# Analysis of Working Capital Management in an Electrical Industry
Special Reference to Transformers and Electrical Kerala Ltd (TELK)

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## ABSTRACT

*Working capital is concerned to be the lifeblood and controlling nerve centre of the business. To run business efficiently, an adequate amount of working capital is very essential. Thus working capital management forms an integral part of over all corporate management. The profitability and solvency are two vital aspects of the working capital management. The survival and growth of the company thus depends upon the ability to meet the profitability and solvency.*

*This study concentrates on the analysis of liquidity and solvency position of the Transformers and Electrical Kerala Ltd (TELK), effectiveness in utilization of various components of working capital, to analyze the type of working capital policy followed by the organization, analyze the sensitivity of return on investment to changes in the levels of current assets; analyze the correlation between the important components of working capital.*

## I. INTRODUCTION

Working capital is so much in use in common parlance and is so much misunderstood. Even among the professional managers the controversy and confusion persist. While an accountant will regard working capital as current assets minus current liabilities and call it as net working capital, a finance manager will consider gross current assets as working capital. For production controller, working capital is the fund needed to meet the day-to-day working expenses. In the ultimate analysis, the latter may be true, but according to accountant or the finance manager it is the very working expenses that gets blocked in current assets along the productive-distributive line of an enterprise, a net working capital is that liquidity, which takes care of the working expenses if the line gets extended due to any reason .

But the notion of liquidity itself has undergone considerable changes with the advances in financial management during the recent years. Liquidity has so far been defined as a pyramid of current assets in descending order of realisability with cash holding the top position and inventory, the last. This notion has given rise to liquidity ratios such as current ratio or quick ratio, and later to concept of net working capital. The pyramid is now upside down with inventory at the top. [13]

## II. Literature survey

Mishra R.K. and Kar N.C. (1998) The study is concerned with the working capital management of Electronic Corporation of India Ltd., a leading company in the medium and light engineering industry group in public sector, manufacturing electronic items like computer communication and control systems, consumer electronics and instruments for the period 1983-84 to 1987-88. The working capital position of the company shows unsatisfactory position and the current and quick ratios of ECIL have been higher as compared to its counter parts in the electronic industry. The debtor's turnover reveals unsatisfactory position of the company and the percentage of finished goods inventory is more or less stable for all the years. [3]

Prof.Narware P.C. (October 2000), conducted a study focusing on working capital management in National Fertilizers Limited during the period 1990-91 to1999-2000 and it indicated that the short term liquidity position of the company was considered good. Liquid assets are insufficient to meet current maturity obligations and major parts of the funds are blocked up in the form of inventories. The percentage of current assets to total assets indicates that the company had wanted to change conservative approach regarding investment in current assets and the ratio of current assets to sales indicates inefficient utilization of funds. An analysis of inventory to sales ratio or age of inventory indicates that there is no effective control on inventory and it is not a healthy sign for the company, and management needs to give efficacious attention to manage its inventory effectively. Debtors' turnover ratio or age of debtors of the company deliberates the velocity of debt collection policies adherent to the enterprise which has been encouraging. [4]

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Mallick Amit .K., Debasish Sur (September 1999) on Working Capital Management of Hindustan Lever Limited, presented a case study of consumer goods industry for the year 1988-1998 and in his analysis revealed that working capital management of the company was very much encouraging over the last ten years. There was a high degree of positive relationship between liquidity and profitability which signifies a favorable influence of liquidity on the profitability of the company. The study shows a negative influence on debtor's turnover ratio and inventory turnover ratio on the profitability which was actually very significant. In fact, the gradual improvement maintained by the company in its profitability during the period under study was not possible without the efficient management as well as effective control of both inventory and debtors.[5]

Sur Debabish (June 2001) in the study on liquidity management of four companies in Indian Power Sector such as Ahemadabad Electricity Company Limited (AEC Ltd.), Bombay Suburban Electric Supply Limited (BSES Ltd.), Calcutta Electric Supply Co-operation Limited (CESC Ltd.) and Surat Electricity Company Limited (SEC Ltd.) for the period 1987 88 to 1996-97 displays inefficiency of liquidity management as a whole in the case of AEC Ltd and SEC Ltd. Quick ratio shows, on the basis of findings it can be concluded that in most of the years under study liquid assets of the companies were inadequate to meet very short term debt. Debtors turnover reveals efficiency in the receivables management in the case of AEC Ltd when compared to other companies understudy and inventory management for all the four was quite encouraging.[6]

All the above studies reveal the fact that working capital management plays a key role in the overall performance of an industry. The management of working capital has been an external problem particularly in the context of Indian situation. One needs to know where to look for working capital funds, how to use them and how to measure, plan and control them. All the available literatures of working capital management in different industries have made an attempt in this direction. These literatures suggest various ways and means to efficiently utilize working capital and thereby improve liquidity and increase profitability.

These studies are very much informative for financial managers, academicians, research scholars and the general public, particularly those who are interested in knowing the profitability progress position and prospects of public enterprises in India.

## Importance or Advantages of Adequate Working Capital

Working capital is the lifeblood and nerve centre of the business. Just as circulation of blood is essential in the human body for maintaining life, working capital is very essential to maintain the smooth running of the business. No business can run successfully without adequate amount of working capital. The main advantages of maintaining adequate amount of working capital are as follows:

1.  Solvency of business: Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.

2.  Goodwill: sufficient working capital enables a business concern to make prompt payments and hence helps in creating and maintaining goodwill.

3.  Easy loans: a concern having adequate working capital, high solvency and good credit standing can arrange loans from banks and others on easy and favorable terms.

4.  Cash discounts: adequate working capital also enables a concern to avail cash discounts on the purchase and hence it reduces costs.

5.  Regular supply of Raw Materials: Sufficient working capital ensures regular supply of raw materials and continuous production.

6.  Regular payment of salaries, wages and other day to day commitments: A company which has ample working capital can make regular payment of salaries, wages and other day to day commitments which arise moral of employees, increases their efficiency, reduces wastages and costs and enhances production and profits.

7.  Exploitation of Favorable Market Conditions: Only Concerns with adequate working capital can exploit favorable market conditions such as purchasing its requirements in bulk when prices are lower and by holding its inventories for higher prices.

