A STUDY ON WORKING CAPITAL MANAGEMENT OF
KELTRON EQUIPMENTS IN TRIVANDRUM- USING "Z-SCORE TEST"

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Abstract

The study of working capital behavior occupies an important place in financial management. The earlier emphasis of financial management was more on a long-term financial decision. Working capital management, which is concerned with short – term financial decision, appears to have been relatively neglected in the literature of finance. The developing economies generally face the problem of inefficient utilization of Resources available to them. Capital is the scarcest productive resource in such economies and hence a proper utilization of these resources promotes the rate of growth, cuts down the cost of production and above all, improves the efficiency of the productivity system. Fixed capital and working capital are the dominant contributors to the capital of a developing country. Fixed capital investment generates productive capacity, whereas working capital makes the utilization of that capacity possible.
Keywords: working capital, financial management, rate of growth, productive capacity, profit and loss, investment decisions

Managers, Tax Authorities and other interested groups seek answers to the following important questions about a firm:
- What is the financial position of the firm at a given point of time?
- How did the firm perform financially over a given period of time?

To answer the above questions, one has to prepare two major financial statements - the balance sheet and the income statement. The balance sheet shows the financial position or condition of the firm at a given point of time. In income statement or profit and loss account reflects the performance of the firm over a period of time.

A firm communicates financial information to the users through financial statements and reports. Balance sheet and profit and loss accounts, as these statements are used by investors and financial analysis to examine the firms performance in order to make investment decisions.

Statement of the Problem

The important of working capital management stems from two reasons
(i)   A substantial portion of the investment is invested in current assets, and
(ii)   Level of current assets will change quickly with the variation in sales.

Hence, in this study, an attempt has been made to analyse the size and composition of working capital and whether such an investment has increased or declined over a period. After determining the requirement of current assets, one of the important tasks of the financial manager is to select a group of appropriate source of finance for the current assets.

Objectives of the Study

1   To study the performance of financial position of the company.
2   To analyse the financial tools like working capital management, ratio analysis and Z score test to be applied.

Scope of the Study

Scope of the study was confirmed to internal environment only. The study based on the secondary data collected from annual report, journals, magazines, newspapers, and website etc.

Financial statement analysis is the process of identifying the financial position of the company. After duly recognizing the importance of financial statement analysis of this topic has been chosen as the focus of the project.

Limitations of the Study

1. The analysis of this study is mainly based on secondary data.
2. The study covers for 7 years from 2001- 02 to 2007 – 08.
3. The financial statements are generally based on historical or original cost. The current economical condition is ignored.

Research Methodology

The type of research used for study is descriptive research. It includes fact findings, enquiries of the different kinds the major purpose of descriptive research is description of the state of affairs as it exists at present data collection. The task of data collection begins after a research problem has been defined and research design.

Collection of Data

The secondary data have been collected from the annual report, periodicals, journals, magazines, text books, news papers and websites and so on.

Data Processing

After completing the collection of data by the researcher prepared for the purpose of classifying the data, lastly classification tables were prepared for further analysis and interpretation of data.

Period of the Study

The analysis of financial statement of KELTRON Ltd is made on the basis of information abstracted, from the financial statements of the company for the period of seven years from the financial year 2003-04 to 2009 – 10. The researcher was done during the period from January march 2010.

Analysis and Discussions

Financial management is that management activity which is concerned with the planning and controlling of firms financial resources. Finance is one of the very important and essential parts of ever organization. The four important managerial finance functions are investment decision, financing, dividend, liquidity decision.

The finance manager is the head of the department and under him there are executives and finance officers and assistants. The auditing work is done by chartered Accounts. The auditing of financial statements of KELTRON 10 the years 2001-2002 was done by a sunny and Associates chartered accounts.

The authorized share capital of KEC is Rs. 800,000,000 which includes 8000,000 shares of Rs 100/- each. Issues, subscribed and paid up shares capital is Rs 799, 155, 0. 79, 91, 550 shares of Rs.100/- fully paid up.

Statement of Changes in Working Capital

The term working capital refers to the amount of capital which is readily available to an organization. That is, working capital is the difference between resources in cash or readily convertible into cash (Current Assets) and organizational commitments for which cash will soon be required (Current Liabilities).

Current Assets are resources which are in cash or will soon be converted into cash in "the ordinary course of business".

Current Liabilities are commitments which will soon require cash settlement in "the ordinary course of business".

