Impact Of Leverage On Profitability Of Primary Aluminium Industry In India

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INTRODUCTION

The foremost objective of financial management is to increase the shareholders wealth. This objective can be achieved based on three major decisions as functions of finance:

1. The investment decision or Capital expenditure decision.
2. The Financing decision or Capital structure decision and
3. The Dividend decision.

The investment decision relates to the selection of assets in which funds will be invested by a firm. The finance decision is concerned with the selection of right mix of debt and equity in its capital structure. The third decision is related to the distribution of surpluses i.e. the dividend policy of the firm. Needless to say, the dividend decision is based on the success of the first two decisions, i.e. the investment and financing decisions. The tool leverage is used in the study to analyze the profitable proceedings of the Primary aluminium industry in India.

ALUMINIUM INDUSTRY: AN OVERVIEW

Aluminium resources are abundant and will cover the world demand for several hundred years.Aluminium compounds make up **7.3%** of the earth's crust, making it the **3**[rd] most common crustal element and the most common crustal metal on the earth. **Aluminium was first produced in 1808.** It is presently the **2**[nd] most commonly used metal and new areas of application raise the consumption. Aluminium being a highly power intensive industry consumes a lot of power. The power cost constitutes up to 35% of the overall cost of production. Environmental implications from aluminium production are mainly related to the smelting, or electrolysis processes.

ALUMINIUM INDUSTRY AND ITS GLOBAL NEED

The aluminium industry directly employs over a million people world wide. In addition, **four** times as many jobs are created indirectly downstream and in service industries. The most important use of aluminium is in transportation and construction, which presently makeup nearly half of the total consumption.

The extensive use in these applications is due to the favorable **material properties** like strength, versatility, low weight, longer life-time, and less maintenance since aluminium has a corrosion rate that is **1/25**[th] of high-resistance steel.

Aluminium is impermeable and keeps out air, light, odour and bacteria in order to preserve the content, which is useful for preserving cosmetics and pharmaceutical products. Aluminium material properties make it excellent for recycling; contributing to more efficient use of energy resources and raw materials. The aluminium recycling industry is growing faster than the primary production industry.Aluminium is also widely used in the aerospace industry, for sea freight and rail transportation as well. Modern aircrafts use aluminium as the main material, comprising about **80%** of the unladen weight. Demand for commercial aircrafts is forecasted to increase by **60%** over the next decade.

ALUMINIUM PRODUCTION IN INDIA

The aluminium industry is the second most important metal-based industry in India. In India, the fabrication of aluminium utensils from imported metal commenced as early as 1929. The industry started producing virgin aluminium from indigenous bauxite ore during the World War II. The Aluminium Corporation of India Limited was the first Indian firm to produce alumina from indigenous bauxite. Its plant at West Bengal started production in 1942. Aluminium production in India is highly concentrated with only **5** companies. The aluminium sector presents the most energy intensive sectors within the Indian economy and is therefore of particular interest in the context of both local and global environment discussions. The main raw material used for aluminium production is bauxite, which is abundantly available in India. Indian aluminium industry is emerging as a key player in the world aluminium market, powered by low costs and vast ore reserves; particularly bauxite. **India has the 5**[th] **largest bauxite deposits,** accounting for substantial reserves of the global deposits.

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CHALLENGES FACED BY THE ALUMINIUM INDUSTRY IN INDIA

India's consumption is growing at **12%-15%,** but the production is growing at **7%**. If the scene remains the same, there will be **supply and demand mismatch in future**; hence, there is the need for capacity expansion. The demand for value added aluminium products is growing at a faster pace, leading to better margins. Also, with airline industry booming in India, the aluminium demand for aircrafts is also improving.

PROFILE OF ALUMINIUM INDUSTRY

In India, primary aluminium industry is concentrated in three business groups i.e., the Aditya Birla Group, Sterlite Industries and Public Sector Undertakings (PSUs).

- ❖ **Aditya Birla Group:** Hindalco Industries Limited (Hindalco) and Indian Aluminium Company Limited **(Indal).**
- ❖ **Sterlite Industries:** Bharat Aluminium Company Limited (Balco) and Madras Aluminium Company Limited (Malco).
- ❖ **Public Sector Undertaking:** National Aluminium Company (Nalco).

