

Financial Performance Analysis of Steel Industry: A Review of Literature

*** Payal Jha, Research Scholar**

**Department of Commerce and Business Administration,
Lalit Narayan Mithila University, Darbhanga**

**** Dr. Divakar Jha, Associate Professor**

**Department of Commerce and Business Administration,
Lalit Narayan Mithila University, Darbhanga**

Abstract

Steel is crucial to the development of any modern economy and is considered to be the backbone of human civilization. The level of per capita consumption of steel is treated as an important index of the level of socioeconomic development and living standards of the people in any country. It is a product of a large and technologically complex industry having strong forward and backward linkages in terms of material flows and income generation. All major industrial economies are characterized by the existence of a strong steel industry and the growth of many of these economies has been largely shaped by the strength of their steel industries in their initial stages of development. The world steel production has been increasing from year to year. The iron and steel industry is important in the Indian economy and plays a crucial role therein. The iron and steel industry of India, which is enormous in size, holds an important position in the industrial system of India. A review of literature on financial performance analysis of steel industry in India and abroad is being presented in the present paper.

Key words: *Competitiveness, Financial Performance, Financial Strength, Steel Authority of India Ltd., Steel Industry.*

Background

Steel plays a pivotal role in a nation's economy and has been proven to be a driver for prompt environmentally sustainable economic development due to its recyclable nature and faster associated completion times. Steel consumption shows a strong correlation with GDP, especially during the nation building phase.

In India also Steel Industry can play an important role in India becoming a USD 5 trillion economy. Usage of more steel in construction & infrastructure development projects results in faster implementation of projects and better quality of structures due to high strength to weight ratio and durability of steel. Also, 100% recyclability of steel allow for improved environmental performance across the entire life cycle. However, the consumption

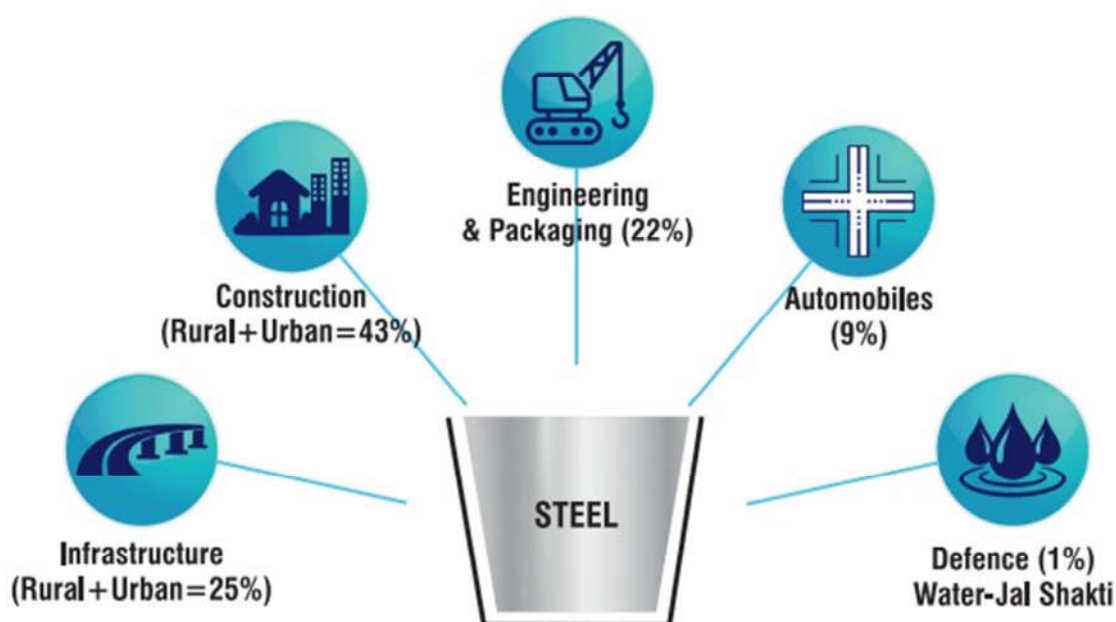
of Steel in our country is lower compared to developed nations and there is large scope to improve the steel usages in various sectors.