Table.1 Statement of Changes in Working Capital

(Rs in Millions)

Year	Current Assets	Current liabilities	Networking capital	increase	Decrease
2001-02	2761.15	5644.77	(2883.62)	-	-
2002-03	2566.26	6322.65	(3755.78)	-	872.16
2003-04	3077.41	7493.35	(4415.94)	-	660.16
2004-05	3414.05	8510.57	(5096.52)	-	680.16
2005-06	4085.42	1161.02	2924.40	2172.12	-
2006-07	3899.20	1129.57	2769.63	-	154.77
2007-08	4757.66	2027.01	2730.65	-	38.98

Source: Calculated Data

The current asset of the firm is 4757.66 in the year 2007-08. The current liability is very high 5096.52 in the year 2004-05. The working capital is increased in the year 2005-06. Last year 2007-08 working capitals was decreased into 38.98

Z- SCORE ANALYSIS
Liquidity Test

Liquidity or short term solvency is an attribute that signifies the capacity to meet the financial obligation as and when required. The liquidity ratios are used to measure the short – term solvency and indicate the ability of a firm to meet its debt requirements as and when they become due current liabilities are used as the denominator of the ratios because they are considered to represent the most urgent debt, requiring retirement within one year or most preciously, within one operating cycle.

Table.2 Liquidity Test

(Rs.in.millions)

Year	Current assets	Liquid assets	Current Liabilities	Current Ratio	Quick ratio
2001-02	2761.15	2060.25	5644.77	0.49	0.36
2002-03	2566.26	1799.26	6322.05	0.40	0.28
2003-04	3077.41	2332.73	7493.35	0.41	0.31
2004-05	3414.05	2459.19	8510.57	0.40	0.28
2005-06	4085.42	3374.43	1161.02	3.52	2.91
2006-07	3899.20	3270.42	1129.57	3.45	2.89
2007-08	4757.66	3734.51	2027.01	2.35	1.84

Source: Calculated Data

The current asset position of the company is presented above the table. It was Rs.2566.26 in the year 2002-03, gradually increased to Rs.4085.42 in the year 2005-06 after it was decreased into Rs.3899.20 and last year it was increased into Rs.4757.66

The liquid assets position was Rs.1799.26 in 2002-03, and gradually increased up to Rs.3734.51 in 2007-08 and continues the same performance because of liquid assets and better management of inventory.

**Figure.1 Diagrammatic Representation of Liquidity Test for Current Assets,
Liquid Assets and Current Liabilities**
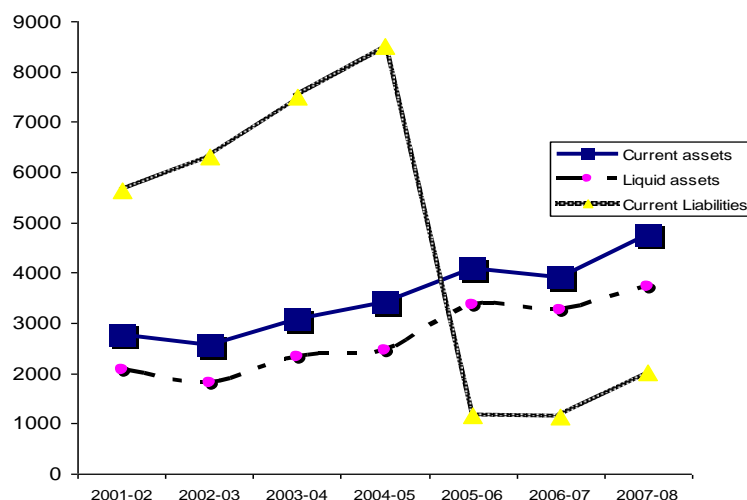
In order to test the liquidity position of KELTRON, two most popular ratios via current ratio, which is worked out by dividing the current assets by current liability and quick ratio. The current ratio was moderate level from 2001-02 to 2004-05 and after, 3.52 in 2005-06 was decreased into 2.35 in 2007-08. The quick ratio is variation in every year, growth and decline.

