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2.0 INTRODUCTION

The objective of this chapter is to review the published literature in the relevant topics of financial performance analysis and to identify the gaps. It is necessary to review the existing relevant literature to investigate and study the problem at hand in a better way. Various studies relating to financial performance have been conducted in the past in India and abroad. However, it is neither possible nor useful to make reference to all such studies.

The present chapter consists of four sections. Section 2.0 Discusses importance of Review of Literature, Section 2.1 gives review of literature based on steel industry in India, Section 2.2 discusses review of literature based on ratio analysis, Section 2.3 gives review of literature based on EVA & MVA analysis and lastly, Section 2.4 discusses the Research Gap.

A brief review of some of the studies conducted in past is given below.

2.1 REVIEW OF LITERATURE BASED ON STEEL INDUSTRY

Arab, Masoumi & Barati (2015) examined the financial performance of identified units in the steel industry in India in terms of financial ratios under Liquidity, Solvency, Activity and Profitability. A group of companies listed in the stock exchanges in India namely, Tata Steel Ltd., Jindal Steel & Power Ltd., JSW Steel Ltd., Bhushan Steel Ltd. and Steel Authority of India Ltd. were selected for the study. ANOVA was used to evaluate the impact of selected variables on the financial performance of identified units in the steel industry. Finally, it was concluded that there was significant difference in financial performance of identified units in the steel industry in India with regard to Liquidity, Solvency, Activity and Profitability Position.
Another study was conducted by Takeh & Navaprabha (2015) to analyze the impact of capital structure on financial performance of selected Indian steel companies for a period from 2007 to 2012. Multiple regression model, correlation matrix, ANOVA and descriptive statistics were used for data analysis. OPM, ROA, ROE and ROCE were used as indicators of financial performance (dependent variables) while TDER, TADR, ICR and FDR were used as indicators of capital structure (independent variables). The result indicated that capital structure had significantly impacted financial performance of Indian steel Industry. Correlation results confirmed negative relationship between capital structure and financial performance measures.

Sinku & Kumar (2014) attempted to review the financial performance of Steel Authority of India Limited (SAIL). The study was purely based on secondary data conducted for a period of five years from 2005-06 to 2009-10. The data were tabulated, analyzed and interpreted with the help of various financial ratios and Multivariate Discriminate Analysis (MDA) developed by Prof. Edward I. Altman (1968). It was observed from the analysis of various ratios that the profit earning capacity, liquidity position and long-term solvency position of SAIL was quite good during the study period and the level of bankruptcy position was also very low.

In another study, Kavitha and Palanivelu (2014) investigated factors affecting steel industry based on profitability model. Analysis was done for a period of ten years starting from 2002-2003 to 2011-2012. Twenty one firms were taken for the study out of 227 iron and steel firms working in India out of which 168 were listed in stock exchanges in India. ANOVA was used to find whether there was any significant difference between liquidity, leverages and efficiency positions of the firms under study during the selected period of time. It was found that quick ratio, debt equity ratio, proprietary ratio, fixed asset to net-worth ratio and inventory turnover ratio had impacted profitability positions of the steel firms. It was suggested that Companies could reduced the interest burden by giving quality products and should build brand image to increase the profit. It was also suggested that the firms should utilize maximum production capacity and should try to increase production and sales for maximization of profit and to strengthen financial position.
Anilbhai (2013) made an attempt to study financial performance of two selected steel companies of India, SAIL and JSW. The study covered a period of five years from 2008 to 2012. Various financial tools and techniques were used to analyze profitability, liquidity and management efficiency of both the units and t-test was used to test the hypothesis. It was concluded that SAIL has been better than JSW in terms of profitability, liquidity and management efficiency during the period under study. Researcher recommended that JSW should control its cost of goods sold and operating expenses. It was also suggested that JSW should try to utilize its full production capacity and should properly utilize its fixed assets in order to improve its performance.

In a comparative study of financial performance analysis, Singla (2013) analyzed financial performance of two leading steel companies in Indian steel industry, SAIL and TATA steel, for a period of five years from 2007-08 to 2011-12. Various financial ratios like current ratio, quick ratio, inventory turnover ratio, operating ratio, gross profit ratio, net profit ratio, dividend payout ratio etc, under category of liquidity, profitability and working capital, were used for the analysis. Result of the study revealed that profitability and inventory management of TATA steel was better than that of SAIL.

Another attempt was made by Pal (2013) to study the financial performance of Indian steel companies during 1991-92 & 2010-11. A sample of top ten companies, based on their market share in 2008-09, was selected for the study. Multiple regression analysis was conducted to estimate the impact of fifteen financial ratios from different segments like liquidity, activity, leverage etc, on profitability for all the selected companies. Ratios with high t value but low p value were retained in the model. Finally, Pal concluded that the sale was not the only indicators of profitability but the profitability was also depended upon liquidity, activity and financial leverage of the firms.

Acharya (2013) compared the liquidity position of TATA Steel Ltd. and SAIL and studied the relationship that exists between liquidity and profitability of both the companies. The purpose of the study was to investigate the liquidity management efficiency and profitability position of selected steel companies. Therefore, an attempt
was made to investigate the liquidity position and its impact on the profitability of Tata Steel Ltd. and Steel Authority of India Ltd for a period of ten years ranging from 2004 to 2013. Various accounting ratios were analyzed with the help of statistical techniques, such as multiple correlations, multiple regression analysis and t-test. Through the analysis of the data, it was found that liquidity position had positive impact on the profitability of the selected firms.

