CHAPTER II

Review of Literature

The review of literature guides the researchers for getting better understanding of methodology used, limitation of various available estimation procedures and database, and lucid interpretation and reconciliation of the conflicting results. Besides this, the review of empirical studies explores the avenues for future and present research efforts related to the subject matter. In case of conflicting and unexpected results, the research can take the advantage of knowledge of their researchers simply through the medium of their published works. A number of research studies have been carried out on different aspects of performance appraisal by the researchers, economists and academicians in India and abroad. Different authors have analysed performance in different perspectives. A review of these analyses is important in order to develop an approach that can be employed in the context of the study of Indian automobile industry. Therefore, the present chapter reviews the empirical studies related with different aspects of performance appraisal. The chapter has been divided into four sections.

Section I - presents the review of those studies that have been carried out in the financial performance.

Section II - a review of studies with the profitability analysis has been presented.

Section III - a review of studies with the economic valued added analysis has been presented.

Section IV - concentrates on researcher’s observations about the research on Performance Appraisal of Indian automobile industry.
Section I

Review of empirical studies on financial performance

Jagan Mohan Rao (1993) in ‘Financial appraisal of Indian Automotive Tyre Industry’ studied the financial appraisal of Indian automotive tyre industry. The study was intended to probe into the financial condition-financial strength and weakness-of the Indian tyre industry. To this end a modest attempt has been made to measure and evaluate the financial performance through inter-company and inter-sectoral analysis over a given period of time (1981-1988). The main findings are that fixed assets utilisation in many of the tyre undertakings was not as productive as expected and inventory was managed fairly well. The tyre industry's overall profit performance was subjected to inconsistency and ineffective.

Kallu Rao (1993) has made a study of inter company financial analysis of tea industry-retrospect and prospect. An attempt has been made in this study to analyse the important variables of tea industry and projected future trends regarding sales and profit for the next 10 year periods, with a view to help the policy makers to take appropriate decisions. Various financial ratios have been calculated for analyzing the financial health of the industry. The forecast of sales and profits of tea manufacturing companies shows that the Indian tea industry has bright prospects. The recent changes in the Indian economic policies will boost up the foreign exchange earnings, which will benefit those companies, which are exporting to hard currency areas.

Pai, Vadivel and Kamala (1995) studied the diversified companies and financial performance: A study. An effort was made to study the relationship between diversified firms and their financial performance. Seven large firms having different products-both related and otherwise-in their portfolio and operating in diverse industries were analyzed. A set of
performance measures / ratios was employed to determine the level of financial performance. The results reveal that the diversified firms studied have been healthy financial performance. However, variation in performance from one firm to another has been observed and statistically established.

In RBI study (1995) an attempt was made to study the financial performance of private corporate business sector during the period 1994-95. Of the 1030 companies covered in this study, 925 are non-financial companies and 105 are financial companies. The results of the non-financial and financial companies are also analyzed size-wise apart from the analysis of the consolidated results for the entire sector. The good corporate performance during 1994-95 reflected in major profitability ratios registering distinct improvement in the year under review as compared to the previous year.

Vijayakumar (1996) in ‘Assessment of Corporate Liquidity - a discriminant analysis approach’ has revealed that the growth rate of sales, leverage, current ratio, operating expenses to sales and vertical integration are the important variables which determine the profitability of companies in the sugar industry. Further, the author has studied the short-term liquidity position in twenty-eight selected sugar factories in co-operative and private sectors. A discriminant analysis has been undertaken to distinguish the good risk companies from poor risk companies based on current and liquidity ratios. Discriminating ‘Z’ scores have been calculated with the help of discriminant function and according to the ‘Z’ scores the companies are ranked in the order of liquidity.

Joanne Loundes (1998) in his study examined performance of Australian Government Trading Enterprises:- An overview. Assessing the performance of Government Trading Enterprises (GTEs) has become increasingly important in the context of the push towards privatisation. This paper provides an overview of GTE performance over the 5 years to 1996.
using the IBIS Enterprise Database, following the method of analyzing firm performance as outlined by the steering committee (1998). The results indicate that there are large differences in performance across firms, and more particularly, across the industries.

**Raj S. Dhankar (1998)**\(^7\) has given a new look at the criteria of performance measurement for business enterprises in India-a study of public sector undertakings. The author gives a new model for measuring the performance of a business enterprise in India, wherein, the basis is to compare its actual rate of return with its expected risk adjusted rate of return. Realizing the importance and controversy of public sector in India, an attempt was made to measure the performance of all public sector undertakings, which were started up to 1964 and were in operation until 1983. It is shocking to know that half of them on an average want to talk of making excess returns, have not been able to earn equal to their cost of capital.

**Key Sengupta (1998)**\(^8\) studied the performance of the fertilizers industry in India. Analysis of cost functions and cobb-douglas production function have been made to study the performance of the industry, the results of which reveal that the industry is subject to the law of increasing costs. The findings get further support from the examination of the production function, which reveals that the average productivity of labour exceeds its marginal productivity. Analysis of shifting cost functions further highlight that the firms belonging to this industry expand capacities, even before fully exploiting the existing capacity conforming to the oligopolistic behavioral tendency of the firms belonging to the fertilizers industry.

**Raghunathan and Prabina Das (1999)**\(^9\) have made a study of the corporate performance of post-Liberalization. In this study, they analyzed the performance of Indian Manufacturing sector in the last 8 years since liberalization on the parameters of profitability, liquidity, leverage and
While the solvency and profitability ratios were encouraging till 1996 they have been gradually diminishing after that. This problem gets more pronounced when the EVA is calculated which shows that the Indian Manufacturing sector has destroyed wealth, while the MNCs have generated wealth for their shareholders. The study points that poor corporate performance has led to an economic slowdown and not the other way round. Corporate raised funds during the blacken days of equity markets and ended up investing these funds at below their cost of capital. The outcome has been a prolonged economic slowdown.

**Juliet D’Souza and William L.Megginson (1999)** have studied the financial and operating performance of privatized firms during the 1990s. This study compares the pre and post privatization financial and operating performance of 85 companies from 28 industrialized countries that were privatized through public share offerings for the period from 1990 through 1996. The significant increases in profitability, output, operating efficiency, dividend payments and significant decreases in leverage ratios for the full sample of firms after privatization were noticed. Capital expenditures increase significantly in absolute terms, but not relative to sales. Employment declines, but insignificantly. The findings of the study strongly suggest that privatization yields significant performance improvements.

