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A STUDY OF FINANCIAL HELTH OF STEEL AUTHORITY OF INDIA LIMITED (SAIL) BY USING RATIO ANALYSIS

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Abstract: Financial statement analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyze whether a unit is stable, solvent, liquid, or profitable enough to warrant a monetary investment. Preparation of the final accounts is not the end of the accounting process. It is followed by the analysis of these final accounts. The process of reviewing and analyzing a company's financial statements to make better economic decisions is called analysis of financial statements. In other words, the process of determining financial strengths and weaknesses of the entity by establishing the strategic relationship between the items of the balance sheet, profit and loss account, and other financial statements. The most common form of financial statement analysis is Ratio Analysis. Ratio analysis compares different financial statements of accounts. There are different types of ratios that we can use for the analysis of financial statements such as Liquidity Ratios, Profitability Ratios, Solvency Ratios, Turnover Ratios and Earning Ratios. Financial statement analysis is used by all investors and creditors to help assess the performance of a company and predict future performance for base financial decisions. The primary purpose of financial statement analysis is to understand and diagnose the information contained in the financial statement, in order to assess the profitability and financial soundness of the firm, and to make predictions about the future prospects of the firm. The purpose of the analysis depends on the person interested in such analysis and its object. The main objective of financial statement analysis is to provide information about a business enterprise to the decision makers so that they can use this information in decision-making. Users of financial statement information are the decision-makers who can either be internal or external concerned with evaluating the economic situation of the firm and predicting its future actions. This paper analyzes information and guidelines regarding various accounting ratios of SAIL-Steel Authority of India Limited.

Keyword: Financial Statements Analysis, Profitability, Liquidity, Ratio Analysis.

INTRODUCTION:

The Steel Authority of India Limited (SAIL) is an Indian state-owned steel making company based in New Delhi, India. It is a public sector undertaking, owned and operated by the Government of India with an annual turnover of INR 66,267 Crore (US\$9.32 Billion) for fiscal year 2018-19. SAIL was Incorporated on 24 January 1974 and as of 01-June-2020 it has 68,742 employees. With an annual production of 16.30 million metric tons, SAIL is the 20th largest steel producer in the world and the third largest in India. The company's hot metal production capacity will increase further and is expected to reach 50 million tonnes per annum by 2025. Mr. Anil Kumar Chaudhary is the current Chairman of the cell.

SAIL operates and owns 5 integrated steel plants at Bhilai, Rourkela, Durgapur, Bokaro and Burnpur (Asansol) and has 3 specialized steel plants at Salem, Durgapur and Bhadravati. It also owns a ferro alloy plant in Chandrapur. As part of its global ambition, the company is undergoing a large-scale expansion and modernization program that includes upgrading and building new facilities with an emphasis on cutting-edge green technology. According to a recent survey, SAIL is one of the fastest growing public sector units in India. In addition, it has R&D Center for Iron and Steel (RDCIS), Engineering Center at Ranchi, Jharkhand.

Achievements and Milestones

1913: Production of steel initiates in India.

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

1960: Alloy plant was established at Durgapur in W. Bengal with Japanese assistance.

1973: The Steel Authority of India, Ltd. was formed on 24 January as the holding company for Steel and Associated Input Industries.

1974: SAIL International Limited, was incorporated for coordination of export and import business.

1993: India prepares proposals to partially privatize SAIL.

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

2001: The Company launched a new voluntary retirement scheme for its employees.

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

2005: GAIL tied up with SAIL

2008: SAIL and Larsen and Toubro Limited (L&T) has signed a Memorandum of Understanding (MoU) to jointly set up, develop, manage and own captive/independent power plants at suitable location/s to meet future power requirements of SAIL.

2009: SAIL signed a joint venture agreement with Coal India Limited, Rashtriya Ispat Nigam Limited, NMDC Limited and NTPC Limited to set up a special purpose vehicle i.e. International Coal Ventures Pvt. Ltd. (ICVL) for acquisition of coal mines / blocks for securing coal supply abroad.

