



RESEARCH ARTICLE  
Vol.6.Issue.3.2019  
July-Sept



INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA  
2 3 4 9 - 4 6 3 8

**INTERNATIONAL JOURNAL OF BUSINESS, MANAGEMENT  
AND ALLIED SCIENCES (IJBMAS)**  
*A Peer Reviewed and refereed Journal*

**PROFITABILITY ANALYSIS OF NATIONAL ALUMINUM COMPANY  
LIMITED (NALCO)**

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[doi.org/10.33329/ijbmas.63.45](https://doi.org/10.33329/ijbmas.63.45)



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**ABSTRACT**

The main aim of a business is to earn profits. Thus a company has to attract and retain those customers who are profitable. This is known as profitability analysis or customer profitability analysis. An analysis of cost and revenue of the firm which determines whether or not the firm is profiting is known as profitability analysis. The 20-80 marketing principle says that 80% of the profits arrive from 20% of customers.

The paper aimed to present a case study of profitability analysis based on ratio method in order to evaluate the financial performance at NATIONAL ALUMINUM COMPANY LIMITED. Based on the data collected from Balance Sheet and Profit and Loss Account concluded. the following ratios have been determined: gross profit margin, operating profit margin and net profit margin, return on assets, return on equity and return on capital employed, Earnings Per Share and total Assets Turnover.

**Key words** :- Gross profit Ratio, Operating profit Ratio Net profit Ratio, Return on assets, Return on equity, Earnings Per Share and total Assets Turnover Ratio.

**INTRODUCTION**

Profitability analysis is a part of ratio analysis which helps to know the financial position of the firm in terms of profit. It is the powerful tool of financial analysis. It is the process of evaluating the relationship between component parts of financial statements to obtain a better understanding of firm's position and performance. It is used as a device to analyze and interpret the financial health of enterprise.

In order to pin-point the causes which are responsible for low or high a financial manager should continuously evaluate the efficiency of a firm in terms of profit. The study of increase or decrease in retained earnings, various reserves and surplus will enable the financial manager to see whether the profitability has improved or not. An increase in the balance of these items is an indication of improvement in profitability, whereas a decrease indicates a decline in profitability. Following ratios are calculated to analyse the profitability of an enterprise.

Being the owner of the business, the shareholders should continuously evaluate the efficiency of a firm in terms of profit because they have permanent stake in business. So, they are directly affected by the prosperity of higher profit and adversity of losses suffered by the business.

An increase in the net profit after tax is an indication of improvement in profitability and in turn improved financial welfare of the owners and larger share of dividend to them and vice versa. Following are the ratios to be calculated:-

1. Net profit to net revenue ratio
2. Return on owner's equity ratio
3. Gross profit to net revenue ratio
4. Net operating profit to net revenue ratio
5. Return on capital employed ratio

### OBJECTIVES OF PROFITABILITY ANALYSIS

Followings are the objectives of profitability analysis:

- Reviewing the performance of a company over the past periods
- To provide the true information of the company to the investors and stakeholders.
- To determine the operational efficiency.
- To analyze the financial position of the firm.

### JUSTIFICATION OF RESEARCH

- The study has been conducted for gaining practical knowledge about comparative statement analysis and activities of National Aluminum Company India Limited.
- Assessing the current financial position. Analyzing company's current balance sheet and income statement.
- To analyze how much profit is earned by a company.
- To appraise the utilization of current assets and current liabilities and find out short comings if any.
- To suggest measure for effective management of financial statement

### RESEARCH DESIGN

This study is about the profitability analysis of NALCO. For the purpose of this study required information has been collected from primary and secondary sources.

The secondary data of this study includes the information from the company's reports i.e; financial statements like balance sheet and profit and loss account. The financial analysis techniques is used i.e; the ratio analysis to judge the financial position of the NALCO. All the other information obtained from various financial management books, journals, and magazines. For this project, following are the secondary sources used:-

- Annual reports of the company
- Company websites
- Various books like financial management and research methodology
- Other company documents

### HYPOTHESIS OF STUDY

Hypothesis concept is a tentative generalization the validity of which remains to be tested . In its elementary stage it is just an imaginative idea, which became the basis for action or investigation or research. The following hypotheses are framed for conduction of the study:

- i) The NALCO has sound position in their business.
- ii) There is a positive relation between net sales and profit.

### OBJECTIVES OF STUDY

Followings are the objectives of this research:-

- To analyze the concept of profitability
- To examine the various profitability position of NALCO Limited.
- The main objectives of this is to study the financial performance of NALCO Limited engaged in
- To understand the concept of financial performance.
- To know about the practice of presenting in financial statements.