**Rupa Rege Nitsure and Mathew Joseph (1999)** in their study entitled, “Liberalisation and the Behaviour of Indian Industry (A Corporate - Sector Analysis based on Capacity Utilisation) examined the impact of economic reform on productive capacity creation and utilization across various industries in the nineties. The results suggest that although substantial achievements occurred initially in creation and utilization of capacities in the various industries, there is significant room for further improvement in utilization. It analyzed the determinants of capacity use such as credit flows, import liberalization, fiscal consolidation and demand conditions, using panel
data for 802 firms for the period 1993-98 to suggest an optimum combination of policies that is critical for realizing the unused capacity.

**Rajeswari (2000)**\(^{12}\) studied the Liquidity Management of Tamil Nadu Cement Corporation Ltd. Alangulam-A Case Study. It can be concluded from the analysis, the liquidity position of TANCEM is not stable. Regarding liquidity ratios, there was too much of liquidity in the first two years of the study period. A very high degree of liquidity is also bad as idle assets earn nothing and affects profitability. It can be concluded that the liquidity management of TANCEM is poor and is not satisfactory.

**Dabasish Sur, Joydeep Biswas and Prasenjit Ganguly (2001)**\(^{13}\) studied the Liquidity Management in Indian Private Sector Enterprises - A case study of Indian Primary Aluminum industry. From the analysis, it may be summarized that the overall performance regarding liquidity management at INDAL was better in terms of efficient utilization of short term funds, whereas HINDALCO was unable to do so. A very high degree of positive correlation between liquidity and profitability in case of both the companies was a notable feature, reflecting the favorable effect of liquidity on profitability.

**Aggarwal and Singla (2001)**\(^{14}\) in their study developed a single index of financial performance through the technique of Multiple Discriminant Analysis (MDA), They attempt to identity from among the 11 ratios, used as inputs, those ratios, which are relevant in distinguish between profit making units and loss making units in Indian paper industry. The study indicates that model has correctly classified 82.14 percent of units selected as profit making and loss marking. The study also shows that inventory turnover ratio, interest coverage ratio, net profit to total assets and earning per share are the most important indicators of financial performance. The study also suggests that the results of MDA can be used as predictor of future profitability / sickness.
Joanne Loundes (2001)\(^{15}\) in the study ‘The Financial performance of Australian Government Trading Enterprises Pre-and Post-Reform’ revealed that during the 1990's there were several measures introduced to improve the efficiency and financial performance of government trading enterprises in Australia. The purpose of this study was to discover whether there had been any change in the financial performance of government trading enterprises operating in electricity, gas, water, railways and ports industries as a result of these changes. The study reveals that it does not appear to have been a noticeable enhancement in the financial performance of most of this business, although railways have improved slightly, from a low base.

Mark Rogers (2001)\(^{16}\) in his research the effect of diversification on firm performance analyses the association between diversification and firm performance in a sample of up to 1449 large Australian firms (1994 to 1997). Firm performance is measured by profitability and, for quoted firms, market value. Results from the full sample shows that more focused firms have higher profitability. This result controls for firm specific effects and other determinants of profitability. However, this association is not found in sub-sample regressions for listed firms. This is true both when either profitability or market value is used as a performance measure. The results may indicate that listed firms may be under closer scrutiny and competitive pressures that ensure, on average, that these firms are at their optimal degree of diversification.

Dabasish Sur (2001)\(^{17}\) studied the Liquidity Management: An overview of four companies in Indian Power Sector. In this study a comparative analysis regarding the liquidity management in Electricity generation and distribution industry has been made for the period 1987-88 to 1996-97. The study reveals that the overall liquidity should be managed in such a way that not only it should not hamper profitability but also its contribution towards increase in profitability should be positive.
Derek Bosworth and Joanne Loundes (2002) in his study entitled the Dynamic performance of Australian Enterprises investigate the interaction of discretionary investments (R&D, capital investment, training and advertising), innovation, productivity and profitability within a dynamic framework of firm performance. A dynamic and closed model of firm performance is set up, and the resulting empirical model is tested as a series of recursive equations, using a four-year balanced panel data set of Australian firms drawn from the Business Longitudinal Survey. The results indicate that current economic profit has an important role to play in enabling firms to invest, and the findings indicate which of these investments are complements and which are substitutes. The study explores the impact of these discretionary investments on innovation and total factor productivity performance. Finally, the impact of past discretionary investments both directly and indirectly (that is, via innovation and productivity performance) on current profitability is examined. Past values of these investments have a significant influence on current profit, effectively closing the model.

Mansur A. Mulla (2002) in ‘Use of ‘Z’ score analysis for evaluation of financial health of textile mills - A case study’ has been made an insight into the financial health of Shri Venkatesh Co-operative Textile Mills Ltd., Arunageri of Dharwad District. The ‘Z’ score analysis has been applied to evaluate the general trend in financial health of a firm over a period by using many of the accounting ratios. From the study it was concluded that the textiles mill under study was just on the verge of financial collapse. On the one hand, current assets declined because of the negative profitability performance, whereas on the other hand, the current liabilities were on the increase because of poor liquidity performance of the mill.

Wolfgang Aussenegg and Ranko Jelic (2002) examine operating performance of 154 Polish, Hungarian and Czech companies that were fully or partially privatized between January 1990 and December 1998. The study
reveals that privatized firms in the sample did not manage to increase profitability, and significantly reduced efficiency and output in the post privatization period. Enterprises privatized through mass privatization programs (Czech SOEs) achieved lower profitability in the post-privatization period compared to their counterparts privatized through case-by-case method. Czech companies have also maintained much higher bank borrowings after privatizations than their polish and Hungarian counterparts. The study further reveals that private sector IPOs underperforms their privatization counterparts in terms of profitability, efficiency, capital investments and output. Finally firm’s size does not seem to influence key performance measures in selected countries.

**Sudarsana Reddy (2003)**\(^{21}\) studied the Financial Performance of Paper industry in AP. The main objectives set for the study are to evaluate the financing methods and practices to analyze the investment pattern and utilization of fixed assets, to ascertain the working capital condition, to review the profitability performance and to suggest measures to improve the profitability. The data collected have been examined through ratios, trend, common size, comparative financial statement analysis and statistical tests have been applied in appropriate context. The main findings of the study are that A.P paper industry needs the introduction of additional funds along with restructuring of finances and modernization of technology for better operating performance.

