

A FINANCIAL RATIO ANALYSIS OF STEEL AUTHORITY OF INDIA LIMITED(SAIL)

¹Tarsariya Mahendrakumar S., ²Patel Ashvinkumar M., ³Nayka Pankaj M.

¹Alumnus, ²Alumnus, ³Alumnus

¹ S.P.B. English Medium College of Commerce, Surat, India.

² Sir K.P. College of Commerce, Surat, India.

³ Navyug Commerce College, Surat, India

Abstract: Analysis of Financial statements is a method of swotting and examining a company's accounting reports i.e. profit and loss account and Balance Sheet of the company, in order to knowing its past, present or anticipated future performance. This process of revising the financial statements allows for healthier economic decision making. This paper delivers the information and guidelines Concerning Analysis of various Accounting ratio of SAIL-Steel Authority of India Limited.

Keyword: Financial Statements, Accounting Ratio, Accounting Reports.

INTRODUCTION:

One of the Biggest state owned steel making company is Steel Authority Of India limited (SAIL), based in New Delhi, India and one of the top steel makers in world, headed by Shree P.K.singh. The company is a fully integrated iron and steel maker producing both basic and special steels for local construction, engineering power, railway automotive, defense industries and for sale in export markets. It is a public-sector undertaking which trades publicly in the market is largely owned by Government of India and acts like an operating company. Incorporated on 24 January 1973, SAIL has 78,333 employees (as of 01-Jan-2018). With an annual production of 13.9 million metric tons. SAIL is one the Maharatna industry of the country's Central Public-Sector Enterprises. The company manufactures and sells a broad range of steel products including hot and cold rolled bars and rods, stainless steel and other alloy steels. They produce iron and steel at five integrated plants and three special steel plants located principally in the eastern and central regions of India and situated close to domestic sources of raw materials including the company's iron ore limestone and dolomite mines.

Key Years:

1913: Production of steel initiates in India.

1918: The Indian Iron & Steel Co. is set up to contest with Tata Iron and Steel Co.

1948: A new Industrial Policy Statement states that new ventures in the iron and steel industry are to be undertaken only by the federal government.

1954: Hindustan Steel Ltd. is fashioned to oversee the Rourkela plant.

1959: By now, Hindustan is answerable for two more plants in Bhilai and Durgapur.

1964: Bokaro Steel Ltd. is created.

1973: The Steel Authority of India Ltd. (SAIL) is created as a holding company to oversee most of India's iron and steel production.

1993: India sets plans in motion to partially privatize SAIL.

1999: The company posts losses as a result of an industry downturn.

2003: SAIL's output betters ten million tons of saleable steel.

During this time period, SAIL continued in the public sector as a central tool of state plans for industrial development. The country's reserves of iron ore and other raw materials for iron and steel made the industry central to the economy.

LITERATURE REVIEW:

Prof.Vijay Patel & Prof.Chandresh B.Mehta had written in Research paper In International Journal of Marketing, Financial Services & Management Research on the subject "A FINANCIAL RATIO ANALYSIS OF KRISHAK BHARATI CO-OPERATIVE LIMITED." They discuss about different types of profitability ratios and how to interpret them. The main detached of study were include the important of Financial Ratio as the indicator of firms Financial Enactment and position. And also classifying the obstacles and snags facing this company as regards to its Profitability ratio and with the help of this Study they Recommended regarding how the company increasing its Profitability.

Bansal and Gupta (1985) in their study entitled, "Financial Ratio Analysis and Statistics" progressive that the coefficient of variation in the study period had a wide gap changing between 7.1 per cent and 51.3 per cent for current ratio and ratio of fixed assets to sales. The correlation of gears of short term liquidity ratio generally low correlation as against long term solvency ratio components but the component Ratio independently keep quite satisfactory correlation in cotton textile industry. The profitability ratio elements in the industry also have quite high correlation in cotton industry as compared to synthetic industry.

