Management Practices in Working Capital - A Comparative Study in NALCO Vs HINDALCO

Dr. Suman Kalyan Chaudhury
Faculty Member,
P.G. Department of Business Administration,
Berhmapur University, Odisha.

Mr. Pramath Nath Acharya
Research Scholar,
P.G. Department of Commerce,
Berhampur, Odisha.

Abstract

Working capital management is important in financial management due to the fact that it plays an essential role in keeping the wheels of a business enterprises running. The business will not be able to carry on day to day activities without the availability of adequate working capital. In a common way, managing of current assets and current liability is called the Working Capital management. In any business firm, whether it is trading or manufacturing business, the relevance of working capital can never be overemphasised. Shortage of funds for working capital has caused many businesses to fail and in many cases has retarded their growth. Lack of efficient and effective utilisation of working capital leads to earn low rate of return on capital employed or even compel sustain losses. In other words, the efficiency of a business enterprise depends largely on its ability to manage its working capital. However the requirement of working capital varies from firm to firm. It is depending upon the nature of the business like production policies, market conditions, seasonality of operations, conditions of supplies etc. For manufacturing companies, working capital creates challenges because supplier and production expenses frequently require payment several months before goods are sold to customers. Aluminium companies, as a part of manufacturing sector, are required to give emphasis in this regard. In this context, it is an effort to accesses the practice of working capital management in Nalco and Hindalco through some hypothesis testing. In this paper, the authors' try to analyse the working capital management practices of NALCO and HINDALCO which would facilitate in maximizing the firm's value and the wealth of the shareholders.

Keywords: Working Capital Management, Capital Insolvency, Liquidity, Ratios

Introduction

Working capital is considered as a significant issue in financial decision-making. It calls for appropriate financing investment. However, according to Sanger, working capital has always been ignored in financial decision-making because it involves investment and financing in short-term period. It also acts as a restrain in financial performance, since it does not contribute directly to Return on Stakeholders' Equity (ROSE). The essential part in management of working capital lies in maintaining its liquidity in day-to-day operation to ensure smooth running of the business and meets its obligations or else it would lead to operational insolvency. Managers must ensure that

the firm functioning is efficient and profitable. Further, there are high possibilities of mismatch between current asset and current liability during this process. If this happens and firm's manager fails to manage it properly then it will affect firm's growth and profitability which will further escort to financial distress and finally firms can go capital insolvency.

Aluminium Industry in India:

Aluminum industry is one of the highly concentrated industry in India and the top five companies in this sector offers a great share towards the production of the country. With the increasing demand for aluminum in India, the top players in this sector are also growing at a faster pace. The fact is that production of Aluminum in India has presently outpaced the demand for aluminum in the country. India holds the third place in the aluminum production in the world and the country has a competence of producing 2.7 million tones (MTPA), which is nearly 5% of the total aluminum production all over the world.

Table-1 Major Aluminium Producing Countries

Countries	Production in '000 t			
	2008	% of total	2014	% of total
China	13,695	34	21,481	43
Russia	4,191	10	3,712	7
Canada	3,124	8	756	2
USA	2,658	7	1,754	3
Australia	1,978	5	1,727	3
Brazil	1,661	4	1,684	3
Norway	1,383	3	1,195	2
India	1,348	3	3,958	8
Dubai	899	2	1026	2
Others	9,194	23	13,042	26
Total	40,131	100	50,335	100

Source: http://aluminium-india.org/Worldscenario.php

Table-2 Major Aluminium Consuming Countries

Countries	Consumption in '000 t			
	2008	% of total	2014	% of total
China	12,604	34	22,088	44
USA	5,147	14	5,505	11
Japan	2,319	6	2,259	4
Germany	1,929	5	2,054	4
Middle East	1,459	4	2,030	4
India	1,089	3	3,800	8
Italy	951	3	869	2
South Korea	937	3	1297	3
Brazil	933	3	1,198	2
Others	10,051	24	9,551	19
Total	37,419	100	50,651	100

Source: http://aluminium-india.org/Worldscenario.php

Aluminium plays a key role in the industrial development of India as it serves as a basic input for most of the industries. Progressing in long way since early fifties, India's aluminium industry is well placed to explore untapped demand potential. With a meagre production capacity of 5000 tonnes (TPA) in fifties, the production of Indian aluminium industry has reached 3958000 tonnes as on 2014.