**RBI Corporate Studies Division (2003)**\(^{22}\) has made an attempt to study the performance of corporate business sector during the first half of 2002-2003. The results of 146 private companies of various sectors were analyzed on the various parameters of performance. Aggregation and comparison of the results of the first two quarters were done on these performance parameters. It was concluded that the performance of the private sector was better when compared with the first half of the previous year.
This was indicated by the following parameters viz., higher sales, reduced interest payments and ultimately improved profitability. Sector-industry wise analysis of performance has been done to highlight those areas where the performance has been better vis-à-vis sectors, which have lagged behind in performance.

**Ram Kumar Kakani, Biswatosh Saha and Reddy (2003)**

attempts to provide an empirical validation of the widely held existing theories on the determinants of firm performance in the Indian context. The study uses financial statements and capital market data of 566 large Indian firms over a time frame of eight years divided into two sub-periods (1992-96 and 1996-2000) and to study Indian firm’s financial performance across various dimensions viz., shareholder value, accounting profitability and its components, growth and risk of the sample firms. The study found that size, marketing expenditure and international diversification had a positive relation with a firm’s market valuation. The study also found that a firm’s ownership compositions, particularly the level of equity ownership by domestic financial institution and dispersed public shareholders, and the leverage of the firm were important factors affecting its financial performance.

**Laurent Weill (2004)** in his study leverage and corporate performance-a frontier efficiency analysis provides new empirical evidence on a major corporate governance issue: the relationship between leverage and corporate performance. His study provides two major importance’s to this literature by applying frontier efficiency techniques to obtain performance measures for companies from several countries (France, Germany and Italy). The study proceeds to regressions of corporate performance on a various set of variables including leverage. The study found mixed evidence depending on the country; while significantly negative in Italy, the relationship between leverage and corporate performance is significantly positive in France and
Germany. This tends to support the influence of some institution characteristics on this link.

**Petia Topalova (2004)** in his study uses firm level data to examine the performance of India’s non financial corporate sector since 1989 and evaluate its financial vulnerabilities. The study shows promising trends in liquidity, profitability and leverage of the sector emerged in the early 1990s, they experienced a reversal after 1996. Nevertheless, most indicators were still at comfortable levels, and there is evidence of improvement in 2002. The study also reveals that a number of firms still face problems servicing their debt obligations, posing a risk to lenders. The study of aggregate interest coverage of the corporate sector indicates that potential non-performing loans of the corporate sector remain high. This underscores the need of the corporate sector remain high. This underscores the need for close monitoring of the corporate sector in the future.

**Raghunatha Reddy and Padma (2005)** in their study, an attempt has been made to study the impact of mergers on corporate performance. It compares the pre and post merger operating performance of the corporations involved in merger to identify their financial characteristics. Empirical research on share price performance suggests that acquiring firm generally earns positive returns prior to announcement, but less than the market portfolio in the post liberalisations period in general and analysis of the pre and post merger operating performance of the acquiring firm.

**Santimoy Patra (2005)** the impact of liquidity on profitability is analysed in his study considering the case Tata Iron & Steel Company Limited. The study of the impact of liquidity ratios on profitability showed both negative and positive association. Out of seven liquidity ratios selected for this study, four ratios namely current ratio, acid test ratio, current assets to total assets ratio and inventory turnover ratio showed negative correlation
with profitability ratio. However, these correlation co-efficient were not statistically significant. The remaining three ratios namely working capital turnover ratio, receivable turnover ratio and cash turnover ratio have shown positive association with the profitability ratio, all of which are statistically significant at 5% level of significance. The result of all the correlation co-efficient is as desirable except correlation co-efficient between inventory turnover ratio and ROI. However this undesirable sign between ITR and ROI is not supported by the multiple regression analysis, which shows the positive association between these two variables. There is increasing profitability which depends upon many factors including liquidity.

**RBI Bulletin (2005)** Finance of Foreign Direct Investment companies, 2002-03. An attempt has been made to assesses financial performance of 490 selected non-Government non financial foreign direct investment (FDI) companies for the period 2001 based on their audited annual accounts. The financial results of the selected company should improved performance in terms of higher growth in sales, value of production, manufacturing expenses and gross profit during 2002-03 compared with the respective growth rates in the previous year. The profitability ratios like profit margin, return on network increased during the year under review company having major portion of FDF from UK, USA, Switzerland and Mauritius registered net flow of foreign companies in all the three years.

**S.P.Singh (2006)** in his study performance of sugar mills in Uttar Pradesh by ownership, size and location. Performance assessment of the sugar industry and setting targets for the relatively inefficient mill to improve their efficiency and productivity is crucial, as the interest of various stakeholders are largely dependent on its performance. The performance of the mills is found to vary significantly across sector, plant size and region. The private sector mills achieve the highest efficiency scores, followed by the cooperative sector. It has also been observed that the mills with bigger plant size attain
relatively higher efficiency scores, moreover, the mills located in the WK found better performer as compared to their counter parts of other regions. Labour and energy inputs are found highly underutilized in almost all the inefficient mills.

Debasish Sur and Kaushik Chakraborty (2006)\textsuperscript{30} in his study financial performance of Indian Pharmaceutical industry: The Indian Pharmaceutical industry has been playing a very significant role in increasing the life expectancy and in decreasing the mortality rate. It is the 5\textsuperscript{th} largest in terms of volume and the 14\textsuperscript{th} largest in value terms in the world. The comparative analysis the financial performance of Indian Pharmaceutical industry for the period 1993 to 2002 by selecting six notable companies of the industry. The comparison has been made from almost all points of view regarding financial performance using relevant statistical tools.

