quick net working capital of Suzlon Energy Ltd. does not show a definite trend. In the year 2010 and 2011 the company had negative QNWC. Hence, the measure of QNWC evidences the incapability of the company to pay current debts in all the years of the study.

**Table No.5: Components of Working Capital of ABB Ltd.**

| PARTICULARS | YEARS | | | | |
|---|---|---|---|---|---|
| **CURRENT ASSETS** | **2010-11** | **2009-10** | **2008-09** | **2007-08** | **2006-07** |
| INVENTORIES | 925.55 (18.66%) | 697.85 (14.17%) | 729.41 (15.36%) | 642.65 (13.67%) | 488.71 (11.89%) |
| SUNDRY DEBTORS | 3082.51 (62.15%) | 2925.97 (59.40%) | 2857.73 (60.17%) | 2975.89 (63.32%) | 2423.56 (58.96%) |
| CASH & BANK BALANCES | 264.37 (5.33%) | 587.13 (11.92%) | 524.14 (11.04%) | 348.23 (7.41%) | 642.86 (15.64%) |
| OTHER CURRENT ASSETS | 320.96 (6.47%) | 361.12 (7.33%) | 320.3 (6.74%) | 381.29 (8.11%) | 275.36 (6.70%) |
| LOANS & ADVANCES | 366.67 (7.39%) | 354.16 (7.19%) | 317.69 (6.69%) | 351.77 (7.48%) | 280.2 (6.82%) |
| **GROSS WORKING CAPITAL** | **4960.06 (100%)** | **4926.23 (100%)** | **4749.27 (100%)** | **4699.83 (100%)** | **4110.69 (100%)** |

Source: Annual Reports of ABB Limited

The components or compositions of gross working capital in percentage form have been prepared and presented in table 5 for ABB Ltd. to examine in which component the gross working capital funds are locked up and to find out the factors responsible for significant changes in the working capital of different years. It can be observed that the working capital consisted of inventory, sundry debtors, cash & bank balances, other current assets and loans and advances.

Out of the five components of working capital, the component, namely, sundry debtors contributed highest to the working capital. It varied from` 58.96% in 2007 to 63.32% in 2008 fluctuating one year to another, in the year 2011 it again increased to 62.15% which evidences that the working capital blocked up due to increases in debtors. This may also indicate a liberal credit policy with chances of bad debts and collection charges. Inventory occupied the second position in the gross working capital; it shows an increasing trend from11.89% in 2007 to 18.66% in 2011 except the year 2010 in which it declined. The third rank goes to cash & bank balances whose share in gross working capital shows a fluctuating trend it reduces from 15.64%in 2007 to 5.33% in 2011. Loans & advances and other current assets contributed almost the same to gross working capital and shows a fluctuating trend it varied from 6.82% to 7.39% in 2011 its maximum contribution was in 2007 with 7.48% and other current assets contribution was 6.7% in 2007, in 2008 it increased to highest of 8.11 % and it was lowest to 6.47% in 2011.

**Table No: 6: Components of Working Capital of BHEL Ltd.**

| PARTICULARS | YEARS | | | | |
|---|---|---|---|---|---|
| **CURRENT ASSETS** | **2010-11** | **2009-10** | **2008-09** | **2007-08** | **2006-07** |
| INVENTORIES | 10963.03 (21.29%) | 9235.46 (21.51%) | 7837.02 (21.24%) | 5736.4 (20.71%) | 4217.67 (20.10%) |
| SUNDRY DEBTORS | 27354.62 (53.12%) | 20688.75 (48.19%) | 15975.5 (43.29%) | 11974.87 (43.22%) | 9612.81 (45.82%) |
| CASH & BANK BALANCES | 9630.15 (18.70%) | 9790.08 (22.80%) | 10314.67 (27.95%) | 8386.02 (30.27%) | 5808.91 (27.69%) |
| OTHER CURRENT ASSETS | 309.63 (0.60%) | 406.85 (0.95%) | 350.21 (0.95%) | 421.09 (1.52%) | 199.7 (0.95%) |
| LOANS & ADVANCES | 3237.31 (6.29%) | 2813.67 (6.55%) | 2423.67 (6.57%) | 1186.34 (4.28%) | 1140.87 (5.44%) |
| **GROSS WORKING CAPITAL** | **51494.74 (100%)** | **42934.81 (100%)** | **36901.07 (100%)** | **27704.72 (100%)** | **20979.96 (100%)** |

Source: Annual Reports of BHEL Ltd.