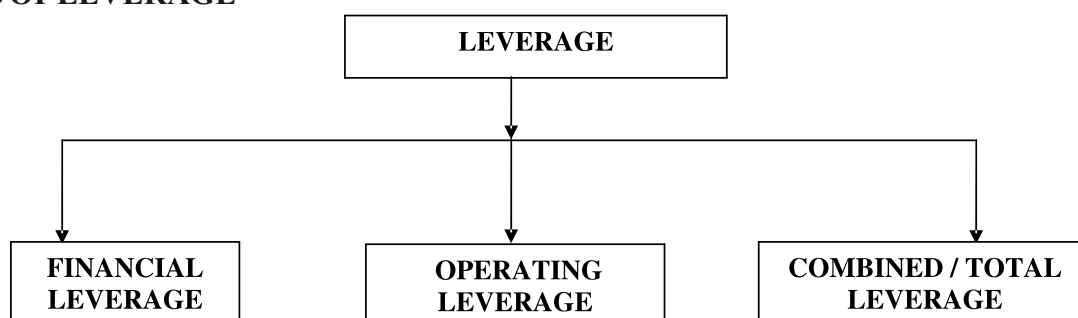The 5 primary aluminium producers in the domestic aluminium industry are:

- ➢ The **Indian Aluminium Company [INDAL-Mumbai]** was started in 1938 as a private limited company but later, in 1944, it was converted into a public limited company. Indal became a part of the Aditya Birla Group in June 2000 as a subsidiary of Hindalco.On 23rd August, 2004 all the business undertakings of Indal other than the aluminium foil business were transferred to Hindalco by way of a demerger.From 7ᵗʰ March, 2005; the demerged units of Indal came under the corporate identity of Hindalco.
- ➢ The **Hindustan Aluminium Corporation [HINDALCO-Uttar Pradesh]** was set up in 1958, being the biggest producers of primary aluminium in Asia and one of the lowest cost producers of aluminium in the world.
- ➢ The **Bharat Aluminium Corporation Limited [BALCO-New Delhi]** was incorporated on 27 November 1965. Till 2001, Balco was a public sector enterprise 100% owned by the Government of India. In the year 2001, Government of India divested 51% equity and management control in favour of Sterlite Industries (I) Limited.
- ➢ **The Madras Aluminium Company [MALCO-Tamil Nadu]** went into operation in 1965 and was started in collaboration with Montecatine of Italy and taken over by the Sterlite Group in 1995.
- ➢ **The National Aluminium Company Limited [NALCO-Orissa]** was incorporated in 1981 as a public sector enterprise of Government of India.

MEANING OF LEVERAGE

Leverage means the use of special force or power to have more than normal results from a particular action. The term *'leverage'* refers to the ability of a firm in employing long term funds having a fixed cost to enhance returns for the owners. In other words, *'leverage'* is the employment of fixed assets or funds for which a firm has to meet fixed costs or fixed rate of interest obligation irrespective of the level of activities attained or the level of operating profit earned.

The higher the leverage, the higher are the profits and vice-versa. But a higher leverage obviously implies higher outside borrowings and it is hence **riskier** if the business activity of the firm suddenly takes a dip. But a low leverage does not necessarily indicate prudent financial management. The firm might be incurring an opportunity cost for not having borrowed funds at a fixed cost to earn higher profits.

KINDS OF LEVERAGE

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                    ┌─────────────┐
                    │  LEVERAGE   │
                    └──────┬──────┘
                           │
        ┌──────────────────┼──────────────────┐
        ▼                  ▼                  ▼
┌──────────────┐   ┌──────────────┐   ┌──────────────────┐
│  FINANCIAL   │   │  OPERATING   │   │ COMBINED / TOTAL │
│   LEVERAGE   │   │   LEVERAGE   │   │     LEVERAGE     │
└──────────────┘   └──────────────┘   └──────────────────┘
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FINANCIAL LEVERAGE

The use of long-term fixed interest bearing debt and preference share capital along with equity share capital is called financial leverage or trading on equity. The aim of financial leverage is to increase the revenue available for equity share holders by using the fixed cost funds. A firm is known to have a favorable leverage if its earnings are more than what debt would cost.