Figure .2 Diagrammatic Representation of Liquidity Test for Current Ratio and Quick Ratio
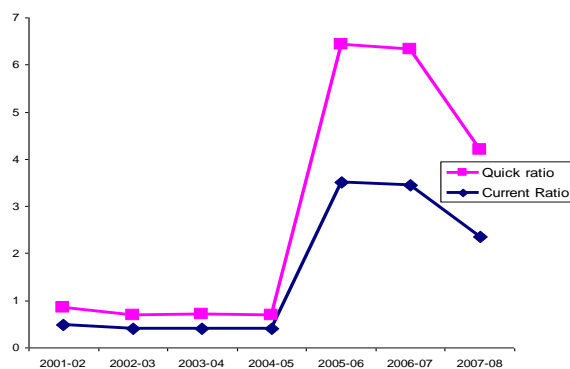
Working Capital Investment Efficiency Test

In order to substantiate the liquidity test, it is essential to test the working capital investment efficiency test because inventory and accounts receivable the two important constituents of current assets, may sometimes block the proprietors fund. A blockage occurs when money becomes tied up in slow paying debtors, or in slow moving stock. In such a case, the business may appear to have a satisfactory amount of working capital but little or to liquidity. The common working capital investment efficiency ratios are

- ❖ Inventory turnover Ratio   =   Cost of sales / Inventory
- ❖ Days inventory outstanding   =   365 / Inventory turnover ratio
- ❖ Debtors turnover ratio   =   Sales / Debtors
- ❖ Days sales outstanding   =   365 / Debtors turnover ratio

The working capital investment efficiency ratio of KELTRON is presented in following table.

Table 3 Working Capital Investment Efficiency Test (Rs.in millions)

Year	Inventory Turnover Ratio	Days stock outstanding	Debtors turnover ratio	Days sales outstanding
2001-02	6.49	56	1.06	344
2002-03	5.45	67	1.15	317
2003-04	7.05	52	1.04	351
2004-05	4.15	88	1.24	294
2005-06	4.77	77	1.36	268
2006-07	6.76	54	1.39	263
2007-08	7.65	48	0.86	424

Source: Calculated Data

The inventory turnover ratio has shown a overall dismal performance during the initial stage of the study period. It indicates the company was in financial distress. The inventory was no gradual improvement, but, from 2004-05 ratios 4.15 was improving into 7.65 in 2007-08.

Debtors Turnover Ratio has also started with a poor ratio of 1.06 but from the year 2002-03 ratio was 1.04 increased into 1.39 in 2006-07, but the last year the ratio decreased into 0.86.

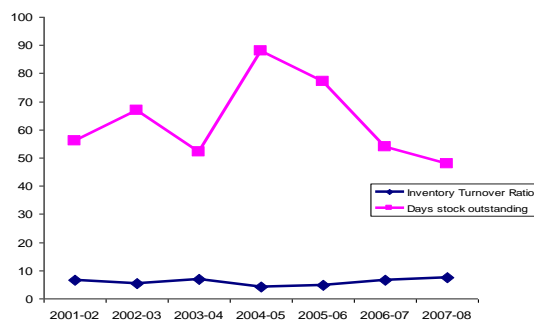The outcomes of the working capital investment efficiency test can be depicted in the following schematic way.

Figure 3 Diagrammatic Representation of working Capital Efficiency Test for Inventory Turnover Ratio and Day Stock Outstanding
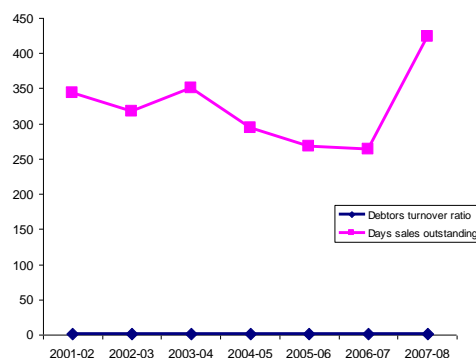
Figure.4 Diagrammatic Representation of working Capital Efficiency Test for Debtors Turnover Ratio and Day Sales Outstanding

Solvency Test

Rather than searching for a single best ratio, Prof. Edward Altman has built a new model that distills five key performance ratios into a single score called z-score which gives investors a pretty good snapshot of a firm's financial health. The model uses five ratios to consider both financial problems (XI, X2, & X4) and operating problems (X3 &X5) of the firms. He has used multiple decrement analysis weight age used for the different ratios. Which are,

$X1$ =   (Working capital / Total assets) x 1.2
$X2$ =   (Retained earnings / Total assets) x 1.4

X3 =   (EBIT/Total assets) x 3.3
X4 = (Capital fund / Total Liabilities) x 0.6 and
 X 5 = (Sales / Total assets) x 0.999

The final z-score is arrived at by adding all the above
i.e., Z= X1 + X2 + X3 + X4 + X5

Table.4 Z- Score Analysis

(Rs. In Millions)