The components or compositions of gross working capital in percentage form have been prepared and presented in table 6 for BHEL Ltd. to examine in which component the gross working capital funds are locked up and to find out the factors responsible for significant changes in the working capital of different years. It can be observed that the working capital consisted of inventory, sundry debtors, cash & bank balances, other current assets and loans and advances.

Out of the five components of working capital, the component, namely, sundry debtors contributed highest to the working capital. It was on increase almost every year except the year 2008 in which it declined otherwise it increased from 45.82% in 2007 to 53.12% in 2011, which evidences that the working capital blocked up due to increases in debtors. This may also indicate a liberal credit policy with chances of bad debts and collection charges. Inventory occupied the second position in the gross working capital, contributes the same almost every year with slight variation at decimal places. It was 20.10% in 2007 and 21.29% in 2011. The third rank goes to cash & bank balances whose share in gross working capital reduces from 30.27%in 2008 to 18.7% in 2011. Loans & advances also do not show any definite trend it varied from 5.44% in 2007 to 6.29% in 2011; it was lowest with 4.28% contribution in 2008 to and 6.57% in 2009. The contribution of other current assets is around 1% every year.

**Table No. 7: Components of Working Capital of Siemens Ltd.**

| PARTICULARS | YEARS | | | | |
|---|---|---|---|---|---|
| **CURRENT ASSETS** | **2010-11** | **2009-10** | **2008-09** | **2007-08** | **2006-07** |
| INVENTORIES | 807.83 (9.45%) | 1533.52 (19.3%) | 972.2 (14.05%) | 762.11 (13.31%) | 749.05 (18.28%) |
| SUNDRY DEBTORS | 4173.33 (48.81%) | 3302.34 (41.62%) | 3458.31 (49.97%) | 3432.8 (59.96%) | 2224.28 (54.27%) |
| CASH & BANK BALANCES | 1275.04 (14.91%) | 1853.44 (23.36%) | 1444.9 (20.88%) | 913.09 (15.95%) | 463.62 (11.31%) |
| LOANS & ADVANCES | 1406 (16.44%) | 1244.9 (15.69%) | 1045.76 (15.11%) | 617.32 (10.78%) | 661.76 (16.15%) |
| OTHER CURRENT ASSETS | 888.29 (10.39%) | | | | |
| **GROSS WORKING CAPITAL** | **8550.5 100%** | **7934.21 100%** | **6921.17 100%** | **5725.32 100%** | **4098.72 100%** |

Source: Annual Reports of Siemens Ltd

The components or compositions of gross working capital in percentage form have been prepared and presented in table 7 for Siemens Ltd. to examine in which component the gross working capital funds are locked up and to find out the factors responsible for significant changes in the working capital of different years. It can be observed that the working capital consisted of inventory, sundry debtors, cash & bank balances, other current assets and loans and advances.

Out of the five components of working capital, the component, namely, sundry debtors contributed highest to the working capital. It does not show any definite trend it varied from 54.27% in 2007 to 48.81% in 2011; it was highest 59.96% contribution in 2008 and lowest 41.62% contribution in 2010 which evidences that the working capital blocked up due to increases in debtors. This may also indicate a liberal credit policy with chances of bad debts and collection charges. Inventory also does not show any definite trend, it declined from 18.28% in 2007 to 9.45% in 2011 it was highest 19.3 % in 2010. Cash & bank balances show an increasing trend except the year 2011 in which it falls. It increases from 11.31% in 2007 to 23.36% in 2010. It declined in 2011 to

14.91%. Loans & advances also do not show any definite trend it varied from 16.15% in 2007 to 16.44% in 2011; its contribution was lowest 10.78% in 2008 and highest 16.44% in 2011. The contribution of other current assets was 10.39% in 2011.

