

**A COMPARATIVE STUDY OF PROFITABILITY ANALYSIS OF INDIAN ALUMINIUM INDUSTRY BETWEEN PUBLIC AND PRIVATE SECTOR**

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**ABSTRACT**

*The primary aluminium industry in India consists of three producers viz. National Aluminium Company Limited (NALCO), HINDALCO Industries Limited and The Vedanta Group. Out of these Companies, only NALCO is in the Public Sector.*

*For this study, two major companies have been chosen, i.e. HINDALCO Industries Limited and National Aluminium Industries from both the sector Public as well as Private which represent whole aluminium industry of India.*

*The major objective of this paper is to analyze and understand the impact of leverage on the profitability of Aluminum Industry in India. For the purpose of research different Profitability and Leverage ratios have been used, for analysing the significance of this analysis statistical analysis has also been used. Graphic presentation has been used for showing the trend and analysing the profitability at different level and basis.*

**Key words:** Profitability, Leverage, Sales, Investment.

**Introduction:**

Profitability is the ability to earn profit from all the activities of an enterprise. It indicates how well management of an enterprise generates earnings by using the resources at its disposal. In the other words the ability to earn profit e.g. profitability, it is composed of two words profit and ability. The word profit represents the absolute figure of profit but an absolute figure alone does not give an exact ideas of the adequacy or otherwise of increase or change in performance as shown in the financial statement of the enterprise. The primary objective of Business is to earn profits. The amount of profit earned is parameter of measuring the efficiency of a business. The higher the volume of profit, the higher is the efficiency of the concern. The word 'ability' reflects the power of an enterprise to earn profits, it is called earning performance. Earnings are an essential requirement to continue the business. So we can say that a healthy enterprise is that which has good profitability. According to Hermenson Edward and Salmonson 'profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets employed.

The profit of a business may be measured and analyzed by studying the profitability of investments and production attained by the business.

### **Aluminium Industry in India:**

The global aluminium production which was 41.93 million tonnes in 2010 increased to 45.54 million tonnes in 2011, as per CRU Monitor-Aluminium. The Global aluminium production is forecast to increase by about 8.23% i.e. to 49.28 million tonnes in 2012. The world aluminium consumption in 2010 and 2011 was 40.96 million tonnes and 44.88 million tonnes respectively.

India produced 15.25 lakh tonnes aluminium in 2009-10 and 16.29 lakh tonnes in 2010-11 which approximately was about 3.6% of world production.

India is endowed with rich bauxite reserve of 2300 million tonnes (approx. 6.76% of the world total) and ranks 5th in the world bauxite reserve base. The primary aluminium industry in India consists of three producers viz. National Aluminium Company Limited (NALCO), HINDALCO Industries Limited and The Vedanta Group comprising Bharat Aluminium Company Limited

(BALCO), Madras Aluminium Company Limited (MALCO) and Vedanta Aluminium Limited (VAL). Vedanta Aluminium Limited (VAL) started its operations in April, 2008 and MALCO closed its operations since December, 2008. Out of these Companies, only NALCO is in the Public Sector. The production of aluminium by primary aluminium producers in the years 2009-10 to 2011-12 is 15.24 lakh tonnes to 12.39 lakh tonnes and Sales figures of Aluminium in the years 2009-10 to 2011-12 is 15.31 to 12.24 lakh tonnes.

For the purpose of study two major companies are taken, i.e. HINDALCO Industries Limited which represents Private Sector Aluminium Companies and National Aluminium Limited which represents Public Sector Undertakings.

### **Companies Profiles:**

**HINDALCO Industries Limited**, a flagship company of the Aditya Birla Group, is structured into two strategic businesses — Aluminium and Copper — and is an industry leader in both. Established in 1958, Hindalco commissioned its aluminium facility at Renukoot in eastern U.P. in 1962 and has today grown to become the country's largest integrated aluminium producer and ranks among the top quartile of low cost producers in the world.

With a strategic intent to achieve vertical integration in the copper business, Hindalco acquired two captive copper mines in Australia — Nifty and Mt. Gordon through Aditya Birla Minerals Limited.