### VISION

- To be a reputed global company in the metals and energy sectors.

### MISSION

- To achieve growth in business with a global competitive edge in providing satisfaction to the customers, employees, shareholders & community at large.
- To continuously help human resource, create safe working conditions, improve productivity and quality, reduce cost and wastage.
- To satisfy the customer and shareholders, employees and all other stakeholders.
- To be a good corporate citizen, protecting and enhancing the environment aswell as discharging social responsibility in order to ensure sustainable growth.
- To intensify research and development towards technological developm

### MANTRA

“Ordinary people, extraordinary attitude

### SWOT ANALYSIS OF NALCO

<u>Strength</u>	<u>Weakness</u>
<ul style="list-style-type: none"> <li>• Well planned and organized</li> <li>• Advanced technology</li> <li>• Huge power production</li> <li>• Availability of raw material</li> <li>• Coordination among various departments</li> <li>• Presently the market leaders</li> <li>• Low cost operations</li> </ul>	<ul style="list-style-type: none"> <li>• limited number of skilled manpower which consist of following:</li> <li>• unskilled: 847</li> <li>• executive: 1817</li> <li>• no diversification of products</li> <li>• inert to new development in the areas of</li> <li>• specializations</li> </ul>

<u>Opportunity</u>	<u>Threats</u>
<ul style="list-style-type: none"> <li>• abundance of ore providing mines</li> <li>• availability of suitable labour</li> <li>• uninterrupted power supply</li> <li>• better transportation (port) facilities</li> <li>• supportive government policies</li> <li>• growth of domestic potential market</li> <li>• product aluminum</li> <li>• exported 30-35%,</li> <li>• domestic use 60-65%</li> </ul>	<ul style="list-style-type: none"> <li>• stiff competition from HINDALCO,</li> <li>• Madras Aluminum Company Ltd, AMCO India ltd</li> <li>• environmental threats like super cyclone</li> <li>• high tax rate imposed on metal</li> <li>• scope of privatization</li> </ul>

**PROFITABILITY ANALYSIS OF NALCO:-****CONSOLIDATED BALANCE SHEET OF NALCO**

(Rs. In crores)

YEARS	2017	2016	2015	2014	2013
<b>EQUITY AND LIABILITIES</b>					
<b>SHAREHOLDER'S FUND</b>					
Equity share capital	966.46	1288.62	1288.62	1288.62	1288.62
Preference share capital	0.00	0.00	0.00	0.00	0.00
<b>Total share capital</b>	<b>966.46</b>	<b>1288.62</b>	<b>1288.62</b>	<b>1288.62</b>	<b>1288.62</b>
Revaluation reserves	0.00	0.00	0.00	0.00	0.00
Reserves and surplus	9238.69	1162.88	11508.80	10833.83	10643.83
<b>Total reserves and surplus</b>	<b>9238.69</b>	<b>1162.88</b>	<b>11508.80</b>	<b>10833.83</b>	<b>10643.83</b>
Money received against share warrants	0.00	0.00	0.00	0.00	0.00
Employee stock options	0.00	0.00	0.00	0.00	0.00
<b>Total shareholders fund</b>	<b>10205.15</b>	<b>12916.50</b>	<b>12797.42</b>	<b>12122.45</b>	<b>11932.45</b>
Preference shares issued by subsidiary companies	0.00	0.00	0.00	0.00	0.00
Equity shares application money	0.00	0.00	0.00	0.00	0.00
Preference shares application money	0.00	0.00	0.00	0.00	0.00
Share capital suspense	0.00	0.00	0.00	0.00	0.00
Hybrid/debt /other securities	0.00	0.00	0.00	0.00	0.00
Statutory consumers reserves	0.00	0.00	0.00	0.00	0.00
Special appropriation towards project cost	0.00	0.00	0.00	0.00	0.00
Service line construction from consumers	0.00	0.00	0.00	0.00	0.00
Governments/other grants	0.00	0.00	0.00	0.00	0.00
Minority interest	0.00	0.00	0.00	0.00	0.00
Policy holders fund	0.00	0.00	0.00	0.00	0.00