8.  Ability to face crisis: Adequate working capital enables a Concern to face business crisis in emergencies such as depression because during such periods, generally, there is much pressure on working capital.

9.  Quick and Regular return on Investment: Every investor wants a quick and regular return on his investments. Sufficiency of working capital enables a Concern to pay quick and regular dividends to its investors as there may not be much pressure to plough back profits. This gains the confidence of its investors and creates a favorable market to raise additional funds in the future.

10. High Morale: Adequacy of working capital creates an environment of security, confidence, and high morale and creates overall efficiency in a business.

## Objectives of the study

The main objectives of the study are to analyze the efficiency of working capital management of TELK and to carry out an interfirm comparison of the efficiency of working capital management. The following are the basic objectives of the present study.

**Primary Objective**: To study the working capital management of the organization from 2002-2003 to 2006-2007.

### Secondary Objective

1.  To study the trend in gross working capital and net working capital in the organization.

2.  To study the type of working capital policy followed by the organization.

3. To study the effectiveness in utilization of various components of working capital.

4. To study the liquidity and solvency position of the organization.

8. To study the correlation between

a) Gross working capital and sales

b) Net working capital and sales

c) Receivables and Networking capital

d) Inventories and Networking capital

e) Inventories and sales

### Significance of the study

This study can bring to light the efficiency of the working capital management of TELK and its financial position as compared to other leading companies in the India. This is an attempt to find out the weak areas in the performance of the company and suggest remedial measure to improve the efficiency of the company.

### III. Methodology

The data needed for the study can be classified as

*A.* Primary data

*B.* Secondary data

Primary data are collected by personnel interviews with the finance manager and other officers of the finance and accounts departments of TELK.

Secondary data has been used for the study. The data is mainly collected from annual reports, audited and provisional balance sheets, websites, and journals and periodicals, company magazines etc.

### IV. Statistical tools used

1. Ratio Analysis

2. Correlation analysis

3. T- test

4. Trend analysis with the help of graphical trend

### V. Findings and observations

#### Analysis of Liquidity & Solvency Position

Liquidity refers to the ability of a concern to meet its current obligation as and when they become due. Short term obligations are met by realizing amounts from current assets. If the current assets can pay off the current liabilities, then the liquidity position will be satisfactory. On the other hand, if current liabilities may not be easily met out of current assets then the liquidity position is bad. Solvency refers to the long term financial position of the organization. To measure liquidity following ratios can be calculated.
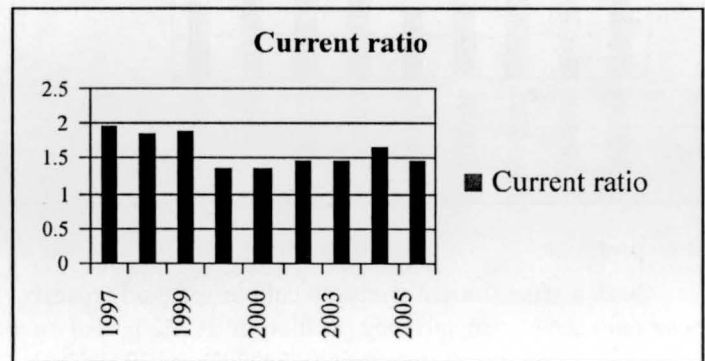
### 1. Current Ratio

Current Ratio explains the relationship between current assets and current liabilities. Generally 2:1 is considered ideal for a concern i.e. current asset should be twice of the current times of the current liabilities. This ratio is an indicator of the firm's commitment to meet its short term liabilities. It can be calculated by dividing current assets by current liabilities.

**Current Ratio** = Current assets Current Liabilities

| Year | Current Assets | Current Liabilities | Ratio |
|------|---------------|---------------------|-------|
| 1997-98 | 81.99 | 41.28 | 1.98 |
| 1998-99 | 79.96 | 42.90 | 1.86 |
| 1999-2000 | 63.08 | 33.15 | 1.90 |
| 2000-01 | 46.63 | 33.68 | 1.38 |
| 2001-02 | 39.57 | 28.56 | 1.38 |
| 2002-03 | 64.84 | 44.45 | 1.46 |
| 2003-04 | 65.93 | 44.64 | 1.48 |
| 2004-05 | 80.98 | 48.39 | 1.67 |
| 2005-06 | 73.72 | 50.32 | 1.47 |



**Current ratio**

### Interpretation

TELK shows a current ratio less than 2 in all the periods considered for the study. From 1997-98 to2005-06, the components of current assets such as inventories, sundry debtors, other receivables, cash in hand and loans and advances shows an effective increase. In the case current liabilities of TELK are concerned, sundry creditors decreases and an increase of advance and progress payment received. Provisions show an effective increase for the entire period.

### 2. Quick Ratio

The quick ratio tells about the relationship between quick assets and current liabilities. 1:1 is considered ideal ratio for a concern because it is wise to keep the liquid assets at least equal to the current liabilities. It is calculated by dividing quick asset and current liabilities. Quick assets are obtained by subtracting prepaid expenses and inventories from current assets.

Quick Assets to
**Quick Ratio** =

Current liabilities

| Year | Current Assets | Current Liabilities | Ratio |
|------|------|------|------|
| 1997-98 | 73.16 | 41.28 | 1.77 |
| 1998-99 | 55.86 | 42.90 | 1.30 |
| 1999-2000 | 46.21 | 33.15 | 1.39 |
| 2000-01 | 29.34 | 33.68 | 1.87 |
| 2001-02 | 23.11 | 28.56 | 1.80 |
| 2002-03 | 52.82 | 44.45 | 1.18 |
| 2003-04 | 52.27 | 44.64 | 1.17 |
| 2004-05 | 59.68 | 48.39 | 1.23 |
| 2005-06 | 55.04 | 50.32 | 1.10 |



Quick Ratio
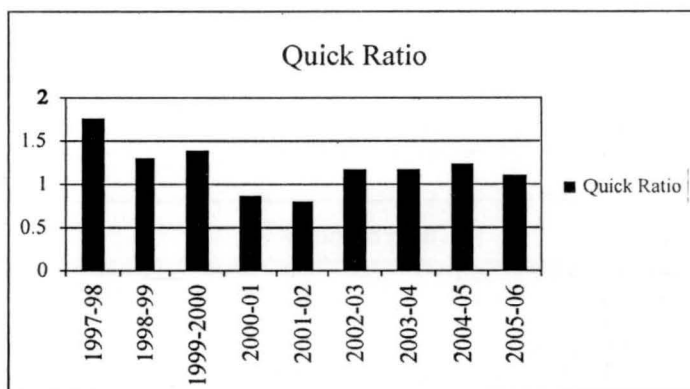
**Interpretation**

Quick assets = Current assets- inventories-prepaid expenses. The ratio shows that solvency position of TELK is also on a better level, other than the two periods, 2000-01 and 2001-02.