National Steel Policy 2017 was issued by the Government with the objective to make the country self-reliant in all types of steel as well as making Indian Iron & Steel Industry globally competitive. Ministry of Steel is continuously making efforts to enhance steel production capacity domestically and at the same time increase domestic demand and usage of steel.

Steel Usage Scenario in India

In India, steel is primarily consumed in growth driving sectors such as Housing & Construction (43%), Infrastructure development (25%), Engineering & Packaging (22%), Automotives (9%) and Defence (1%). During the FY20, the total steel consumption in the country was 100.2 Million Tonne. Overall steel demand has grown at a healthy CAGR of 5.3 % over the past 07 years. However, India's annual per capita steel consumption is 74.1 kg and is one third the global average (224.5kg) . India's rural per capita consumption at 19 kg per annum is well below the national level. There is large scope to improve the steel usage in various sectors.

Building & construction sector forms 43% of India's steel usage followed by infrastructure (25%), automobile (9%), engineering & packaging (22%) and defence (<1%) sectors.



India's Steel Demand Outlook

India's total steel demand is expected to grow at 7.2% CAGR through FY 31 and reach ~230 MT. This growth will be driven by the building & construction (rising urbanization rate, increasing steel intensity) and infrastructure segments (investments in roads, railways and airports, increasing steel intensity).

Financial Appraisal: Reflection of Financial Strengths and Weaknesses

Financial statements are records of the monetary activities of a business and provide explanations or survey regarding business or individual's cash related condition in both short run as well as long term basis. However, the excessive amount of numbers present in a company's financial statements can be confusing and intimidating to many investors (**Klein, Goodhue and Davis, 1997**).

Whereas, if we can analyze those numbers, these financial statements can also act as a mountain of information regarding companies' performance. Financial analysis is one of the ways of analysing the working and monetary attributes of a business by using bookkeeping and financial statement related articulations (**Drake, 2010**). Financial analysis is said to be the route towards reflecting the financial strengths and weaknesses of the firm by suitably setting up relationship between the data of profit and loss account and Balance sheet. Ratio analysis is a measuring stick used to measure the efficiency of an organization in connection to other firms (**Lermack, 2003**). In this way, proportion analysis with the help of ratios makes the related data practically identical.

With the growing importance of steel industry in our economy, covering the crevices and the prior studies made, this study helps to provide an insight into analysing the financial performance of Steel sector in India and abroad.

Financial Performance Analysis of Steel Industry: A Review of Literature

Steel is said to be one of the world's most essential metal. It is foundational to the growth of any economy which forms the pillar of industrialization (**Vadde, 2012**). India is the world's second-largest steel producer in the world.

From the production point of view, India is the third largest producer of crude steel in the world and second-largest steel producer in the world with production of 111.2 million tonnes (MT) in 2019 (**Ministry of Steel, 2019**).

The degree to which investment inflows drive returns to the free market level, and thus the ability of firms in the industry to maintain above average returns, is determined by

the intensity of competition in the industry. The level of competition is not determined by chance. The five basic competitive forces—threat of new entrants, buyer bargaining power, competition between existing rivals, threat of replacement goods, and supplier bargaining power—are determined by the industry's underlying economic and technical characteristics. These forces vary in intensity from intense in industries such as tyres, paper, and steel, where no firm receives spectacular returns, to moderate in industries like oil field equipment and services, cosmetics, and toiletries, where high returns are prevalent. The success of a company's competitive strategy is determined by how well it interacts with its surroundings. Although the relevant environment is very broad, encompassing both social and economic forces, the sector or sectors in which the company operates is the most important aspect of the company's environment. The rules of the competitive game, as well as the potential strategies available to the business, are heavily influenced by industry structure (**Porter, 1980**).