Kapil Choudhary (2007)\textsuperscript{31} in his study performance of the common stocks under alternative investment strategies. While the efficient market hypothesis denies the possibility of earning abnormal returns, the fundamental analysts assert that investment strategies based on the accounting numbers may be indicators of feature investment performance. The present study examines the relationship between investment performance of equity securities and alternative investment strategies based on their market capitalization, P/E ratio and earning per share. During the period from January 1997 to December 2005, the low market capitalization, P/E ratio, and earning per share portfolios on average earned higher absolute rate of return than the high market capitalization, P/V ratio, and earning per share portfolios respectively. Among the three investment strategies the low market capitalization investment strategy was found superior to both low P/E ratio and low earning per share investment strategies in terms of absolute and risk adjusted rate of return.
P. Janaki Ramudu and S. Durga Rovo (2007) in his study Receivables management in the commercial vehicles industry in India. This paper examines the efficiency of receivables management of the Indian commercial vehicles industry. This study reveals that the industry as a whole had managed receivables efficiently, where as a few individual companies had for less satisfactory scores in this respect. The study reveals that the level of investment in receivables as a percentage of sales across the industry was reasonable less. When benchmarked against the industry average, Ashok Leyland and Swaraj Mazda had recorded poor performance in the receivables management, where as a Tata Motors, Bajaj Tempo, and Eicher Motors, did well.

Monicor Singhana (2007) in his study Dividend policy of India companies. The analysis revealed that while the percentage of companies declaring dividend declined over the years, the average dividend per share increased by nearly eight times. This implies that those companies declare dividend, increasingly per higher dividends over the years. Average dividend payout ratio ranged between 25% and 68% during 1992-2004. However average dividend yield showed a consistent upward trend throughout the period of study-increasing from 0.75% in 1992 to 10% in 2004. One possible reason for the increase in dividend payout may be the change in tax regime. According to tax preference or trade-off theory, favorable dividends tax should lead to higher payouts.

S.K. Srivastorva (2007) in his study Role of Organizational management and managerial Effectiveness in promoting performance and production. Management is a universal Phenomenon. It is present in virtually all walks of life. Management is not confined merely to a factory or an office. Skillful management is needed in clubs, families, Schools, Sports, teams and social functions like marriages, Picnics parties and so on. Lack of proper management invariable results in chaos, wastage of time, money and effort. Although management is needed in various activities, it has special
significance with respect to business enterprises in the public as well as private sectors. The productive efficiency of business firm depends a great deal on the Quality of management. Also effectiveness of management is a major factor determining the growth and prosperity of a business on which rests the process of economic growth.

T.Vanniarajan and C.Samuel Joseph (2007)\textsuperscript{35} in his study An Application of Dupont control chart in Analyzing the financial performance of Banks. The liberalization of the finance sector in India is exposing Indian banks to a new economic environment that is characterized by increased competition and new regulatory requirements. Indian and foreign banks are exploring growth opportunities in India by introducing new products for different customer segments, many of which were not conventionally viewed as customer for the banking industry. Many Banks have, in the last ten years, witnessed new shareholders. All banks are in a position to evaluate its performance compared to others. In general, the performance of the banks may be viewed on three dimensions namely structural, operational and efficiency factors are suggested By India Bank Association.

Adolphus J. Toby, Ph.D. (2007)\textsuperscript{36} in his study, Financial management modeling of the performance of Nigerian Quoted Small and medium-sized Enterprises. It is conceptualized that sustained growth, adequate liquidity and requisite profitability in the SME sector is significantly related to their investment and financing decisions. The empirical results show a significantly inverse relationship between current ratio and the gross profit margin, holding the working capital gap constant. The quoted SMES current assets ratio are significantly sensitive to commercial Banks ‘liquidity ratio, cash reserve requirements, and loan-to-deposit ratio. Overall, over model results confirm that the SME sector in Nigeria is still limited by the liquidity-profitability dilemma, efficiency constraints, Pecking order reversals, stringent monetary policy regimes and a risk-over banking system.
Section II

Review of empirical studies on profitability analysis

Rao (1985)\(^{37}\) in his work entitled ‘Impact of Debt-Equity Ratio on Profitability-An Exploratory Study of Engineering Industry’, observes if the earning ability i.e., profitability, has any impact on the debt-equity ratio in engineering companies. The study based on the impact of profitability on the debt-equity ratio has revealed a negative association i.e., high debt-equity ratios meant low profitability due to large interest payments, whereas low debt-equity ratio caused high profitability because of low interest payments. The operating efficiency of the firm and reasonable rate of return on owner’s capital ultimately depend on the profits earned by it. Thus, profits are necessary to run the firm in a healthy atmosphere of present day cut throat competitions and defend it from business rivalry.

Deepak Chawola (1986)\(^ {38}\) studied an empirical analysis of the profitability of the Indian man-made fibres industry. This study examines and explains the trends in the profitability of the Indian man-made fibres industry. The relevant data for the study is obtained from 17 firms found in BSE Official Directory for the period 1963-64 to 1977-78. An increase in the excise duty of man-made fibres seems to be associated with the decline in profitability of the industry. Both concentration and vertical integration influence the profitability. However, their impact differs for cellulose and petro-chemical based group of fibres.

Nagarajan and Burthwal (1990)\(^ {39}\) in their research work entitled “profitability and structure: A firm level study of Indian Pharmaceutical Industry”, intensively examined the relationship between profitability and structure, using a sample of thirty-eight pharmaceutical firms in India for the period 1970-1982. Two measures of profitability i.e., ratio of net profit to total sales revenue and the ratio of net profits to total assets have been used to
find out the determination of profitability. The analysis demonstrated that under the condition of price controls the most significant determinant of the profitability of the firms in this industry is vertical integration. Size and advertising intensity did not appear to be major determinants. This was perhaps due to the inability of firms to translate their market power into prices, because of controls. The coefficient of growth rate of sales was positive and significant, suggesting that factors on the demand side of a firm had a greater impact on profitability than on the supply side.

Conyon and Machin (1991) in ‘The Determinants of Profit Margins in U. K. Manufacturing’, made an attempt to find the causes of inter-industry variations in profit margins for 90 U.K. Manufacturing Industries over the period 1983 to 1986. Labour-market characteristics (such as trade union coverage and unemployment), import intensity, concentration and capital stock were taken as independent variables. The study revealed that the union coverage and unemployment had a negative impact on profit margins. On the other hand, import intensity, concentration and capital stock were significant in explaining inter-firm variations in profit margins.