OPERATING LEVERAGE

Operating leverage results from the existence of fixed costs that help in magnifying net operating income fluctuations flowing from small variations in revenue. The fixed cost is treated as fulcrum of leverage. If a firm does not have fixed costs, then there will be no operating leverage.

COMBINED (OR) COMPOSITE (OR) TOTAL LEVERAGE

Total leverage is simply expressed as financial leverage multiplied by operating leverage. It focuses attention on the entire income of the concerned. Operating leverage affects the income which is the result of production. Financial leverage is the result of financial decisions. The risk factor should be properly assessed by the management before using the composite leverage. The high financial leverage may be offset against low operating leverage or vice-versa.

OBJECTIVES OF THE STUDY

❖ To understand and analyze the leverage position of Primary Aluminium Manufacturing Industry in India.
❖ To examine the impact of leverage on EPS.

METHODOLOGY

PERIOD OF STUDY

This study covers a period of seven years from 2000-2001 to 2006-2007.

SOURCES OF DATA

The study is confined to primary aluminium industry. In India, there are five primary aluminium manufacturing industries of which only three industries are selected for the analysis based on continuous data availability for seven years. The needed data belonging to these industries have been collected from Capitaline Plus Corporate Databases.

TOOLS FOR ANALYSIS

✓ Leverage analysis
✓ Mean, Standard Deviation, Skewness, Kurtosis, Correlation analysis and Test of significance.

HYPOTHESIS OF THE STUDY

For better analysis of the *LEVERAGE AND PROFITABILITY POSITION OF 3 COMPANIES,* the following hypothesis is framed:

1. There is no significant relationship between DFL and EPS.
2. There is no significant relationship between DOL and EPS.
3. There is no significant relationship between DCL and EPS.

LIMITATIONS OF THE STUDY

● The study is based on secondary data and only the period of 7 years is considered for analysis.
● All the calculations are made on the basis of data given in the Capitaline Plus Corporate Databases.
● Due to time constraint, some of the external factors affecting the leverage were not taken into account.

ANALYSIS AND INTERPRETATION

DEGREE OF FINANCIAL LEVERAGE (DFL)

The degree of financial leverage is defined as the percentage change in earning per share (EPS) that results from a given percentage change in earning before interest and taxes (EBIT).

DFL = EBIT / EBT

TABLE No - 1
DEGREE OF FINANCIAL LEVERAGE (DFL) (Rupees in Crores)

YEAR	NALCO	MALCO	HINDALCO
2000-2001	1.12	1.93	1.06
2001-2002	1.23	2.62	1.04
2002-2003	1.16	2.04	1.15

|			
2003-2004	1.11	1.24	1.14
2004-2005	1.06	1.1	1.1
2005-2006	1.01	1.04	1.11
2006-2007	1.01	1.01	1.07
Mean	1.1	1.5686	1.0957
Standard Deviation	0.0804	0.6295	0.0412
Kurtosis	-0.5733	-0.8701	-1.4586
Skewness	0.4038	0.799	0.0479

Source: Capitaline Plus

From Table No-1 it is clear that the DFL shows a fluctuating trend and the calculated mean and standard deviation values of Malco were maximum when compared to the other 2 companies indicating high return and risk. For all the three companies, Skewness results are positive and the Kurtosis values show that the DFL follows a platykurtic pattern.

DFL for Nalco was maximum in the year 2001-2002, i.e. 1.23 after which the DFL shows decrease and the DFL was minimum in the years 2005-2007, i.e. 1.01 and during the study period, the average/mean value of DFL was 1.1 and the standard deviation was 0.0804.

DFL for Malco was maximum in the year 2001-2002, i.e. 2.62 after which the DFL shows decrease and the DFL was minimum in the year 2006-2007, i.e. 1.01 and during the study period the average/mean value of DFL was 1.5686 and the standard deviation was 0.6295.

DFL for Hindalco shows a fluctuating trend and it was maximum in the year 2002-2003, i.e. 1.15 and minimum in the year 2001-2002, i.e. 1.04 and during the study period, the average/mean value of DFL was 1.0957 and the standard deviation was 0.0412.