**Table No. 8: Components of Working Capital of Suzlon Energy Ltd.**

| PARTICULARS | YEARS | | | | |
|---|---|---|---|---|---|
| **CURRENT ASSETS** | **2010-11** | **2009-10** | **2008-09** | **2007-08** | **2006-07** |
| INVENTORIES | 1,014.95 (11.71%) | 797.8 (9.45%) | 1,383.62 (15.31%) | 1,483.23 (21.33%) | 1,375.25 (27.53%) |
| SUNDRY DEBTORS | 2283.90 (26.35%) | 2,986.81 (35.40%) | 4,745.14 (52.49%) | 3,306.59 (47.55%) | 1,970.78 (39.46%) |
| CASH & BANK BALANCES | 431.06 (4.97%) | 599.22 (7.10%) | 212.4 (2.35%) | 875.5 (12.59%) | 351.39 (7.04%) |
| LOANS & ADVANCES | 4,938.39 (56.97%) | 4,054.40 (48.05%) | 2,698.75 (29.85%) | 1,289.15 (18.54%) | 1,297.19 (25.97%) |
| **GROSS WORKING CAPITAL** | **8,668.30 100%** | **8,438.23 100%** | **9,039.91 100%** | **6,954.47 100%** | **4,994.61 100%** |

Source: Annual Reports of Suzlon Energy Ltd.

The components or compositions of gross working capital in percentage form have been prepared and presented in table 8 for Suzlon Energy Ltd. to examine in which component the gross working capital funds are locked up and to find out the factors responsible for significant changes in the working capital of different years. It can be observed that the working capital consisted of inventory, sundry debtors, cash & bank balances, other current assets and loans and advances.

Out of the five components of working capital, the component, namely, Loans & Advances contributed highest to the working capital. It does not show any definite trend it varied from 18.54% in 2008 to 56.87% in 2011, in 2007 it was 25.97% which evidences that the working capital blocked up due to increases in loans & Advances. Inventory also does not show any definite trend, it declined from 27.53 % in 2007 to 9.45% in 2010, in 2011 it again raised to 11.71%. Sundry debtors also do not show any definite trend it had significantly declined to 26.35% in 2011 from 39.46% in 2007; it was highest with 52.49% in 2009 and lowest with 35.4% in 2010. Cash & bank balances also do not show any definite trend it was highest with 12.59% in 2008 and with a lowest percentage of 2.35% in 2009. It fluctuates from 7.04% in 2007 to 4.97% in 2011.

The problem with the above measures is that they do not show the extent of margin of safety provided for current creditors. Due to this, the ratio and other similar measures are regarded as better than these measures. Hence, Liquidity position of the companies is ascertained on the basis of three ratios has been calculated that are current ratio, liquid ratio and super quick ratio

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

$$\text{Quick Ratio} = \frac{\text{Current Assets-(Stock + Prepaid Expenses)}}{\text{Current Liabilities}}$$

$$\text{Super Quick ratio} = \frac{\text{Current Assets-( Debtors +Stock + Prepaid Expenses)}}{\text{Current Liabilities}}$$

**Table 9: Current Ratio of Companies listed in Nifty 50 under electrical equipment industry**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 1.32 | 1.47 | 1.52 | 1.41 | 1.37 | 1.42 | 0.06 | 4.56 |
| 2 | BHEL | 1.74 | 1.32 | 1.30 | 1.39 | 1.46 | 1.44 | 0.15 | 10.08 |
| 3 | SIEMENS | 1.35 | 1.33 | 1.30 | 1.16 | 1.15 | 1.26 | 0.08 | 6.22 |
| 4 | SUZLON | 2.17 | 2.17 | 2.40 | 2.69 | 3.33 | 2.55 | 0.40 | 15.50 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