**National Aluminium Company Ltd. (NALCO)** is considered to be a turning point in the history of Indian Aluminium Industry. In a major leap forward, NALCO has not only addressed the need for self-sufficiency in aluminium, but also given the country a technological edge in producing this strategic metal to the best of world standards. Nalco was incorporated in 1981 in the Public Sector, to exploit a part of the large deposits of bauxite discovered in the East Coast. The Captive Power Plant (CPP) & Smelter Plant are situated near Angul.

### **Research Methodology and Objective of the Study:**

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The main objective of this study is to examine the profitability of Aluminium Industry in India. The followings points have been analysed for examining the profitability of Aluminium Industry in India:

1. Examining the leverage position of Indian Aluminium Companies.
2. Examining the profitability position of Indian Aluminium Companies.
3. Analyse the impact of sales and investment on profitability of Indian Aluminium Industry.

#### **Collection of Data for study:**

Data used for present study are based on secondary sources, extracted from the annual report of the HINDALCO Industries Limited and National Aluminium Industries. The study covers 05 years period for study from 2007-08 to 2011-12.

#### **Analysis of Data:**

The collected data arranged in the form of tables so that meaningful inferences could be drawn. The analysis has been made on the basis of application of various financial ratios to establish the relationship between various financial variables and by using simple statistics including table, charts and diagrams for the presentation of data and average, percentage.

#### **Analysis of Leverage Position of Aluminium Industry in India:**

<b>EXHIBIT 1-      LEVERAGE POSITION OF NALCO</b>	<b>(Rs. in Crore)</b>				
	2008	2009	2010	2011	2012
NET WORTH	8874	9770	10395	11165	11715
LOAN FUND			9	15	
WORKING CAPITAL	3500	2596	2998	3304	4193
CAPITAL EMPLOYED	7031	6628	7834	8798	10805
<b>LEVERAGE POSITION IN HINDALCO</b>					
NET WORTH	17436	23758	27911	29700	32032
LOAN FUND	8329	8324	6357	9038	14572

WORKING CAPITAL	4051	5068	2716	4780	5318
CAPITAL EMPLOYED	27088	33493	35634	40025	47829
DEBT/EQUITY	0.48	0.35	0.23	0.30	0.45
Source: Computed from Annual reports of NALCO and HINDALCO					

Exhibit 1 shows that Loan Fund is not used in NALCO except in the years 2010 and 2011 that is not much effective figure, but HINDALCO uses both the sources of fund internal as well as external sources of fund, in spite of that net worth of HINDALCO is more than that of NALCO, i.e. more than 2.5 times. Due to the difference of loan fund Capital Employed of HINDALCO is around 4 times more. But difference in Working Capital of both the companies is minor as HINDALCO records huge gap in long term fund.

The trend of these items can easily be analysed from the figure 1 and figure 2, which show the ascending trend of all in both the companies.

These figures depict the growth of capital in the aluminium industry in India mainly in private sector.

Figure 1- LEVERAGE POSITION OF NALCO (Rs. in crore)