In light of the fact that low industrial concentration has become an explicit issue constraining China's iron and steel industry, the article by **Kuizao (2007)** investigates the relationship between industrial concentration and profitability and uses the VAR model to perform an empirical analysis for China's iron and steel industry. The findings reveal a long-term stable equilibrium between industrial concentration and profitability in China's iron and steel industry, with differences in short- and long-term causal relationships, as well as the mutual influence of the extent and direction of industrial concentration and profitability in various sub-industries. As a result, China should take steps to increase the concentration of the iron and steel industry.

Burange and Yamini (2008) focused on the performance of Indian iron and steel industry and competitiveness of the firms during the 1971-2008. The study is based on secondary data and the data has been taken from annual report of SAIL and commercial and industrial department. The study implemented for the presentation of data which include the use of tables and CAGR methods. In the study the researcher has used variable such as production, export and import etc. and found that the production of iron is increased continuous after independent of India.

Demailly & Quirion (2008) examines the effect of the European Emission Trading Scheme (ETS) on the iron and steel industry's two dimensions of competitiveness: production and profitability. This sector is one of the most vulnerable among those covered by the scheme, as it is both CO₂-intensive and relatively open to international trade. They also test the results' sustainability to a variety of assumptions, including the marginal abatement cost

curve, trade and demand elasticity, pass-through rates, and allocation rule updating, the latter two of which are hotly debated. They came to the conclusion that competitiveness losses in this industry are minor. They also demonstrated that this conclusion was sound. As a result, arguments that tightening the environmental stringency of the ETS in Phase II would harm competitiveness are unfounded. We can define the critical assumptions for each output variable using our systematic sensitivity analysis. Pass-through rates and updating rules turn out to be important, despite the fact that they are often implicit and under discussed in existing studies.

The book authored by **Rogers (2009)** provides a basic overview of the American steel industry's history, a sector of the economy that has played a critical role in the industrial system. The book begins in the 1830s and ends in 2001, when the American iron and steel industry resembled the traditional iron-producing sector that had existed for centuries in the old world. Steel, an iron-carbon alloy that has become the world's most widely used metal, is a product of this industry. The steel industry's size and place in the modern economy make it a unique place in the business, social, and political systems.

Yameen & Parvez (2009) have opined that businesses operate in a world that is constantly changing. Various changes characterize the business and economic climate in the twenty-first century, including high-growth markets, financial crises, technological advancements, stiff competition, and innovation, to name a few. A company will not be able to survive in the long run if its financial performance is not sound in all areas, especially in such a complex and rapidly changing corporate environment. Using different financial ratios, this study attempts to analyze the financial performance of Steel Authority of India Limited, a Maharatna Public Sector Undertaking in India, over a ten-year period from 2005 to 2014. The result of the study showed that SAIL's financial performance declined between 2005 and 2014, which was the study period.

A study has been conducted by **Bhunja (2010)** on private sector steel companies of India to test the short term liquidity trend of the companies and its effect on the financial performance. The study shows that the inventory and receivable management require special attention and proper control over inventory. The investment in loans and advances should be minimized to the extent possible. A balanced and proper amount of working capital should be maintained in the business for smooth running of the same. The management of the companies should adopt a viable and proficient payment policy. At the same time maximization of assets and minimization of liabilities should be preserved and help Indian steel companies to grow further.

A proper working capital management system ensures the hazard free business operations and also enhances the profitability of the company. **Ramaratnam and Jayaraman (2010)** used financial ratios in terms of liquidity, profitability, variability and sustainability to measure the financial performance of Indian steel industry for a period of five years from 2005 to 2010. Their study reveals that the critical situation faced by the Indian steel industry is due to over capacity and demand slowdown resulting in price cuts. U.S and many European countries imposed the anti-dumping duties to this demand supply mismatch in the market. A study has been conducted by **Pal (2011)** on the Indian steel companies for a period of ten years range between 2000-01 and 2009-10 to measure the profitability of the selected companies which is of major importance to the internal and external stakeholders to determine the earning capacity together with the credibility of the companies to sustain in the competition for a long run.