Prof. Mr. S. Sabarinathan and Ms. V. Jenifer attempt research analyze 5-year balance sheet and profit and loss a/c of Kaleeswarar Mills B Unit of National Textile Corporation Ltd by using ratio analysis. The objective of their study includes the profitability, cost of goods sold and other experience company overall financial performance of the company. They gave suggestion to the company to concentrate on financial performance, to control the ratio to earn more profit and to improve the absolute liquid asset.

RESEARCH METHODOLOGY: Being Explanatory research it is based on secondary Sources of data, which have been collected from official website of SAIL, and its annual reports, various web articles, blogs (internet sources), Various Website, and Newspaper etc. The accessible secondary data is intensively used for research study.

RESEARCH STATEMENT

The research statement studied is entitled, "A financial ratio Analysis of Steel Authority of India Ltd." The present study focuses on the analysis of the performance of SAIL using Profitability ratios and t- test is used for test hypothesis in this study.

OBJECTIVES OF THE STUDY

These objectives are categorized in a following manner:

- To analysis the profitability performance of the company.
- To assess the growth prospective of the industry.
- To study the organizational building and the present position of the STEEL AUTHORITY OF INDIA LTD.

TOOLS AND METHODS OF DATA ANALYSIS

The present study contains calculation of profitability ratios to assess the financial Performance of SAIL in India from 2013 to 2017, Statistical measures like percentage, mean and t test are used in this study. Ratio analysis has been used in this research to evaluate the performance of the company. Being a scientific method, it is not springy - the addition of even one more opinion makes it necessary to do all the computations again.

RATIO ANALYSIS

A ratio analysis is a quantitative analysis of information checked in a company's financial statements. Ratio analysis is used to assess various features of a company's operating and financial performance such as its efficiency, liquidity, profitability and solvency. A Ratio states the relationship that occurs between two numbers taken from the financial statements.

Profitability Ratio:

Profitability ratios are possibly the most broadly used ratios in investment analysis. These ratios include the universal "margin" ratios, such as gross, operating and net profit margins. These ratios measure the firm's ability to earn a passable return. When analyzing a company's margins, it is always discreet to compare them against those of the industry and its close competitors. The profitability Ratio in relation to sales are – (1) Gross profit ratio, (2) Net profit ratio, (3) Expenses or operating ratio, while profitability Ratio related to investments are – (1) Return on assets ratio and (2) Return on shareholders' equity or investment ratio.

1. **Gross Profit Ratio:** Gross Profit Ratio or Gross Profit Margin shows how much a business is earning, taking into account the desirable costs to produce its goods and services. A high gross profit ratio signifies a higher efficiency of main operations, meaning it can still cover operating expenses, fixed costs, dividends, and depreciation, while also providing net earnings to the business. On the other hand, a low profit margin incorporates a high cost of goods sold, which can be endorsed to adverse purchasing policies, low selling prices, low sales, rigid market competition, or wrong sales promotion policies.

$$\text{Gross Profit Ratio} = (\text{Gross Profit} / \text{Sales}) \times 100$$

2. **Net Profit Ratio:** Net Profit Margin is the ratio of after-tax profits to net sales. It exposes the remaining profit after all costs of production, administration, and financing have been abstracted from sales, and income taxes acknowledged. The formula for the net profit ratio is to divide net profit by net sales, and then multiply by 100. The formula is:

$$\text{Net Profit Ratio} = (\text{Net Profit} / \text{Sales}) \times 100$$

3. **Operating ratio:** This ratio is used to measure the operating adeptness of the management. It shows whether the cost component in the sales figure is within normal series. A low operating ratio means high net profit ratio i.e., more operating profit. 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.

$$\text{Operating Ratio} = (\text{Cost of Goods Sold} / \text{Sales}) \times 100$$

4. **Earnings Per Share Ratio (EPS):** Earnings per share measures how many rupees of net income have been received by each share of common stock. It is calculated by dividing net income less favoured dividend by the number of shares of common stock remaining period. It is a popular measure of complete profitability of the company and is usually expressed in rupees.