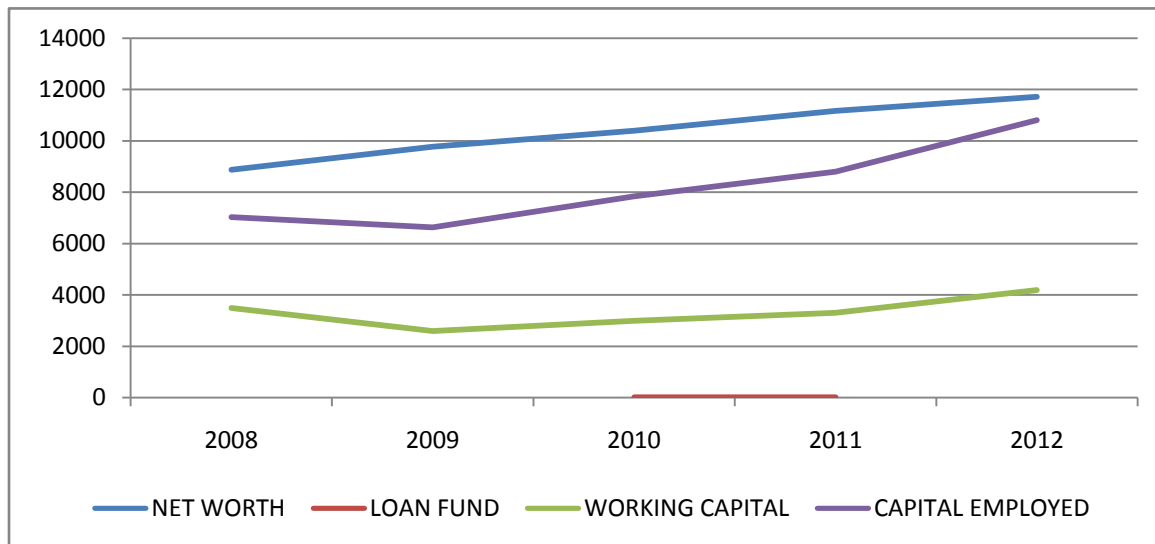
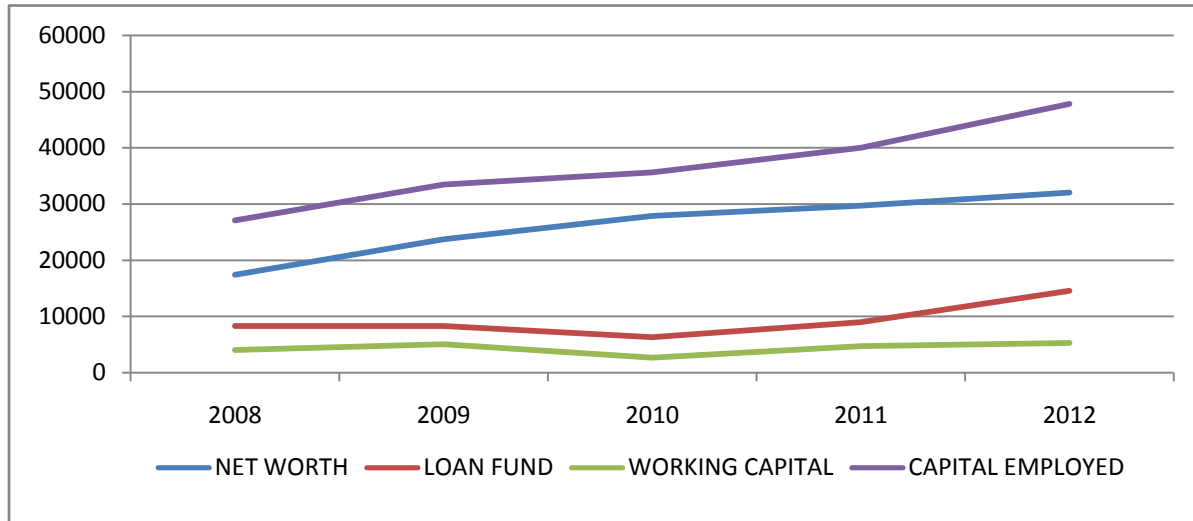


Figure 2- LEVERAGE POSITION OF HINDALCO (Rs. in crore)



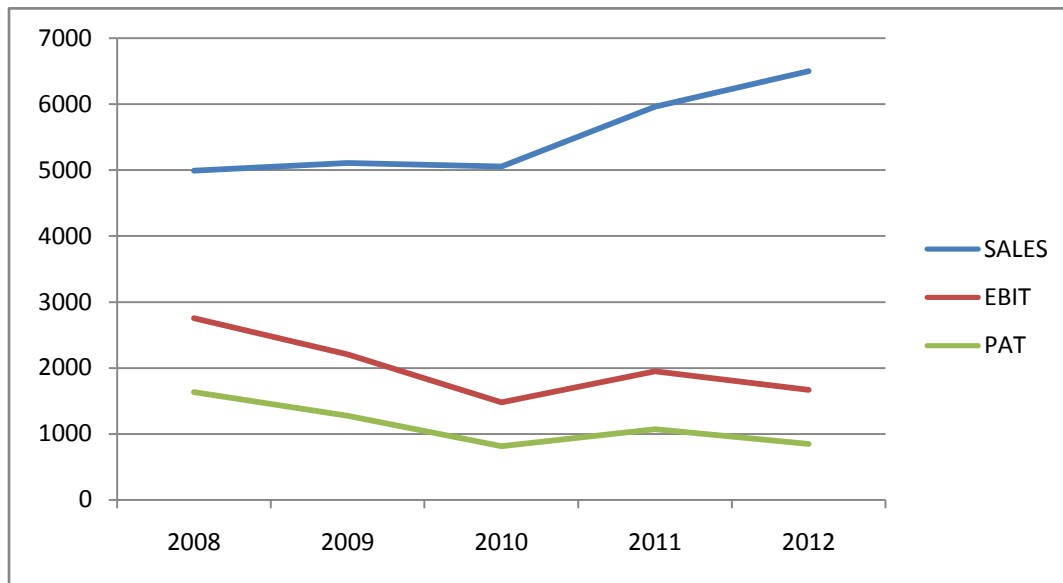
**Analysis of Profitability in Aluminum Industry in India:**

