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Working Capital Management in Cement Company a Study

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Abstract
Working capital is considered to be life-giving force to an economic entity and managing working capital one of the most important functions of corporate management. Working capital management (WCM) is the management of short-term financing requirements of a firm which includes maintaining optimum balance of working capital components – receivables, inventory and payables – and using the cash efficiently for day-to-day operations.
The main objectives of this study are to examine and evaluate the working capital management in ACC Limited, examine the management pattern of inventory, liquidity, cash position and receivables management. This also finds the relationship between Working Capital Efficiency and Profitability, Profitability and Market ratios.

Keywords
Working Capital, Liquidity, Profitability, Market ratios, Inventory

I. Introduction
Global slowdown that severely affected several countries had its invariable effect on Indian Industrial production as also on other important sectors of Indian Economy. The Cement Industry, which exhibited resilience in the face of the global financial meltdown by sustaining a near 8% growth (7.9%), during 2008-09, jumped up to record a double-digit growth of 12.7%, in 2009-10. The Indian cement industry ranks the second largest amongst cement producing countries in the world and added a capacity of 37 mn.t. in 2009-10.
This paper is prepared to examine the relationship between the working capital efficiency and profitability of the selected cement company ACC Limited. ACC Limited is a manufacturer of cement and concrete with a countrywide bouquet of 16 modern cement factories those are having a capacity of 26 million tonnes per annum. This increased to 30 million tonnes by the end of the year 2009. Many of the country's iconic structures that symbolize India's progress have used ACC cement. Thus ACC contributes, in a small but meaningful way, in the process of Nation Building through the supply of cement and concrete to mega structures that are proud testaments standing the test of time. Working capital management is a new area emphasized by the productive utilization of their available funds created out of good cash flow, financial solvency and growth strategies. This study may enlighten the different ways and techniques of working capital management to develop the sound financial base of the company.

II. Significance of the Study
The purpose of the present study is to analyze the various concepts of working capital and find out the feasibility of the concept of working capital in the light of better planning and control of working capital. Problems of working capital management involve the problem of determining the optimum level of investment in each component of current assets i.e. inventory, receivables, cash, and other short term investment. The basic focus in working capital management should be to optimize the firm's investment. An expert in the financial management is of the opinion that problem of working capital is one of the factors responsible for the low profitability in manufacturing sector. Better planning and control of working capital, or in other words, proper utilization of optimum quantity of working capital increases the earning power subject to the existence of operating margin

III. Objectives of the Study
The major objective of the present study is to examine and evaluate the working capital management in ACC Limited over a period of 6 years i.e., from 2004-05 to 2009-10. The specific objectives of the study are as under:

Hypotheses
The following hypotheses are tested in the present study:
H1: There is a positive correlation between efficiency in working capital and profitability of the Company.
H2: There is a positive correlation between market ratio and profitability of the company.
H3: There is also correlation between efficiency ratio and profitability ratio.
H4: There is positive correlation between liquidity and market ratio.

IV. Database and Methodology
The sample selected for this study is ACC Limited. The study covers five years period from 2004-05 to 2009-10. This study is based on secondary data which is collected from annual reports of the company and various studies made available through library work. The collected data has been tabulated, analyzed and interpreted with the help of different financial ratios and statistical tool like correlation. Four hypotheses have been tested statistically to arrive at a conclusion.

Abbreviations Used

Current Ratio	CR
Quick Ratio	QR
Gross Profit Margin	GPM
Net Operating Margin	NOPM
Return on Total Assets	ROTA
Return on Equity	ROE
Earning Per Share	EPS
Dividend Yield	DY
Market to Book Ratio	M/B
Payout Ratio	PR
Dividend per Share	DPS
Sales to Total Assets	S/TA
Sales to Fixed Assets	S/FA
Inventory Turnover Ratio	ITR
Average Collection Period	ACP
Price Earning Ratio	PER

Hypothesis Testing
1. There is a positive correlation between efficiency in working capital and profitability of the ACC Limited.