$$\text{EPS} = \text{Net Profit After Tax} / \text{Numbers of Equity shares}$$

5. **Return on Capital Employed:** Return on capital employed or ROCE is a profitability ratio that processes how professionally a company can make profits from its capital employed by linking net operating profit to capital employed. In other words, return on capital employed shows investors how many rupees in profits each rupee of capital employed

generates. ROCE is a long-term profitability ratio because it shows how excellently assets are performing while taking into consideration long-term financing. This is why ROCE is a more useful ratio than return on equity to evaluate the permanency of a company

$$\text{Return on capital Employed} = (\text{Profit Before tax} / \text{capital Employed}) \times 100$$

IMPORTANCE OF THE STUDY

Accounting ratios are very noteworthy to increase the efficiency of the management, to decrease the expenditure and to increase the rate of profit etc. The main extents are as under.

- 1. Communication:** This type of analysis provides expressive information to the users of accounting information and as a result the predictor can draw right decisions
- 2. Investors:** Investors are more absorbed in profitability performance of business and safety & security of their investment and growth probable of their investment. So, it provides information to investors.
- 3. Bankers and Lenders:** Bankers and lenders want to know the capacity of the borrowing business in consistent scheduled interest payments and reimbursements of principal loan amount. So, this type of financial analysis helps them into taking decisions.
- 4. Government:** It's provide valuable information to government regarding net profit of the company and with the help of such kinds of information the government-imposed Tax.
- 5. Management:** This study helps to measure its past performance and to plan about its future programs. It also helps to know up to what range the funds were resourcefully utilized or pocketed.

SCOPE OF THE STUDY

This paper examined the financial reports and financial statements of SAIL-Steel Authority of India limited from 2013 to 2017 with the help of statistical analysis, the projecting of following years can also be made for particular item such as sales, inventory, profit, etc. The statistical scrutiny can also be applied to every ratio and by their upon more inclusive results can be obtained. Thus, this study also provides significant information to the management of SAIL company, for prophesying profit, sales amount, EPS etc.

DATA ANALYSIS:

The process of assessing data using diagnostic and logical reasoning to examine each component of the data provided. This form of analysis is just one of the many steps that must be completed when conducting a research experiment. Data from various sources is assembled, studied, and then analyzed to form some sort of outcome or conclusion.

GROSS PROFIT RATIO

Year	Gross Profit (in crore)	Net Sales (in crore)	Gross Profit Ratio (%)
2013	3211.07	44,598.26	7.20
2014	2199.50	46,698.41	4.71
2015	2879.77	45,710.78	6.30
2016	-5713.96	39,086.24	-14.62
2017	-2640.47	44,452.41	-5.94
Average.	-12.82	44,109.22	-0.47
Correlation	0.846179131		
t-cal	6.805647		

The Gross Profit Ratio indicates the relationship between the sales and gross profit higher gross profit indicates good condition of the company. When the ratio of various year was compared with average gross profit, it is found that the gross profit in the year 2013 ,2014 and 2015 is positive While in the year 2016 and 2017 gross profit is negative.

The hypothesis to be tested is that, H₀: "There is insignificant and no linear relationship between gross profit and net sales" (i.e. H₀ = 0) against the alternative hypothesis H₁ = "> 0". The alternative hypothesis is accepted because the calculated value of t (=6.805647) is greater than table value of t (= 2.78) at 5% level of significance. This indicates that there is linear relationship between gross profit and net sales.

Correlation (r = 0.846179131), here, correlation between gross profit and net sales is positive, so, it also indicates there is positive relationship between gross profit and net sales.

NET PROFIT RATIO

Year	Net Profit (in crore)	Net Sales (in crore)	Net Profit Ratio (%)
2013	2,170.35	44,598.26	4.866445462
2014	2,616.48	46,698.41	5.602931663

2015	2,092.68	45,710.78	4.578088582
2016	-4,137.26	39,086.24	-10.58495266
2017	-2,833.24	44,452.41	-6.373647683
Average.	-18.20	44,109.22	-0.3822
correlation	0.819157926		
t-cal	3.8352907		

This ratio indicates the relationship between sales and net profit. When average sales are compared for the period covered it was revealed that it was lower in the year 2016 only. And higher in the remaining year.