In table 9 the analysis of every company listed in Nifty 50 under Electrical Equipment Industry is been done on the basis of current ratio. The higher the ratio the better is the liquidity position of the company but on the other hand stability is also important like in the table 9 the maximum average of current ratio was of Suzlon Energy Ltd. and its coefficient of variation is also highest which indicates that there was higher flexibility in the liquidity position of the company. The coefficient of variation of ABB Ltd. is less which indicates better stability in the liquidity position of the company after that comes Siemens Ltd. The coefficient of variation of BHEL Ltd. is also high with 10.08%.

**Table 10: Quick Ratio of Companies listed in Nifty 50 under electrical equipment industry**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 1.08 | 1.26 | 1.28 | 1.22 | 1.21 | 1.21 | 0.06 | 5.27 |
| 2 | BHEL | 1.30 | 1.04 | 1.03 | 1.11 | 1.17 | 1.13 | 0.09 | 8.00 |
| 3 | SIEMENS | 1.22 | 1.22 | 1.12 | 1.01 | 0.94 | 1.10 | 0.10 | 9.29 |
| 4 | SUZLON | 1.91 | 1.97 | 2.03 | 2.12 | 2.41 | 2.09 | 0.16 | 7.66 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

The analysis on the basis of Liquidity ratio that is current assets minus stock and prepaid expenses divided by current liabilities minus bank overdraft is done and all the companies are above the standard ratio of 1:1. Suzlon Energy Ltd. is showing highest liquidity with an average of 2.09. According to coefficient of variation ABB Ltd. is showing lesser flexibility in liquidity position and Siemens Ltd. is showing the highest with 9.29%. The cofficient of variation of BHEL Ltd. and Suzlon Energy Ltd. was also high.

**Table 11: Super Quick Ratio of Companies listed in Nifty 50 under electrical equipment industry**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 0.25 | 0.39 | 0.37 | 0.33 | 0.40 | 0.35 | 0.05 | 14.31 |
| 2 | BHEL | 0.49 | 0.40 | 0.46 | 0.51 | 0.50 | 0.47 | 0.04 | 7.68 |
| 3 | SIEMENS | 0.56 | 0.66 | 0.47 | 0.31 | 0.32 | 0.46 | 0.12 | 26.70 |
| 4 | SUZLON | 1.32 | 1.20 | 0.77 | 0.84 | 1.10 | 1.05 | 0.19 | 18.32 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

The analysis on the basis of Super Quick Ratio is been done in table 11 which indicates extreme liquidity position of the company. According to table 11 the average of Suzlon Energy Ltd. shows maximum liquidity strength with 1.05. The highest variability in liquidity position was of Siemens Ltd with 26.7% the second position of Suzlon Energy Ltd after that ABB ltd. The coefficient of variation of BHEL Ltd was lowest with 7.68 % which indicates consistency in liquidity position.

**Motaal's Comprehensive Test of Liquidity**

Motaal prescribes a comprehensive test for determining the soundness of a firm as regards liquidity position. According to him, a process of ranking is used to arrive at a more comprehensive measure of liquidity in which the following three ratios are combined in a point score:

I) Working Capital (WC) to Current Asset Ratio = $\frac{(Current\ Assets - Current\ Liabilities)}{Current\ Assets} x\ 100$

ii) Stock to Current Asset Ratio in percentage = $\frac{Average\ Stock}{Current\ Assets} x\ 100$

iii) Liquid Resources (LR) to Current Asset Ratio in percentage = $\frac{Liquid\ Resources}{Current\ Assets} x\ 100$

The higher the value of both working capital to current asset ratio and liquid resources to current asset ratio, relatively the more favourable will be the liquidity position of a firm and vice-versa. On the other hand, lower the value of stock to current assets ratio, relatively the more favourable will be the liquidity position of the firm. The ranking of the above three ratios of a firm over a period of time is done in their order of preferences. Finally, the ultimate ranking is done on the basis of the principle that the lower the points score, the more favorable will be the liquidity position and vice-versa.