Table_1: Correlation Matrix

	CR	QR	GPM	NOPM	ROTA	ROE
CR	1	0.70	-0.40	0.20	-0.70	0.50
QR	-	1	-0.10	0.30	-0.30	0.40
GPM	-	-	1	0.60	0.90*	0.20
NOPM	-	-	-	1	0.50	0.90*
ROTA	-	-	-	-	1	0.10
ROE	-	-	-	-	-	1

* Correlation is significant at the 0.05 level (2-tailed).Source: Annual Reports of ACC Limited.

Table 1 shows the relationship between the efficiency of working capital and profitability of ACC Limited. The efficiency of working capital has been shown through the quick and current ratios of the company. It has been found that the QR and CR of the company were negatively related with the ROTA and GPM. But the CR and QR are positively related with NOPM and ROE. It has been found that there is significant correlation between GPM to ROTA, and NOPM to ROE. Though there are relationships existing within the efficiency of working capital and the profitability these relationships are not statistically significant.

2. There is a positive correlation between market ratio and profitability of the company.

Table 2 : Correlation Matrix on Earnings

	GPM	NOPM	ROTA	ROE	EPS	DY	M/B	PR	DPS
GPM	1	0.60	0.90*	0.20	0.90*	-0.075	-0.10	-0.30	0.675
NOPM	-	1	0.50	0.90*	0.50	-0.80	0.70	-0.70	-0.05
ROTA	-	-	1	0.10	0	0.05	-0.20	-0.20	0.80**
ROE	-	-	-	1	0.10	-0.95	0.90*	-0.70	-0.45
EPS	-	-	-	-	1	0.05	-0.20	-0.10	0.80**
DY	-	-	-	-	-	1	-0.85	0.80**	0.575
M/B	-	-	-	-	-	-	1	-0.60	-0.60
PR	-	-	-	-	-	-	-	1	0.40
DPS	-	-	-	-	-	-	-	-	1

* Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.10 level (2-tailed).
Source: Annual Reports of ACC Limited.

Table 2 shows the relationship between the market ratio and profitability of the ACC Limited. There are statistically significant relationships only between the GPM to EPS, ROE to M/B, DY to PR, ROTA to DPS and EPS to DPS. It has been found that the GPM is positively correlated with NOPM, ROE and DPS - but negatively correlated with all other variables. NOPM is positively correlated with EPS and M/B. It has been found that there is no correlation between ROTA to EPS, but positively correlated with ROE and DY. And, ROE is positively correlated with EPS.

3. There is also correlation between efficiency ratio and profitability ratio.

Table 3 : Correlation Matrix on Earnings and activity level

	GPM	NOPM	ROTA	ROE	S/TA	S/FA	ITR	ACP
GPM	1	0.75	0.90*	0.20	0.60	0.30	-0.70	-1.0
NOPM	-	1	0.50	0.90*	0.80**	0.60	-0.10	-0.60
ROTA	-	-	1	0.10	0.70	0.40	-0.40	-0.90
ROE	-	-	-	1	0.60	0.50	0.20	-0.20
S/TA	-	-	-	-	1	0.90*	0.10	-0.60
S/FA	-	-	-	-	-	1	0.30	-0.30
ITR	-	-	-	-	-	-	1	0.70
ACP	-	-	-	-	-	-	-	1

* Correlation is significant at the 0.05 level(2-tailed).
**Correlation is significant at the 0.10 level (2-tailed).
Source: Annual Reports of ACC Limited.

Table_3 shows the relationship between the efficiency ratio and profitability ratio of ACC Limited. There are statistically significant relationships between the NOPM to S/TA, S/TA to S/FA and all other relationships are not statistically significant. ACP is negatively correlated with all the profitability ratios except with ITR. ITR is positively correlated with ROE and S/TA and to S/FA, but negatively correlated with other profitability variables. S/TA is positively correlated with all profitability variables.