In 2000-01, the components of quick assets such as sundry debtors, other receivables, loans& advances show a decrease as compared to the previous period. The components of current liabilities such as sundry debtor's decreases for both the periods with respect to the just previous period advance and progress payments received for suppliers to be made increases for both the periods.

**3. Absolute Liquidity Ratio**

Absolute liquid ratio shows the relationship between the sum of cash and marketable securities to the total current liabilities. In absolute liquid ratio only absolute liquid assets such as cash in hand, cash at bank and readily realizable securities are taken into consideration. The desirable norm is 0.5: 1 i.e. Rs 1 worth of absolute liquid assets and Rs. 2 worth of current liabilities are sufficient.

Absolute Liquid Assets = share capital (issued, subscribed &paid up) +cash& stamps in hand+ bank balance

**Absolute Liquidity Ratio** = Absolute Liquid Assets Current Liabilities

| Year | Current Assets | Current Liabilities | Ratio |
|------|------|------|------|
| 1997-98 | 08.99 | 41.28 | 0.20 |
| 1998-99 | 5.513 | 42.90 | 0.12 |
| 1999-2000 | 03.04 | 33.15 | 0.09 |
| 2000-01 | 03.09 | 33.68 | 0.09 |
| 2001-02 | 01.11 | 28.56 | 0.038 |
| 2002-03 | 08.46 | 44.45 | 0.19 |
| 2003-04 | 10.05 | 44.64 | 0.235 |
| 2004-05 | 08.52 | 48.39 | 0.17 |
| 2005-06 | 06.94 | 50.32 | 0.13 |

**Interpretation**

Absolute liquid assets = Current assets Inventories Sundry debtors-loans &advances.

The recommended standard norm for the ratio is 0.5:1 The ratio in the company is below the recommended value. Liquidity position of the company is in not in satisfactory levels.

**4. DEBT-EQUITY RATIO**

The relationship between borrowed funds and owner's capital is a popular measure of the long term financial position or solvency of the firm. This relationship is shown by the debt-equity ratio. This ratio indicates the relative proportion of the debt and equity in financing the assets of a firm. This ratio is computed by dividing the total debt of the firm by its net worth. Acceptable norm for this ratio is considered to be 2:1. Higher debt equity is allowed in the case of capital intensive industries, a norm of 4:1 is used for fertilizers and cement unit and a norm of 6:1 is used for shipping units. A high ratio shows that the claims of creditors are greater than that of owners. A very high ratio is unfavorable from the firm's point of view. A high debt company, also known as highly leveraged or geared, is able to borrow funds on very restrictive terms and conditions. A low debt equity ratio implies greater claim of owner as than creditors. From the point of view of creditors, it represents a satisfactory capital structure of the business since a high proportion of equity provides a larger margin of safety for them. This ratio shows the extent to which debt financing is used in the business.

Debt-Equity Ratio = Debt   Equity

| Year | Debt | Equity | Ratio |
|------|------|------|------|
| 1997-98 | 41.28 | 13.6 | 3.02 |
| 1998-99 | 42.9 | 13.68 | 3.13 |
| 1999-00 | 33.15 | 13.68 | 2.42 |
| 2000-01 | 33.68 | 13.68 | 2.46 |
| 2001-02 | 28.56 | 13.58 | 2.10 |
| 2002-03 | 44.45 | 13.58 | 3.27 |
| 2003-04 | 44.64 | 13.58 | 3.29 |
| 2004-05 | 48.39 | 13.58 | 3.56 |
| 2005-06 | 50.32 | 13.58 | 3.71 |

**Debt-Equity Ratio**
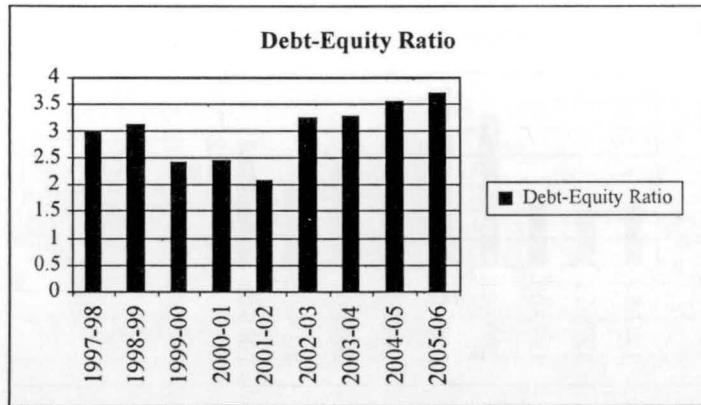


| Year | Cash | Current Assets | Ratio |
|---|---|---|---|
| 1997-98 | 7.89 | 81.99 | 0.096 |
| 1998-99 | 1.88 | 79.96 | 0.0235 |
| 1999-00 | 1.45 | 63.08 | 0.0229 |
| 2000-01 | 3.84 | 46.63 | 0.0082 |
| 2001-02 | 1.06 | 39.57 | 0.0267 |
| 2002-03 | 8.04 | 64.84 | 0.1239 |
| 2003-04 | 10.37 | 65.93 | 0.1577 |
| 2004-05 | 7.93 | 80.98 | 0.0979 |
| 2005-06 | 5.80 | 73.72 | 0.0786 |

Debt = Debentures + Current liabilities.