Chaturvedi (2011) observed that survival is the most important condition for a profitable business venture. This necessarily requires strain-resistance strength or ability. Aside from survival, the ability to develop an organization requires strength or the consistency of being powerful. Financial strength, as defined by Walter Meigs and others, is “a company's capacity to meet its obligations, to transfer resources to meet changing circumstances, and to meet its obligations in the face of adversity.” As a consequence, the term "financial strength" includes both solvency and growth. Solvency ensures only survival, while financial strength ensures both.

Profitability refers to an organization's ability to generate profit through the use of production factors and capital. It is also a synthetic way of expressing an organization's economic and financial effectiveness. There are many approaches to profitability analysis: using profit in absolute terms or using profitability ratios in relative terms (**Pavaloaia, 2011**).

The steel industry in India is one of the fastest-growing and contributes significantly to the country's GDP. After China, Japan, and the United States, India is the world's fourth largest steel producer. The Indian steel industry contributes about 2% to GDP and has a weight of 6.2 percent in the Index of Industrial Production (IIP). The purpose of this paper is to examine the financial performance of Indian steel companies and to establish a linear relationship between liquidity, leverage, efficiency, and profitability of the companies chosen. Indian steel companies were chosen for the study based on their market share in 2008-09 for a twenty-year period covering 1991-92 to 2010-2011. Steel Authority of India, Tata Steel Limited, JSW Steel Limited, Essar Steel Limited, JSW Ispat and Steel Limited, Rastriya Ispat Nigam Limited, Jindal Steel and Power Limited, Bhushan Steel Limited,

Llyods Steel Industries Limited, and National Steel and Agro Industries Limited are the companies with the largest market share. Multiple regression analysis is used to estimate the effect of selected variables on profitability, and models are estimated for this purpose (**Pal, 2012**).

India's iron and steel industry has a nearly 4000-year history. Iron pillars on the outskirts of Delhi demonstrate that Indians were aware of iron and steel even during the Vedic period. Sir Jamshedji Tata, the founder of the modern steel industry, founded the Tata Iron and Steel Company (TISCO) in 1907. In 1911, TISCO rolled the first steel ingots. In 1936, the Mysore Iron and Steel Works, which was later, renamed Visveswaraya Iron and Steel Works, was established. Indian Iron and Steel Company (IISCO) were founded in 1939 and is now a subsidiary of Steel Authority of India Limited (SAIL) (**Popat, 2012**).

Steel Authority of India Ltd., Tata Steel Ltd., JSW Steel Ltd., Essar Steel Ltd., and Jindal Steel & Power Ltd. are the five steel companies studied. The study used data from 2006 to 2011 to determine the comparative role of steel companies in working capital management using various analyses such as size-wise analysis, ratio analysis, and operating cycle analysis. According to the report, Tata Steel ltd has the highest net working capital growth during the holding era, led by Jindal Steel ltd, and JSW Steel ltd has the lowest. Essar Steel Limited has the highest average gross operating period (92.36 days), followed by SAIL (88.38 days), and Jindal Steel (69.50 days). Each year, the net operating period of Jindal Steel and Tata Steel is negative, indicating that these companies have excellent working capital management (**Patel & Prajapati, 2012**).

Singla (2013) opines that finance management is vital to a company's growth. Financial output over time is a complex concept. Financial performance is a topic that is rapidly developing. The value of financial results has risen in recent years. As a result, they attempt to compare the financial output of the selected units, namely Steel Authority of India Ltd. and Tata Steel Ltd., in this study.