2011: SAIL bagged Randstad Award for HR Practices & Employer Branding under 'Manufacturing Industries' category.

2016: SAIL Signs MOU with POSCO

2017: SAIL receives SCOPE Award for Best HR Practices from the President

LITERATURE REVIEW:

Mital Menapara & Dr. Vijay Pithadia (2010), "A study on financial performance of selected companies during pre-post merger and acquisition". They probe as per current scenario corporate restructuring is one of the most widely used strategic tools. In diurnal news we come across frequently with the headlines of merger, acquisitions, takeover, joint venture, demerger and so on. Since last two decades as especially after, the liberalization and consequent globalization and privatizations have resulted into robust competition not only in Indian business but globally as well. The present study is mainly based on secondary data. In order to access financial performance, Ratio analysis, Standard Deviation and, "t" test have been utilized as tools of analysis.

Dr. Vivek Singla (2013), he published research paper on "A comparative study of financial performance of SAIL and Tata steel Ltd" according to him Efficient management of finance is very important for the success of an enterprise. The term financial performance is very dynamic term. The subject matter of financial performance has been changing very fast. In existing time greater importance is given to financial performance. So, here an attempt is made by me to compare the financial performance of the selected units i.e. Steel Authority of India and TATA STEEL LTD.

Paghadar Amala Anilbhai (2013), has illuminated an article "A Comparative Analysis of Financial Performance of SAIL and JSW" in Indian Journal of Applied Research in 2013-14. He would like to make an analysis of financial performance of two selected units of steel industry i.e. SAIL and JSW. His study covers the five year period of both units. In the paper, it has been tried to analyze the profitability, liquidity and management efficiency of both units with various financial tools and techniques. The paper has also derived findings from the analysis. Under the study he examines profitability position of SAIL is good as compare to JSW. Liquidity or solvency position of SAIL is quite better in comparison to JSW. This shows sound liquidity position of SAIL. Statistically there is each significant difference between them as revealed by T-Test. efficiency of asset utilization of SAIL is better than JSW. T-Test revealed that there is significant difference between them.

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 websites, articles, Research papers, blogs (internet sources), and Newspapers etc.

Method of Data Collection: The research is present entirely based upon secondary data and the data was collected from the official directory of the Bombay Stock Exchange, Iron and Steel Industry in India Reports, official website of SAIL (Annual Reports) and money control.

Time Period of the Study: The selected study is based on data during the period from 2000 to 2015, covering a time period of 15 years.

Selection of the Sample: The sample was drawn from the list of companies coming under the top 10 steel sector companies listed at the Bombay Stock Exchange and one amongst them is Steel Authority of India.

Statistical Tools and Techniques: The present study contains calculation of profitability ratios to assess the financial Performance of SAIL in India from 2000 to 2015 and for the purpose of statistical measures like percentage, mean, correlation and t test are used in this study and the analysis is done with the use of MS excels.. Ratio analysis has been used in this research to evaluate the performance of the company.

OBJECTIVES OF THE STUDY

- To analysis the liquidity and profitability performance of the company.
- To highlight the growth prospective of the industry.
- To study the position of the STEEL AUTHORITY OF INDIA LTD.

SCOPE OF THE STUDY

This paper examined the Annual financial reports and statements of SAIL-Steel Authority of India limited from 2000 to 2015 with the help of statistical analysis, the projecting of following years can also be made for particular item such as sales, profit, Capital Employed etc. The statistical measures have been applied to every ratio and by doing so the analysis of results has been made. Thus, this study will also provide the information to the management of SAIL Company and also to external investors regarding the sale volume, profits, profitability, solvency and liquidity etc.