In another study, Venkateshan and Nagarajan (2012) analyzed profitability of selected steel companies of India over a period of six years from 2005-06 to 2010-11. A sample of five steel companies, naming SAIL, TATA Steel, Bhusan, VISA and JSW, were selected for the study. The basis for sample selection was shareholder’s population, availability of data, total debt etc. Different profitability and operating ratios were used to analyze the profitability position of the companies. Correlation analysis revealed positive correlation between Operating Profit of Bhusan & JSW while positive correlation was found between Net Profit of SAIL & TATA. Two way ANOVA test was conducted on return on investment (ROI) of selected companies which revealed that there was no significant difference between the ROI of selected companies. The study indicated that profitability depends upon better utilization of resources, cut-off expenses and quality management. Finally, it was concluded that SAIL and TATA have performed better than Bhusan and JSW while VISA was in unsatisfactory financial position during the study period.

Comparing profit earning capacity of selected Steel companies in India, Popat (2012) analyzed profitability ratios of selected companies in Indian steel industry. Findings of that study indicated that TATA steel’s profitability was better than other selected companies while JINDAL steel’s profitability was next to TATA steel. It was also found that JSW and SAIL showed fluctuation in their profitability while UTTAM had a decreasing trend in the profitability during the period of study.

In a case study of TATA steelfor a period of ten years from 2000-01 to 2009-2010, Goswami and Sarkar (2011) assessed degree of association of profitability ratio, return on equity (ROE), with liquidity ratios (current ratio, quick ratio & inventory turnover ratio) and leverage ratios (degree of financial leverage & degree of operating leverage) with the help of Pearson correlation coefficient and concluded that ROE
was significantly correlated with inventory turnover ratio and degree of financial leverage at 5% level of significance. It was also inferred from the study that because of combined effect of high financial leverage and high operating leverage, the company was in a risky position for first three years of study.

**Bhunia and Khan (2011)** tried to analyze the association between the liquidity management and profitability of 230 Indian private sector steel companies. The period covered under the study extends to nine years ranging from 2002 to 2010. Liquidity management indicators and profitability indicators were modeled as a linear regression system in multiple correlation and regression analysis. Descriptive statistics disclosed that liquidity and solvency position in terms of debt was satisfactory but liquidity position had no impact on profitability. Multiple regression tests confirmed a lower degree of association between the working capital management and profitability.

In another study, Altman Z score model was used by **Ramaratnam and Jayaraman (2010)** to examine the financial soundness of selected steel companies of Indian steel industry. The study covered a period of five years from 2006 to 2010. Various financial ratios used in Altman Z-score were calculated and statistical techniques such as ANOVA test etc were applied to the ratios to test consistency, stability and overall trends in different ratios. Finally, it was concluded that all selected units were financially sound during the study period while operating efficiency of JSW steel and TATA steel was good.

**Mayank (2010)** in his project report analyzed financial performance of SAIL from 2003 to 2009 with the help of comparative financial statement, trend analysis, common size statement and ratio analysis. Various ratios under the categories of profitability, liquidity, solvency and management efficiency were calculated. He also compared financial performance of SAIL with other leading steel companies in India Viz., TATA, ISPAT, JINDAL and ESSAR for the year 2009. Finally, it was concluded that sales turnover of SAIL have increased during the study period but profit have decreased, showing increase in cost of goods sold. It was also found that the debtor’s turnover was lower for SAIL when compared with other companies but the liquidity position of SAIL was better than other companies. The study also
revealed that SAIL had lower debt-equity ratio during study period and therefore, SAIL can raise more debt in future.

**Bhunia and Brahma (2009)** attempted to study Indian steel Industry to examine combined impact of liquidity indicators on profitability through the sophisticated statistical techniques. Multiple correlation and multiple regression techniques were applied to study the joint influence of selected liquidity ratios on the profitability. The regression coefficients were tested with the help of t-test. The period for the study was from 1997-98 to 2005-06. Twenty Seven private sector steel companies operating in India were selected for the study. The main objective of the study was to analyze the efficiency of the management of working capital in selected private sector Iron and Steel enterprises in India. The researcher found a higher degree of multiple correlations which implied the presence of some explained variables that led to lower profitability, over and above lower liquidity, for all the companies under study. To remove such problems, suggestion was made to improve internal intervention, specifically working capital investment in terms of short-term liquidity.

In another study **Bardia (2006)** made an attempt to conduct a comparative study of liquidity trends of SAIL and TISCO. The statistical methods such as index number, time series analysis, regression and chi-square test were employed to examine the liquidity position of both the companies. The working capital and sales relationship based on working capital turnover ratio was also analyzed. The statistical technique of hypothesis testing was used to analyze the significance of differences between actual and estimated values of working capital, current assets and current liabilities of both the companies. The liquidity policies pursued by SAIL and TISCO were precisely and effectively presented.