Equity = Equity share capital + Preference share capital + Reserves & surplus + share premium.
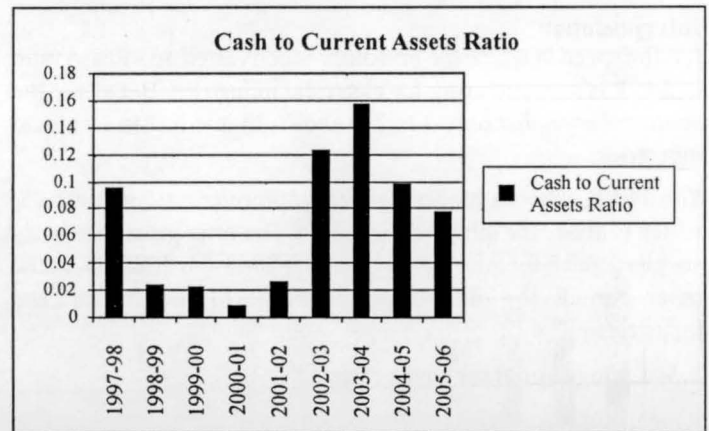
**Interpretation**

As for TELK, debt equity ratio is very high all the periods as on consideration. In the case of TELK the ratio directly related to its current liabilities.

**5. Cash to Current Assets Ratio**

Cash is an asset, and like any other asset, it earns only when it is in use. In other words , when cash is in the flow it is earning for the enterprise; when it is idle, not only that it does not earn , it also contributes negatively to the profitability of the enterprise, because the fund that is tied to idle cash to be carried at a cost. The situation is similar to that of a machine which has been bought but kept idle. An enterprise must, therefore, make its cash, works as hard as possible.

Of all the current assets that are found in the balance sheet of an enterprise, cash is most important in terms of its usage, hence it is holding in stock form must be the least. With the development of the financial market and rising efficiency in financial management of enterprises, cash (stock) as a percentage of total current assets has been going down significantly in almost all the developed nations of the world. For example, in United States it was 13.4 percent in 1961, which came down to 8.81 percent in 1970 and to 6.67 percent in 1990. Although the trend of the ratio is on the decline, in absolute percentage the figure is still quite high. This is primarily due to the compensatory balances required to be maintained by the U. S. enterprises with banks from whom they have taken loans. As against this in India, cash to current asset ratio went up from 3.1 percent in 1966-67 to 6.67 percent in 1976-77. It stayed more or less at the same level during the following years.

The value of cash to current assets ratio for Indian manufacturing companies appears to be closely comparable with that of the United States in 1990s.

**Cash to Current Assets Ratio**



**Interpretation**

In India, the companies show a value of 6.67 percent, but TELK shows only decimal values. This trend is good, because the company shows the trend of almost all the developed countries. In comparison with TELK, KEL show low ratio in all the periods. The ratio means TELK utilizes cash in a better way.

**Effectiveness in Utilization of Components of Working Capital**

**1. Inventory Turnover Ratio**

It measures the velocity of conversion of the stock in to sales. It is obtained by dividing sales by average inventories. Usually a higher inventory turnover indicates efficient management of inventories.

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Average inventories}}$$

| Year | Sales | Avg. Inventory | Ratio |
|---|---|---|---|
| 1997-98 | 89.66 | 9.3 | 9.64 |
| 1998-99 | 54.65 | 24.187 | 2.26 |
| 1999-00 | 57.43 | 17.06 | 3.40 |
| 2000-01 | 55.50 | 17.59 | 3.20 |
| 2001-02 | 65.24 | 16.76 | 3.96 |
| 2002-03 | 82.90 | 12.21 | 6.78 |
| 2003-04 | 93.32 | 15.17 | 6.15 |
| 2004-05 | 94.15 | 22.14 | 4.25 |
| 2005-06 | 110.01 | 18.34 | 5.99 |

**Inentory Turnover Ratio**



**Working Capital Turnover Ratio**
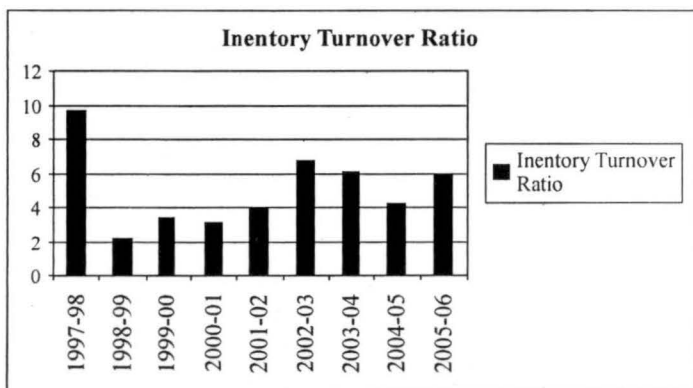


**Interpretation**

It is the speed in which the inventory is converted to sales. A ratio of 5 to 8 is standard norm for electrical industries. But as per the studies shows, that only 2 to 3 is shown by the Indian electrical industries.

The TELK shows a higher inventory turnover ratio in 1997-98, which is above the international value. The ratio posses' industry standard value for the periods 2002-03, 2003-04, 2005-06. In the other periods the ratio is in the range of Indian electrical industries.

**2. Working capital turnover ratio**

It measures the efficiency of employment of the working capital. It indicates the over trading and under trading.

Higher the turn over ratio, more efficient is the management & utilization of assets, low ratios indicates the under utilization of resources.