Krishnaveni (1991) in her study evaluated the impact of policy changes since 1982-92 on profitability and growth of firms in the industry using Tobin’s q as a measure of profitability. The study finds no evidence to show that firms have made supernormal profits. Profitability is found to be explained mainly by age of the firms, vertical integration, diversification and industry policy dummy variables. Important determinants of the growth of firms are found as diversification, industry policy dummy variable, gross retained profits and expansion of capacities. Results also reveal differences in performance between car and non-car sectors as well as within the sectors of the industry.
**Chandrasekaran (1993)** in ‘Determinants of profitability in Cement Industry’ has studied the determinants of profitability in cement industry. The objective of this study was to examine determinants of profitability in cement industry. The study aims at drawing inference on impact of policy measures which led to change in price and distribution policies relevant for cement industry. Determinants of profitability are analysed using the technique of ordinary least squares. Based on existing theories and relevant econometric empirical works, variables are selected. The study concluded that efficiency in inventory management and efficient management of current assets were important to improve profitability.

**Cleveland and Frederick (1993)** in their study ‘Profitability, Uncertainty and Firm Size’, examines the connections between variations in profit and loss rates among firms in small-firm and large-firm size classes as reflections of uncertainty. They found that, within industries, such variations are particularly great for firms in small-firm size classes, leading to operating policies for small firms best characterized as entrepreneurial. Large firms, in contrast, faced with less uncertainty in earning profit, appear to adopt policies that manifest an emphasis on strategic planning.

**Vijayakumar and Venkatachalam (1995)** in ‘Working Capital and Profitability - An Empirical Analysis’ studied the impact of working capital on profitability in sugar industry of Tamil Nadu by selecting a sample of 13 companies; 6 companies in co-operative sector and 7 companies in private sector over the period 1982-83 to 1991-92. They applied simple correlation and multiple regression analysis on working capital and profitability ratios. They concluded through correlation and regression analysis that liquid ratio, inventory turnover ratio, receivables turnover ratio and cash turnover ratio had influenced the profitability of sugar industry in Tamil Nadu.
James Ted McDonald (1997)\textsuperscript{45} in the study entitled ‘The Determinants of Firm Profitability in Australian Manufacturing’ provides new evidence on the determinants of the profitability of Australian manufacturing firms by analyzing a unique firm level data set of firm performance over the period 1983-1993. From estimations based on an adaptation of a standard oligopoly model, econometric results suggest that lagged profitability is a significant determinant of current profit margins, and that industry concentration is positively related to firm profit margin. As well, both union density and real wage inflation are found to be negatively associated with firm profits. Finally, the cyclicality of profit margins depends on industry concentration - firm margins are pro-cyclical in concentrated industries and are counter-cyclical in less concentrated industries.

Sidhu and Gurpreet Bhatia (1998)\textsuperscript{46} studied the factors affecting profitability in Indian textile industry. In this study an attempt was made to identify the major determinants of profitability in Indian textile industry with the help of empirical data taken from Bombay Stock Exchange Directory for the year 1983. To find out the factors affecting profitability, regression analysis had been applied. From the analysis, there was no clear-cut relationship between current profitability and capital intensity. The age of the firm was having generally negative but statistically insignificant relationship with current profitability which points towards the fact firms in Indian textile industry are absolute and need modernization.

Kuldip Kaur (1998)\textsuperscript{47} studied size, growth and profitability of firms in India. It is in this context that the study of various facets of 235 firms of India has been undertaken, covering the period from 1970-71 to 1989-90. Growth pattern of the firms showed that majority of the firms recorded growth rate from 10 to 20 per cent. Two measures of profitability have been used in the study. First measure is the profitability margin (operating profit as percentage of net sales). Second measure is the profitability rate (gross profit as
percentage of net sales). However, the analysis in case of Indian firms showed that there was no systematic tendency for average profitability to increase/decrease as the size of the firm changed.

**Amit Mallick and Debasish Sur (1998)** examined the Working capital and profitability: a case study in interrelation. The study explores the correlation between ROI and several ratios relating to working capital management. In this study an effort has been made to make an empirical study of AFT industries Ltd., a tea producing enterprise in Assam for assessing the impact of working capital on profitability by computing simple correlation co-efficient between ROI and each of some selected important ratios relating to working capital management and to test the significance of such coefficients. The study on the inter relation between the selected ratios in the areas of working capital management and profitability of the company revealed both negative and positive association

**Simon Feeny and Mark Rogers (1998)** in their research work entitled ‘Profitability in Australian Enterprises’ analyses profitability in a sample of large Australian companies over the period 1985 to 1996. Various measures of profitability are used and the paper provides a discussion of the theoretical basis for these measures. The key issues investigated are a comparison of the profitability measures, the distribution of profitability between firms, and the persistence of firm profitability. The results are compared to previous studies on firm profitability.

**Vijayakumar (1998)** has examined the determinants of corporate size, growth and profitability- the Indian experience. To meet the objectives of the study, Indian public sector industries were selected. The data relating to size, growth and profitability were collected from their annual reports published by the Bureau of Public Enterprises (BPE), Government of India. The study covers the period from 1980-81 to 1995-96. The technique of
average, correlation and linear and multiple regression analysis has been used in this study. Inter-industry analysis reveals that the growth is positively and significantly associated with the size in all the industry groups except textiles.

**VishnuKanta Purohit (1998)** in ‘Profitability in Indian Industries: An analysis of firm size and profitability’ examined the relation between size and profitability in Indian industries. The study highlights the following two common conclusions. Firstly, though the average profitability of firms does not seem to vary significantly with their size and the variability of profit rates declines with size. Secondly, the average growth rates of firms do not seem to vary significantly with their size but the variability of growth rates only. The study further explores the factors that determine profitability. Besides the size, the model also tests for the impact of age of the firm and growth in sales on profitability at both micro and macro levels. The study concludes that the selected industries and firms have made efforts to increase profitability through various means including increase in size through diversification and moving into higher technology.