Conducting financial performance analysis of Indian steel industry, **Rohini (2004)** found that investment in research and development in Indian steel sector was inadequate and concluded that technology is the key for competitiveness in the steel industry and only a technology centric push can move the sector to a higher growth path. The authors specifically examined certain major players in Indian steel industry during the downturn as well as in upswing.
2.2 REVIEW OF LITERATURE BASED ON RATIO ANALYSIS

In a case study of ICICI bank, Gupta (2014) aimed to analyze and compare the Financial Performance of ICICI Bank for a period from 2009-10 to 2013-14. Financial ratios were grouped in four broad categories: liquidity ratios, profitability ratios, activity ratios and leverage ratios. Results of the study revealed bad liquidity position, continuous improvement in the earning power of the bank and high debt-equity ratio which indicated a precarious amount of financial leverage for the bank. The researcher suggested that the bank should take an appropriate measure to keep current ratio and Quick ratio on par with the norms. The Non Performing Assets (NPAs) of the ICICI bank were more than one per cent, hence it was suggested that the bank should control its NPAs otherwise it might affects the asset quality of the bank in long run. It was also suggested that proper control over leverage should be taken in order to magnify DP ratio and the spread of the ICICI bank should be controlled otherwise the income of the bank might be eaten away by the interest expenses in the long-run.

Ahmed and Ahmed (2014) conducted a study to analyze the effect of mergers upon financial performance of manufacturing industries in Pakistan. Twelve manufacturing companies were selected for the study which had involved in the process of merger during 2000-2009. Three years data before merger and three years data after merger were used to test the significance of study. Paired sample t-test was applied on accounting ratios. The study revealed that overall financial performance of acquiring manufacturing corporations were insignificantly improved after the merger. The liquidity, profitability and capital position of the selected companies were insignificantly improved and the efficiency deteriorated after the merger. Finally, it was concluded that merger impacted on different industries of manufacturing sector differently.

In another study, Agha (2014) attempted to empirically test the impact of working capital management on profitability of GlaxoSmithKline pharmaceutical company listed in Karachi stock exchange. The study was conducted for a period from 1996 to 2011. Return on assets ratio was used to measure the profitability of company while account receivable turnover, creditor turnover, inventory turnover and current ratio
were used for working capital management criteria. The results of the study revealed significant impact of working capital management on profitability of the company, although no significant effect of increasing or decreasing the current ratio was found on profitability. Results of the study confirmed that through proper working capital management, the company can increase its profitability. Finally, it was suggested that the profitability of the firms might be enhanced by minimizing the inventory turnover, account receivables ratio and by decreasing creditor turnover ratios.

Niresh & Velnampy (2014) examined the effects of firm size on the profitability of fifteen companies, active in Colombo Stock Exchange (CSE) during 2008 to 2012. Return on Assets and Net Profit were used as measures of firm profitability, whereas Total Assets and Total Sales were used as indicators of firm size. Correlation and regression analysis were used in the empirical analysis. The results of the analysis indicated the existence of weak positive relationship between size indicators and profitability of the listed manufacturing firms while negative association was found between Asset Turnover and performance measures. Lower Asset Turnover indicated inefficiency of management in utilizing the assets and decline in profitability of the firms.

In another study conducted by Shanmugam and Kavitha (2014), working capital policies of twenty one firms out of thirty large pharmaceutical firms were analyzed for a period of ten years from 2000-01 to 2009-10. Ratio analysis, descriptive statistics, one-way ANOVA, Tukey’s Honestly Significantly Different (HSD) tests, rank order correlation and regression analysis were used for the analysis. Result of the study indicated that pharmaceutical firms followed conservative investment and financing policies during study period. No uniformity in the policies of firms was found despite the fact that they were in same industry. There was a change in policies of all the firms over the period. Further, there was a strong stability in each industry’s relative level of aggressiveness with respect to working capital investment policies over the period of time and a negative relation was found between working capital policies and profitability.

In another study, Saravanan and Abarna (2014) aimed to analyze the liquidity efficiency of selected Automobile companies in India. The study covered a period of
sixteen years from 1997-98 to 2012-13. Researcher selected five companies (Ashok Leyland, Eicher, Forcec, SML and TATA motors) out of 26 companies in Indian automobile industry. Hypotheses were tested on the basis of ANOVA one-way analysis of variance test. Through the study, the researcher concluded that the liquidity position of force motors was better than other selected companies and suggested that other companies should improve their liquidity and turnover for better performance.

Dharmaraj and Kathirvel (2013) made an attempt to study financial strength of automobile industry in India. The study covered a period of fourteen years from 1998-99 to 2011-12. A sample of fifteen companies was selected to analyze financial strength, profitability and liquidity. Various financial ratios were calculated under profitability, liquidity and solvency categories and descriptive statistics and ANOVA were used for the analyses. Finally, the researchers concluded that financial performance of Atul Auto Ltd, Ashok Leyland, HMT Ltd, TATA motors and SML ISUZU Ltd was highly improved as compared to the group average value for all selected ratios and the automobile industry was growing at 17% per annum, contributing in the country’s growth.

Analyzing financial position of City Union Bank, Dhevika, Latasri and Gayathri (2013) attempted to find the financial position of City Union Bank. The period undertaken for the study was from 2007-08 to 2011-12. Various financial ratios like gross profit ratio, net profit ratio, operating ratio, dividend payout ratio, turnover ratio etc were used for financial analysis. Finally the study revealed that despite of the price drops in various products, the company has been able to maintain and grow its market share contributing to the strong financial position of the bank.

In another study, Chandrashekaran, Manimannan & Priya (2013) made an attempt to analyze financial performance of private and public sector companies from five major industries in India over a period of ten years from 2001 to 2010. Factor analysis, k-means clustering, discriminate analysis and perceptual techniques were used for data analysis. The selected companies were divided into three categories i.e. H-class (high performance), M-class (moderate performance) and L-class (lower performance). Results of analysis revealed that financial analyst can make use of
these techniques and companies can project their performance on the basis of financial ratios that were considered in the study.