Working capital turnover ratio = $\dfrac{\text{Cost of goods sold}}{\text{Net working capital}}$

| Year | Cost of goods sold | Net Working Capital | Ratio |
|------|------|------|------|
| 1997-98 | 87.97 | 40.17 | 2.16 |
| 1998-99 | 65.55 | 37.06 | 1.76 |
| 1999-2000 | 76.25 | 29.93 | 2.54 |
| 2000-01 | 71.40 | 12.95 | 5.51 |
| 2001-02 | 71.32 | 11.01 | 6.47 |
| 2002-03 | 76.72 | 20.39 | 3.76 |
| 2003-04 | 86.99 | 21.29 | 4.08 |
| 2004-05 | 93.61 | 32.59 | 2.87 |
| 2005-06 | 108.28 | 23.40 | 4.62 |
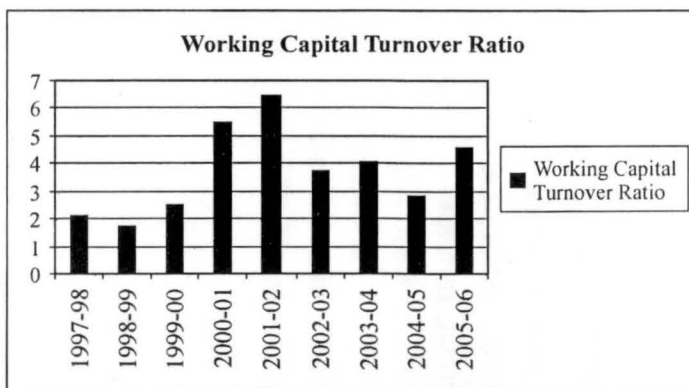
**Interpretation**

The ratio is maximum in the year 2001-02 (6.47) and minimum in the period 1998-99 (1.76), it reveals that more efficient utilization in the period 2001-02 and under utilization in the period ( compared to other periods ) 1998-99.

**3. Debtors turn over ratio**

It shows the collection power of a firm.

Higher ratio shows the majority of sales are cash sales.

Debtors turn over ratio = $\dfrac{\text{Sales}}{\text{Debtors}}$

| Year | Sales | Debtors | Ratio |
|------|------|------|------|
| 1997-98 | 89.66 | 64.82 | 1.38 |
| 1998-99 | 54.65 | 47.78 | 1.14 |
| 1999-00 | 57.43 | 45.92 | 1.25 |
| 2000-01 | 55.50 | 31.62 | 1.75 |
| 2001-02 | 65.24 | 32.80 | 1.98 |
| 2002-03 | 82.90 | 56.22 | 1.47 |
| 2003-04 | 93.32 | 50.49 | 1.84 |
| 2004-05 | 94.15 | 61.19 | 1.53 |
| 2005-06 | 110.01 | 60.49 | 1.81 |

**Debtors Turnover Ratio**
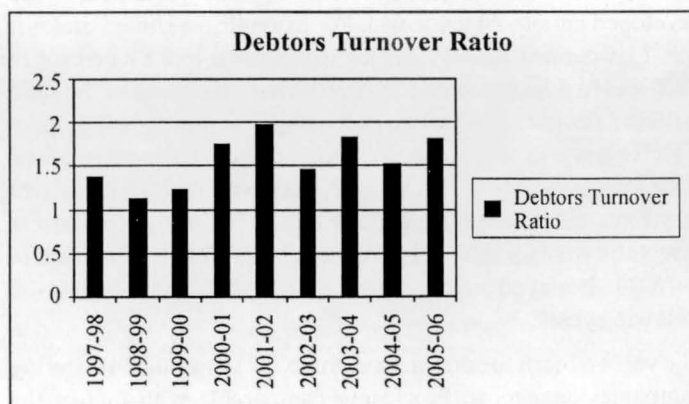


**Interpretation**

In the period 2001-02 ratio is higher as compared to the other years (1.98), this indicates cash sale is more in the period 2001-02 compared to other periods

## 4. Average collection period

$$\text{Average collection period} = \frac{\text{Debtors} * 365}{\text{Sales}}$$

| Year | Debtors | Sales | No. of Days |
|------|---------|-------|-------------|
| 1997-98 | 64.82 | 89.66 | 263.87 |
| 1998-99 | 47.78 | 54.65 | 319.11 |
| 1999-00 | 45.92 | 57.43 | 291.84 |
| 2000-01 | 31.62 | 55.50 | 207.95 |
| 2001-02 | 32.80 | 65.24 | 183.50 |
| 2002-03 | 56.22 | 82.90 | 247.5 |
| 2003-04 | 50.49 | 93.32 | 197.48 |
| 2004-05 | 61.19 | 94.15 | 237.22 |
| 2005-06 | 60.49 | 110.01 | 200.69 |

### Interpretation

A short collection period is preferable. Long period reflects that the payments by debtors are delayed. In TELK, collection period shows a fluctuating trend. In the year 2001-02, company shows a high collection power and in 1998-99 shows a very low collection power.



Average Collection Peiod
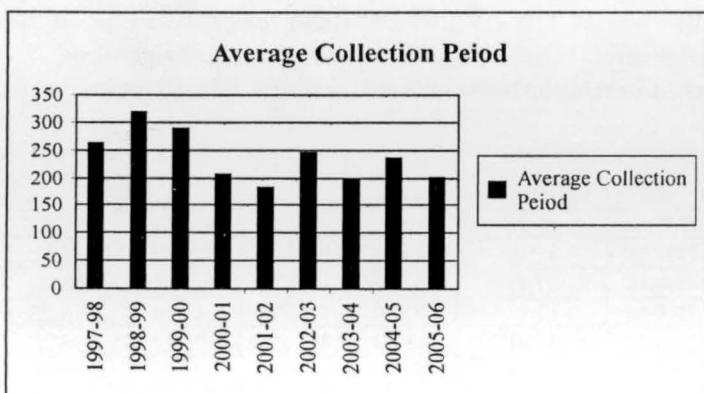
## 5. Cash Velocity

Cash velocity ratio explains the speed with which the cash is turned over. Higher the turnover lesser the cash balance required for any given level of sales and it shows greater efficiency in utilization of cash.

$$\text{Cash Velocity} = \frac{\text{Sales}}{\text{Cash}}$$

| Year | Sales | Cash | Cash Velocity |
|------|-------|------|---------------|
| 1997-98 | 89.66 | 7.89 | 11.36 |
| 1998-99 | 54.65 | 1.88 | 29.06 |
| 1999-00 | 57.43 | 1.45 | 39.60 |
| 2000-01 | 55.50 | 3.84 | 14.45 |
| 2001-02 | 65.24 | 1.06 | 61.54 |
| 2002-03 | 82.90 | 8.04 | 10.31 |
| 2003-04 | 93.32 | 10.37 | 8.99 |
| 2004-05 | 94.15 | 7.93 | 11.87 |
| 2005-06 | 110.01 | 5.80 | 18.96 |