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EXHIBIT: 1
DEGREE OF FINANCIAL LEVERAGE FOR PRIMARY ALUMINIUM COMPANIES

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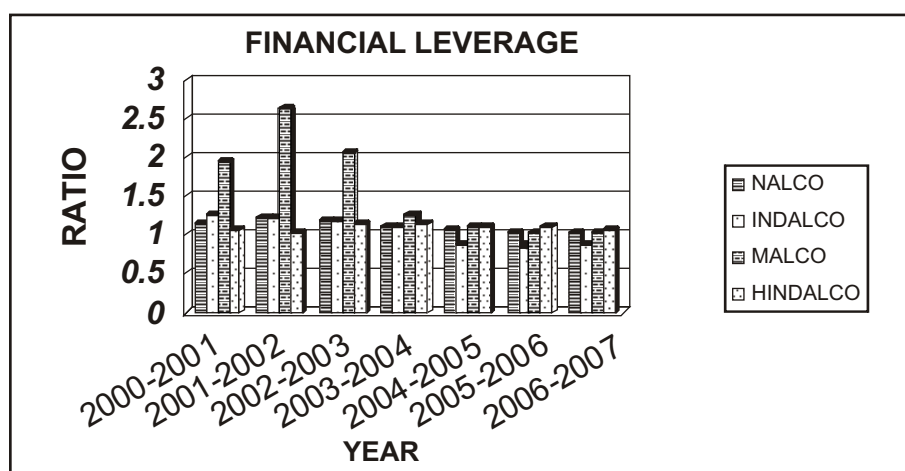
DEGREE OF OPERATING LEVERAGE

The degree of operating leverage (DOL) is defined as the percentage change in operating income or EBIT that results from a given percentage in sales. DOL depends upon the amount of fixed elements in the cost structure.

DOL = CONTRIBUTION / EBIT

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TABLE No.-2
DEGREE OF OPERATING LEVERAGE (DOL)   (Rupees in Crores)

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Year	NALCO	MALCO	HINDALCO
2000-2001	1.45	1.29	1.14
2001-2002	1.8	1.73	1.06
2002-2003	1.63	2.09	1.26
2003-2004	1.54	3.78	0.99
2004-2005	1.35	1.33	1.1

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2005-2006	1.26	1.33	0.74
2006-2007	1.14	1.44	1.07
Mean	1.4528	1.8557	1.0514
Standard Deviation	0.2255	0.8962	0.1607
Kurtosis	-0.5934	4.727	2.5698
Skewness	0.1866	2.1370	-1.1559

Source: Capitaline Plus

From the Table No-2, it is found that the DOL shows a fluctuating trend, the calculated mean and standard deviation values of Malco were maximum when compared to the other two companies indicating the tendency of operating profit to vary disproportionately with sales is higher and risk is higher. Skewness values of Nalco and Malco are positively skewed and for Hindalco, it is negatively skewed. Kurtosis values of Nalco and Hindalco shows that the DOL follows a platykurtic pattern and Malco shows a leptokurtic pattern, i.e. the values are more peaked than the other two companies.

DOL for Nalco was maximum in the year 2001-2002, i.e. 1.8 after which the DOL shows decrease and it was minimum in the year 2006-2007, i.e. 1.14 and during the study period, the average/mean value of DOL was 1.4528 and the standard deviation was 0.2255.

DOL for Malco was maximum in the year 2003-2004, i.e. 3.78. Upto this, the DOL was increasing and minimum in the year 2000-2001, i.e. 1.29 and during the study period, the average/mean value of DOL was 1.8557 and the standard deviation was 0.8962.

DOL for Hindalco shows a fluctuating trend and it was maximum in the year 2002-2003, i.e. 1.26 and minimum in the year 2005-2006, i.e. 0.74 and during the study period, the average/mean value of DOL was 1.0514 and the standard deviation was 0.1607.

