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WORKING CAPITAL MANAGEMENT IN COAL INDIA LTD.: A STUDY

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ABSTRACT

The present paper makes an attempt to give a conceptual insight on working capital management and assess its impact on liquidity and profitability of Coal India Ltd. The liquidity and profitability tradeoff has become an important aspect for all the organizations. The attempt also has been made to test the liquidity and profitability position. For this correlation and spearman's rank method has been applied. The correlation and spearman's ranking method indicates weak correlation and negative relationship between liquidity and profitability. The Motaal's test has also been applied to test the liquidity performance. It indicates liquidity position of the firm has improved over the study period.

KEYWORDS: *Working Capital Management, Liquidity, Correlation and Spearman's Ranking Method.*

Introduction

In today's competitive world maintaining financial strength on a day to day basis has become a challenge. Every firm wants to see themselves financially sound. Empirical studies have shown that ineffective management of working capital as one of the major cause of industrial sickness. So, efficient management of working capital is one of the important indicators of financial soundness. Profitability and liquidity are at most important issue for any firm to tackle in the modern world. Basically there are few concepts on working capital. They are the balance sheet and operating cycle concept. Balance sheet concept includes the gross and net working capital and operating cycle concept is to support the operational activities of the firm.

- Gross Working Capital is the sum of all the current assets.
- Net Working Capital is the difference between the current assets and current liabilities i.e. excess of current assets over current liabilities.

Operating cycle is a time taken for conversion of raw material into cash. It includes raw material-WIP-finished goods-sales-debtors-cash

- **Working Capital Policies:** Every company needs to monitor its working capital closely in order to cover its cash requirements. As a business grows the firms should keep an eye on the investment of working capital. The firm can also form the effective policies on working capital management to run their business smoothly. The firm needs a separate policy on all the components of working capital like cash policies, inventory policies, credit policies, payable policies etc
- **Aggressive Strategy:** This is the most aggressive of all the strategies. It fully focuses on the profit side the firm. It is called high risk, high profit strategy. Here the long term funds are mainly employed in fixed assets
- **Moderate Strategy:** As the name indicates it is moderate. Here part of the long term funds are used in current assets. Here risk and returns are moderate. It is a balance between the aggressive and conservative policies

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- **Conservative Strategy:** Here also the working capital is financed with low risk and profit. In this strategy part of the permanent working capital is financed by the long term sources. In this strategy the objective is to play safe

Literature Review

Debnath (2017) examined the implications of a firm's working capital management practice on its profitability and dividend payout ratio. The study focused on the extent of the effects of working capital management on the Profitability and Dividend Payout Ratio.

K. Kumar (2018) examined the effect of working capital on profitability of Indian firms. They collected data about a sample of 263 non-financial BSE 500 firms listed at the Bombay Stock (BSE) from 2000 to 2008 and evaluated the data using OLS multiple regression. The results revealed that working capital management and profitability is positively correlated in Indian companies.

Madhav (2015) in his study on the influence of working capital management on corporate profitability found that there exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers and profitability. He explained that the more profitable firms take the shortest time to collect cash from the customers.

Singla (2016), examined the impact of working capital management on cash holdings of Small and medium-sized Manufacturing Enterprises (SMEs) in Sweden.

Dayal Sekhar (2014) studied the economics of production and marketing of milk in the state of Uttar Pradesh. Linear and log-linear functions were used to work out the estimates of factors affecting marketed surplus of milk both for the private and cooperative systems.

Research Methodology

Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to give the work plan of research.

Objectives of the Study

- To study the working capital management of Coal India Ltd.
- To examine the liquidity position of Coal India Ltd.
- To know the relationship between the liquidity and profitability.

Statement of the Problem

Though there are number of studies carried out in the area of working capital management but, only very few studies have been done on mining sector. The study aims at examining the relationship between the liquidity and profitability of the selected firm. So, the study is an attempt to contribute to the existing literature.

Sample Design

The sample for the study has been selected a company named COAL INDIA ltd which is one of the top public sector companies in the mining sector.

Data Collection

The study is mainly based secondary which is collected from the annual reports and accounts of Coal India ltd

Coal India Ltd: Brief Profile

Coal India Limited (CIL) is one of the leading public sector companies of Indian mining sector. Coal India ltd as an organized state owned coal mining corporate came into being in November 1975 with the government taking over private coal mines. With a modest production of 79 Million Tonnes (MTs) at the year of its inception CIL today is the single largest coal producer in the world. The company is into the production and sale of coal and its related products. It operates approximately in an 82 mining areas extended over eight provincial states of India. The Company has nearly 430 mines, out of which 227 are underground, 175 are opencast and 28 are mixed mines. It also operates in 15 coal washeries (including 12 coking coal and three non- coking coal) and looks after other establishments like workshops, hospitals etc.