<b>Exhibit 2- SALES EBIT AND PAT OF NALCO</b>						(Rs. in Crore)
	2008	2009	2010	2011	2012	
SALES	4989	5108	5054	5959	6500	
EBIT	2754	2204	1476	1946	1665	
PAT	1632	1272	814	1069	850	
<b>SALES EBIT AND PAT OF HINDALCO</b>						
SALES	19201	18220	19522	23859	26597	
EBIT	3401	3036	2950	3155	3105	
PAT	2861	2230	1916	2137	2237	

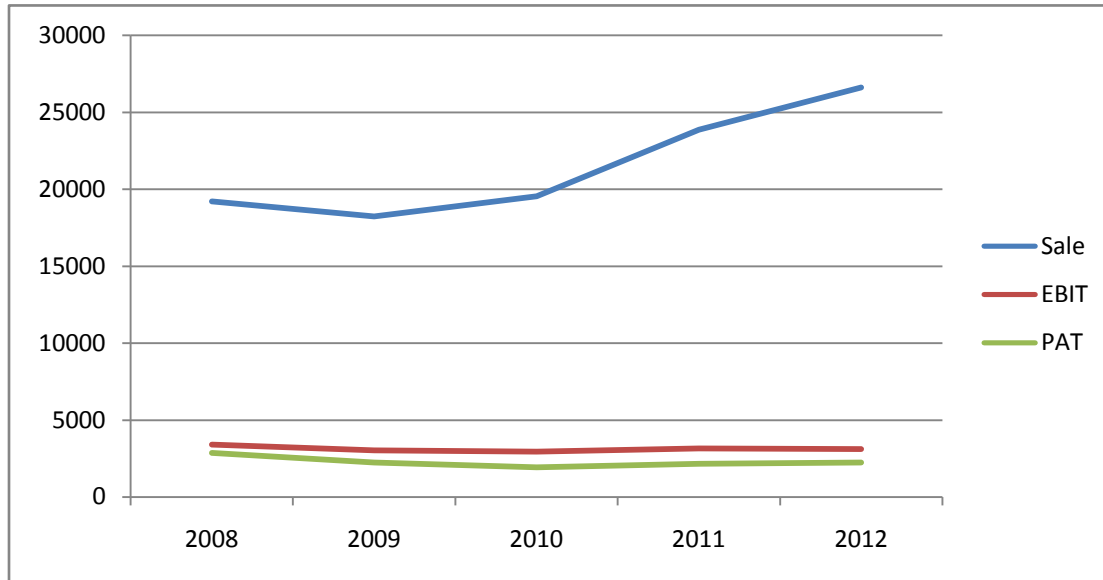
Exhibit 2 depicts that sales of NALCO and HINDALCO has been increasing during the study period as it has become Rs.6,500 in the year 2012 from Rs.4,989 of 2008. Sales volume of HINDALCO is always higher during the study period as an average it is 4 times more than that of NALCO. In amount, earnings before interest and tax and Profit after Tax are also higher of HINDALCO.

As it is revealed from figure 3 and figure 4 that sale of both the companies shows increasing trend whereas EBIT and PAT show declining trend. But this is more fluctuating in case of NALCO as compared to HINDALCO in which profit is less fluctuating.

