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UNDERSTANDING THE IMPACT OF WORKING CAPITAL MANAGEMENT PRACTICES ON FIRM'S PROFITABILITY

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Abstract : The rapid and un-predictive business changes make the business market all over the world more competitive and exert pressures on the firms. It is characterized by a considerable amount of uncertainty regarding the demand, market price, and availability of raw materials. The markets in which real firms operate are not perfectly competitive. Hence, this necessitates the firms to have working capital to meet the demand.

Working capital management is a very important aspect of corporate finance. This study has been undertaken to examine the management of finance playing a crucial role in the growth. It is concerned with examining the structure of liquidity position and profitability position of *BIL ENERGY LTD, and TRANFORMER LTD.*

The purpose of this paper is to examine the trends in working capital management and its impact on firm's profitability. The dependent variable, return on total assets (ROTA) is used as a measure of profitability and the relation between working capital management.

Keywords: Working Capital Management, Profitability.

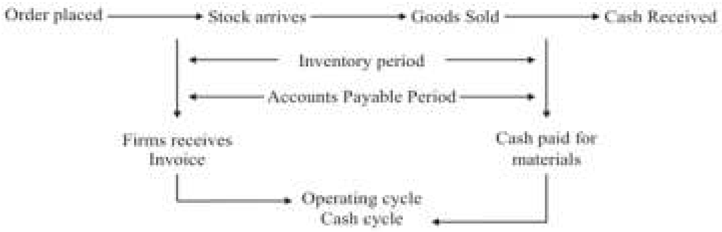
INTRODUCTION

The real world fact is characterized by considerable amount of uncertainty regarding the demand, market price and availability of suppliers. These all transaction costs for purchasing or selling goods or securities. Information is costly to obtain and is not equally distributed. There are spreads between the borrowing and lending rates for investments and financing of equal risk. Similarly each organization is faced with its own limits on the production capacity and technology it can employ. There are fixed as well as variable costs associated with producing goods. Above problem necessitate the requirement for working capital.

Working capital management is the functional area of finance that covers all the current accounts of the firm. Working capital management involves the relationship between firms short-term assets and its short term liabilities. A firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations. Liquidity is a precondition to ensure that firms are able to meet its short term obligations and its continued flow can be guaranteed from a profitable venture. The importance of cash as an indicator of continuing financial health should not be surprising in view of its crucial role within the business. The goal of W.C. management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short term debt and upcoming operational expenses. The management of W.C. involves managing inventories, accounts receivable and accounts payable and cash.

The basic objective of financial management is to maximize shareholders wealth. This objective can be achieved when the company earns sufficient profits. The amount of profits largely depends on the magnitude of sales. But sales do not convert into cash instantly. There is a time lag between the sale of goods and the receipt of cash. Working capital is required to purchase the materials, pay wages and other expenses in order to sustain sales activity and the time gap between the sale of goods and realization of cash is called operating cycle.

A firm can be very profitable if it can translate the cash from operations within the same operating cycle otherwise the firm would need to borrow to support its continued working capital needs. Thus, the twin objectives of profitability and liquidity must be synchronized. Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers and a proper management of same should give the desired impact on either profitability or liquidity. If resources are blocked at the different stage of the supply chain, this will prolong the cash operating cycle. Although this might increase profitability due to increase sales it may also adversely affect the profitability if the costs tied up in working capital exceed the benefits of holding more inventories and or granting more trade credit to customers.



LITERATURE REVIEW:-

Many researchers have studied working capital from different views and in different environments. The following are the pioneer studies in this area for better understanding gap in the area:-

1.Smith and Begemann 1997 emphasized that working capital theory comprised of shared goals of profitability and liquidity. The problem was because, the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute the returns. The problem under investigation was to establish whether the more recently developed alternative working capital concept showed improved association with return on investment to that of traditional working capital ratios or not. Results indicated that there were no significant differences amongst the year were with respect to the independent variables.