Cash Velocity
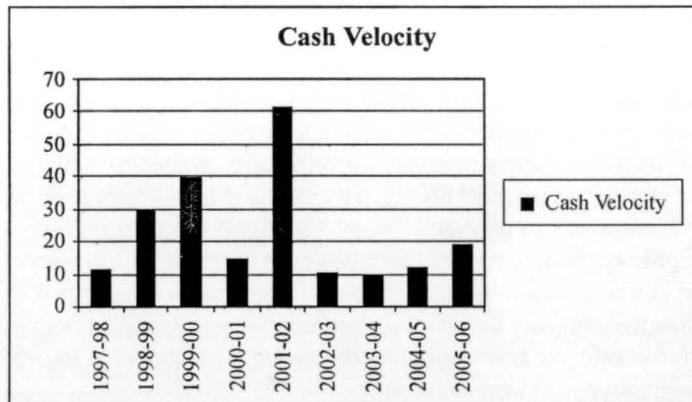
### Interpretation

From the analysis, the efficiency of utilization of cash is high at 2001-02 and low at 2003-04. This means that cash balance required for any given level of sales is less in the period 2001-02 and the cash balance requirement is high in the period 2003-04.

## 6. Net Profit Ratio

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Sales}}$$

| Year | Sales | Net Profit | Ratio |
|------|-------|------------|-------|
| 1997-98 | 89.66 | - 1.89 | -0.021 |
| 1998-99 | 54.65 | - 11.62 | - 0.212 |
| 1999-00 | 57.43 | - 18.87 | - 0.328 |
| 2000-01 | 55.50 | - 15.90 | - 0.286 |
| 2001-02 | 65.24 | - 6.08 | - 0.093 |
| 2002-03 | 82.90 | + 6.18 | 0.0745 |
| 2003-04 | 93.32 | + 6.33 | 0.0678 |
| 2004-05 | 94.15 | + 0.54 | 0.0057 |
| 2005-06 | 110.01 | + 1.61 | 0.0146 |
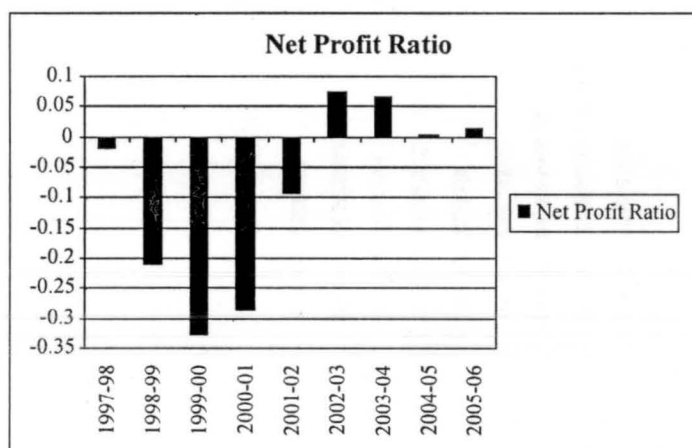


Net Profit Ratio

### Interpretation

Net profit ratio of TELK shows a positive trend from 2002-03 to 2005-06. But from 1998-99 to 2001-02, the company shows a loss. The net profit/ net loss for TELK is not proportional to the sales of the company
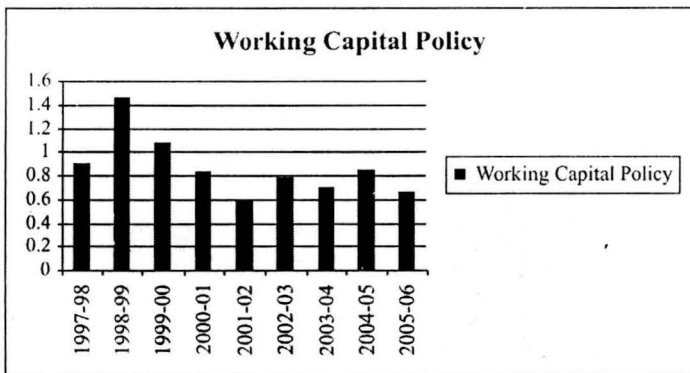
## Working Capital Policy

The working capital policy depends on how conservative or aggressive is the current asset policy of the firm. If the firm pursues a very conservative current asset policy it would carry a high level of current asset in relation to sales. If the firm adopts a moderate current asset policy, it would carry a moderate level of current assets in relation to sales. Finally, if the firm follows a highly aggressive current assets policy, it would carry a low level of current assets in relation to sales. If the ratio is more than 0.6, then the company follows a conservative working capital policy. If the ratio is less than 0.6, the company follows a highly aggressive working capital policy.

$$\text{Working Capital Policy} = \frac{\text{Current Assets}}{\text{Sales}}$$

| Year | Current Assets | Sales | Ratio |
|------|----------------|-------|-------|
| 1997-98 | 81.99 | 89.66 | 0.91 |
| 1998-99 | 79.96 | 54.65 | 1.46 |
| 1999-00 | 63.08 | 57.43 | 1.09 |
| 2000-01 | 46.63 | 55.50 | 0.84 |
| 2001-02 | 39.57 | 65.24 | 0.60 |
| 2002-03 | 64.84 | 82.90 | 0.78 |
| 2003-04 | 65.93 | 93.32 | 0.70 |
| 2004-05 | 80.98 | 94.15 | 0.86 |
| 2005-06 | 73.72 | 110.01 | 0.67 |

## Interpretation

In all the periods the ratio is higher than 0.6, so the company follows a conservative working capital policy. So the level of current asset is high. But the level of conservation shows a decreasing trend.