Mohamad and Said (2013) performed a study to measure and compare the profitability of selected top-listed government linked and non-government linked companies in Malaysia. Data envelopment analysis (DEA) was used to measure the relative performance of each company by utilizing a list of normalized performance indicators for the period 2009-2011. In addition to estimating technical and scale efficiency, DEA also provided a mean of measuring returns to scale – increasing, constant or decreasing and identifying companies exhibiting the most productive scale size. The DEA scores indicated that only a small number of the companies were operating on the best-practice frontier under the assumptions of constant and variable returns to scale. Comparisons were made between government-linked and non-government linked companies. Most of the companies indicated serious scale inefficiency and exhibited decreasing return to scale.

In another study, Sandhar and Janglani (2013) Endeavored to analyze the working capital management in terms of profitability and liquidity in a sample of firms selected from the cement companies listed in the NSE. The data was analyzed with the help regression analysis to find out the impact of liquidity on profitability, Correlation analysis was used to find out the relationship between liquidity with profitability. The study revealed that liquidity ratios measure by current ratio (CR), Liquid ratio (LR) and Cash Turnover Ratio, CATAR, CLTAR had a diminutive relationship with profitability measured by return on capital employed (ROA and ROI). It was also revealed that CR and LR were negatively associated with ROA and ROI, while Cash Turnover Ratio (CTR) was negatively associated with ROI and ROA. The analyses also revealed inverse direction of CR and LR with profitability ratios, ROA and ROI. Result of the study was found consistent with the theoretical foundation of liquidity-profitability trade off theory.

Sivathaasan et al. (2013) conducted a study to investigate impact of capital structure, working capital, firm size, non-debt tax shield and growth rate, on profitability of selected manufacturing companies listed in Colombo Stock Exchange, Sri Lanka. The study was conducted for a period of five years starting from 2008 to 2012. The study
employed multiple regression analysis to measure relationship among variables and their overall impact on profitability. The results revealed that whereas all independent variables explain 76.6% and 84.7% of the variance in ROA and ROE, respectively at 5% levels of significance, the overall model had a significant impact on profitability. Further, while capital structure and non-debt tax shield had statistically significant positive impact on profitability, working capital, growth rate and firm size had insignificant effect on the profitability.

In a study conducted by Alfan & Zakaria (2013), the performance of construction companies in Malaysia were analyzed using financial ratios and Altman z-score model before, during and after the crisis. In addition to that, the study assessed and predicted the future performance of these companies. A sample of five large companies was selected for the study. Based on data of six year, starting from 2004 to 2009, the results showed that the financial performance of the contractors in Hong Kong had deteriorated very fast during the past few years. The results of all financial ratios, together with the prevailing situation of over competition, inelasticity of construction costs and reduced aggregate demand in Malaysia, revealed the extreme difficulty of reversing the financial performance in the coming years.

Zafar and Khalid (2012) carried out a study on financial performance analysis of two leading automobile companies in India viz. Maruti Suzuki and TATA Motors. The study was based on a period of five years ranging from 2006 to 2010. Financial ratio analysis was used to analyze liquidity, profitability, efficiency, leverage and market value position of both the companies during the study period. It was found that Maruti Suzuki had been more efficient and performed better in terms of liquidity, profitability, solvency position and market value than TATA motors during the period of study. Finally, the researchers concluded that Maruti Suzuki had better strategic position in comparison to its competitors.

In another study, Marimuthu (2012) analyzed financial performance of selected firms in textile industry of Tamil Nadu. A sample of five firms was selected for the study. The study covered a period of eleven years ranging from 2001 to 2011. Various financial ratios were used to analyze liquidity, profitability and efficiency of selected firms in the study. The data collected was examined using descriptive statistics while
ANOVA-single factor analysis was used to compare the variables. The findings of the study indicated that liquidity ratios, debt-equity ratios and creditor’s position were significantly different for the selected companies. It was also inferred from the study that KPRML and RML were playing very well in the competitive market and particularly KPRML had been efficient in generating income and assets with good overall efficiency.

Shaji and Ganesan (2012) study financial performance of two pharmaceutical companies in India. The study covered a period of twelve years from 1998-99 to 2009-10. Liquidity ratios, Profitability ratios and Efficiency ratios were used for comparative analysis of the selected companies. Variables of the study were analyzed with the help statistical techniques including t-test. Finally, it was inferred from the results of analysis that the liquidity position of both the companies has been strong during the period under study but the companies relied more on external fund in case of long term borrowing and financial stability ratios of both the companies had a downward trend.

Dastgir, Momeni, Daneshwar and Sarokolaei (2012) conducted a study to analyze financial statements of companies listed in Tehran stock exchange with the help of window data envelopment analysis model. A sample of hundred firms was selected to study their financial performance for a period of six years from 2005 to 2010, dividing the period into four windows of three years each. Finally, the researchers came with the result that none of the company showed stable performance during the period under study.

Singh and Tandon (2012) in their research paper found that SBI performed well and financially sound in comparison to ICICI bank while ICICI bank showed better managing efficiency in terms of deposits and expenditure than SBI. The study covered a period of six years ranging from 2006-07 to 2011-12. The financial performance of the selected banks were evaluated with the help of financial ratios like credit deposit, net profit margin etc.