EXHIBIT: 2
DEGREE OF OPERATING LEVERAGE FOR PRIMARY ALUMINIUM COMPANIES
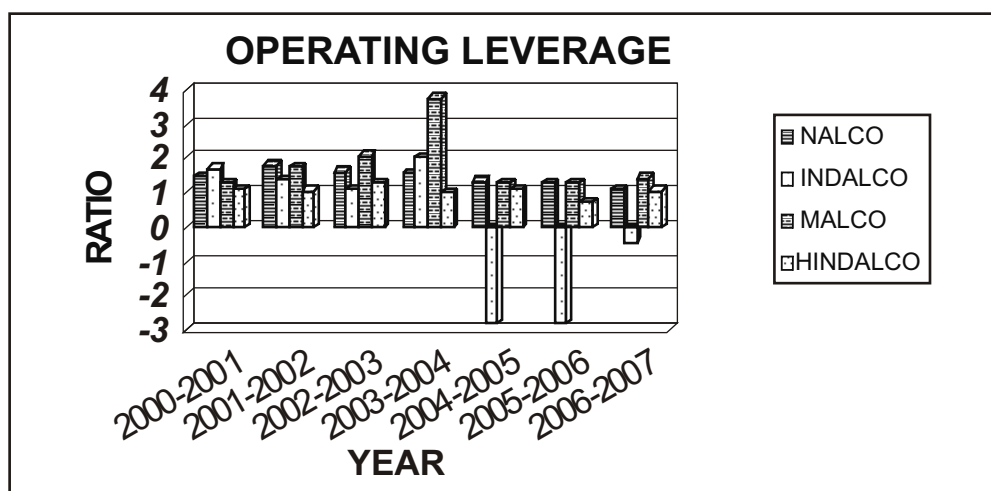
DEGREE OF COMBINED LEVERAGE

'Total leverage' is simply expressed as financial leverage multiplied by operating leverage. The operating leverage has its effect on operating risk and is measured by the percentage of change in sales. The financial leverage has its effects on financial risk and is measured by the percentage change in EPS due to percentage change in EBIT. If both are combined, the result is total leverage and the risk associated with combined leverage is known as total risk.

DCL = DFL X DOL

TABLE No - 3
DEGREE OF COMBINED LEVERAGE (DCL)   **(Rupees in Crores)**

Year	NALCO	MALCO	HINDALCO
2000-2001	1.62	2.49	1.21
2001-2002	2.21	4.53	1.1

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2002-2003	1.89	4.26	1.44
2003-2004	1.71	4.69	1.93
2004-2005	1.42	1.46	1.19
2005-2006	1.27	1.38	0.82
2006-2007	1.15	1.45	1.14
Mean	1.61	2.8943	1.2614
Standard Deviation	0.3678	1.5473	0.347
Kurtosis	-0.4216	-2.5584	2.3194
Skewness	0.4475	0.2023	1.1845

Source: Capitaline Plus

From the Table No-3, it is found that the ratio shows a fluctuating trend. The calculated average/mean value and standard deviation of Malco was maximum when compared to the other 2 companies. DCL for all the 3 companies are positively skewned. Kurtosis values shows that the combined leverages of all the 3 companies follow platykurtic i.e. the values are more flat-topped.

DCL for Nalco was maximum in the year 2001-2002, i.e. 2.21 after which the DCL shows decrease and it was minimum in the year 2006-2007, i.e. 1.15. During the study period, the average/mean value of DCL was 1.61 and the standard deviation was 0.3678.

DCL for Malco shows a fluctuating trend and it was maximum in the year 2003-2004, i.e. 4.69 and minimum in the year 2005-2006, i.e. 1.38. During the study period, the average/mean value of DCL was 2.8943 and the standard deviation was 1.5473.

DCL for Hindalco shows a fluctuating trend and it was maximum in the year 2003-2004, i.e. 1.93 and minimum in the year 2005-2006, i.e. 0.82. During the study period, the average/mean value of DCL was 1.2614 and the standard deviation was 0.347.