2.The study conducted by De Chazal Du Mee (1998) revealed that 60%. Enterprises suffer from cash flow problems. The pioneer work of Shin and Soenen (1998) and the more recent study of Deloof (2003) have found a strong significant relationship between the measures of WCM and corporate profitability. Their findings suggest that managers can increase profitability by reducing the number of days accounts receivable and inventories. This is particularly important for small growing firms who need to finance increasing amounts of debtors.

3.Narasimham and Murty (2001) stress on the need for many industries to improve their return on capital employed (ROCE) by focusing on some critical areas such as cost containment, reducing investment in working capital and improving working capital efficiency.

4.S.K. Khathik & P.K. Singh (2003) made a study on working capital management in Indian Farmers fertilizers co-operative limited. For this, they employed several statistical tools on different ratios, to examine the effective management of working capital. It was concluded that the overall positions of the working capital of IFFCO are satisfactory but there is a need of improvement in inventory.

5.Ghosh and Maji, 2003. In this paper made an attempt to examine the efficiency of working capital management of the Indian Cement Companies during 1992-1993 to 2001-2002. For measuring the efficiency of WCM (Working Capital Management), performance, utilization and overall efficiency. Indices were calculated instead of using some common working capital management ratios. Finding of the study indicated that the Indian Cement Industry as a whole did not perform remarkably well during this period.

6.Eljelly, 2004 elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short term obligations and avoids excessive investment in these assets. The relation between profitability and liquidity was examined, as measured by current ratio and cash gap (Cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that effects profitability.

All the above studies provide us an idea regarding working capital management and its tools.

OBJECTIVES OF THIS STUDY:

1.To study the combined effect of the ratio relating to working capital management.
2.To analyze the relationship between WCM (Working Capital Management) efficiency and firms profitability.

RESEARCH METHODOLOGY:-

The data has been collected from the financial statements of the two sample firms have a legal entity and have filed their annual return to the Registrar of companies. Data for years 2010-2011 and 2011-2012 has been considered.

DATA SET & SAMPLE (VARIABLES) :

This study undertakes the issues identifying the key variable that influence working capital management of Indian firms. Choice of the variables is influenced by the previous studies on working capital management. The variables used in our study are:-

(i)Current ratio establishes the relationship between current assets and current liabilities. Normally, high current ratio is considered to be a sign of financial strength. It is the indicator of the firm's ability to promptly meet its short term liabilities.
(ii)Quick ratio represents immediate solvency position of the business.
(iii)Inventory turnover ratio is the number of times inventory turned over in a year. It is the relationship between cost of goods sold and average inventory at cost.
(iv)Cash position ratio is the relationship between absolute liquid assets and current liabilities. The purpose of preparing this ratio is to find out the absolute liquidity position. The standard norm is 0.5:1.
(v)Return on total assets (ROTA) Profitability is measured by return on total Assets (ROTA). It is the ratio which measures company's earnings before interest and taxes (PBIT) against its total net assets. The ratio is considered as an indicator of how effectively a company uses its assets to generate earning before meeting contractual obligations. The greater the company's earning in proportion to its assets, the more effectively the company is said to be using its assets.
(vi)Cash conversion cycle is a measure of working capital efficiency; it determines the health of a business. The cycle measures the average number of days that working capital is invested in the operating cycle.
(vii)The working capital management efficiency is measured in terms of the "Days of Working Capital" (DWC). DWC value is based on the amount in each of equally weighted receivable, inventory and payable accounts. The DWC represents the time period between purchases of materials on account from suppliers until the sale of finished product to the customer, the collection of the receivables and payment of payables. Thus it reflects the company's ability to finance its core operations with vendor credit. Days inventory outstanding (DIO), Days Sales Outstanding (DSO) and Days Payable Outstanding (DPO) are independent terms which are dependent variables for DWC=DSO + DIO – DPO.

The firm's profitability is measured using the ROTA (Return on Total Assets). This measure is indicator of the earning power of the firm's assets. To measure the liquidity of the firm, the cash conversion efficiency (CCE) and current ratio (CR) are used. The CCE is the cash flow generated from operating activities related to the sales.