In a study, Vural, Sokemen and Cetenak (2012) investigated the relationship between working capital management and performance of the firms by using dynamic panel data analysis. Data was collected for 75 manufacturing firms listed in Istanbul
Stock Exchange for a period from 2002 to 2009. These 75 manufacturing firms were exposed to 600 observations. Five models were developed to make empirical research on the associations between working capital management and firm’s performance. Tobin Q as a proxy of firm value and gross operating profit as a proxy of profitability, were used as measures of firm’s performance in the study. Findings of the study revealed significant relations between working capital management and firm performance while significant negative relationship of leverage was found with firm value and profitability. The results demonstrated that firm’s profitability increased by shortening collection period of accounts receivable and cash conversion cycle while increase in the level of leverage led to decline the profitability and value of the firm.

**Duvvari (2012)** attempted to evaluate the financial efficiency and performance of the company and to forecast financial health of the company. The period of the study was from 2001 to 2011. The study was conducted with the help of K. B. Mehta’s Model, which is a modified version of Altman’s model. The Z score of NFCL based on modified Altman’s model was ranging from 0.53 to 1.93 during the period of the study. It was found that the company had successfully entered the grey area from bankruptcy area and was moving towards safe zone. Based on the result of the study, it was suggested that the investors who are interested in the fertilizer industry could confidently park their surplus funds in the company.

Another attempt was made by **Memon and Tahir (2012)** to examine the performance of fourteen manufacturing companies in Pakistan using financial ratios. The study was conducted for a period of five year starting from 2006 to 2010. It was found that ENGRO, being the largest company by total assets for three years (2006, 2007 and 2008), had more expenses, lower sales, lower profit before tax and lower return on assets compared to other thirteen companies. FCC, being the second largest company by assets, showed higher sales, higher profit before tax and higher return on asset during five years (2006-2010). Furthermore, NRL being the fourth largest company, showed the highest sales during five years and lowest expenditures in 2010 as compared to other thirteen listed companies. However, it had declining profit before tax and return on asset over the study period and lowest profit before tax in 2010. The financial position of other listed companies was found mixed during study period. Correlation analysis indicated that total assets, sales and profit before tax were
positively related indicating economies of scale where large firms were able to take advantage of their size. Finally, it was concluded that higher expenses were the results of either the Expense Preference Behaviour Theory or slow growth rate of investment.

Pratheepkanth (2011) attempted to identify impact of capital structure on financial performance of companies listed on Colombo stock exchange. Variables of the study included debt-equity ratio and profitability ratios. Researcher found weak positive and negative correlation between capital structure and financial performance measures of selected firms. Regression analysis revealed an insignificant relationship between capital structure and financial performance of selected firms during study period.

In a comparative study of pharmaceutical firms, Salman and Qamar (2011) investigated financial performance of two multinational pharmaceutical companies, GlaxoSmithKline and SanofiAventis using financial ratio analysis. They used various ratios under the segments liquidity, profitability, activity, solvency, marketability and growth. The study covered a period of five years covering years from 2005 to 2009. ANOVA and independent t-test were used for comparative analysis. The result of the analysis revealed that the performance of both the companies had improved during the period under study. However, GlaxoSmithKline was leading SanofiAventis during study period.

Owolobi, Obiakor and Okwu (2011) investigated the relationship between liquidity and profitability of selected companies in Nigeria. Three companies, each from Banking, processing and manufacturing industries were taken for the study. The study covered a period of seven years from 2003 to 2009. Current ratio was taken as measure of liquidity while operating profit-turnover ratio was taken as measure of profitability. Correlation and regression analysis were used to determine the nature, extent and cause & effect relationship between the selected ratios. A model of perceived functional relationship was specified and estimated with the help of OLS technique. A negative relation was found between liquidity & profitability in case of Banking Company while a positive relation was found in case of processing and manufacturing companies. Therefore, a trade-off between liquidity and profitability was found in banking business while the liquidity & profitability reinforced each other in processing and manufacturing businesses.
In another study, Srinivasan et al. (2011) analyzed the performance of selected Foreign Direct Investment (FDI) assisted pharmaceutical units in India. 23 companies were taken for the purpose of analysis for a period from 1st April 1999 to 31st March 2008. Capital Structure Ratios, Liquidity Ratios, Profitability Ratios, Du Pont Analysis and Return on Investment ratios were used in the study to evaluate the financial performance of FDI pharmaceutical units in India. It was found that most of the units performed well and have shown positive growth while the remaining units showed downward trend where most of the units were lagging due to improper utilization of the funds.

Investigating determinants of profitability, Vijayakumar (2011) attempted to examine the determinants of profitability of selected firms in Automobile Industry using the techniques of ordinary least squares. Author found that size is the strongest determinants of profitability of Indian Automobile Industry followed by the variables vertical integration, past profitability, growth rate of assets and inventory turnover ratio. It was concluded that industry should consider all these possible determinants while considering its profitability.

Afeef (2011) aimed to determine the potential effect of working capital management on the profit performance of Small and Medium sized firms in Pakistan. Effect of working capital management was determined on profitability of a sample of 40 Pakistani small and medium enterprises (SME’s) listed in Karachi Stock Exchange for a period of six years from 2003 to 2008 which led to a total of 240 firm-year observations. Correlation analysis was conducted to determine the relationship between efficient management of working capital and corporate profitability for the sample under study while the Multiple Regression analysis was employed to explore the combined effect of the variables of working capital management on profitability of selected firms. Results of the analyses revealed that indicators of working capital management had a perceptible impact on profitability of firms under study.