**Figure 3 SALES, EBIT AND PAT OF NALCO (Rs. in Crore)**



**Figure 4 SALES, EBIT AND PAT OF HINDALCO (Rs. in Crore)**



**Analysis of Profitability Ratios on the basis of Sales and Investment:**

<b>EXHIBIT 3- PROFITABILITY RATIOS OF NALCO</b>					
(in %)	2008	2009	2010	2011	2012
Operating Profit Ratio	46.36	35.32	21.8	26.73	17.62
Net Profit Ratio	32.71	24.90	16.11	17.94	13.07
ROCE	23.21	19.19	10.39	12.15	7.86
ROE	18.39	13.02	7.83	9.57	7.25
EARNING PER SHARE (in Rs.)	6.33	4.94	3.16	4.15	3.3
DIVIDEND PER SHARE (in Rs.)	6	5	2.5	2.5	1
<b>PROFITABILITY RATIOS OF HINDALCO</b>					
Operating Profit Ratio	17.71	16.66	15.11	13.67	11.67
Net Profit Ratio	14.90	12.24	9.81	8.96	8.41
ROCE	12.21	9.04	7.14	7.03	6.34
ROE	16.41	9.39	6.86	7.19	6.98



EARNING PER SHARE (in Rs.)	22.23	14.82	10.82	11.17	11.69
DIVIDEND PER SHARE (in Rs.)	1.85	1.35	1.35	1.50	1.55

Exhibit 3 presents the profitability position of both the companies. In contrast of Capitalisation, NALCO has registered better profitability as against HINDALCO. But profitability reduces every year in both the companies, which shows its decreasing trend.

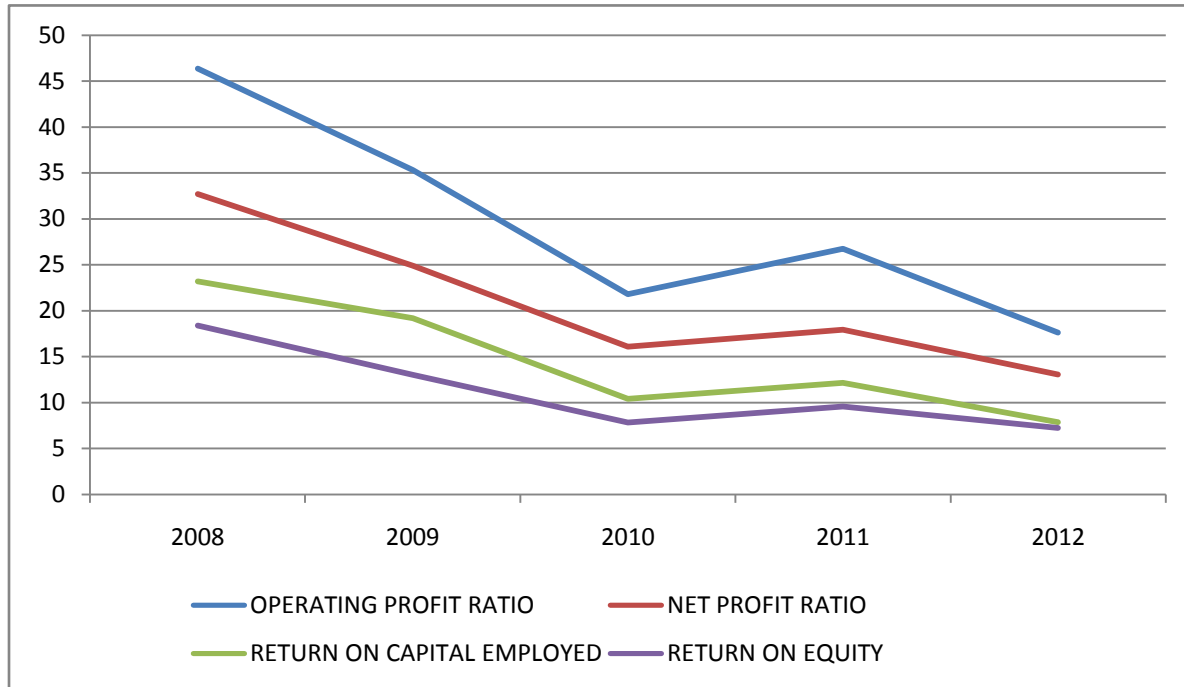
Operating profit of NALCO is around 3 times more than that of HINDALCO during 2008, 2009 and 2011, but in the year 2012 HINDALCO has shrunk the gap. Same nature is shown of net profit which shows that on the basis of sales NALCO earns more profit.