Group shares in joint ventures	0.00	0.00	0.00	0.00	0.00
<b>NON CURRENT LIABILITIES</b>					
Long term borrowings	0.00	0.00	0.00	0.00	0.00
Deferred tax liabilities(net)	1245.58	1110.09	1105.27	910.13	903.13
Other long term liabilities	70.24	69.47	65.30	54.96	70.82
Long term provisions	328.11	223.72	242.76	218.22	208.62
<b>Total Non- current liabilities</b>	<b>1643.93</b>	<b>1403.28</b>	<b>1413.33</b>	<b>1183.31</b>	<b>1002.57</b>
Foreign currency monetary item translation difference	0.00	0.00	0.00	0.00	0.00

<b>CURRENT LIABILITIES</b>					
Short term borrowings	51.09	0.00	0.00	0.00	0.00
Trade payables	844.46	581.38	440.18	531.12	509.17
Other current liabilities	1639.31	1350.77	1340.65	2564.38	2545.75
Short term provisions	117.07	277.43	186.22	147.25	162.67
<b>Total current liabilities</b>	<b>2651.93</b>	<b>2209.58</b>	<b>1967.05</b>	<b>3242.75</b>	<b>3217.59</b>
<b>Total capital and liabilities</b>	<b>14501.01</b>	<b>16529.36</b>	<b>16177.80</b>	<b>16648.51</b>	<b>16152.61</b>
<b>ASSETS</b>					
<b>NON CURRENT ASSETS</b>					
Tangible assets	7018.63	6328.90	6509.21	6688.80	6523.80
Intangible assets	125.80	138.61	136.21	103.14	105.09
Capital work-in-progress	514.65	662.14	550.01	768.74	1001.92
Intangible assets under development	51.35	0.00	0.00	0.00	0.00
Other assets	0.00	0.00	0.00	0.00	0.00
Construction stores	0.00	0.00	0.00	0.00	0.00
Mining development expenditures	0.00	0.00	0.00	0.00	0.00
Assets held for sale	0.00	0.00	0.00	0.00	0.00
<b>Fixed assets</b>	<b>7710.43</b>	<b>7129.65</b>	<b>7195.43</b>	<b>7560.68</b>	<b>7630.81</b>
Non -current investments	38.91	810.03	0.03	1.04	161.04
Deferred tax assets(net)	0.00	0.00	0.00	0.00	0.00
Long term loans and advances	91.37	1347.55	1221.85	1517.27	1474.04
Other non -current assets	1004.51	49.48	47.45	43.32	36.49
<b>Total non- current assets</b>	<b>8845.22</b>	<b>9336.71</b>	<b>8464.76</b>	<b>9078.99</b>	<b>9302.38</b>
Minority interest	0.00	0.00	0.00	0.00	0.00
Group shares in joint ventures	0.00	0.00	0.00	0.00	0.00
Foreign currency monetary item translation difference	0.00	0.00	0.00	0.00	0.00
Account					
<b>CURRENT ASSETS</b>					
Current investments	1221.13	66.00	950.00	1244.00	1329.02

Inventories	1155.93	1126.97	1165.56	1173.66	1380.64
Trade receivables	184.25	235.21	120.82	243.57	148.65
Cash and cash equivalents	2287.23	4944.11	4628.79	4048.29	3504.38
Short term loans and advances	193.19	586.68	240.33	481.38	473.76
Other current assets	614.06	233.68	240.33	235.30	193.78
<b>Total current assets</b>	<b>5655.79</b>	<b>7192.65</b>	<b>7713.04</b>	<b>7426.20</b>	<b>7030.23</b>
<b>Total assets</b>	<b>14501</b>	<b>16529.36</b>	<b>16177.80</b>	<b>16505.19</b>	<b>16332.61</b>
<b>OTHER ADDITIONAL INFORMATION</b>					
<b>CONTINGENT LIABILITIES, COMMITMENTS</b>					
Contingent liabilities	2880.68	2864.70	2706.96	0.00	0.00
Other earnings	0.00	55.01	1.23	0.00	0.00
<b>BONUS DETAILS</b>					
Bonus equity share capital	644.31	644.31	644.31	644.31	644.31
<b>NON CURRENT INVESTMENTS</b>					
Non- current investment quoted market value	0.00	0.00	0.00	0.00	0.00
Non -current investment unquoted book value	38.91	0.03	0.03	0.00	0.00
<b>CURRENT INVESTMENTS</b>					
current investment quoted market value	1221.03	66.04	1021.06	0.00	0.00
current investment unquoted book value	0.00	0.00	0.00	0.00	0.00

### CONSOLIDATED PROFIT AND LOSS ACCOUNT OF NALCO

(Rs. In crore)