In another study, Kumbirai and Webb (2010) investigated performance of South Africa’s banking sector for a period from 2005 to 2009. Variables included various financial ratios to measure profitability, liquidity and credit quality. A sample of five large South African commercial banks was selected for the study based on their
market capitalization in the year 2009. The researchers examined if there was any significant difference in the performance of the banks in 2005-2006 and in 2007-2008, using student t-test. Finally, it was concluded that while the performance of banks in 2007-08 deteriorated due to global slowdown in terms of profitability, banks were able to maintain their liquidity and credit quality during the period of financial crises.

**Sangmi and Nazir (2010)** evaluated financial performance of two major banks operating in northern India with the help of CAMEL model. Key parameters of CAMEL model, Capital adequacy, Asset quality, Management capability, Earning capacity and Liquidity were analyzed for both the selected banks. The period undertaken for study was from 2001 to 2005. Findings of the study indicated that both the banks have managed their capital adequacy ratio above the minimum standard of 10%, fixed by RBI. The study also revealed that both the banks have shown significant performance in asset quality but Punjab National Bank (PNB) has been more successful in management efficiency than Jammu and Kashmir Bank (JKB) while liquidity of JKB was better than PNB.

**Sharma (2010)** made an attempt to study liquidity, risk and profitability of Maruti India Ltd. The period covered under study was from 2001 to 2010. Liquidity ratios, profitability ratios and calculated risk factor were used to analyze liquidity, profitability and risk, respectively. Sharma established relationship of liquidity and profitability of the company with risk factor. T-test was applied for hypothesis testing. Finally, the Researcher concluded that the company earned good profit with moderate liquidity but at a higher risk, during study period.

**Menapara and Pithadia (2009)** attempted to measure the impact of mergers and acquisitions on financial Performance of Indian Corporate Sectors and to evaluate the impact of merger and acquisitions on Profitability and Liquidity position of selected companies. Ratio analysis, Standard Deviation and t-test were used as tools for analysis. Pre-merger and post-merger performance ratios were estimated and the averages were computed for the selected units, during five years before merger and five years after merger. Average Pre-merger and post-merger financial performance ratios were compared using Student Paired t distribution test to find if there was any
statistically significant change in financial performance due to mergers. The Conclusion emerged from the point of view of financial evaluation was that the merging Companies were takeover by companies with reputed and good management. Therefore, it was possible for the merged firms to turnaround successfully in due course.

**Balasubramanian (2007)** tried to evaluate the financial performance of Indian private sector banks and rank them based on the basis of business per employee, return on assets, profit per employee, capital adequacy, credit deposit ratio, operating profit and percentage of net non performing asset to net advance. A consolidate ranking was also calculated. Data were collected for a period of three years ranging from 2003-2004 to 2005-2006 from all Indian private sector banks. Return on assets was used to measure the profitability of the banks, Profit per employee and business per employee were used as measure of efficiency of the employee working in bank, credit deposit ratio was used as a measure of liquidity position of the bank and Net NPA as a percentage of Net advances, was used to study the quality of the assets of the bank. Finally, the researcher concluded that the new generation private sector banks have used the technology and have utilized the manpower in an effective manner.

**Sori, Hamid, Nasir and Mohamad (2006)** tried to investigate the distributional characteristics of selected financial ratios of failed and non-failed Malaysian listed firms. A total of 66 listed firms with 330 observations and 65 variables were examined for a period ranging from 1980 to 1996. Normality test was carried out using Kolgomorov-Smirnov test adjusted to Lilliefors test. The finding of the study indicated that in all instances, only one variable (i.e., current asset percent) conformed to normal distribution. Remedial actions were carried out using three-transformation techniques namely natural log, square root and square. The natural log transformation outperformed the other techniques and the square transformation was the least effective. It was concluded that outlier trimming improved the normality of variable after the data transformation and this technique was more effective on the specific industry compared to the mixed industry sector.
In another study, Atkotiya (2005) analyzed and evaluated financial performance of Tea industry in India. The study covers ten reputed tea companies in India. The selected firms were thoroughly examined for their financial performance during 1997-1998 and 2002-2003. Statistical techniques used for the purpose of financial appraisal involve, among others, regression and correlation analysis. To test the hypothesis Kruskal Wallis one-way analysis of variance test was also used.

Kakani and Kaul (2002) conducted sector specific empirical analysis to determine the firm characteristics and performance nexus in varying financial and socio-economic conditions. Forty firms from textile sector and forty two firms from transportation equipment industry were analyzed over a time span of eight years ranging from 1992 to 2000. This eight year period was divided into two sub-periods of four years each, the first period from 1992-93 to 1995-96, being a period of economic growth and the second one from 1996-97 to 1999-2000, being a period of relative recession. It was found that firm size was the most important factor influencing its financial performance. To this effect, industry level analysis was performed looking into the nexus of firm characteristics and their performance numbers in a high performing (transportation equipment) and a low performing (textile mill) industry. The study led to the conclusion that in an industry level analysis, size of the firm was the most significant factor influencing its shareholder value in the liberalized era.