**Glancey (1998)** in his study determinants of growth and profitability in small entrepreneurial firm investigates the relationship between company characteristics including size, age, location and industry group, and profitability and growth. The trade-off between the possibly conflicting objectives of profit and growth is considered primarily from the entrepreneurial rather than the managerial standpoint which previous econometric studies of small firm performance have concentrated on. It is argued that a firm size measure based on employment is more appropriate than one based on sales or assets which previous studies have used. Firm characteristics are found to be of limited value in explaining profitability. However, larger firms are found to grow faster than smaller, and younger firms are found to grow faster than older. There is also some evidence that growth is stronger in urban than in suburban or rural locations.
Agarwal (1999)\textsuperscript{53} studied the profitability and growth in Indian Automobile manufacturing industry. The objective of this study is to examine if firms have been making super normal profits since 1975 when price controls were removed. It also evaluates the impact of policy changes since 1981-82 on profitability and growth of firms in the industry using Tobin’s Square as a measure of profitability. The study finds no evidence to show that firms have made super normal profits. Profitability is found to be explained mainly by the age of the firms, vertical integration, diversification and industry policy dummy variable. Important determinants of the growth of firms are found as diversification, industry policy dummy variables, gross retained profits and expansion of capacities. Results also reveal differences in performance between car and non-car sectors as well as with in the sectors of the industry.

Soumyendra Kishore Dutta (1999)\textsuperscript{54} examined an analysis of profitability trend in the Indian Cotton Mill industry. The disadvantage situations of a large number of mills are reflected in the haphazard movement of the mill sector’s profitability ratio. Loss of market share of mill made cotton cloth to synthetic substitutes, burden of unfavorable excise duty, uncertainty in supply of raw cotton, untoward labour legislation, under utilization of capital and high capital cost added to the aforesaid fluctuations in profitability. Lower base of the profitability ratios and the warning financial position of the majority of the mills have left them with resources to undertake renovation and modernization.

Simon Feeny and Mark Rogers (1999)\textsuperscript{55} in their research work entitled ‘Market Share, Concentration and Diversification in Firm Profitability’ review the role of market share, concentration and diversification in firm performance. An empirical analysis of the profitability of 722 Large Australian firms for the period 1993 to 1996 was also undertaken. Using simple regression techniques the analysis suggests that
industry concentration (as proxies by the 4-firm concentration ratio) has a positive influence on profitability. The market share of a firm does not appear to have any significant linear association with profitability; however, a non-monotonic relationship is found to be significant.

Govinda Rao and Mohana Rao (1999) in ‘Impact of working capital on profitability in cement industry - A Correlation Analysis’, analyse the impact of profitability on working capital in cement industrial units in India. Ten variables on working capital ratios have a close interaction with profitability measures viz., current ratio, debt equity ratio, cash position ratio, working capital turnover ratio, inventory turnover ratio, debtors turnover ratio, cash turnover ratio, current assets turnover ratio and average collection period are selected for analysis. The inter-relationship are to be studied with the help of Karl-Pearson’s co-efficient of correlation technique, by arranging the correlation of one variable with each other variable in the form of matrices which are a triangular and symmetrical about the principal diagonal. On overall basis out of 10 variables with PBDIT, 3 variables showed a significant co-efficient and seven exhibited insignificant relationships. Out of the 10 variables, 5 variables showed negative association while the others showed positive relationships.

Mohammed Rafiqul Islam (2000) studied the profitability of Fertilizer Industry in Bangladesh from 1985-86 to 1994-95. The sample included five fertilizer enterprises of the seven fertilizer enterprises in Bangladesh under the control of Bangladesh Chemical Industries Corporation (BCIC). The findings of the study indicate that none of the selected units were consistent and all the units were plagued with declining profits. The study concluded with suggestions for improvement of the profitability of fertilizer industry in Bangladesh.
Simon Feeny (2000)\textsuperscript{58} in his research study entitled determinants of profitability: an empirical investigation using Australian tax entities. Using simple regression techniques the analysis suggests that size of entity is positively related to profitability but industry characteristics have limited importance in explaining entity profitability. Concentration, defined at a 4 digit level, is positively and significantly related to entity profitability in 27 per cent of Australian 3 digit industries, while a significant negative association is found in 8 per cent of the industries. There is some evidence that barriers to entry have the positive relationship with entity profitability as dictated by theory when proxies by the industry capital intensity but not when proxies by the minimum efficient scale or industry trademark intensity. There is strong evidence that the market share of an entity has a U-shaped relationship with profitability.

Debashish Rei and Debashish Sur (2001)\textsuperscript{59} studied the profitability analysis of Indian food products industry: A case study of Cadbury India Ltd. The study attempts to measure the profitability scenario of Cadbury India Ltd. and analyses the relationship among various profitability ratios and their joint impact using multiple correlation co-efficient and multiple regression method. The study on the inter-relation between the selected ratios regarding the company’s position and performance and profitability of the company revealed both negative and positive association.

Vijayakumar (2002)\textsuperscript{60} in “Determinants of Profitability-A firm level study of the Sugar Industry of Tamil Nadu”, delved into the various determinants of profitability viz., growth rate of sales, vertical integration and leverage. Apart from these three variables, he had selected current ratio, operating expenses to sales ratio and inventory turnover ratio. Econometric models were used to test the various hypotheses relating to profitability with other variables. The researcher noted in his conclusion that efficiency in inventory management and current assets are important to improve the profitability.
Jack Glen, Kevin Lee and Ajit Singh (2002) in their study presents time-series analyses of corporate profitability in seven leading Developing Countries (DCs) using the common methodology as the persistence of profitability (PP) studies and systematically compare the results with those for Advanced Countries (ACs). Surprisingly, both short and long term persistence of profitability for DCs is found to be lower than those for ACs. The paper concentrated on economic explanation for these findings. It also reports the results on the persistence of the two components as profitability-capital-output ratios and profit margins. These two raise important general issues of economic interpretation for persistence of profitability (pp) studies, which are outlined.

Vijayakumar (2002) in his study ‘Financial appraisal of Salem Co-operative Sugar Mills Ltd, Mohanur’ analysed the various aspects of the working of Salem Co-operative Sugar Mills Ltd, Mohanur. Financial appraisal has been studied with respect to profitability, capital structure, fixed assets and working capital. The researcher's main finding is about the Mill’s over reliance on external funds which results in interest burden. It is certain that the Mill will have better scope to function in an efficient manner if the owner's funds are increased and the borrowings are reduced.