TOOLS AND METHODS OF DATA ANALYSIS

RATIO ANALYSIS

Ratio analysis refers to the analysis of various ratios with the help of financial information provided in the financial statements of a business. Various aspects of business such as liquidity, profitability and solvency are determined by the external analysts with the help of ratio analysis. Ratio analysis can be defined as the process of ascertaining the financial ratios that are used for indicating the ongoing financial performance of a company by using few types of ratios such as liquidity, profitability, activity, debt, market, solvency, efficiency, and coverage ratios and few examples of such ratios are current ratio, quick ratio, Gross profit ratio, Net profit ratio, dividend payout ratio, debt-equity ratio, and so on. Ratio analysis is a process used for the calculation of financial ratios or in other words, for the purpose of evaluating the financial well being of a company. The values used for the calculation of financial ratios of a company are extracted from the financial statements of that company.

Profitability Ratio:

Profitability ratios help in measuring the ability of a company in earning sufficient profits. Profitability ratios are financial measures used by analysts and investors to evaluate a company's ability to generate income (profit) relative to revenue, balance sheet assets, operating costs, and shareholders' equity during a specific time period. They show how well a company uses its assets to produce profit and value to shareholders. These ratios include the universal "margin" ratios, such as gross, operating and net profit margins. Some of the profitability Ratio are – (1) Gross profit ratio, (2) Net profit ratio, (3) Operating ratio, (4) Return on capital employed (Based on Gross Profit / Net Profit)

1. Gross Profit Ratio:

Gross profit ratios are calculated in order to represent the operating profits of an organization after making necessary adjustments pertaining to the COGS or cost of goods sold. Gross profit ratio (GP ratio) is a ratio that shows the relationship between gross profit and total net sales. It is also known as gross margin ratio and gross profit margin ratio. It shows how much profit a company makes after paying off its Cost of Goods Sold (COGS). Compared to the industry average, a low margin may indicate that the company is under-priced. A high gross profit margin indicates that a company can make a reasonable profit on sales, as long as it keeps overhead costs under control. The formula used to calculate the gross profit ratio is-

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

2. Net Profit Ratio:

Net profit ratios are calculated in order to determine the overall profitability of an organization after reducing both cash and non-cash expenditures. A high net profit margin means that a company is able to control its costs effectively and / or provide goods or services at a price significantly higher than its costs. A low net profit margin means that a company uses ineffective cost structure and / or poor pricing strategies. The formula used to calculate the net profit ratio is-

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

3. Operating ratio:

Operating profit ratio is used to determine the soundness of an organization and its financial ability to repay all the short term and long term debt obligations. A high ratio may indicate better management of resources i.e. a higher operational efficiency leading to higher operating profits in the company. A low ratio may indicate operational flaws and improper management of resources, it is an indicator that the profit generated from operations are not enough as compared to the total revenue generated from sales. The formula used to calculate the operating profit ratio is-

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

4. Return on Capital Employed: (Based on Gross Profit / Net Profit)

Return on capital employed is used to determine the profitability of an organization with respect to the capital that is invested in the business. The formula used to calculate the ROCE is:

Return on Capital Employed (Based on Gross Profit)

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

Return on Capital Employed (Based on Net Profit)

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

DATA ANALYSIS:

Data analysis is the process of collecting and organizing data so that a useful conclusion can be drawn from it. The process of data analysis uses analytical and logical reasoning to obtain information from data. The main purpose of data analysis is to find meaning in the data so that derived knowledge can be used to make informed decisions.