Aluminium industry in India, comparatively a recent origin, has progressed very fast and has been ranked as 2nd largest producer of aluminium in the world after China. However, in India, the production of primary aluminium was stagnated around the 1.6 to 1.7 million tonne mark for the last three years as surge in the global demand.

Simililarly the table -2 signifes the global consumption of alumninium,whereas Indian consumption satands at 3rd position with a consuption 3800000 tonnes next to China and USA. The aluminium consuption of China and USA is 22088000 tonnes and 5505000 tonnes respectively. The major users in the segment of aluminium consumption continues to be automotive & transportation sector followed by building & construction, packaging, consumer durables, electrical & electronics, industrial and other applications including defence in indian domestic market.

Fig No-1 Primary Aluminium Production in India
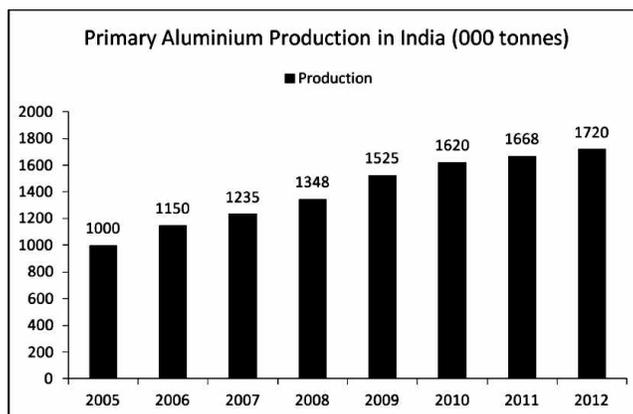
Source: Company Report/ MCG Research

Table-3 Production of Major Aluminium Players

Name of the Company	Production in Thousand Tonns			
Year	**2011-12**	**2012-13**	**2013-14**	**2014-15**
HINDALCO	574	542	512	593
NALCO	413	403	316	244
VEDANTA	429	527	542	406
Total	**1416**	**1472**	**1370**	**1243**

Source: Press Information Bureau (PIB), Ministry of Mines, Government of India.

Table-3 Sales of Major Aluminium Players

Sl. No	Name of the Company	2011-12 Sales in Cr's	2012-13 Sales in Cr's	2013-14 Sales in Cr's	2014-15 Sales in Cr's
01	HINDALCO	26596.78	26056.93	27850.93	34525.03
02	NALCO	6611.48	6916.48	6780.85	7382.81
03	VENDANTA	6513.45	2187.92	28536.53	32502.41

Source: Annual Reports

In India the aluminium production is carried out by public sector as well as private sector companies. A list of companies producing aluminium in India is given in table no. 3. It can be observed from the table that Hindalco and Nalco have became the largest players in this market. The three primary aluminum producers, viz. Hindalco, Vedanta and Nalco have expansion plans as well as greenfield projects that should take the production to 2.5 to 3.0 million tonnes in the foreseeable future.

Objective of Study:

The study was carried out with the objectives which are presented below:

1. To understand the concept of working capital management and its importance.

2. To understand the role and significance of various ratios related to working capital.

3. To understand the working capital practices by NALCO and HINDALCO.

4. To determine whether there is any significant difference in various ratios of working capital management between NALCO & HINDALCO.

Hypotheses of the Study:

Based on the objectives as cited, the following hypotheses were formulated for the study:

H01: There is no significant difference between NALCO & HINDALCO with respect to Current Ratio.

H02: There is no significant difference between NALCO & HINDALCO with respect to Quick Ratio.

H03: There is no significant difference between NALCO & HINDALCO with respect to Inventory Turnover ratio.

H04: There is no significant difference between NALCO & HINDALCO with respect to Debtor Turnover Ratio.

H05: There is no significant difference between NALCO & HINDALCO with respect to Working Capital Turnover Ratio.

Research Methodology:

The study is carried out by considering NALCO & HINDALCO as the sample unit which are among the largest Aluminium producers in India. The data collected for this research was basically from secondary sources which include web sources like www.moneycontrol.com and www.rediff.com/money data base for a period of ten years i.e. 2004-05 to 2013-14. The collected was analysed by using statistical tools in Ms-Excel such as Mean and Standard Deviation. To test the hypotheses, the researchers have used t-test to get the level of significance and draw inference for the study. The study was carried out by developing and testing some hypotheses with respect to both the companies.