Assessing Performance of Indian State-Owned Enterprises, Ahuja and Mujamdar (1998) examined the determinants of performance of 68 Indian state-owned enterprises in the manufacturing sector for a five-year period ranging from 1987 to 1991. Relative performance was determined using data envelopment analysis, and variations in performance patterns were explained with the help of regression analysis. T-test was used for hypothesis testing. It was noted that the performance of firms in the Indian state-owned sector was characterized by both, low performance as well as significant and systematic variations in the performance parameters. The researcher found that the Size of the firm was positively associated with efficiency while the age was negatively associated with efficiency. Finally, it was concluded that the economic liberalization and reforms aimed at improving the performance of state-owned firms induced efficiency gains over the period of time.
Boubakri and Cosset (1998) in their research paper, examined the change in financial and operating performance of 79 companies from 21 developing countries that had experienced full or partial privatization from 1980 to 1992. Due to the possibility of the differences between pre privatization and post privatization performance of the firms due to economy wide factors, unadjusted performance measures as well as performance measures adjusted for market effects, were used. Results revealed significant increases in profitability, operating efficiency, capital investment spending, output, total employment and dividend for both unadjusted and market-adjusted performance measures. Researchers also found a decline in leverage following the privatization for unadjusted leverage ratios. Finally, it was suggested that privatization had yielded greater benefits for the companies which were operating in developing countries with high income per capita and for companies whose governments had surrender voting control.

2.3 REVIEW OF LITERATURE BASED ON ECONOMIC VALUE ADDED & MARKET VALUE ADDED ANALYSIS

Patel (2015) in his doctoral thesis examined the ability of Indian automobile industry in creating value for the shareholders. Players of the Indian Automobile Industry were selected on the basis of their performance, capital and turnover representing various segments of the industry. The financial performances of the selected companies were analyzed with the help of traditional performance indicator (ROI) and new corporate performance measure (EVA) for a period of nine years from 2003-2004 to 2011-2012. Result of the analysis revealed that the companies had been successfully able to create value for its shareholders and there has been a significant increase in EVA of the Automobile firms indicating that companies have a positive trend to improve their firm values.

In another study, Prasad & Shrimal (2015) attempted to find the relationship between financial measures and MVA. MVA was taken as dependent variable and the profitability ratio (GPM, NPM, ROCE, ROE and RONW) and market value ratios (EPS, PER and DPR) were selected as independent variables. A Sample of 23 listed infrastructural companies of CNX Infrastructure Index was taken for the study. The period of the study was from 2009-10 to 2013-14. Results of the analysis revealed a
positive relationship between MVA and financial performance measures of selected infrastructural companies during the period of the study.

Sharma & Grover (2015) in a study revealed that Dividend and Capital structure have influence on the Shareholder Value Creation. Dividend and capital structure were taken as independent variable and EVA was taken as dependent variable. Regression technique was used to examine the impact of Dividend and Capital structure on Shareholder Value Creation (SVC). Findings of the study also revealed that mostly all companies were having positive EVA during study period indicating that the selected companies, along with the profit maximization, had also focused on the objective of wealth maximization.

Aslam et al. (2015) examined the performance of listed companies in Karachi Stock Exchange with the help of economic value added (EVA) and market value added (MVA). Applying multiple regression technique, performance of 35 firms from seven industrial sectors in Pakistan were estimated with the help of EVA and traditional performance measures (operating cash flow, net operating profit after tax, net income and return on equity) for the year 2012 and 2013. Findings indicated that ability of EVA to explain MVA was insignificant. Finally, the researchers concluded that although the companies operating in Pakistan were still depending on traditional performance measures but EVA can play a vital role when combined with other variables.

Hall (2013) aimed to determine whether more refined firm categorization and increase in the number of variables would yield more information on value creation measures that financial decision-makers can use. For the purpose of the study, four different categories of firms were compiled and 11 different internal performance measures were regressed against two different external shareholder value creation measures for each category. The empirical results showed that different value creation measures could best explained the shareholder value creation for different categories of firms. Market Adjusted share Return was found to be a better indicator of shareholder value than Market Value Added in case of the total category and capital intensive firms. Researcher suggested that for firms with a positive EVA and labor intensive firms, neither of these two measures should be used. Further, it was
concluded that the economic-based value indicators performed better than the accounting-based measures with the SPREAD (ROCE minus WACC) turning out to be the best. The ROA and EPS were also found to be good internal value indicators. The results also showed that the internal value indicators differed when different external shareholder value measures (MVA or MAR) were used.

Joibary (2013) investigated the relationship between traditional performance measures and Economic Value Added (EVA) and identified effective factors and important variables for Companies listed in Tehran Stock Exchange (TSE). The study focused on one hundred and eighty Companies listed in Tehran Stock Exchange (TSE) and covered five financial years to investigate relationship between Economic Value Added (EVA) as dependent variable and Market Value Added (MVA) and financial ratios as independent variables. Results indicated EVA in model 1 could not create worth for shareholders but EVA in model 2 has been successful in creating value for investors and shareholders. Also, the average of MVA in each three models 1, 2, and 3 had positive amount and therefore, listed Companies of TSE created external value for shareholders and investors. The main difference between calculation of EVA in models 1 and 2, was in calculation of weighted average cost of capital with Dividend discount models and Capital Assets Pricing models.