GROSS PROFIT RATIO

Year	Gross Profit (in crore)	Net Sales (in crore)	Gross Profit Ratio (%)
2000-01	-729	16233	-4.49
2001-02	-1707	15502	-11.01
2002-03	-316	19207	-1.65
2003-04	2628	24178	10.87
2004-05	9365	31805	29.45
2005-06	5706	32280	17.68
2006-07	9423	39189	24.05
2007-08	11469	45555	25.18
2008-09	9399	48738	19.28
2009-10	10132	43935	23.06
2010-11	7194	47041	15.29
2011-12	5151	50348	10.23
2012-13	3241	49350	6.57
2013-14	3225	51866	6.22
2014-15	2359	50627	4.66
Average.	5102.66667	37,723.60	11.6926667
Correlation	0.564262045		
t-cal	1.5209508		

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 from 2003 - 2004 to 2014 - 2015 is positive while from the year 2000 – 2001 to 2002 - 2003 is negative. The null hypothesis to be tested denoted by H₀ is: "There is no 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 rejected because the calculated value of t (=1.5209508) is less than table value of t (= 2.15) at 5% level of significance. This indicates that there is no linear relationship between gross profit and net sales. Correlation (r = 0.564262045), here, correlation between gross profit and net sales is positive.

NET PROFIT RATIO

Year	Gross Profit (in crore)	Net Sales (in crore)	Gross Profit Ratio (%)
2000-01	-729	16233	-4.49
2001-02	-1707	15502	-11.01
2002-03	-304	19207	-1.58
2003-04	2512	24178	10.39
2004-05	6817	31805	21.43
2005-06	4013	32280	12.43
2006-07	6202	39189	15.83
2007-08	7537	45555	16.54
2008-09	6170	48738	12.66
2009-10	6754	43935	15.37
2010-11	4905	47041	10.43
2011-12	3543	50348	7.04
2012-13	2170	49350	4.4
2013-14	2616	51866	5.04
2014-15	2093	50627	4.13
Average.	3506.1333	37724	7.907333333
Correlation	0.5845684		
t-cal	1.2654908		

This ratio shows the relationship between sales and net profit. The null hypothesis to be tested denoted by H_0 is: "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 rejected because the calculated value of $t (=1.2654908)$ is less than table value of $t (= 2.15)$ at 5% level of significance. So, it indicates there is no linear relationship between sales and net profit of the company. The correlation ($r= 0.5845684$) between Net profit and sales is positive.

OPERATING RATIO

Year	Operating Profit (Crore)	Sales	Operating Profit Ratio
2000-01	1023	16233	6.3
2001-02	-145	15502	-0.94
2002-03	1018	19207	5.3
2003-04	3529	24178	14.6
2004-05	9970	31805	31.35
2005-06	6174	32280	19.13
2006-07	9755	39189	24.89
2007-08	11720	45555	25.73
2008-09	9658	48738	19.82
2009-10	10534	43935	23.98
2010-11	7544	47041	16.04
2011-12	6091	50348	12.1
2012-13	4218	49350	8.55
2013-14	4192	51866	8.08
2014-15	3813	50627	7.53
Mean	5939.6	37723.6	14.83066667
Correlation	0.56508401		
t-cal	2.4469508		

Operating Ratio indicates the relationship between Net sales and Operating Profit. 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 2000 – 2001 to 2003-2004 and 2011-2012 to 2014 - 2015 And higher in case in the year of 2004-2005 to 2010-2011. Here, Operating Ratio ($t\text{-cal} = 2.4469508$), The hypothesis to be tested is that H_0 : "There is linear relationship between operating profit and net sales" (i.e. $H_0: =0$) and this null hypothesis is rejected because the calculated value of $t (=2.4469508)$ is more than the table value of $t (=2.15)$. This indicates that, there is linear relationship between operating profit and net sales. Correlation (0.56508401) between sales and operating profit, indicates there is a relationship between sales and operating profit.