Financial analysis is an accounting discipline aimed at forming a diagnosis and prognosis for a company's or organization's condition and financial results. This study will concentrate on the relationship between financial analysis and accounting, as well as the important role accounting plays in analysts' work through the knowledge it provides. The analysis approach is bibliographic, with existing books and publications in the domain being researched. The literature does not offer concrete solutions to this issue, and practitioners, in particular, are required to provide those (**Babalola & Abiola, 2013**).

The decision to invest in fixed assets is one of the most critical decisions that a company's top management must make. The financing of fixed assets is also a source of concern. The adequacy of internal fund availability for financing fixed assets in India's steel industries is the subject of this report. It also looks at how well fixed assets are used and how much they depreciate. This research was conducted over a ten-year period, beginning in 2002-03 and ending in 2011-2012. The information for this article came from the sample companies' annual reports. The data was analysed using ratio analysis, trend analysis, and common size analysis. Statistical techniques such as co-efficient of correlation and regression were also used in the analysis (**Nandani, 2013**).

Sumedhatuteja (2013) conducted a case study to demonstrate how to conduct financial statement analysis on a company. As a result, using a combination of mathematical and computational instruments and techniques, the paper shows the approaches to be used for performing a Profitability Study on SAIL.

Katewa (2015) observed that leading companies' success in India is key to the country's industrial development. Leverage is important in evaluating financial strength, which is crucial for the country's corporate sector to grow. Operating leverage, financial leverage, and combined leverage have all been analysed in this report, and it has been determined that the leverage of the companies under consideration is inadequate, requires consolidation, and varies substantially from one business to another.

Arab, Masoumi & Barati (2015) examined the financial performance of recognised units in the steel industry in India is examined in terms of financial ratios such as liquidity, solvency, activity, and profitability position. This study focuses on Tata Steel Ltd., Jindal Steel & Power Ltd., JSW Steel Ltd., Bhushan Steel Ltd., and Steel Authority of India Ltd., which are all listed on Indian stock exchanges. ANOVA-Test analysis is used to assess the effect of selected variables on the financial performance of identified steel industry units.

Patijoshi (2016) advocated on maintaining sufficient liquidity and opined that it is essential to the day-to-day activities of every company. The financial results and success of a company are regulated by keeping liquidity and managing it properly. The company must maintain a proper amount of working capital in order to maintain liquidity, as having too much or too little working capital will wreak havoc on the organization's smooth operations. As a result, the aim of this research is to find out how Profitability and Liquidity affect the financial characteristics of a business. The paper focuses on expressive backgrounds in natural settings and exposes a common statistic. For the purpose of evaluating the effect of liquidity on profitability, financial statements from five Indian steel companies (Tata Steel,

Steel Authority of India Ltd., Visa Steel, JSW Steel, and Bhushan Steel) were used for a five-year period from 2010-11 to 2014-15. To determine the impact of liquidity on profitability, the collected data was examined using descriptive analysis, correlation, regression, and various financial ratio analyses.

Since successful working capital management involves striking a balance between profitability and liquidity, working capital has an impact on profitability. Working capital management covers all aspects of working capital management, including cash, marketable securities, debtors and stock, and creditors. Working capital is one of the most useful indicators of a company's financial health. The aim of working capital management is to maintain a satisfactory level of working capital by managing the firm's existing assets and current liabilities. Working capital management that is effective reduces costs while still allowing the company to achieve greater performance. With this perspective, this paper aims to conduct a comparative analysis of working capital management in SAIL and Tata Steel Ltd using financial and statistical methods. SAIL and Tata Steel Ltd are capital intensive steel companies with substantial investments in working capital, such as inventory, receivables, and cash (**Kumar, 2017**).