The computation of ratios is been done as under in the table no. 12 to 14

**Table 12 : Working Capital to Current Assets Ratio (%) of Nifty 50 Electrical Equipment Companies**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 24.38 | 32.04 | 34.05 | 29.33 | 27.04 | 29.37 | 3.15 | 10.71 |
| 2 | BHEL | 42.38 | 24.40 | 23.22 | 28.25 | 31.66 | 29.98 | 6.28 | 20.94 |
| 3 | SIEMENS | 25.83 | 24.95 | 23.02 | 14.14 | 13.19 | 20.23 | 4.97 | 24.56 |
| 4 | SUZLON | 53.87 | 53.94 | 58.34 | 62.87 | 69.93 | 59.79 | 5.53 | 9.25 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

**Table 13 : Stock to Current Assets Ratio (%) of Nifty 50 Electrical Equipment Companies**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 18.66 | 14.17 | 15.36 | 13.67 | 11.89 | 14.75 | 2.06 | 13.93 |
| 2 | BHEL | 25.08 | 21.52 | 21.24 | 20.56 | 20.10 | 21.70 | 1.61 | 7.41 |
| 3 | SIEMENS | 9.45 | 8.61 | 14.05 | 13.28 | 18.28 | 12.73 | 3.18 | 24.95 |
| 4 | SUZLON | 11.71 | 9.45 | 15.31 | 21.33 | 27.53 | 17.07 | 6.02 | 35.28 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

**Table 14 : Liquid Resources to Current Assets Ratio (%) of Nifty 50 Electrical Equipment Companies**

| Sr. No. | Company | Year | | | | | Mean | S.D. | C.V. |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010.11 | 2009-10 | 2008-09 | 2007-08 | 2006-07 | | | |
| 1 | ABB | 81.34 | 85.83 | 84.64 | 86.33 | 88.11 | 85.25 | 2.06 | 2.41 |
| 2 | BHEL | 74.92 | 78.48 | 78.76 | 79.44 | 79.90 | 78.30 | 1.61 | 2.05 |
| 3 | SIEMENS | 90.55 | 91.39 | 85.95 | 86.72 | 81.72 | 87.27 | 3.18 | 3.64 |
| 4 | SUZLON | 79.27 | 64.01 | 82.22 | 86.11 | 84.76 | 79.27 | 7.29 | 9.19 |

Source: Annual Reports of Nifty 50 Manufacturing Companies

**Table 15 : Motaal's Comprehensive Test of Liquidity of Nifty 50 Electrical Equipment Companies (2006-07 to 2010-11 )**

| Sr. No. | Company | WC to CA Ratio (%) | Rank | Stock to CA Ratio (%) | Rank | LR to CA Ratio (%) | Rank | Total Rank | Ultimate Rank |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ABB | 29.37 | 2 | 14.75 | 2 | 85.25 | 3 | 7 | **2** |
| 2 | BHEL | 29.98 | 3 | 21.70 | 4 | 78.30 | 1 | 8 | **3** |
| 3 | SIEMENS | 20.23 | 1 | 12.73 | 1 | 87.27 | 4 | 6 | **1** |
| 4 | SUZLON ENERGY | 59.79 | 4 | 17.07 | 3 | 79.27 | 2 | 9 | **4** |

The above table 15 is computed from the averages of the above constructed tables from 12 to 14 to provide ranking. On the basis of Motaal's ultimate rank test of Liquidity Siemens Ltd. is awarded I rank which indicates favorable liquidity position. II rank goes to ABB Ltd. III rank goes to BHEL Ltd and the last rank goes to Suzlon Energy Ltd which indicates towards less favorable liquidity position.