Limitations of Study:

In the course of research certain problems were encountered which might had adverse effect on the work. The study is based on the data collected from the secondary sources. Time constraint is one of the most important limitations for the study. Limited sample size is another problem where the result could not be generalised.

Data Analysis and Interpretation:

The analysis and interpretation of the study are based on the parameters mentioned in the methodology of the study. This section is divided in to two parts. The first one makes the analysis of Trend in working capital and second part discusses the testing of hypothesis.

Table 4 Gross Working Capital (in Rs.)

Years	NALCO	HINDALCO
Mar '05	1,861.83	4,476.43
Mar '06	3,346.65	7,315.07
Mar '07	5,044.95	7,846.17
Mar '08	5,103.21	7,926.26
Mar '09	4,605.57	7,824.24
Mar '10	5,333.42	8,962.11
Mar '11	6,213.33	10,904.79
Mar '12	7,469.73	12,869.15
Mar '13	7,206.08	15,433.66
Mar '14	7,742.79	16,530.55

Figure 2 Gross Working Capital
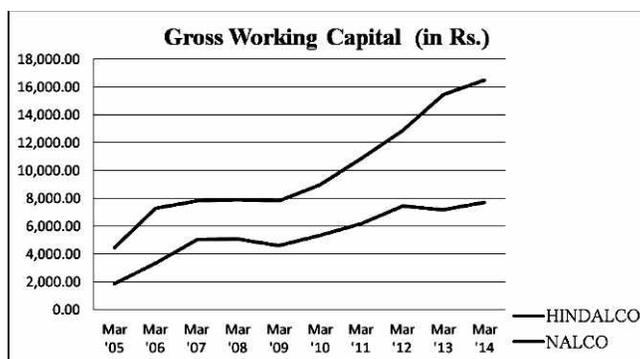
The above graph shows the trend in gross working capital of NALCO and HINDALCO during the study period. It can be observed that HINDALCO maintains higher level of working capital comparing to NALCO. It shows positive trend after 2009 in HINDALCO because the firm invested more in current assets. But in case of NALCO fluctuation is noticed during the study period.

Testing of Hypotheses

The hypotheses of the study have been tested by applying t-test which is normally used to determine if two sets of data are significantly different from each other with an assumption that the test statistics would follow normal distribution. The t-test results are depicted in the tables given below and suitable interpretations are made accordingly.

Hypothesis (H01): There is no significant difference between NALCO & HINDALCO with respect to Current ratio.

Table 5 Current ratio

	NALCO	HINDALCO
Mean	1.883	1.101
Variance	0.151756667	0.009987778
Observations	10	10
Pooled Variance	0.080872222	
Hypothesized Mean Difference	0	
Degree of freedom	18	
t Stat	6.148824064*	
P	0.000	
t Critical	2.100922037	

*1% level of significance

The above table-5 presents the current ratio of the both companies. Since the t- stat (calculated value) is greater than t critical (tabulated value) i.e. 6.14 > 2.11. The t stat values are positive & significant at 1% level of significance. So the null hypothesis will be rejected. Hence, there is a significant difference between NALCO & HINDALCO in maintaining the current ratio. The mean value of current ratio of NALCO is found to be better than mean value of HINDALCO during the study period. The higher the ratio the better it will be in a position to meet its current obligation easily. So NALCO's position is good comparing to HINDALCO.

Hypothesis (H02): There is no significant difference between NALCO & HINDALCO with respect to Quick ratio.

Table 6 Quick Ratio

	NALCO	HINDALCO
Mean	1.541	0.628
Variance	0.14892111	0.0354178
Observations	10	10
Pooled Variance	0.09216944	
Hypothesized Mean Difference	0	
Degree of freedom	18	
t Stat	6.72453556*	
P	0.00	
t Critical	2.10092204	

*1% level of significance

Here the calculated Table-6 presents the quick ratio of NALCO & HINDALCO. Since the t stat (calculated value) is greater than t critical (tabulated value) i.e. 6.72 > 2.11, the null hypothesis is rejected at 1% level of significance. Hence there is a significant difference between NALCO and HINDALCO in maintaining the quick ratio. Comparing the current ratio and quick ratio of both the companies, it can be seen that HINDALCO has higher inventory position as compared to NALCO. It is also found that the quick ratio of HINDALCO is less than 1:1 which is considered as an ideal in a manufacturing Industry. This means that the liquid assets of HINDALCO are not equal to its current liabilities.