YEARS	2017	2016	2015	2014	2013
<b>INCOME</b>					
<b>Revenue from operations(gross)</b>	7932.99	7156.53	7770.62	7024.27	7247.17
Less: excise/service tax/other levies	506.98	453.20	508.72	375.47	437.72
<b>Revenue from operations(net)</b>	7426.01	6703.33	7261.90	6648.80	6809.45
Other operating revenues	117.03	112.67	120.91	0.00	0.00
<b>Total operating revenue</b>	7543.04	6816.00	7382.81	6648.80	6809.45
Other income	408.27	536.64	672.72	557.71	511.05
<b>TOTAL OPERATING REVENUES</b>	7951.31	7352.64	8055.53	7338.56	7427.53
<b>EXPENSES</b>					
Cost of material consumed	3394.32	2969.01	2833.83	1063.16	1167.83
Operating and direct expenses	507.93	610.79	583.06	2017.67	2432.27
Changes in inventories of FG, WIP,	-96.59	-8.99	2.90	58.55	-64.25

stock of trade					
Employee benefit expenses	1537.44	1361.37	1377.91	1245.33	1153.93
Finance cost	2.69	1.27	0.00	0.00	7.45
Provisions and contingencies	0.00	0.00	0.00	0.00	0.00
Depreciation and amortization expenses	480.36	424.09	413.66	524.73	505.43
Miscellaneous expenses written off	0.00	0.00	0.00	0.00	0.00
Other expenses	1120.29	945.81	879.10	1401.94	1319.83
<b>TOTAL EXPENSES</b>	<b>6946.44</b>	<b>6303.29</b>	<b>6090.46</b>	<b>6371.38</b>	<b>6522.49</b>
<b>Profit before exception, extra ordinary items and tax</b>	<b>1004.87</b>	<b>1049.35</b>	<b>1965.07</b>	<b>967.18</b>	<b>905.04</b>
Exception items	-40.15	53.45	148.42	49.37	0.00
<b>Profit/loss before tax</b>	<b>964.74</b>	<b>1102.80</b>	<b>2113.49</b>	<b>917.81</b>	<b>905.04</b>
<b>tax expenses-continued operations</b>					
Current tax	219.52	375.62	520.65	264.65	263.30
Deferred tax	76.67	4.82	249.68	10.81	48.91
<b>Total tax expenses</b>	<b>296.19</b>	<b>371.77</b>	<b>791.59</b>	<b>275.46</b>	<b>312.21</b>
<b>Profit/loss after tax before extraordinary items</b>	<b>668.53</b>	<b>731.03</b>	<b>1321.90</b>	<b>642.35</b>	<b>592.83</b>
Prior period items	0.00	0.00	0.00	0.00	0.00
Extra ordinary items	0.00	0.00	0.00	0.00	0.00
<b>Profit and loss for the period</b>	<b>668.53</b>	<b>731.03</b>	<b>1321.90</b>	<b>642.35</b>	<b>592.83</b>
Minority interest	0.00	0.00	0.00	0.00	0.00
Share of profit/loss of associates	-0.81	0.00	0.00	0.00	0.00
<b>Consolidated profit/loss after MI and associates</b>	<b>667.72</b>	<b>731.03</b>	<b>1321.90</b>	<b>642.35</b>	<b>592.83</b>
<b>OTHER ADDITIONAL INFORMATION</b>					
earnings per share					
Basic EPS(Rs)	3.00	3.00	5.00	2.49	2.30
diluted EPS(Rs)	3.00	3.00	5.00	2.49	2.30
Imported raw material	0.00	124.30	139.22	0.00	0.00
Indigenous raw material	0.00	980.10	892.37	0.00	0.00
Imported stores and spares	0.00	62.61	102.95	0.00	0.00
Indigenous stores and spares	0.00	331.91	316.89	0.00	0.00
dividend and dividend percentage					
Equity share dividend	686.19	515.45	451.02	-	-
Preference share dividend	0.00	0.00	0.00	0.00	0.00
Tax on dividend	139.69	104.93	90.18	-	-



## PROFITABILITY ANALYSIS

### Gross Profit Ratio:

Gross profit ratio is important for management because it highlights the efficiency of operation and also indicates the average spread between the operating cost and revenue. Any difference position in this ratio is the result of a change in the operating cost or revenue or both. The main objective of computing this ratio is to determine the efficiency with which operations are carried on. The Gross Profit Ratio expresses the relationship between gross profit and net sales.

$$\text{Gross profit ratio} = \frac{\text{gross profit}}{\text{Net sales}} \times 100$$

A high ratio of gross profit to revenue is a sign of good management as it implies that

- The operating cost is relatively low;
- Increase in revenue income, operating cost remains constant;
- Operating cost decline, revenue income remains the same.