Vijayakumar and Kadirvel (2003) studied the determinants of profitability of Indian Public Sector Manufacturing Industries-An Econometric analysis. It is evident from the results that age is the strongest determinant of profitability followed by the variables vertical integration, leverage, size, current ratio, inventory turnover ratio, operating expenses to sales ratio and growth rate. The selected variables have both positive and negative contribution in variation of profit rate. In a nutshell, it can be concluded that firms should consider all these possible determinants while considering its profitability.
Vijayakumar and Kadirvel (2003) studied the profitability and size of firm in Indian Minerals and Metals industry. Generally, it is suggested that the larger the firm may be in a position to earn a higher rate of return on its investment than the smaller firm. Similarly, a counter argument is that size breed’s inefficiency and hence profitability may decline with size of firms. Thus, they find that some theoretical arguments suggest that profitability should increase with the firm size, others suggest a negative relationship. It is in view of these contradictory suggestions, that it becomes necessary to study the relationship between size and profitability of the firms. For this purpose, Indian public sector minerals and metals industry has been selected. The study reveals that size is found to be significantly associated with the profitability during the study period. It is also evident from the analysis that size is positively associated with the profitability. Thus, larger firm may be in a position to earn higher rate of return on investment through diversification and moving into higher technology.

Zuobao Wei, Oscar Varela, Juleit D’ Souza and Kabir Hassan (2003) in ‘The financial and operating performance of China's newly privatized firms’, examine the pre- and post-privatization financial and operating performance of 208 firms privatized in China during the period 1990-97. The full sample results show significant improvements in real output, real assets and sales efficiency, and significant declines in leverage following privatization, but no significant change in profitability. Further analysis shows that privatized firms experience significant improvements in profitability compared to fully state-owned enterprises during the same period. Firms in which more than 50 per cent voting control is conveyed to private investors via privatization experience significantly greater improvements in profitability, employment, and sales efficiency compared to those that remain under the state's control. Privatization seems to work in China, especially the more private firms become successful operators.
Maninder S. Sarkaria and Shergil (2004)\textsuperscript{66} aims to test how market structure may affect performance. The study has employed model consulting determinants of both structure and profits. In order to decompose the variation performance variables like industry effect, seller concentration, market share, capacity utilization, size, leverage, skill, risk, age and capital intensity have been included in the regression models as the determinants as performance. The study results suggest that market share is positively and concentration is negatively related to performance. The industry membership has turned up to be an important determinant of firm growth.

Marcos A. M. Lima and Marcelo Resende (2004)\textsuperscript{67} in his work entitled profit margins and business cycles in the Brazilian industry: a panel data study investigates the relationship between profit margins and business cycle in the Brazilian industry during the 1992-1998 period, taking as reference a dynamic panel data model founded around a conjectural variation framework. The empirical results indicate pro-cyclical behavior of profit margins for the aggregate business cycle but are less clear in the case of sector-specific business cycle variables. Among the most robust results, one can highlight the roles of lagged profitability and import intensity and the negligible role of union density.

Bhanu (2005)\textsuperscript{68} in his paper the structural adjustment programmes and the new industrial policy adopted by the Indian government has enabled business houses to undertake the programme of expansion either by entering into a new market or through expansion in an existing market. In this context, it is found that in order to expand and grow companies in India they are increasingly resorting to merges and acquisitions. In this regard this study has identified twelve companies and proposes to examine the growth of the merged company’s vis-à-vis select one hundred thirty four companies in terms of net fixed assets and paid-up capital for the period 1990-91 to 1997-98. The study also examines the trends in profitability of the merged and
selected companies for the above-mentioned period. The study concluded that the merged companies have been more successful and profitability under all the heads examined, were higher for these companies as compared to the select companies.

RBI Bulletin (2005)\(^{69}\) in RBI study 2005 an attempt was made to study performance of private corporate Business sector During the First Half of 2004-05. The performance of non-Government non- financial improved significantly as evidenced my marked increases in sales and profit, despite a moderate increase in interest payments during first half of 2004-05. Profitability in terms of Profit margin on sales and return on sales recorded high increase in the paid-up Capital (PUC) size class Rs.25 Crore and above. Interest burden was lighter than that in the corresponding period of the pervious year. The non-Government financial companies recorded improvements in income from operations and profit after for during and over the Quarters of the first half of 2004-05.

Santanu Kumar Ghosh and Paritosh Chandra Sinha (2007)\(^{70}\) in his study can Firm’s capital structure Decision help an Investor (A Risk Averter or Risk Taker) A case study on Automobile Industry in India . The question of relevance of the capital structure in the context of Share holder’s value maximization remains unsolved as yet. In this paper the hypothesis is leverage variable can explain firm’s value maximization and the same has been tested in the context of the Automobile industries in India. Our results reveal that share holder’s returns very significantly with significant variance in firm’s dept levels. Firm are more conservative in maintenance of long-term dept to equity ratio than that of total debt to equity ratio. Increase in dept levels does not contain always good news to the investors and risk takers act differently.

Manoj Anand and Keshar Malhotrov (2007)\(^{71}\) in his study Working Capital performance of corporate in India: An attempts to develop
quantitative benchmarks at the firm and the industry level, so as to evaluate the working capital management performance of corporate India from time to time. During the period of study, Corporate India has achieved a compound Annual growth Rate (CAGR) of 26.3% in net sales and 1.6 % in the three-year average cash operating margins. The length of the operating cycle and cash conversion cycle has reduced by 10. 2% and 12.7% respectively on compounded annual basis. The paper finds very little evidence on the positive relationship between working capital management and firm profitability. The finding of the paper capture the dynamics of risk-return trade off, which will help the performance evaluation of working capital management of corporate India.

Manor Selvi .A and Vijaya Kumar.A (2007)\textsuperscript{72} in this study structure of profit rates in India automobile industries – a comparison an attempt has been made in this study to examine the trends of profit of selected Indian automobile Industries over the period from 1991-92 to 2003-04. It shows a declining trend in profitability of ten out of eighteen industries (55.55 per cent). India automobile industries studied here is a very big cause of concern. The falling tendency of profit rates of these industries is a proof of adverse effect of various control on prices, output, expansion and investment etc., extended by government on these industries over time.

Section III

Review of empirical studies on Economic Value Added (EVA)

Stern (1990)\textsuperscript{73} observed that EVA as a performance measure captures the true economic profit of an organization. EVA-based financial management and incentive compensation scheme gives manager better quality information and superior motivation to make decisions that will create the maximum shareholders’ wealth in an organization. EVA is a performance measure which is more closely linked to the creation of shareholders’ wealth
over a period of time. Accordingly, EVA should be made the focal point for financial reporting, planning and decision-making.