4. There is positive correlation between liquidity and market ratio.

Table 4: Correlation Matrix on Liquidity Ratios

	QR	CR	EPS	PER	DY	M/B	PR	DPS
QR	1	0.70	-0.30	0	-0.35	0.70	-0.20	-0.35
CR	-	1	-0.70	0.60	-0.60	0.70	-0.40	-0.15
EPS	-	-	1	-0.40	0.05	-0.20	-0.20	0.80**
PER	-	-	-	1	-0.80	0.60	-0.60	-0.80
DY	-	-	-	-	1	-0.85	0.80**	0.575
M/B	-	-	-	-	-	1	-0.60	-0.60
PR	-	-	-	-	-	-	1	0.30
DPS	-	-	-	-	-	-	-	1

**Correlation is significant at the 0.10 level (2-tailed).
Source: Annual Reports of ACC Limited.

Table 4 shows the relationship between the liquidity and market ratio of the ACC Limited. There are statistically significant relationships only between the EPS to DPS and DY to PR and all other relationships are not statistically significant. QR has no relationship with the PER. On the other hand, QR is positively correlated with CR and M/B but negatively correlated with all other ratios. CR is positively correlated with PER and M/B but it is negatively correlated with all other market ratios.

V. Findings

1. Working capital management of the Company is satisfactory due to efficient management of inventory, debtors, cash balances and increase of net working capital.
2. The major elements of working capital are inventory, debtors, cash balances and short term investments. Inventories are grouped into raw materials, work in process, finished goods, stores and spares etc.
3. The Company has maintained proper records of inventory.

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No discrepancies were noticed on verification between the physical stocks and the book stocks. The Company does not carry any inventory of raw materials and there is no Stock of Traded Finished Goods at the end of the year 2010. The stock of stores and spares is valued at cost (Moving Weighted Average) and net realizable value whichever is less.

4. The cement industry faced some challenges in the year 2010 due to decrease in sales, decline in selling prices and increase in input costs.
5. In 2009 the Alternative Fuels and Raw Materials business has recorded savings of Rs. 40.8 Crores as against Rs. 22.8 Crores in 2008. This was achieved by co-processing 77,800 tonnes of Industrial waste as compared to 12,900 tonnes in 2008.
6. The company is having neither too high nor too low inventory turnover ratio so as to avoid both stock out costs associated with a high ratio, and the cost of carrying excessive inventory with a low ratio.
7. Debtor's turnover ratio observed in this company is high. The higher the turn over ratio the shorter the average collection period, the better is the trade credit management and the liquidity.
8. The company liquidity position is satisfactory..
9. Gross profit margin and net profit margin is increased.
10. Net sales are increased from Rs.3221 crores (2004-05) to Rs. 7717crores (2009-10).
11. Return on total assets is increased from 19 %(2004-05) to 49 %(2008-09) and it is 25% (2009-10).
12. Earning per share is increased from Rs.30 (2004-05) to Rs.86 (2008-09) and Rs.59 in 2009-10.
13. The average collection period is decreased from 2004-05 to 2009-10. This indicates the average time taken to convert receivables into cash.
14. Cash management of the company is done through cash budget, cash flow statement and other steps.
15. Every year, performance evaluation is done highlighting the different ratios.
16. ACC was the first to introduce Ready Mixed Concrete in India on a commercial basis. Thus, a transit concrete mixer is, now, a familiar sight in India's major cities.
17. ACC is proud of its large supply chain managed by an energetic sales force from an extensive spread of sales offices spanning across India - a country-wide network of highly motivated channel partners comprising more than 9000 dedicated dealers complemented by a chain of retailers.

VI. Conclusion

Working capital management of ACC Limited is satisfactory. The Company has no problem in the management of inventory, debtors, cash balances and current liabilities. The liquidity position of the company is also very much satisfactory due to good turnover of current assets, inventory debtors and cash balances. There is no difficulty in repayment of current liabilities out of the operating profit. Planning and Control of cash balances follow cash-flow statement. It shows the sources and uses of cash over the period. Financial statement shows the current assets and current liabilities in classified form. There is good collection of receivables due to good credit and collection policy. Due to good utilization of working capital the business growth of the company is also highly satisfactory. Market prices of shares are increasing year after year due to good dividend and good image in the market.

It has been found that there is a relationship existing within the efficiency of working capital and the profitability, but these relationships are not statistically significant (H1). There are statistically significant relationships only between the gross profit margin to earning per share, return on equity to market/book ratio, dividend yield to payout ratio, return on total assets to dividend per share and earning per share to dividend per share. There are statistically significant relationships only between the net operating margin to sales to total assets, and sales to total assets to sales to fixed assets. There are statistically significant relationships only between the earnings per share to dividend per share and dividend yield to pay out ratio.

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