**Working Capital Policy**

## Correlation Analysis

### Correlation Analysis of TELK

a) **Correlation between Gross Working Capital & Sales**

| Year | Gross working Capital (X) | Sales (Y) | X * Y | X² | Y² |
|------|---------------------------|-----------|-------|-----|-----|
| 1997-98 | 81.99 | 89.66 | 7351.22 | 6722.36 | 8038.91 |
| 1998-99 | 79.96 | 54.65 | 4369.81 | 6393.60 | 2986.62 |
| 1999-00 | 63.08 | 57.43 | 3622.68 | 3979.08 | 3298.20 |
| 2000-01 | 46.63 | 55.50 | 2587.96 | 2174.35 | 3080.25 |
| 2001-02 | 39.57 | 65.24 | 2581.54 | 1565.78 | 4256.25 |
| 2002-03 | 64.84 | 82.90 | 5375.23 | 4204.22 | 6872.41 |
| 2003-04 | 65.93 | 93.32 | 6152.58 | 4346.76 | 8708.62 |
| 2004-05 | 80.98 | 94.15 | 7624.26 | 6557.76 | 8864.22 |
| 2005-06 | 73.72 | 110.01 | 8109.93 | 5434.63 | 12102.2 |

$\sum 596.7 \sum 702.861 \sum 47775.21 \sum 41378.54 \sum 58207.68$

$$r = \frac{9*47775.21 \ 596.7 * 702.86}{\{\sqrt{9*41378.54 \ [(596.7)^2]}\} * \sqrt{\{9*58207.68 \ (702.86)^2\}}}$$

= **0.47**

### Test of Significance

$$t = r(\sqrt{n-2}) = \frac{(.47) \sqrt{(9-2)}}{1-(r^2) \quad 1-[.47^2]} = \textbf{1.54}$$

### Interpretation

The value 'r' is 0.47, shows a positive correlation. From the T-test, the value of T is 1.54, which is less than table value, so the relationship between inventories and sales are not significant

a) **Correlation between Net Working Capital & Sales**

| Year | Networking Capital (X) | Sales (Y) | X * Y | X² | Y² |
|------|------------------------|-----------|-------|-----|-----|
| 1997-98 | 40.71 | 89.66 | 3650.05 | 1657.30 | 8038.91 |
| 1998-99 | 37.06 | 54.65 | 2025.32 | 1373.44 | 2986.62 |
| 1999-00 | 29.93 | 57.43 | 1718.87 | 895.80 | 3298.20 |
| 2000-01 | 12.95 | 55.50 | 718.72 | 167.70 | 3080.25 |
| 2001-02 | 11.01 | 65.24 | 718.29 | 121.22 | 4256.25 |
| 2002-03 | 20.39 | 82.90 | 1690.33 | 415.75 | 6872.41 |
| 2003-04 | 21.29 | 93.32 | 1986.78 | 453.26 | 8708.62 |
| 2004-05 | 32.59 | 94.15 | 3068.34 | 1062.10 | 8864.22 |
| 2005-06 | 23.40 | 110.01 | 2574.23 | 547.56 | 12102.2 |

$$r = \frac{9 * 18150.93 \quad 229.33 * 702.86}{\{\sqrt{9*6694.13 \ [(229.33)^2)]}\} * \sqrt{\{9*58207.68 \ (702.86)^2\}}}$$

= **0.143**

### Test of Significance

$$t = r(\sqrt{n-2}) = \frac{(.143) \sqrt{(9-2)}}{1-(r^2) \quad 1-[.143^2]} = \textbf{0.386}$$

### Interpretation

- The value 'r' is 0.143, shows a positive correlation
- From the T-test, the value of T is 0.386, which is less than table value, so the relationship between inventories and sales are not significant

c) **Correlation between Inventories & Net Working Capital**

$\sum 152.757 \quad \sum 229.33 \quad \sum 3920.53 \sum 2642.14 \quad \sum 6694.13$

| Year | Inventories (X) | Net Working Capital (Y) | X * Y | X² | Y² |
|---|---|---|---|---|---|
| 1997-98 | 9.3 | 40.71 | 378.603 | 86.49 | 1657.30 |
| 1998-99 | 24.187 | 37.06 | 896.37 | 580.81 | 1373.44 |
| 1999-00 | 17.06 | 29.93 | 510.606 | 284.59 | 895.80 |
| 2000-01 | 17.59 | 12.95 | 227.79 | 298.94 | 167.70 |
| 2001-02 | 16.76 | 11.01 | 184.53 | 270.93 | 121.22 |
| 2002-03 | 12.21 | 20.39 | 248.96 | 144.48 | 415.75 |
| 2003-04 | 15.17 | 21.29 | 322.97 | 186.59 | 453.26 |
| 2004-05 | 22.14 | 32.59 | 721.54 | 453.69 | 1062.10 |
| 2005-06 | 18.34 | 23.40 | 429.16 | 355.62 | 547.56 |

$$r = \frac{9*3920.53 \ 152.76 * 229.33}{\{\sqrt{9*2642.14 \ [(152.757)^2]}\}* \sqrt{\{[9*6694.13 \ (229.33)^2\}}}$$
$$= \mathbf{0.136}$$

### Test of Significance

$$t = \frac{r(\sqrt{n-2})}{1-(r^2)} = \frac{(.136) \sqrt{(9-2)}}{1-[.136^2]} = \mathbf{0.366}$$

### Interpretation

The value 'r' is 0.136, shows a positive correlation. From the T-test, the value of T is 0.366, which is less than table value, so the relationship between inventories and sales are not significant

### c) Correlation between Inventories & Sales

| Year | Inventories (X) | Sales (Y) | X * Y | X² | Y² |
|---|---|---|---|---|---|
| 1997-98 | 9.3 | 89.66 | 833.84 | 86.49 | 8038.91 |
| 1998-99 | 24.187 | 54.65 | 1321.82 | 580.81 | 2986.62 |
| 1999-00 | 17.06 | 57.43 | 979.76 | 284.59 | 3298.20 |
| 2000-01 | 17.59 | 55.50 | 976.25 | 298.94 | 3080.25 |
| 2001-02 | 16.76 | 65.24 | 1093.42 | 270.93 | 4256.25 |
| 2002-03 | 12.21 | 82.90 | 1012.21 | 144.48 | 6872.41 |
| 2003-04 | 15.17 | 93.32 | 1415.66 | 186.59 | 8708.62 |
| 2004-05 | 22.14 | 94.15 | 2084.48 | 453.69 | 8864.22 |
| 2005-06 | 18.34 | 110.01 | 2017.58 | 355.62 | 12102.2 |