On the contrary, a low gross profit to revenue is definitely a danger signal. It implies that

- The profit is relatively low;
- The operating cost is relatively high

**Table no. 1: Statement of Gross profit and Net sales**

YEARS	GROSS PROFIT	NET SALES	RATIO (%)
2013	2779.88	6809	40.82
2014	3521.39	6649	52.96
2015	4421.15	7262	60.88
2016	3743.56	6703	55.84
2017	4140.27	7438	55.66

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

### INTERPRETATION:

The gross profit ratio for the years 2013,2014,2015,2016and 2017 are 40.82%, 52.96%, 60.88%, 55.84%, and 55.66% respectively which indicates that gross profit ratio has increased from 2013 to 2015 but it started declining to 2016 then to 2017. The gross profit ratio is very high in2015

i.e. 60.88% as compared to other years which indicates the good management of the company and also relatively low operating cost.

### Operating profit ratio

The Net Operating Profit Ratio expresses the relationship between net operating profit and net sales. This ratio helps to find out the profit arising out of the main business. In other words this ratio helps to determine the efficiency with which affairs of business are being managed. A high ratio indicates the improvement in the operational efficiency of the business and vice versa.

It is figured as shown below:

$$\text{Net Operating Profit Ratio} = \frac{\text{Net Operating Profit}}{\text{Net sales}} \times 100$$

Net sales



**Table no. 2: Statement of Operating profit and Net sales**

YEARS	OPERATING PROFIT	NET SALES	RATIO(%)
2013	906	6809	13.30591864
2014	934	6649	14.04722515
2015	1706	7262	23.49215092
2016	937	6703	13.97881546
2017	1080	7438	14.52003227

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

INTERPRETATION: The operating profit ratio for the years 2013,2014,2015,2016and 2017 are 13.30%, 14.04%, 23.49%, 13.97%, and 14.52% respectively which indicates that operating profit ratio has increased from 2013 to 2015 but it started declining to 2016 then to 2017. The operating profit ratio is very high in2015 i e; 23.49% as compared to other years which indicates improvement in the operational efficiency of the company and also relatively low operating cost.

#### Net Profit Ratio:

The net profit ratio indicates the ability of management to operate the business with sufficient success not only to recover from revenues of the period, all the expenses including depreciation and interest, but also to leave a margin of reasonable compensation to the owners for providing their capital at risk. In other words, this ratio is the overall measure of the firm's ability to turn each rupee of revenue into profit. The Net Profit Ratio expresses the relationship between net profit and net sales. It is figured as shown below:

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net sales}} \times 100$$

A high ratio of net profit to revenue is a sign of good management as it ensures adequate return to the owners as well as enables a firm to withstand adverse economic conditions. On the contrary, a low net profit to revenue is definitely a danger signal. It has the opposite implications. If this ratio is not adequate, the firm will fail to achieve satisfactory return on shareholder's funds.

**Table no .3 : Statement of Net profit and Net sales**

YEARS	NET PROFIT	NET SALES	RATIO(%)
2013	593	6809	8.709061536
2014	642	6649	9.655587306
2015	1322	7262	18.20435142
2016	731	6703	10.90556467
2017	669	7438	8.994353321

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

INTERPRETATION: The Net Profit of the Company for the years 2013, 2014, 2015, 2016 and 2017 are 8.70%, 9.65%, 18.20%, 10.90%, and 8.99%. The Net Profit Ratio reveals the ability of the management

to operate its business. This ratio is very high in 2015 i.e; 18.20% as compared to other years which indicates that in this particular year the firm has the adequate return to the owner.

### Return on Capital Employed Ratio

It measures the relationship between profit and capital employed. Return means profits or net profits.

Capital employed means total investment made in the business. It is figured as:

$$\text{Return on capital employed} = \frac{\text{Net profit}}{\text{Net sales}} \times 100$$

### Statement of net profit and capital employed

YEARS	NET PROFIT	CAPITAL EMPLOYED	RATIO(%)
2013	593	10040	5.906374502
2014	642	10741	5.977097105
2015	1322	12146	10.88424173
2016	731	12093	6.044819317
2017	669	9384	7.12915601

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

INTERPRETATION: The return on capital employed ratio for the years 2013, 2014, 2015, 2016 and 2017 are 5.90%, 5.97%, 10.88%, 6.04%, and 7.12%. The return on capital employed Ratio measure the efficiency of the firm to generate satisfactory profit on the capital invested. This ratio is very high in 2015 i.e; 10.88% as compared to other years which indicates that in this particular year NALCO has generated maximum profit as compared to other years.