FORMULAE TO CALCULATE THE VARIABLES:-

1.Quick Ratio (QR) = (Current assets inventories) /Current liabilities.
2.Current Ratio (CR) = (Total Current assets / Current liabilities).
3.NCA/TA = Net Current Assets / Total Assets.
4.NCA/NS = Net Current Assets / Net Sales.
5.Working Capital Turnover Ratio = (Net Sales or COGS) / Net Working Capital.
6.Inventory Turnover Ratio =(COGS / Inventory).
7.Cash Position Ratio = (Cash and bank balance + Investments) / Current liabilities.
8.Return on Total Assets (ROTA) % =(PBIT / Total assets)*100
9.Days Sales Outstanding (DSO) =(Receivables / Sales)*365
10.Days inventory Outstanding (DSO)= (Inventories / (Sales)*365

11.Days payable outstanding (DPO) =(Payables / Sales)*365.
12.Days Working Capital (DWC) = DSO+DIO – DPO.
13.Cash Conversion efficiency (CCE) = (Cash flow from operations) / Sales.

CORRELATION ANALYSIS:

Spearman's rank correlation analysis attempts to determine the degree and direction of relationship, between two variables under study.

SPEARMAN'S RANK CORRELATION FORMULA:-

$$r = 1 - \frac{6\sum D2}{N(N2-1)}$$

DATA SOURCES:
In order to meet the objectives and hypotheses of the study, data were collected from secondary sources mainly from financial report of the BIL POWER LTD and TRANSFORMER LTD.

DATA ANALYSIS AND INTERPRETATION:

Table 1:- Comparison of Components of currents assets and liquidity ratios for various sectors between periods 2010-11 and 2011-12

ompanies atios	QR		CR		NCA/TA		NCA/NS		WCIR		ITR		CPR	
ear	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12
IL POWER TD.	4.3	3.76	1.07	5.91	0.35	0.44	0.162	0.70	0.207	1.42	8.876	3.25	0.847	0.015
RASF-RMER TD.	2.34	1.58	2.84	1.81	0.54	0.50	7.26	1.89	1.54	2.24	0.77	4.20	1.48	0.12

Sources: - Data collected and compiled from Annual Reports.

DATA ANALYSIS:-

From the analysis of each component of working capital some interesting trends can be deduced. The ideal ratio for CR is 2:1. An increase in CR represents that there is improvement in liquidity position of the firm and has ability to meet its current obligations BIL POWER LTD has high and desirable liquidity position.

WCTR indicates the velocity of utilization of working capital. This ratio indicates the number of times the W.C. is turned over in the course of a year. Higher ratio indicates efficient utilization of W.C. and lower ratio indicates otherwise.

High CPR signifies that the liquidity is high and the company can meet its obligation. The NCA/TA ratio is almost stable for both the companies.

The standard quick ratio should be 1:1. It is maintained by both the companies. Tarapur transformer Ltd has the high CPR (1.48). Tarapur Transformer Ltd requires high liquidity to meet the changing market demands.

Table – 2:- The following table shows rank correlation between liquidity and profitability for both the companies.

Company	Current Ratio		Return on total assets		R1-R2	
	CR		ROTA %		D	D^2
	CR	RANK	%	RANK		
BIL POWER LTD.	5.91	1	1.21	2	1	1
Tarapur Transformer Ltd.	1.81	2	2.26	1	1	1
r=-1						**? D^2=2**

r =1- (6 x2) / 2(3) =-1

INFERENCE:-

From the above discussion it could be inferred that CR and ROTA of selected manufacturing sectors are inversely related with each other.

CONCLUSIONS:-

It is the duty of the finance manager to maintain working capital at the optimum level by maximizing the profitability without impairing the liquidity of the concern. Analyzing working capital trends brings out certain important trends in the working capital.

The ROTA shows the direct influences of variations in the independent variables on the profitability of the company. Out of the two ratios namely CR and ROTA has inverse relationship between profitability and liquidity. This study shows that there is disproportionate and inadequate increase in the profitability of the company for a decrease in working capital.

It was found that the study of working capital management of the company is very effective and also the firm has to maintain the liquidity and solvency position to repay its obligations in time.

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