Working capital is one of the most important indicators of a company's productivity because it represents all of the company's liquid assets. It represents a company's ability to meet day-to-day operating costs and serves as a gauge of its short-term financial wellbeing. As a result, in order to maintain a balance between liquidity and profitability, a company must plan the efficient use of its working capital. As a result, the purpose of this paper is to investigate the effect of working capital management on the profitability of Indian steel companies. As a result, the purpose of this paper is to investigate the effect of working capital management on the profitability of Indian steel companies. The study looked at four independent variables, including the current ratio, quick ratio, debtor turnover ratio, and finished goods turnover ratio, all of which are indicators of working capital usage in the sector. The profitability of the industry is represented by return on total assets, which serves as a dependent variable in the development of an empirical model to create a relationship between working capital management and profitability of the steel industry in India using panel data regression. The research was conducted over a 17-year period, from 2000 to 2016. The study's findings show that working capital management has a major impact on the profitability of Indian steel industry firms (**Paul & Mitra, 2018**).

Das (2018) in her work “Financial Performance of Steel Industry in India” analyzed the financial performance of selected units in the steel industry in India in terms of financial ratios such as Liquidity, Solvency, Profitability and Efficiency position. The basic rationale of doing the study is that in the recent economic scenario of the country, iron and steel industry is going through severe downturn and Government is trying to keep no stones unturned for putting the industry back on growth track to achieve the second largest producer of steel in the world. For the study following companies listed in the stock exchanges in India viz. Tata Steel Ltd., Jindal Steel & Power Ltd., J S W Steel Ltd. and Steel Authority of India Ltd. are selected. ANOVA-Test analysis is employed to evaluate the impact of selected variables on the financial performance of identified units in the steel industry.

Pham, Nguyen & Nguyen (2020) investigated that the impact of working capital management (WCM) factors on the profitability of steel companies listed on the Vietnam Stock Exchange. Data was gathered from companies' audited financial statements over a ten-year period, from 2010 to 2019. Twenty out of the 26 firms have samples eligible for study, which is equivalent to 76.9%. Multivariate regression models are used to determine the effect of WCM (through eight independent variables: DIO, DPO, DSO, CCC, SIZ, CR, LEV, GRO) on the firm's profitability (through the dependent variable) using Stata version 14. WCM has a strong impact on company profitability, according to research findings from companies in the steel industry in Vietnam during this time period. Among the eight factors impacting steel business profitability, DPO, DIO, DSO, CR, SIZ, and GRO have a positive impact, improving profitability; two factors, CCC and LEV, have a negative impact, with the effect of CCC being negligible. Due to the unique characteristics of the industry, as well as the various stages of economic development associated with the State's economic management policies, this conclusion stands in stark contrast to many previously published studies.

Shukla et al (2021) have conclude that there is poor liquidity position in the steel companies as no firm has kept the standard current and quick ratio of 2:1 and 1:1 respectively. Current ratio position of BSL is better whereas quick ratio position of Tata steel is satisfactory as compared to other firms. The analysis shows satisfactory long-term solvency position of JSW and SAIL however, earning of Tata Steel and JSW are sufficient to cover interest charges. The profitability ratios show that Tata steel has most prominent profitability position with respect to return on capital employed, Net profit Margin and Earning per share.

Summing-up

Financial performance is the achievement of the company's financial performance for a certain period covering the collection and allocation of finance measured by capital adequacy, liquidity, solvency, efficiency, leverage and profitability. Financial performance, the company's ability to manage and control its own resources. Cash flow, balance sheet, profit-loss, capital change can be the basis of information for corporate managers to make decisions. It is important to understand fundamental analysis and technical analysis, it is necessary to learn finance to understand the company's financial behaviour through economics, financial management and accounting.

A paradigm shift to financial performance analysis, which explores the nature and extent of impact of the internal key performance indicators on the overall financial performance of firms, will complement financial performance analysis literature both in industry and academia. This approach will serve as empirical inputs into business planning and budgeting processes as well as prioritization and investment decision making. Because performance of the internal KPIs are traceable and measurable, their extent of contribution to overall performance can be easily determined. Hence non achievement of financial goals can be traced to specific indicators, causes diagnosed and remedial measures implemented to arrest financial under performance. This will lead to efficiency and effectiveness yielding improved financial performance, which ultimately will be reflected in the overall financial statements.

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