### Cash profit ratio:

**Concept:** Cash Profit is the operating net profit less depreciation, amortization and other non- cash expenses such as provisions and past losses. The ratio is derived by dividing the cash profits earned by the tested party over the appropriate base such as total sales, total costs, etc.

**Depreciation Adjustment - The Relevance:** Depreciation adjustment is made to eliminate the differences between the tested party and comparable in terms of depreciation policy, depreciation rates, the technology of assets employed in production and useful life of the assets.

The technical or physical life is the period over which the asset is expected to produce the intended results, while the economic life is the period over which use of the asset makes economic sense and which could vary amongst companies. Hence, a suitable adjustment is required to factor such differences in useful life of assets between the tested party and the comparable.

Under the Companies Act, 1956, Schedule XIV provides minimum depreciation rate both written-down value and straight-line methods. The Act allows charging depreciation at rates higher than the scheduled rates, provided the fact is disclosed in financial statements. If a company charges lower than appropriate depreciation.

$$\text{Cash profit ratio} = \frac{\text{Cash Profit}}{\text{Net sales}} \times 100$$

Cash profit= net profit + depreciation

### Statement of Net sales and Cash profit

YEARS	NET PROFIT	DEPRECIATION	CASH PROFIT	NET SALES	RATIO(%)
2013	593	505	1098	6809	16.12572
2014	642	525	1167	6649	17.55151
2015	1322	414	1736	7262	23.90526
2016	731	424	1155	6703	17.23109
2017	669	480	1149	7438	15.4477

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

INTERPRETATION: The cash profit ratio for the years 2013, 2014, 2015, 2016 and 2017 are

16.12%, 17.55%, 23.90%, 17.23%, and 15.44%. this ratio started increasing from 2013 to 2015 and after that it has declined.

### Return on Net Worth

Return on Net Worth (RONW) is a measure of profitability of a company expressed in percentage. It is calculated by dividing the net income of the firm in question by shareholders equity. The net income used is for the past 12 months. It can be represented mathematically as follows:

Return on Net Worth =  $\frac{\text{Net Profit}}{\text{Net worth}} \times 100$

Net worth

In terms of its implication, return on net worth indicates how much profit has been generated for every dollar of equity investment. Even more plainly, return on net worth is a measure of how well the company is utilizing the money invested by shareholders.

A high return on net worth percentage is indicative of the prudent use of shareholders money while a low percentage indicates less efficient deployment of equity resources.

Return on net worth is considered as a vote of the efficiency of a company's management with an increasing percentage indicating higher efficiency in generating profit on every dollar invested.

### Statement of Net Profit and Net Worth

YEARS	NET PROFIT	NET WORTH	RATIO(%)
2013	593	11933	4.9694126
2014	642	12122	5.2961557
2015	1322	12797	10.330546
2016	731	12907	5.6635934
2017	669	10206	6.5549677

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

NOTE: THE FIGURES ARE AS PER THE GAAP AS REPORTED

INTERPRETATION: The return on net worth ratio for the years 2013, 2014, 2015, 2016 and 2017

are 4.96%, 5.29%, 10.33%, 5.66%, and 6.55%. The return on net worth Ratio indicates how efficiently the shareholder's money is used to generate the profits. This ratio is very high in

2015 i.e; 10.33% as compared to other years which indicates that in this particular year NALCO has efficiently used shareholder's fund to generated maximum profit as compared to other years but after 2015 this ratio has started declining which is not a good sign for the company.

#### Operating cost ratio:

Operating ratio (also known as operating cost ratio or operating expense ratio) is computed by dividing operating expenses of a particular period by net sales made during that period. Like expense ratio, it is expressed in percentage.

Operating ratio is computed as follows:

$$\text{Operating cost ratio} = \frac{\text{operating cost}}{\text{Net sales}} \times 100$$

The basic components of the formula are operating cost and net sales. Operating cost is equal to cost of goods sold plus operating expenses. Non-operating expenses such as interest charges, taxes etc., are excluded from the computations.

This ratio is used to measure the operational efficiency of the management. It shows whether the cost component in the sales figure is within normal range. A low operating ratio means high net profit ratio i.e., more operating profit.