On the basis of investment, profitability of NALCO is more than that of HINDALCO in the same way as on the basis of sales. But the gap of profitability is minimised in this case, as ROCE of NALCO is moving between 23.21% to 7.86% whereas in HINDALCO it is moving between 12.21% to 6.34%. But Return on Equity of NALCO is slightly higher. The reason behind this reduction in gap is NALCO does not pay interest as it has no long term loan fund obligation as compared to HINDALCO.

Figure 5 depicts the decreasing trend of profitability in NALCO. But in the year 2011 profitability has increased.

**Figure 5 PROFITABILITY ANALYSIS OF NALCO**

(in %)

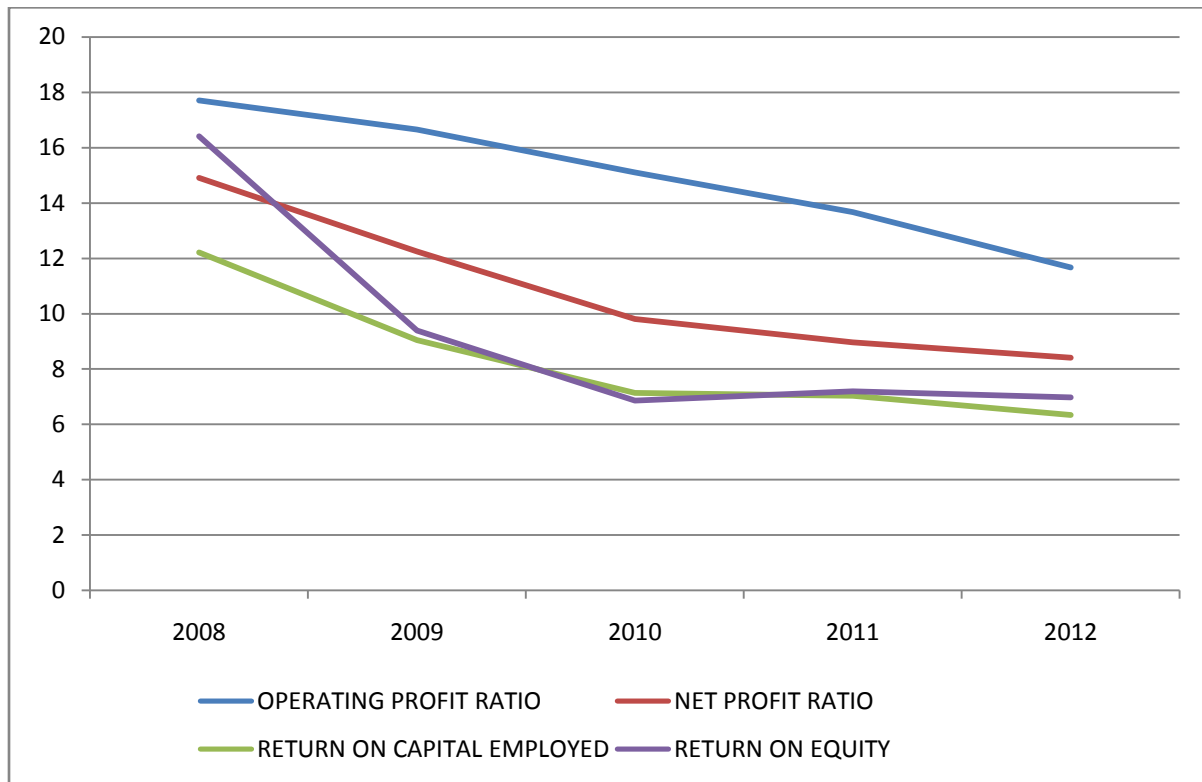


But from the figure 6 it is revealed that the profitability of HINDALCO has registered decreasing trend, only Return on Equity shows different nature than other profitability ratios, i.e. Gross profit, Net Profit ratio and Return on Capital Employed.

The overall performance of profitability of Indian Aluminium Company shoes declining trend.