## 7. FINDINGS

The findings of the data analysed is summarized company wise as under:

### 7.1. ABB Ltd.

1. The current assets, liquid assets, current liabilities, net working capital shows a positive growth rate but the growth rate of quick net working capital is in negative which indicates that the absolute liquidity position of the company was not safe.
2. The major component of current assets was Sundry Debtors and Inventories which indicates that the major portion of liquid funds is blocked in these two whose convertibility into cash is considered to be low.
3. Current ratio of the company indicates towards consistency in liquidity position of the company.
4. Quick ratio also indicates towards consistency in liquidity position.
5. Super Quick ratio indicates a little poor performance of the company.

### 7.2. BHEL Ltd.

1. The current assets, liquid assets, current liabilities, net working capital and quick net working capital shows a positive growth rate which indicates that the liquidity position of the company was safe during the period of study.
2. The major component of current assets was Sundry Debtors and Inventories which indicates that the major portion of liquid funds is blocked in these two whose convertibility into cash is considered to be low.
3. Current ratio of the company indicates towards variability in liquidity position of the company as its coefficient of variation is second highest.
4. Quick ratio also indicates towards inconsistency in liquidity position.
5. The absolute liquidity position of the company on the basis of super quick ratio is strong.

**7.3. SIEMENS Ltd.**

1. The current assets, liquid assets, current liabilities, net working capital shows a positive growth rate but the growth rate of quick net working capital is in negative which indicates that the absolute liquidity position of the company was not safe.
2. The major component of current assets was Sundry Debtors and Inventories which indicates that the major portion of liquid funds is blocked in these two whose convertibility into cash is considered to be low.
3. Current ratio of the company indicates towards consistency in liquidity position of the company.
4. Quick ratio of the company shows greater flexibility as its coefficient of variation was highest.
5. Super Quick ratio of the company shows greater flexibility as its coefficient of variation was highest.

**7.4. Suzlon Energy Ltd.**

1. The current assets, liquid assets, current liabilities, net working capital and quick net working capital shows a positive growth rate which indicates that the liquidity position of the company was safe during the period of study.
2. The major component of current assets was Loans & Advances and Sundry Debtors in which liquid funds of the company is tied.
3. The current ratio of the company indicates greater flexibility as its coefficient of variation is highest.
4. Quick ratio of the company indicates consistency in liquidity position of the company.
5. Super quick ratio of the company indicates greater flexibility in liquidity position of the company.

## 8. CONCLUSION

The current assets, liquid assets, current liabilities, net working capital and quick net working capital of BHEL and Suzlon Energy Ltd. shows a positive growth rate which indicates that the liquidity position of the company was safe during the period of study except ABB Ltd. and Siemens Ltd whose quick net working capital growth rate is negative which indicates towards unsound liquidity position. The major components of current assets of all the companies are Inventories and Sundry debtors except Suzlon Energy Ltd. whose major component is loans and advances. The maximum average of current ratio was of Suzlon Energy Ltd. but its coefficient of variation is also highest which indicates that there was higher flexibility in the liquidity position of the company. The coefficient of variation of ABB Ltd. is less which indicates better stability in the liquidity position of the company after that comes Siemens Ltd. According to liquid ratio Suzlon Energy Ltd. is showing highest liquidity. According to coefficient of variation ABB Ltd. is showing lesser flexibility in liquidity position and Siemens Ltd. is showing the highest. The coefficient of variation of BHEL Ltd. and Suzlon Energy Ltd. was also high. According to super Quick ratio the average of Suzlon Energy Ltd. shows maximum liquidity strength. The highest variability in liquidity position was of Siemens Ltd with 26.7% the second position of Suzlon Energy Ltd after that ABB ltd. The coefficient of variation of BHEL Ltd was lowest which indicates consistency in liquidity position.

As different parameters to analyse liquidity provides varied results hence, Motaal's Ultimate rank test has been applied to come to a more concrete result. On the basis of Motaal's ultimate rank test Siemens Ltd. is provided I$^{st}$ rank, The II$^{nd}$ rank is awarded to ABB Ltd and III$^{rd}$ to BHEL Ltd. and the last one is to Suzlon Energy Ltd.

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