Detail / Year	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Working capital	(2883.62)	(3755.78)	(4415.94)	(5096.52)	2924.40	2769.63	2730.65
Total assets	3231.46	2945.28	3424.38	3744.92	4416.72	4207.03	4867.77
EBIT	2169.99	2611.66	2747.38	2437.75	(1812.80)	924.12	823.18
Total liability	5816.26	6649.40	7889.56	8937.24	1625.87	1632.04	2594.13
Net sales	2037.11	1857.76	2104.46	2346.27	3129.91	3370.94	2591.56
Ratio's of WC/TA	(0.89)	(1.27)	(1.28)	(1.36)	0.66	0.66	0.56
Ratio's of EBIT / TA	0.67	0.89	0.80	0.65	(0.41)	0.22	0.17
Ratio's of Sales /TA	0.63	0.63	0.61	0.63	0.71	0.80	0.53
X1	(1.068)	(1.524)	(1.536)	(1.632)	0.792	0.792	0.672
X3	2.211	2.937	2.64	2.145	(1.353)	0.726	0.561
X5	0.629	0.629	0.609	0.629	0.709	0.799	0.529
Total	1.77	2.04	1.71	1.14	0.15	2.32	1.76

Source: Calculated Data

        The five ratios are indicated above which are the following parts of the z score table, can be worked out as follows.
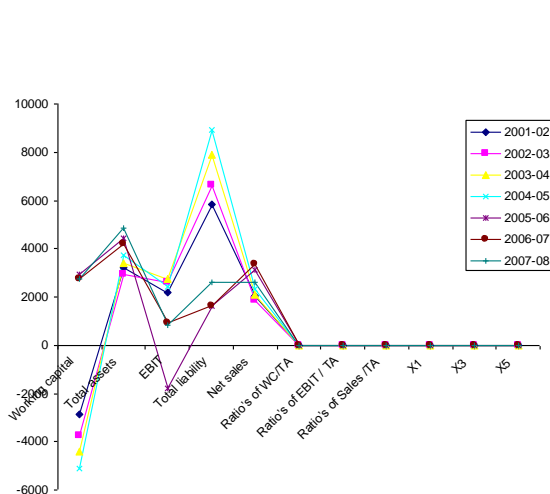

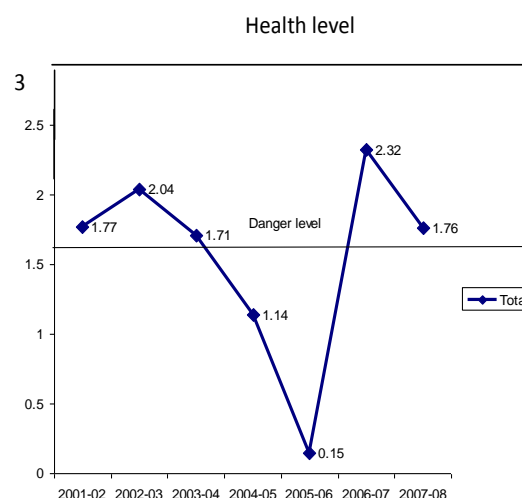
Figure 5 Diagrammatic Representation of Z-Score Analysis

Figure 6 Diagrammatic Representations of Altman Z-Score – Insolvency Predictor

1) If the 'z' score is above 3.0 – the company is safe based on these financial figures.
2) If he score is between 2.7 and 2.99 on alert. This zone is an area where one should exercise caution.
3) If the score is between 1.8 and 2.7 good chances of the company going bankrupt within two years of operations from the data of financial figures given.
4) If the score is below 1.8 – probability of financial embarrassment is very high

From the graph it is clear that even the company not at all reach the financially healthy position at any of the time under the study. But from a much made level 1.77 it reaches 2.04 in 2002-03 implies the recovery from the financial crunch & efficient turn around strategies. But it is not a progress. In the very next year it was reduced to 1.71 but after that it started gradually but the last year it again went declined 1.76.

Conclusion

In this study, it is clear that the overall position of the working capital of KELTRON is satisfactory, but there is a need for improvement in inventory. However from beginning stage the companies working capital is not satisfactory now it was growing trend, a major portion of the current assets are in the form of inventory , whereas other current assets are properly utilized and maintained.

The liquidity position mainly depends upon the size of inventory but other components like debtors, loans and advances, cash and bank balance and bills receivable etc. are also responsible. However, this study found that there is need for an immediate improvement in working capital and inventory. The management of KELTRON must try to properly utilized the inventory and try to maintain the inventory as per the requirements, so that liquidity will not interrupted.

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