**Figure 6 PROFITABILITY ANALYSIS OF HINDALCO**

(in %)



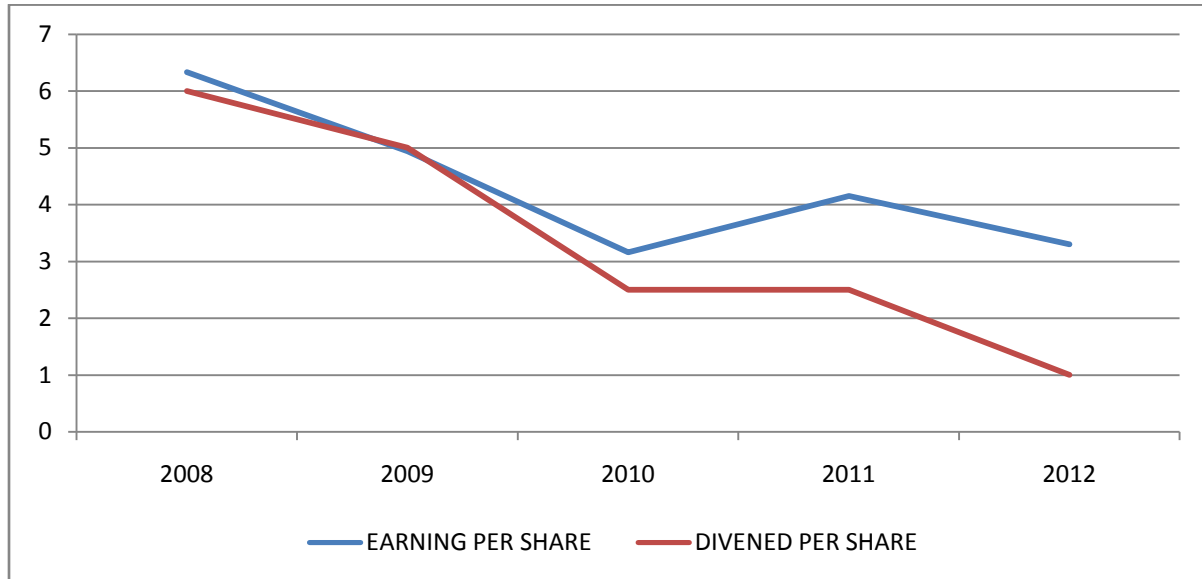
**Earnings per Share, Dividend per Share**

Earnings per Share has reduced from 2008 to 2012 when it has become from Rs.6.33 per share to Rs.3.30 per share except in the year 2011 when EPS was Rs.4.13 per share. Similarly DPS has reduced from Rs.6.00 per share (2008) to Re.1.00 per share (2012). Excluding the year 2012, NALCO distributes bigger part of its earnings as dividend.

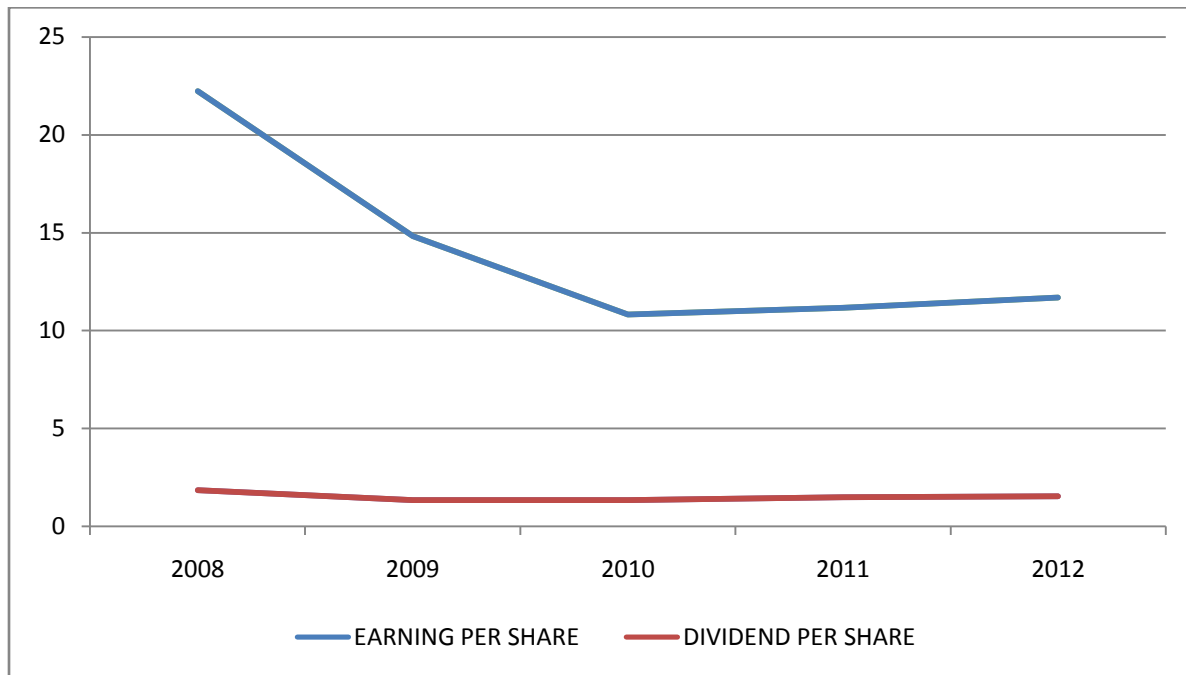
Exhibit 3 shows different situation of Earning per Share and Dividend per Share of HINDALCO. From 2008 to 2010, EPS has declined from Rs.22.23 to Rs.10.82 per share, but after that EPS continually increasing till the end of the study period i.e. 2012, and become Rs.11.69 per share. Dividend per Share of HINDALCO is Rs.1.85 in the year 2008 to Rs.1.55 per share, which shows that HINDALCO retains maximum portion of its earnings, but pays constant dividend to its shareholders.