RETURN ON CAPITAL EMPLOYED (BASED ON G.P.) IN SAIL

Year	Gross Profit (Crore)	Capital Employed (Crore)	Return on capital employed (In%)
2000-01	-729	18265	-3.99
2001-02	-1707	17056	-10.01
2002-03	-316	16541	-1.91
2003-04	2628	15218	17.27
2004-05	9365	20064	46.68
2005-06	5706	21438	26.62
2006-07	9423	25476	36.99
2007-08	11469	28450	40.31
2008-09	9399	34704	27.08
2009-10	10132	41696	24.3
2010-11	7194	39431	18.24
2011-12	5151	32921	15.65
2012-13	3241	31381	10.33
2013-14	3225	38450	8.39
2014-15	2359	48314	4.88
Mean	5102.666667	28627	17.38866667
Correlation	0.349600411		
t-cal	1.1938307		

Return on capital employed (ROCE) is a measure of the returns that a business is receiving from capital employed, usually expressed in terms of percentage. The capital employed is equal to the equity and non-current liabilities of a company. ROCE should always be higher than the rate at which the company borrows otherwise any increase in borrowing will reduce shareholders' earnings, and vice versa. The null hypothesis to be tested denoted by H_0 is "There is no linear relationship between Gross profit and capital employed" against the alternative hypothesis $H_1 = "> 0"$ is rejected because the calculated value of t ($=1.1938307$) is less than table value of t ($= 2.15$) at 5% level of significance. It's also indicates that there is no linear relationship between Gross profit and Capital Employed.

Here, Correlation ($r = 0.349600411$) is positive.

RETURN ON CAPITAL EMPLOYED (BASED ON N.P.) IN SAIL

Year	Net Profit (In Crore)	Capital Employed (Crore)	Return on Capital Employed (In %)
2000-01	-729	18265	-3.99
2001-02	-1707	17056	-10.01
2002-03	-304	16541	-1.84
2003-04	2512	15218	16.51
2004-05	6817	20064	33.98
2005-06	4013	21438	18.72
2006-07	6202	25476	24.34
2007-08	7537	28450	26.49
2008-09	6170	34704	17.78
2009-10	6754	41696	16.2
2010-11	4905	39431	12.44
2011-12	3543	32921	10.76
2012-13	2170	31381	6.92
2013-14	2616	38450	6.8
2014-15	2093	48314	4.33
Correlation	0.36410203		
t-cal	5.0976508		

Return on capital employed (ROCE) is a measure of the returns that a business is receiving from the capital employed, usually expressed in terms of percentage. The Capital employed is equal to the Equity and Non-current liabilities of a company. 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. The null hypothesis to be tested denoted by H₀ is: "There is linear relationship between Net profit and capital employed" against the alternative hypothesis H₁ = "> 0" is accepted because the calculated value of t (=5.0976508) is more than table value of t (= 2.15) at 5% level of significance. It's also indicates that there is linear relationship between Net profit and Capital Employed. Here, Correlation (r = 0.36410203) is positive.

CONCLUSION:

Gross profit ratio from the year 2000-2001 to 2014-15 deceits between -11.01 % to 29.45 %. In the year 2004-2005, there is maximum gross profit Ratio i.e. 29.45%, which was a good or sound condition for the company and minimum in the year 2001-2002 i.e., -11.01% which was not a good sign for the company. Net Profit ratio from the year 2000-2001 to 2014-15 lies between -11.01 to 21.43. In the year 2004-2005, net profit Ratio is maximum, it indicates the sound position of the company and lower in the year of 2001-2002, indicates worst performance of the company. Operating Ratio of the company for the year 2000-2001 to 2014-15 lies between -0.94 % to 31.35%. 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 2001-2002 is -0.94%, indicates the good condition or performance of the company. Higher operating Ratio is found in the year of 2004-2005 is 31.35%, indicates the worst performance of the company. Return on Capital Employed ratio(Based on GP) lies between -10.01% to 46.68%. ROCE is a long-term profitability ratio because it shows how effective assets are performing, taking into account long-term financing. Higher will be the ROCE, the company generates more earnings and vice a versa. Here, ROCE is in the year 2004-2005, indicates the sound position of the company. Return on Capital Employed ratio(Based on NP) lies between -10.01% to 33.98%. Here, ROCE is in the year 2004-2005, indicates the sound position of the company i.e. 33.98%.

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