The hypothesis to be tested is that, H_0 : "There is no linear relationship between net profit and net sales" (i.e. $H_0 = 0$) against the alternative hypothesis $H_1 = "> 0"$ which is accepted because the calculated value of $t (=3.8352907)$ greater than table value of $t (= 2.78)$ at 5% level of significance. So, it indicates there is linear relationship between sales and net profit of the company.

The correlation ($r= 0.819157926$) between Net profit and sales is positive, so it's also indicates that there is positive relationship between sales and net profit of the company.

OPERATING RATIO

Year	C.O.G.S (in crore)	Net Sales (in crore)	Operating Ratio (%)
2013	41,387.19	44,598.26	92.80001058
2014	44,498.91	46,698.41	95.28998953
2015	42,831.01	45,710.78	93.70002
2016	44,800.20	39,086.24	114.6188531
2017	47,092.88	44,452.41	105.9399929
Average	44,122.04	44,109.22	100.4697732
Correlation	-0.189281135		
t-cal	0.497293074		

Operating Ratio indicates the relationship between sales and COGS-Cost of Goods Sold. Higher operating ratio indicates, the company is not sound. When we compared average operating ratio with each year, we found that Operating Ratio is lower than average in the year 2013, 2014, & 2015 And higher in case in the year of 2016 & 2017.

Here, Operating Ratio ($t\text{-cal} = 0.497293074$), The hypothesis to be tested is that H_0 : "There is no linear relationship between cost of goods sold and net sales" (i.e. $H_0: =0$) and this null hypothesis is accepted because the calculated value of $t (=0.497293074)$ is Less than the table value of $t (=2.78)$. This indicates that, there is linear relationship between cost of goods sold and net sales. Thus, we can say that, there is No Linear relationship between sales and cost of goods sold.

Correlation (-0.189281135) between sales and Cost of Goods Sold(COGS) is also negative, indicates there is no relationship between sales and cost of goods sold.

EARNINGS PER SHARE RATIO

Year	Net Profit (in crore)	Share in issue (Lakhs)	EPS
2013	2170.35	41305.25	5.254416811
2014	2616.48	41305.25	6.334497431
2015	2092.68	41305.25	5.066377761
2016	-4137.26	41305.25	-10.01630543
2017	-2833.24	41305.25	-6.859273337
Average	-18.198	41305.25	-0.044057353
t-cal	4.305506		

EPS-Earning per share ratio indicates the earnings to equity shares holder in terms of one share. Higher the profitability, higher will be the EPS and vice versa. Here, the maximum profit after tax is in the year 2014.so, in this year, the shareholders earnings is maximum i.e. 6.33497431 per Share.

The hypothesis to be tested is that, H_0 : "There is no linear relationship between profit after tax and number of equity shares" (i.e. $H_0 = 0$) against the alternative hypothesis $H_1 = "> 0"$ is rejected because the calculated value of $t (=4.305506)$ is less than table value of $t (= 2.78)$ at 5% level of significance. So, it indicates, there is linear relationship between Profit After Tax and number of Equity shares.

RETURN ON CAPITAL EMPLOYED (ROC)

Year	EBIT (in crore)	Capital Employed (in crore)	ROCE (%)
2013	4176.11	57,779.77	7.227633478
2014	3082.99	58971.66	5.227917952
2015	3901.37	59389.94	6.569075503
2016	-5136.18	53245.64	-9.646198261
2017	-2106.3	52799.00	-3.9892801
Average	783.598	56,437.20	1.077829714
Correlation	0.92229016		
t-cal	1.1788807		

Return on capital employed (ROCE) is a measure of the returns that a business is achieving from the capital employed, usually expressed in percentage terms. Capital employed equals a company's Equity plus Non-current liabilities. ROCE should always be higher than the rate at which the company borrows otherwise any increase in borrowing will reduce shareholders' earnings, and vice a versa. When we compared average EBIT with each and every year, then we found that, EBIT is higher in the year 2013,2014 and 2015 and less in the year 2016 and 2017.