$\Sigma 152.757 \ \Sigma 702.86 \ \Sigma 11735.0 \ \Sigma 2758.6 \ \Sigma 58207.68$

$$r = \frac{9*11735.02 \ 152.76 * 702.86}{\{\sqrt{9*2758.6 \ [(152.757)^2]}\}* \sqrt{\{[9*58207.68 \ (702.86)^2\}}}$$
$$= \mathbf{-0.26} \text{ (Negative correlation)}$$

### Interpretation

- The value 'r' is -0.26, shows a negative correlation

### Result of Correlation Analysis

| Correlation between | r value of TELK | Significance of relationship |
|---|---|---|
| Gross Working Capital & Sales | 0.47 | Not Significant |
| Net Working Capital & Sales | 0.143 | Not Significant |
| Inventories & Net Working Capital | 0.136 | Not Significant |
| Inventories & Sales | - 0. 26 (Negative correlation) | – |

## Working Capital Leverage of TELK

Working capital leverage reflects the sensitivity of return on investment (earning power) to changes in the level of current assets.

Working Capital Leverage = $\frac{CA}{TA \ - \ *CA}$

CA = Current Assets

TA = Total Assets

- CA = 20% of Current Assets

| Year | Fixed Assets | Current Assets | Total Assets | Working Capital Leverage |
|---|---|---|---|---|
| 1997-98 | 3.47 | 81.99 | 85.46 | 1.187 |
| 1998-99 | 3.36 | 79.96 | 83.32 | 1.187 |
| 1999-00 | 2.93 | 63.08 | 66.01 | 1.18 |
| 2000-01 | 2.55 | 46.63 | 49.18 | 1.17 |
| 2001-02 | 2.42 | 39.57 | 41.99 | 1.16 |
| 2002-03 | 2.21 | 64.84 | 67.05 | 1.19 |
| 2003-04 | 2.34 | 65.93 | 68.27 | 1.196 |
| 2004-05 | 2.79 | 80.98 | 83.77 | 1.19 |
| 2005-06 | 2.87 | 73.72 | 76.59 | 1.19 |

| Year | Current Liabilities (Y) | Trend Value | X | X² | XY |
|---|---|---|---|---|---|
| 1997-98 | 41.28 | 100 | -4 | 16 | -165.12 |
| 1998-99 | 42.90 | 103.9 | -3 | 9 | -128.7 |
| 1999-00 | 33.15 | 80.3 | -2 | 4 | -66.3 |
| 2000-01 | 33.68 | 81.5 | -1 | 1 | -33.68 |
| 2001-02 | 28.56 | 69.2 | 0 | 0 | 0 |
| 2002-03 | 44.45 | 107.7 | 1 | 1 | 44.45 |
| 2003-04 | 44.64 | 108.14 | 2 | 4 | 89.28 |
| 2004-05 | 48.39 | 117.2 | 3 | 9 | 145.17 |
| 2005-06 | 50.32 | 121.9 | 4 | 16 | 201.28 |

$\Sigma \ 367.37 \qquad \Sigma \ 0 \ \Sigma 60 \ \Sigma \ 86.38$

$Y = A + BX$
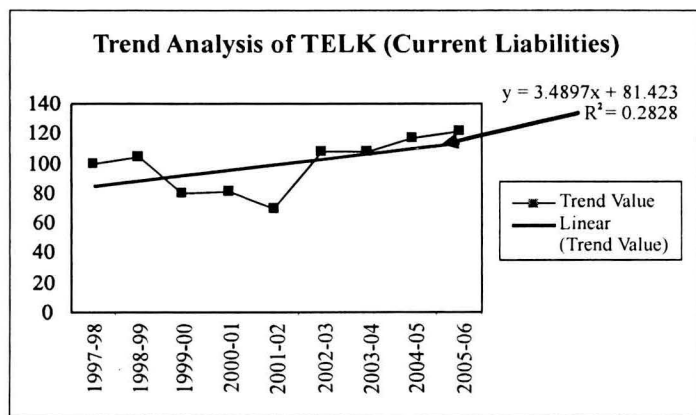
$A = \frac{\Sigma Y}{n} = \frac{367.37}{9} = 40.81$

$B = \frac{\Sigma XY}{\Sigma X^2} = \frac{86.38}{60} = 1.44$

$X = 6$

$Y (2007-08) = A + BX = 40.81 + (1.44*6) = 49.45$

### Interpretation

- Current liabilities show a fluctuating trend. From 2002-03, it shows an increasing trend

- .One of its component sundry creditors decreases up to the period 2001-02. Then it continuously increases up to 05-06. For the entire period it decreases.

- Advances and progress payment received for suppliers to be made decreases for the period 1999-2000, 2003-04 and 2005-06. Over all effect for then entire period is an increase of 7.61 crores. Provisions show an effective increase for the entire period.

**Trend Analysis of TELK (Current Liabilities)**

$y = 3.4897x + 81.423$
$R^2 = 0.2828$

Trend Value
Linear
(Trend Value)

## Conclusion

In the present scenario business expands in a rapid pace with the changing needs .To make the business profitable, the effective management of working capital is a necessity. The analysis of working capital of TELK provided a lot of information's for critical analysis and interpreting numerical facts in a systematic manner.

Following the new trend of very low level of solvency position is better for companies, because the finance needed for current assets can be reduced. So TELK has a scope to decrease the amount of investment in current assets. The inventory to sales speed shows a good trend and the efficiency of utilization of working capital shows a fluctuating trend. By using new techniques of operations management like JIT, EOQ etc. we can reduce the amount of finance in current assets and make the companies into an aggressive working capital policy holders. In the case of TELK, the correlation between Gross working capital & sales, net working capital & sales, Inventories & Net working capital are positively correlated but not significant. Try to reduce the fluctuations in the current liabilities and make the changes to be proportionate with sales.

The recent studies show that in 2005, India will be the second most world giant in the multi polar international system. Emerging Indian economy gives greater opportunities to the industries and other business sector. So, power needed for the country will increase in the near future. This situation is a favorable condition for the public sector electrical industries in Kerala. The analysis reveals that the company shows a prospective growth trend. The inventory to sales speed should be making speedier and the utilization of working capital should make efficient.

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