EXHIBIT: 3- *DEGREE OF COMBINED LEVERAGE FOR PRIMARY ALUMINIUM COMPANIES*
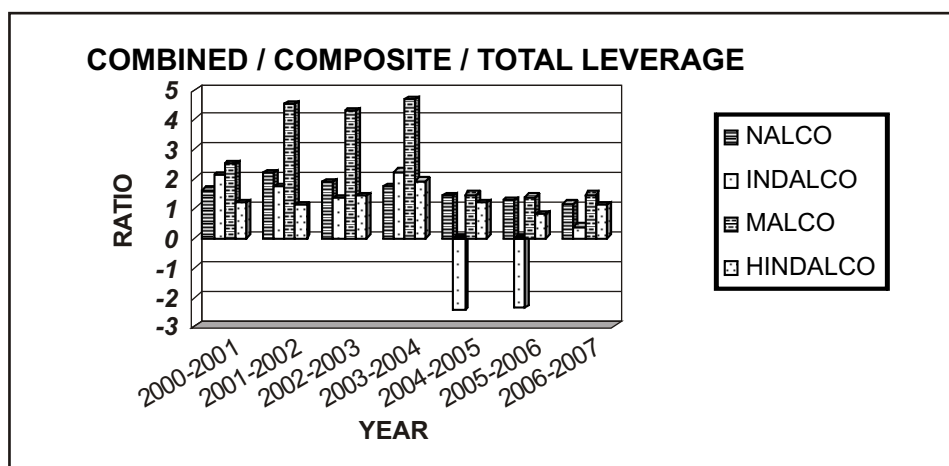
EARNING PER SHARE

The EPS is a good measure of profitability. EPS is a small variation of return on equity capital and is calculated by dividing the net profit after taxes and preference dividend by the total number of equity shares.

Table No-4

EARNING PER SHARE (EPS)   (Rupees in Crores)

Year	NALCO	MALCO	HINDALCO
2000-2001	9.77	11.62	89.83
2001-2002	6.35	6.17	92.13
2002-2003	7.32	13.37	61.23
2003-2004	10.93	15.84	88.6
2004-2005	18.61	17.98	140.43
2005-2006	23.54	35.83	16.49
2006-2007	35.83	78.53	24.34

|			
Mean	16.05	25.62	73.293
Standard Deviation	10.7227	25.1068	43.0861
Kurtosis	0.7131	4.0716	-0.424
Skewness	1.1764	2.0031	0.0439

Source: Capitaline Plus

From the Table No-4 it is found that the EPS of Hindalco is highly fluctuating. Whereas for Nalco and Malco from 2001-2002, the EPS shows an increasing trend. The calculated mean and standard deviation values of Hindalco were maximum when compared to the other two companies. For all the three companies, EPS values are positively skewed. Kurtosis values of Nalco and Hindalco shows a platykurtic pattern and Malco shows a leptokurtic pattern, i.e. Kurtosis values of Malco are more peaked than the other two companies.

EPS for Nalco was maximum in the year 2006-2007, i.e. 35.83 and minimum in the year 2001-2002, i.e. 6.35 from 2001-02.The EPS shows an increasing trend and during the study period, the average/mean value of EPS was 16.05 and the standard deviation was 10.7227.

EPS for Malco was maximum in the year 2006-2007, i.e. 78.53 and minimum in the year 2001-2002, i.e. 6.17 after which the EPS shows an increasing trend and during the study period, the average/mean of value EPS was 25.62 and the standard deviation was 25.1068.

EPS for Hindalco shows a fluctuating trend and it was maximum in the year 2004-2005, i.e. 140.43 and minimum in the year 2005-2006, i.e. 16.49 and during the study period, the average/mean value of EPS was 73.293 and the standard deviation was 43.0861.