Here, Correlation ($r = 0.92229016$) is positive and strong, it's also indicates that there is linear relationship between EBIT and Capital Employed.

The hypothesis to be tested is that, H_0 : "There is no linear relationship between EBIT and capital employed" against the alternative hypothesis $H_1 = "> 0"$ is rejected because the calculated value of $t (=1.1788807)$ is less than table value of $t (= 2.78)$ at 5% level of significance. It's also indicates that there is linear relationship between EBIT and Capital Employed.

CONCLUSION:

Gross profit ratio from the year 2012-13 to 2017-18 deceits between -14.62% to 7.2%. In the year 2012-13, there is maximum gross profit Ratio i.e. 7.2%, which was a good or sound condition for the company and minimum in the year 2016 i.e., -14.62% which was not a good sign for the company. Net Profit ratio from the year 2012-13 to 2017-18 lies between -10.58 to 5.60. In the year 2014, net profit Ratio is maximum; it indicates the sound position of the company and lower in the year of 2016, indicates worst performance of the company. Operating Ratio of the company for the year 2012-13 to 2017-18 are lies between 92.80 % to 114.61%. Operating Ratio indicates that, lower the operating Ratio, higher will be the net profit and vice a versa. Lower operating ratio is found in the year 2013 is 92.80%, indicates the good condition or performance of the company. Higher operating Ratio is found in the year of 2016 is 114.61%, indicates the worst performance of the company. Earnings per share ratio are deceits between -10.01% to 6.33%. High EPS Ratio tends to the increasing the Value of firm. For the year 2014, EPS Ratio is maximum, indicates the good financial condition or position of the company. While in the year 2016, EPS Ratio is negative i.e. -10.01%, it's shows a bad image of company in front of outsiders. Return on Capital Employed ratio lies between -9.64% to 7.22%. ROCE is a long-term profitability Ratio because it shows how effectively assets are performing while taking into consideration long term financing. Higher will be the ROCE, the company generates more earnings and vice a versa. Here, ROCE is in the year 2013, indicates the sound position of the company.

REFERENCES:

1. https://en.m.wikipedia.org/wiki/Steel_Authority_of_India
2. <https://www.encyclopedia.com/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/steel-authority>
3. <http://www.aaii.com/journal/article/16-financial-ratios-for-analyzing-a-companys-strengths-and-weaknesses.touch>
4. <https://www.accountingtools.com/articles/2017/5/5/net-profit-ratio/>
5. <https://www.accountingformanagement.org/operating-ratio/>
6. <https://www.accountingformanagement.org/earnings-per-share-eps-ratio/>
7. <https://www.myaccountingcourse.com/financial-ratios/return-on-capital-employed>
8. <http://www.yourarticlelibrary.com/accounting/accounting-ratios/accounting-ratios-definition-importance-and-limitations/65812>
9. <http://www.financialaccountancy.org/financial-ratios/uses-of-financial-ratio-analysis/>
10. [https://economictimes.indiatimes.com/steel-authority-of-india-\(sail\)-ltd/profitandlose/companyid-11974.cms](https://economictimes.indiatimes.com/steel-authority-of-india-(sail)-ltd/profitandlose/companyid-11974.cms)
11. <https://www.myaccountingcourse.com/financial-ratios/return-on-capital-employed>
12. https://www.readyratios.com/reference/profitability/return_on_capital_employed.html
13. Prof. Vijay S. Patel and Prof. Chandresh B. Mehta (2012) "A FINANCIAL RATIO ANALYSIS OF KRISHAK BHARATI CO-OPERATIVE LIMITED", International Journal of Marketing, Financial Services & Management Research, Vol.1 Issue 10.

14. Bansal L.K. and Gupta R.K. (1985) "Financial Ratio Analysis and Statistics", The Management Accountant, Vol.20, Issue 12, 673-676.
15. Prof. Mr. S. Sabarinathan and Ms. V. Jenifer "A Study on Financial Performance Using The Ratio Analysis at Kaleeswarar Mills B Unit of National Textile Corporation Ltd", IOSR Journal of Business and Management, Vol.3, 39-44.