#### Statement of Net sales and Operating cost

YEARS	OPERATING COST	NET SALES	RATIO (%)
2013	6010	6809	88.26553
2014	5847	6649	87.93804
2015	5677	7262	78.17406
2016	5879	6703	87.707
2017	6476	7438	87.06642

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

note: the figures are as per the gaap as reported

INTERPRETATION: The operating cost ratio for the years 2013, 2014, 2015, 2016 and 2017

are 88.26%, 87.93%, 78.17%, 87.70%, and 88.06%. The operating cost Ratio indicates that the cost component in the sales is within the normal range. This ratio is very low in 2015 i.e; 78.17% and is very high in 2013 which means that the cost incurred in 2015 is within the range and it exceeds the range in 2013 indicates low profit in this year as compared to other years.

#### Earnings Per Share Ratio:

Earnings per share (EPS) ratio measures how many rupees of net income have been earned by each share of common stock. It is computed by dividing net income less preferred dividend by the number of shares of common stock outstanding during the period.

It is calculated as:

$$\text{Earnings per share} = \frac{\text{net profit after tax} - \text{preference share dividend}}{\text{Number of equity shares}}$$

The shares are normally purchased to earn dividend or sell them at a higher price in future. EPS figure is very important for actual and potential common stockholders because the payment of dividend and increase in the value of stock in future largely depends on the earnings of the company. EPS is the most widely quoted and relied figure by investors. In most of the countries, the public companies are required to report EPS figure on the income statement. It is usually reported below the net income figure.

There is no rule of thumb to interpret earnings per share. The higher the EPS figure, the better it is. A higher EPS is the sign of higher earnings, strong financial position and, therefore, a reliable company to invest money. For a meaningful analysis, the analyst should calculate the EPS figure for a number of years and also compare it with the EPS figure of other companies in the same industry. A consistent improvement in the EPS figure year after year is the indication of continuous improvement in the earning power of the company.

**Table no. 4.7.8: statement of net profit after tax and number of equity shares**

YEARS	NET PROFIT AFTER TAX	NUMBER OF EQUITY SHARES	RATIO
2013	5930000000	2577328512	2.300832
2014	6420000000	2577328512	2.4909514
2015	1322000000	2577328512	0.5129342
2016	7310000000	2577328512	2.8362702
2017	6690000000	1932928884	3.4610689

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

NOTE: THE FIGURES ARE AS PER THE GAAP AS REPORTED

INTERPRETATION: The earnings per share ratio for the years 2013, 2014, 2015, 2016 and 2017 are 2.30, 2.49, 0.51, 2.83, and 3.46. This Ratio indicates the earnings of the shareholders i.e; the dividend. This ratio is very high in 2015 i.e; 3.46 and is very low in 2013 but started increasing after that which means that the shareholders have high earnings in 2015 and low earnings in 2013.

#### **Stock turnover ratio:**

Inventory turnover ratio or Stock turnover ratio indicates the velocity with which stock of finished goods is sold i.e. replaced. Generally it is expressed as number of times the average stock has been "turned over" or rotation of during the year.

A slow inventory movement has the following disadvantages:

1. Blocking of scarce funds which could be gainfully employed elsewhere;
2. Requiring more strong space resulting in higher maintenance and handling costs;
3. Chances of product being outdated or out of fashion especially in case of consumer goods;
4. During storage for excessive period quality may deteriorate due to inherent factors like rusting loss of potency etc.

Similarly insufficient level of inventory is also dangerous because it may be responsible for the loss of business opportunity. Thus for each item of stock minimum average and maximum levels should be fixed carefully.

Following formula is used to calculate this ratio:

**Stock turnover ratio = Cost of goods sold / Average inventory at cost**

Where Cost of goods sold = Sales - Gross profit or + Gross loss or

Opening stock + Net purchases + Direct Expenses - Closing stock and

$$\text{Average inventory} = (\text{Opening stock} + \text{Closing stock}) / 2$$

High turnover suggests efficient inventory control, sound sales policies, trading in quality goods, reputation in the market, better competitive capacity and so on.

Low turnover suggests the possibility of stock comprising of obsolete items, slow moving products, poor selling policy, over investment in stock etc.