EXHIBIT: 4 - EARNING PER SHARE FOR PRIMARY ALUMINIUM COMPANIES
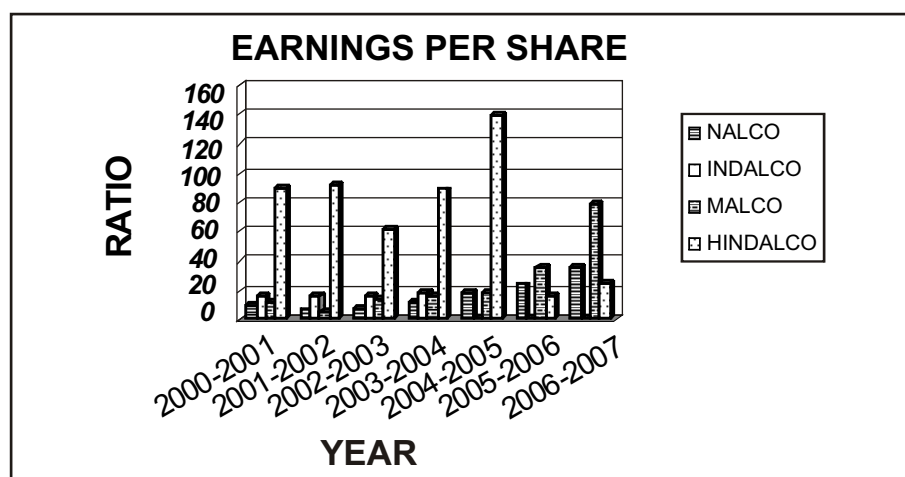
CORRELATION ANALYSIS

Correlation analysis is an important statistical tool which helps in determining the relationship between two or more variables. The measure of correlation is called the co-efficient of correlation. It is denoted by 'r'.

TEST OF SIGNIFICANCE

Table value of (n-1) i.e. 6 degrees of freedom at 5% level of significance is 2.447 for two-tailed test.

Hypothesis 1 (H_o): There is no significant relationship between financial leverage and EPS.

TABLE No 5 :
CORRELATION AND 'T' TEST RESULTS FOR FINANCIAL LEVERAGE AND EARNINGS PER SHARE

Company Name	'r' value	Correlation result	't' value	Hypothesis result
NALCO	-0.87	Highly Negative	/3.69/	Rejected
MALCO	-0.63	Negative	/2.61/	Rejected
HINDALCO	-0.08	Negative	/4.43/	Rejected

Table No-5 reveals that the correlation between the financial leverage and EPS is negative for all the three companies. As per the 't' test results, it is clear that the table value is less than the calculated value. Therefore, the

null hypothesis is rejected. Hence, there exists a relationship between financial leverage and EPS for all the three companies.

Hypothesis 2 (H$_o$): There is no significant relationship between operating leverage and EPS.

TABLE No - 6 : CORRELATION AND 'T' TEST RESULTS FOR OPERATING LEVERAGE AND EARNINGS PER SHARE

Company Name	'r' value	Correlation result	't' value	Hypothesis result
NALCO	-0.91	Highly Negative	/3.61/	Rejected
MALCO	-0.26	Negative	/2.60/	Rejected
HINDALCO	0.44	Positive	/4.44/	Rejected

Table No-6 reveals that the correlation between the operating leverage and EPS is positive only for Hindalco and there exists negative correlation for Nalco and Malco. As per the 't' test results, it is clear that the table value is less than the calculated value. Therefore, null hypothesis is rejected.Hence; there exists a relationship between operating leverage and EPS for all the 3 companies.

Hypothesis 3 (H$_o$): There is no significant relationship between combined leverage and EPS.

TABLE No - 7 : CORRELATION AND 'T' TEST RESULTS FOR COMBINED LEVERAGE AND EARNINGS PER SHARE

Company Name	'r' value	Correlation result	't' value	Hypothesis result
NALCO	-0.89	Highly Negative	/3.56/	Rejected
MALCO	-0.61	Highly Negative	/2.39/	Accepted
HINDALCO	0.34	Positive	/4.43/	Rejected

Table No-7 reveals that the correlation between the combined leverage and EPS are positive only for Hindalco and there exists negative correlation for Nalco and Malco. As per the 't' test results, it is clear that the table value is less than the calculated value except for Malco. Therefore, null hypothesis is rejected except for Malco. Hence, there exists a relationship between combined leverage and EPS for Nalco and Hindalco. Whereas, the null hypothesis is accepted and there exists no relationship between the combined leverage and EPS for Malco.

FINDINGS OF THE STUDY

FINANCIAL LEVERAGE

➢ Mean and SD values of DFL of Malco are maximum when compared to the other 2 companies. This shows better return as well as more risk in this company. For all the three companies, DFL is positively skewed and Kurtosis values shows a platykurtic pattern.