Sharma & Kumar (2012) aimed to examine whether Economic Value Added (EVA) can be used as a tool of performance measures and to provide evidence about its superiority as a financial performance measure as compared to conventional performance measures in Indian companies. To achieve the objective of the research, performance of the Indian listed manufacturing companies was compared with traditional mandated corporate financial performance measures used in investment analysis. The results of the study revealed that investor should use EVA along with traditional measures in firm valuation and making investment strategy. Regression results indicated positive and significant relationship between EVA and MVA of Indian companies. Another observation from the results was that, since EVA outperforms NOPAT, it can be used as proxy for market return (MVA). The regression results indicated that EPS and RI dominated over EVA in explaining the MVA. Finally, the researchers concluded that although EPS is best measures of
shareholder valuation but EVA can also be used by investors in making investment decision and in firm valuation.

**Khan et al. (2012)** empirically examined Economic Value Added of the companies listed in BSE. For the purpose of the study, a sample of the firms from BSE-30 companies was taken. Multiple correlation analyses were applied for the purpose of analysis. The study aimed to find the correlation between EVA and MVA and to find the influence of company's profitability, size (net worth) and growth ability's (sales growth) on EVA. The study uncovered the fact that in the sample units, data correspond to MVA, EVA, Turnover, Net worth and Profitability demonstrated no significance except EVA and Profitability. Finally, the researchers concluded that the positive direction of relationship in all the significant cases suggests that the profitability is an important factor for creating value in BSE-30 companies.

**Sakthivel (2011)** attempted to analyze the value creation in Indian Pharmaceutical Industry from 1997-98 to 2006-07. Fifteen pharmaceutical companies were selected from Indian Pharmaceutical Industry as sample companies by considering the constituent companies in BSE 200 Index whose shares were traded continuously on all market days. To test the significant impact of EVA and Productivity on value creation, ANOVA and simple regression analysis were used. To analyse the impact of financial and economic variables on value creation, a multivariate technique, multiple linear regression was applied. Analysis revealed that the companies with high level of EVA were very highly valued and differed from valuation of companies with low and moderate EVA groups indicating a significant association between MVA and EVA of companies in pharmaceutical industry. Further, it was found that total productivity failed to explain value creation in short-term, but it had some influence on value creation in the long-run. It was also found that EVA is the only variable which had unique influence on MVA of Pharmaceutical companies. Hence, it was concluded that Economic value added had positive & significant impact on Value Creation for Pharmaceutical companies.

**Sharma (2010)** made an attempt to review the literature on EVA. Author presented the literature classification scheme by categorizing the articles in seven sub-streams of EVA, viz., EVA –MVA relationship, EVA and stock returns, managerial behaviour
and performance management, concept, criticism, application and strategy, value management, discounting approaches and literature survey. From the analysis of studies, it was felt that further research is needed on implementation issues, role of accounting adjustments, empirical evidences in developed economies, EVA as a strategy, EVA and discounting techniques like NPV, IRR and managerial performance measurement aspects of EVA. Author also found that Empirical studies conducted till date on EVA had used data for smaller period whereas there is scope for future research on the concept by considering the data pertaining to longer durations in order to test the validity of the concept. Finally, conclusion was made that efforts should be made in this direction to further broaden the horizon of applicability of this useful concept.

Muthumeenakshi (2010) conducted a study to analyze the ability of Economic Value Added (EVA) in reflecting the financial performance and the market performance of Indian firms. An attempt was made by the author to investigate if EVA can be used as an internal performance measure as well as investor investment decision making facilitator in Indian Corporate Sector. Researcher analyzed the ability of EVA in explaining the returns from equity of the sample firms. The returns from equity were taken as dependent variable and EVA values of the companies were taken as the explanatory variable. Regression analysis proved that the relationship of equity returns and EVA was not statistically significant. Further, the statistical relationship of the risk adjusted equity returns (calculated using Treynor’s measure) of the portfolios on EVA was also analyzed. From the regression analysis it was proved that EVA had no impact on the risk adjusted equity returns too. Finally, it was found that EVA can not be used as a reliable single measure for investment decision making of investors in the Indian context.

Irala (2007) endeavored to examine whether Economic Value Added has better predictive power relative to the traditional accounting measures such as EPS, ROCE, RONW, Capital Productivity (Kp) and Labor Productivity (Lp). Researcher made Analysis of 1000 companies across six years. T test was used to examine the significance of the regression models. Finally, it was concluded that the EVA was better predictor of market value compared to other accounting measures.
2.4 RESEARCH GAP

The researcher reviewed various studies on financial performance analysis which revealed that enormous work has been done in the area of financial performance analysis in the past. A number of studies have been made on human resource, marketing and production management and about the causes of poor performances of public sector companies. Most of the studies have been done in other sector of the economy regarding their financial performance. Some studies have been conducted on the financial performance analysis of companies in Indian steel industry, a few studies have been conducted on financial analysis, especially in Indian public sector steel companies and a few comparative studies have been conducted between SAIL and other Indian Steel companies but no particular study have been made on SAIL regarding its financial performance especially using advance performance measures like EVA & MVA. Also no study has considered Industry average ratios as benchmark ratios in Indian Steel Industry. Hence, in the present study, the researcher has made an attempt to evaluate the financial performance of one of the major public sector steel company of India, Steel Authority of India Limited, using both traditional techniques of ratio analysis as well as advance techniques of value addition. Further, financial ratios of SAIL have also been compared with the industry average ratios that have been used as benchmark ratios in the present study. Therefore, through the present study the researcher has attempted to fill the gap of research in this specific area of study.

2.5 CHAPTER SUMMARY

This chapter being dealt upon reviews of literature related to financial performance analyses which were the basis for planning of the thesis. After studying the available literature, research gap has been identified. The next chapter will provide an overview of Indian steel industry.
REFERENCES


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