Results and Discussion

Working Capital Performance of a Selected Company

Performance Drivers	Measures Used
Current Ratio	Current Assets/Current Liabilities
Quick Ratio	Quick Assets/Current Liabilities
Stock Turnover Ratio	COGS/Average Inventory
Stock Velocity(Days)	365/Stock Turnover Ratio
Debtors Turnover Ratio	Credit Sales/Average Debtors
Debtors Velocity(Days)	365/Debtors Turnover Ratio
Working Capital Turnover Ratio	Sales/Working Capital
Return on Capital Employed	EBIT/ Capital Employed
Return on Equity	Net Profit/Networth

Working Capital Performance

Ratios ↓ Year →	2010-11	2011-12	2012-13	2013-14	2014-15
Current Ratio	2.56	2.55	3.34	3.28	2.94
Quick Ratio	2.35	2.38	3.13	3.05	2.72
Stock Turnover	8.86	11.52	13.72	13.97	13.04
Stock Turnover(Days)	36.98	31.68	26.61	26.13	27.97
Debtors Turnover	16.11	12.34	7.35	9.44	9.47
Average Collection Period(Days)	22.64	29.57	49.64	38.67	38.54
Working Capital Turnover	1.32	1.31	1.24	1.39	1.46
WCCA	60.97	60.88	70.14	69.54	66.04
STCA	8.18	6.95	6.35	6.94	7.38
CA-ST/CA	91.82	93.05	93.65	93.05	92.61
ROCE	32.31	36.17	36.93	35.32	32.29
ROE	32.62	36.55	35.81	35.63	34.01
EBIT	16463.23	21272.65	24979	22879.57	21584.1
CE(TA-CL)	59198.75	72758.19	83894.9	79807.47	82118.8

The above table shows the current ratio over the period depicting the satisfactory performance in comparison with the normal standard of 2:1 and on the other side Quick ratio is slightly higher, but acceptable. Both the ratios have increased from 2.56 and 2.35 from 2010-11 to 3.28 and 3.05 till 2013-14. In 2014-15 both have decreased to 2.94 and 2.2 respectively. The stock turnover ratio has increased over the study period from 8.86 to 13.04 from 2010-11 to 2014-15 which indicates a better management of inventory. The age of the stock for the same period has decreased from 36.98 to 27.97 is also an indicator of good inventory management system. The debtor's turnover ratio has shown a fluctuating trend from 16.11 to 9.47 in the study period. But it has decreased from 2012-13 onwards. The company has to make an effort to bring this ratio to the required level. The collection period has also increased to 38.54 in 2014-15. It indicates the company is lagging in management of receivables. The working capital ratio has shown an upwards trend over the period which is a good sign for the company. But it has to improve to a level where the company can manage working capital efficiently. The profitability indicators like return on capital employed (ROCE) and equity (ROE) have shown consistent performance over the past five years. Important indicator like EBIT has increased which is a good sign for the concern

Particulars	Mean	Standard Deviation	Co-efficient of Variation
Current Ratio	2.93	0.34	11.52
Quick Ratio	2.73	0.33	11.94
Stock Turnover	12.22	1.88	15.42
Debtors Turnover	10.42	3.03	27.71
Working Capital Turnover	1.33	0.07	5.51

From the above table it can be inferred that the average current and quick ratios are above the normal standard of 2:1 which shows the firm has ability to meet its short term obligation on time. The coefficient of variation is also not too high (11.52, 11.94). The average stock turnover ratio and debtors are on the higher side indicating the efficient inventory management. Coefficient of variation is high for debtors. It shows the great level of dispersion of mean. But the working capital ratio is low indicating inefficient use of investment of working capital resources.

Liquidity and Profitability

For analysis of the correlation between liquidity and profitability, the Current Ratio and Return on Capital Employed Ratio is used. Here to test the correlation spearman's rank method is applied.

Hypothesis of the Study

Null Hypothesis: There is a negative relationship between liquidity and profitability

Relationship between Liquidity and Profitability

Year	CR	Rank	ROCE	Rank	D (Rank Difference)	D^2
2010-11	2.56	4	32.30	4	0	0
2011-12	2.55	5	36.17	2	3	9
2012-13	3.34	1	36.93	1	0	0
2014-15	3.28	2	35.32	3	1	1
2015-16	2.94	3	32.29	5	2	4
					Total	14

$p = 1 - 6\ \ 14/5(5^2\text{-}1)$
$= 1 – 6*14/5*25-1$
$= 1 – 84/5*24$
$= 1 – 84/120$
$= 1 – 0.7$
$= 0.30$

t-Test Analysis

$\boldsymbol{t = r\sqrt{n-2}/\sqrt{1-r^2}}$
$= 0.3\sqrt{5\text{-}2} / \sqrt{1\text{-}0.3^2}$
$= 0.3\sqrt{3} / \sqrt{1 - 0.09}$
$= 0.3*1.73 / 0.9539$
$= 0.519 / 0.9539$
$= 0.544$

The table value of the t at 5% significance level of ((n-2)), (5-2) is 3.182 and our calculated value is 0.544 i.e. less than the table value, it means null hypothesis is accepted. So, the test result shows that there is a negative relationship between liquidity and profitability.

MOTAALS Comprehensive Test for Analyzing Liquidity Position

Years	WC to CA	Rank	Stock to CA	Rank	LR to CA	Rank	Total Rank	Ultimate Rank
2010-11	60.97	4	8.18	5	91.82	5	14	5
2011-12	60.88	5	6.95	3	93.06	2	10	3
2012-13	70.14	1	6.35	1	93.65	1	3	1
2013-14	69.54	2	6.94	2	93.05	3	7	2
2014-15	66.04	3	7.38	4	92.61	4	11	4

Conclusion

Referring to the objectives of the study the overall working capital performance is found to be satisfactory for the study period. The firm has shown significant improvement in the performance in terms of liquidity and profitability aspects. However, there is a need for improvement in some ratios related to debtors and working capital turnover in order to enhance the liquidity and profitability position to the greater level. Overall the working capital performance of Coal India Ltd is satisfactory.

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