Thus, it is found that Dividend policy of Aluminium Company in India differs from company to company.

**Figure 7 EPS and DPS of NALCO (in Rs.)**



**Figure 8 EPS and DPS of HINDALCO (in Rs.)**



### Regression Analysis of Profitability of Aluminum Industry in India

Regression analysis reveals that the correlation between Sales and EBIT of NALCO is positive highly correlated at 0.95 and between Capital Employed and EBIT is negative moderate at 0.57. it is also found that no variable is statistically significant at 5% level. One unit change in sales increases EBIT by 0.73 unit and one unit change in Capital Employed decreases EBIT by 0.45 unit. Independent variables explains only 43 percent of variation in EBIT of NALCO.

Exhibit 4 Regression Analysis of NALCO				
Variable	Coefficient	t-value	p-value	Co-relation
Intercept	1692.79	0.5344	0.3233	
Sales	0.7296	0.6032	0.2269	0.95
Capital Employed	-0.4517	0.9224	0.2269	-0.57
R-squared				0.43

In HINDALCO regression result is quite different, as it shows in Exhibit 5 that effect of sales and capital employed on EBIT is statistically significant at 5% level and the 93% of variation in

EBIT is explained by the independent variables. But correlation between dependent and independent variable is negative, in case of sales it is low level at 0.011 and in capital employed it is moderate at 0.44. One unit change in sales increases EBIT by 0.09 unit and change in capital employed decreases EBIT by 0.048 unit.

Overall industry analysis shows satisfactory result in case of private unit but in case PSU result is adverse.

Exhibit 5 Regression Analysis of HINDALCO				
Variable	Coefficient	t-value	p-value	Co-relation
Intercept	2920.64	14.7070	0.0023	
Sales	0.0916	4.5624	0.0224	-0.011
Capital Employed	-0.0478	5.1227	0.0180	-0.44
R-squared			0.93	

## Conclusion

After analysis of profitability from different angles it is found that in Public sector aluminium company loan fund is rarely used but private sector aluminium companies uses both the sources of fund, owner fund as well as debt fund, which is the main factor in huge capitalisation of private sector aluminium companies than that of Public sector. In public sector only one company is operating i.e. NATIONAL ALUMINIUM COMPANY. As HINDALCO is biggest aluminium producer in private sector in India that is it has been taken as a representative of private sector aluminium companies in India. The study also presents the growing trend in capitalisation in aluminium industry in India.

In terms of absolute amount sales private sector dominates public sector and also in volume of profitability. But in terms of profitability ratios NALCO scores higher profitability. Though,

overall profitability shows decreasing trend in Aluminum Industry in India. Scenario is again different in case of EPS as it is higher in HINDALCO but DPS is higher in NALCO.

Regression Analysis has shown favourable result in case of HINDALCO but not the same for NALCO. Hence, it may be said that aluminium industry in India shows satisfactory performance in concerned with profitability.

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