**Table no. 4.7.9: Statement of Cost of Goods Sold and Average Inventory**

YEARS	COST OF GOODS SOLDS	AVERAGE INVENTORY	RATIO(TIMES)
2013	3297.73	504.415	6.537731828
2014	2959.44	442.52	6.687697731
2015	2840.85	441.42	6.435707489
2016	3127.61	468.32	6.67836095
2017	4029.12	460.36	8.752107047

SOURCES: Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

NOTE: THE FIGURES ARE AS PER THE GAAP AS REPORTED

INTERPRETATION: The stock turnover ratio for the years 2013, 2014, 2015, 2016 and 2017 are 6.53, 6.68, 6.43, 6.67, and 8.75. This Ratio is increasing year by year which is a good sign for the company it indicates that the company has efficient control on inventory, sound sales policies and trading in quality goods.

#### **Total Assets Turnover Ratio:**

Asset Turnover Ratio is a term that indicates the efficiency of utilization of total assets. Asset turnover indicates how many times the total **assets** turnover for one year.

Asset turnover should be at least at the level of 1. Calculation:

$$\text{Total Asset Turnover} = \text{Sales} / \text{Total assets}$$

For the denominator it should be used the average of assets at the end and beginning of the year (if the information is available).

Use of the Asset Turnover Ratio in practice: In the enterprise it used by CFO in financial analysis to analyze ratios. For the objectivity it is suitable the industry comparison.

**Statement of Net sales and Total Assets**

YEARS	NET SALES	TOTAL ASSETS	RATIO(TIMES)
2013	7438	10256.88	0.725172
2014	6703	12907.68	0.519303
2015	7262	12797.3	0.567463
2016	6649	12122.45	0.548486
2017	6809	11932.45	0.570629

**SOURCES:** Annual report of Profit and Loss Account and Balance Sheet from 2013 to 2017 of NALCO.

**NOTE:** THE FIGURES ARE AS PER THE GAAP AS REPORTED

**INTERPRETATION:** The assets turnover ratio for the years 2013, 2014, 2015, 2016 and 2017

are 0.72, 0.51, 0.56, 0.54, and 0.57. This Ratio indicates how efficiently the company has utilized its assets. This is high in 2013 i.e; 0.72 but then it started declining from 2014 to 2016 which is not good for the company then again increased in to 0.57 in 2017 as compared to 2016.

**FINDINGS AND SUGGESTIONS**

- The net sales of the company has increased from 2013 to 2015 the declined in 2016 then again increased in 2017 and it is maximum in that year only.
- The gross profit ratio has increased from 2013 to 2015 but again started declining which is not satisfactory. The sale of the company is not maximum in 2015 although gross profit is maximum.
- The operating profit ratio also increased from 2013 to 2015 but again started declining which is not satisfactory. The sale of the company is not maximum in 2015 although gross profit is maximum.
- The net profit ratio of the company has started increasing from 2013 to 2015 and reached to maximum but again it declined in 2016 and again increased in 2017 but not as much as in 2015. The increasing net profit ratio indicates good sign and ability of the management to operate business.
- The return on Capital Employed ratio of the company has started increasing from 2013 to 2015 and reached to maximum but again it declined in 2016 and again increased in 2017 but not as much as in 2015. The decrease in this ratio is not satisfactory.
- Assets turnover ratio is declining year by year. It was highest in 2013 which is not good for the company and indicates that assets are not efficiently utilized.
- Stock turnover ratio is increasing year by year. There was a slight decline in this ratio in 2015 but again started increasing and reached to its maximum in 2017 which is good sign for the company and is satisfactory.
- The earnings per share ratio position of the company is also satisfactory as it started increasing from 2015 to 2017 and reached to maximum in 2017 to it was declining from 2013 to 2014.
- There was a significant decrease in operating cost ratio as it was very high in 2013 and then declined but again it started increasing which is not satisfactory and good for the company.
- Return on net worth ratio was high in 2015 but decreased in 2016 and then increased in 2017 but not as much as in 2017.



## SUGGESTIONS FOR THE NATIONAL ALUMINUM COMPANY LIMITED

- The company should try to maintain its net sales in the coming years for its better performance.
- The company should make efforts to reduce its operating cost so as to increase its profit.
- The company should also try to maintain its earnings per share to attract investors
- and to provide higher earnings to its owners and also retain the existing investors in the company.
- According to the study the assets turnover ratio of the company is also declining so
- the company should also try to maintain this ratio by fully and efficiently utilizing its asset's capacity.
- The company should try to maintain increase in its operating profit by reducing its operating expenses.
- Increasing trend should be maintained in capital employed ratio so as to show that capital invested in the company is utilized efficiently.
- There should be continuous increase in the net profit of the company to maintain sound financial position of the company and increase its goodwill too.
- The increased stock turnover ratio should also be maintained by having full control on inventory, sales policies and trading in quality good.

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