Hypothesis (H03): There is no significant difference between NALCO & HINDALCO with respect to Inventory turnover ratio.

Table 7 Inventory turnover ratio

	NALCO	HINDALCO
Mean	8.247	3.809
Variance	14.78406778	0.469454444
Observations	10	10
Pooled Variance	7.626761111	
Hypothesized Mean Difference	0	
Degree of freedom	18	
t Stat	3.593372405	
p	0.002	
t Critical	2.100922037	

*1% level of significance

Inventory turnover ratio of the firms are calculated and presented in Table-7. Since the t stat (calculated value) is greater than t critical (tabulated value) i.e. 3.59 > 2.11, the null hypothesis is rejected at 1% level of significance. Hence there is a significant difference between both the firms in maintaining the Inventory turnover ratio. The higher the inventory turnover ratio, the better it is. As compare to HINDALCO, NALCO shows higher inventory turnover ratio. This means that NALCO is able to convert the inventory into finished stocks quickly.

Hypothesis (H04): There is no significant difference between NALCO and HINDALCO with respect to Debtor turnover ratio

Table 8 Debtor turnover ratio

	NALCO	HINDALCO
Mean	77.221	15.539
Variance	2440.945	10.10492
Observations	10	10
Pooled Variance	1225.525	
Hypothesized Mean Difference	0	
Degree of freedom	18	
t Stat	3.939874*	
p	0.00096	
t Critical	2.100922	

*1% level of significance

Debtor turnover ratio of the firms are calculated and presented in Table 8. Since the t stat (calculated value) is greater than t critical (tabulated value) i.e. 3.93 > 2.11, the null hypothesis is rejected at 1% level of significance. Hence there is a significant difference between both the firms in maintaining the Debtor turnover ratio. In case of NALCO the mean debtor turnover ratio is high whereas in case of HINDALCO it is low. This ratio indicates the speed with which these debtors are collected that effects the liquidity position of the firms. It is found from the above study that NALCO is able to collect from the debtors quickly as compare to HINDALCO.

Hypothesis (H05): There is no significant difference between NALCO and HINDALCO with respect to Working Capital turnover ratio.

Table 9 Working Capital turnover ratio

	NALCO	HINDALCO
Mean	0.6572073	1.665
Variance	0.028035634	0.054761111
Observations	10	10
Pooled Variance	0.041398373	
Hypothesized Mean Difference	0	
Degree of freedom	18	
t Stat	-11.07553*	
P	0.00	
t Critical	2.100922037	

*1% level of significance

Here the calculated Table-9 presents the working capital turnover ratio of the both companies. Since the t stat (calculated value) is greater than t critical (tabulated value) i.e. 11.07 > 2.11, the null hypothesis is rejected at 1% level of significance. Hence there is a significant difference between NALCO and HINDALCO in maintaining the working capital turnover ratio. Working capital turnover ratio shows the velocity or utilization of the working capital of the firm during a year. A high working capital turnover ratio reflects the better utilization of the working capital of the firm.

Findings and Conclusions:

In the current study it shows that the current ratio of NALCO is higher than HINDALCO. So it will be in a position to meet with the current obligation easily. In case of quick ratio HINDALCO has higher inventory position as compared to NALCO because the quick ratio of the manufacturing industry is less than the ideal ratio i.e 1:1. Inventory turnover ratio of NALCO is higher than HINDALCO which proves that NALCO is able to convert the inventory into finished stock quickly. It can be concluded that NALCO can meet the current obligation comfortably. With respect to debtor turnover ratio it is found that NALCO is able to collect from the debtors quickly as compare to HINDALCO. It is found from the working capital turnover ratio that HINDALCO convert the overall working capital quickly into the finished stocks.

Working capital management is a significant issue in firm's corporate financial decision making process which needs careful consideration. The present study move in this regard that from the quick ratio it is found that the NALCO is maintaining higher quick ratio of 1.5 against 1:1 which is an ideal ratio in manufacturing industry. Hence NALCO should take necessary steps to reduce the cash equivalence. When we analyse the both companies in these ratios such as i.e Current Ratio, Quick Ratio, Inventory turnover Ratio, Debtor turnover Ratio, Working capital turnover Ratio it is found that NALCO's performance is better than HINDALCO.

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