OPERATING LEVERAGE

➢ Mean and SD values of DOL of Malco were higher when compared to the other 2 companies indicating the tendency of operating profit to vary disproportionately with sales is higher for Malco. Skewness results reveal that the values of Hindalco were negatively skewed. Kurtosis values of Malco show a leptokurtic pattern.

COMBINED LEVERAGE

➢ The Mean and SD values of combined/composite/total leverage [DCL] were higher in Malco. DCL is positively skewed for all the 3 companies. The studied kurtosis values were platykurtic for all the 3 companies.

EARNING PER SHARE

➢ Mean and SD values of EPS are maximum in Hindalco as compared to the other two companies which indicates higher return and higher variation in return and the trend is also fluctuating but for Nalco and Malco, the trend is increasing from 2001-2002. The EPS for all the three companies is positively skewed and Kurtosis value for Malco indicates a leptokurtic pattern.

CORRELATION ANALYSIS AND TESTS OF SIGNIFICANCE

➢ **Correlation Results**
  ⇨ Correlation between DFL and EPS is negative for all the 3 companies.
  ⇨ Correlation between DOL and EPS is positive only for Hindalco.
  ⇨ Correlation between DCL and EPS is positive only for Hindalco.

➢ **Tests of Significance ['t' test results]**
  ⇨ For all the three companies, 't' test results reveal that there is significant relationship between DFL and EPS, and DOL and EPS.

⇨ As far as the relationship between DCL and EPS is concerned, except for Malco, the other two companies have a significant relationship.

SUGGESTIONS

❖ NALCO

➤ Mean value of Nalco's DFL is more or less the same as that of Hindalco. DOL and DCL are a bit higher than Hindalco.While comparing the Mean value of EPS with the topper i.e. Hindalco, Nalco shows very less EPS but the value increases steadily from 2001-2002.

➤ DFL and EPS have a relationship with each other for Nalco; hence it is suggested to reframe their optimum capital structure.

❖ MALCO

➤ DFL, DOL, and DCL are high in case of Malco.Comparatively, it is evident from DFL that Malco is trading on equity and having an optimum capital structure. DOL is again high for Malco, hence a small change in sales will give more reflection in profits. The DFL, DOL, and DCL gives an evidence to conclude that Malco is having high profit as well as high variation chances; hence it is suggested that they move carefully to further improve themselves.

➤ As far as the Mean value of EPS is concerned, Hindalco is on the top. Even though the leverages are high for Malco; Hindalco is the number one in EPS and Malco is on the second position but Malco has a steady increasing trend from 2001-2002. Hence it is suggested to Malco to concentrate more on the earning of its real owners and to reframe their capital structure for which they could select some cheap source of funds.

❖ HINDALCO

➤ Hindalco shows the highest EPS when compared to the other two companies. But SD is also maximum which indicates higher variation i.e. risk. Hence, it is suggested to reduce the operating fluctuations.

CONCLUSION

● Leverage is the employment of an asset/source of finance for which a firm pays fixed cost/fixed return.

● Overall leverage of Malco is maximum indicating higher profits and also ensuring that any small change will lead to more reflection.

● During the study period of 7 years from 2000-2001 to 2006-2007, the mean value of EPS for Hindalco is high as compared to the other two companies. Nalco shows an average performance during the study period. From the year 2001-2002, the EPS of Nalco and Malco shows an increasing trend during the study period.

It is concluded that the companies could reframe their optimum capital structure and capacity utilization for further profitability in future.

LIST OF ABBREVATIONS:

DFL	DEGREE OF FINANCIAL LEVERAGE
DOL	DEGREE OF OPERATING LEVERAGE
DCL	DEGREE OF COMBINED LEVERAGE
EPS	EARNING PER SHARE
&	AND
r	CORRELATION
t	TESTS OF SIGNIFICANCE
SD	STANDARD DEVIATION
Nalco	NATIONAL ALUMINIUM COMPANY
Malco	MADRAS ALUMINIUM COMPANY LIMITED
Hindalco	HINDALCO INDUSTRIES LIMITED
Indal	INDIAN ALUMINIUM COMPANY LIMITED
Balco	BHARAT ALUMINIUM COMPANY LIMITED

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