_**Rutledge (1993)**_ supported the concept as such. Economic value added is a phrase used by Stern Stewart & Company to describe the way to measure economic profit. The way to calculate economic profit is to subtract its cost of charge capital from after tax profits. A positive number means that an economic profit exists. Managers today are being swamped by stream of sophisticated new management concepts, each with a fancy name and its own glossary of technical terminology. The latest serving dish of this kind is EVA (Economic Value Added), Sterm Stewart and Co’s name for the old friend’s economic profit, the old Alfred Marshal concept taught everywhere in micro-economics classes.

_**Stewart (1994)**_ has expanded that EVA is a powerful new management tool that has gained worldwide recognition as the standard tool of corporate performance. EVA, presents an integrated framework of financial management and incentive compensation. The adoption of EVA system by more and more companies throughout the world clearly depicts that it provides an integrated decision-making framework, can reform energies and redirect resources to create sustainable value for companies, customers, employees, shareholders and for management.

_**Ochsner (1995)**_ brought into being that ‘Economic Value Added’ (EVA) is a performance measure that examines the company’s financial results in economic language. It also quantifies the annual constituent of free cash inflows minus total capital expenses This over 50-years old methodology is becoming popular once again because it is not an accounting-based approach, something that many managers have found unreliable. More importantly, EVA technique is making a comeback because they can gauge whether a firm is generating economic returns. This capability satisfies
investors that want companies to record such returns. In addition, EVA can be used as a tool for assessing financial performance. This performance measure also has a downside that makes it unacceptable to some managers, who include the fact that EVA uses software in computing financial results, so that managers can not actually know, how performance numbers are derived.

**Grant (1996)** found that the EVA concept may have everlastingly changed the way real profitability is measured. Pioneered by Stern Stewart Management Services in the 1980s, EVA is a financial tool that focuses on the difference between company’s after tax operating profit and its total cost of capital. A survey was conducted that examines the empirical relations between EVA and corporate valuation. Results suggest that EVA significantly bangs the Market Value Added of a firm and that this wealth effect stems from the company’s residual return on capital.

**Luber (1996)** confirmed that MVA is in compliance with the direction of the market. Studies have shown that a company which shows a positive EVA over a period of time will also have an increasing MVA while negative EVA will bring down MVA as the market loses confidence in the competence of a company to ensure a handsome return on the invested capital. The five top most companies as the wealth creators-Coke, GE, Microsoft, Merck and Philip Morris-have strong EVAs and are expected to remain in the top niche in the upcoming years.

**Banerjee (1997)** has conducted an empirical research to find the superiority of EVA over other traditional financial performance measures. Ten industries have been chosen and each industry is represented by four/five companies. ROI and EVA have been calculated for sample companies and a comparison of both has been undertaken, showing the superiority of EVA over ROI. Indian companies are gradually recognizing the importance of
EVA. Some of such companies are Ranbaxy Laboratories, Samtel India Ltd. and Infosys Technologies Ltd.

**Bacidore et al., (1997)** observed that the operating performance measures are evaluated in the context of shareholder value creation. Economic Value Added performs well in correlation with shareholder value creation. A refinement of Economic Value Added called Refined Economic Value Added, is proposed. This measure is theoretically and empirically superior in measuring a firm’s financial performance. They have observed that change in shareholder value can be fittingly depicted by applying market derived cost of capital to market value of company assets/organization value. They have described the phenomenon with the help of an improved concept termed as Refine Economic Value Added (REVA). This new concept has been defined as:

\[
\text{REVA}_t = \text{NOPAT}_t - K_w (\text{MV}_{t-1})
\]

Where,

\[
\text{MV}_{t-1} = \text{Total market value of the company’s assets at the end of the period } t-1.
\]

\[
K_w = \text{Weighted average cost of capital.}
\]

EVA is an adequate measure of shareholders’ value creation but REVA is considered a theoretically superior measure for assessing whether a firm’s operating performance is adequate from the viewpoint of compensating the firm’s financers for the risk to their capital. In a wide-ranging statistical study of both EVA and REVA, it has been demonstrated that REVA statistically outperforms EVA in its ability to predict shareholder value creation.

**Burkette and Hedley (1997)** explained that the EVA concept can be used to assess organizational performance known as economic profit, it can be
applied for profit companies, public sector organizations and non-profit organizations. EVA is being used by these entities in a variety of ways, including as a management communication base, as a measure of corporate and divisional performance, to tighten management, stockholder interests, and to emphasize the long-term benefits of industrial research and employee training. The profit can be calculated by determining the company’s cost of equity capital, the weighted average cost of the firm, the adjusted operating income, the operating income plus back expenses providing a future benefit, assets employed on a book basis, the capital investment and the difference between the readjusted operation and the capital charge.

Dodd and Chen (1997) analyzed that Economic Value Added (EVA) has been acclaimed to the most recent and exciting innovation in company performance measures. Although the popular press reports numerous stories of successful EVA adoption, there has been little empirical evidence supporting the claim that EVA is a useful measure of corporate performance. This study examines the EVA performance of 656 US companies and compares the information usefulness of EVA with accounting earnings and residual income. The authors gave three conclusions from the examination: (i) although improving EVA performance is associated with a higher stock return, the association is not as perfect as claimed by EVA advocates; (ii) EVA is more powerful than traditional measures of accounting profit in explaining stock return; however, accounting earnings are still of significant incremental information value in addition to EVA; and (iii) not only is EVA similar to residual income in concept, they are empirically comparable.

Putnam (1997) pointed out that the investors were bullish on US equities in 1995 and 1996 whereas, 1997 was a much more volatile year. In order to understand this phenomenon a framework of analysis such as EVA is extremely useful. EVA highlights five important factors to analyze the creation of shareholders’ value: Net operating profit after tax and before
interest, the weighted average cost of capital, investment in the business, the rate of return on investments, and the competitive advantage period.

**Tully (1997)** brought to book EVA as a method for understanding as to what is happening to the financial performance of an organization. The paper presents the method for calculating EVA and also shows some pictorial presentations of EVAs of several companies like Bajaj Auto, Asian Paints, Procter and Gamble (India) Ltd., Siemens India. It has been concluded that EVA can be a better financial performance evaluation measure than other traditional measures.

**Ethiraj (1998)** derived that in Indian market many companies are using capital inefficiently and thus destroying value. The tool to measure capital efficacy and economic value is Economic Value Added. Taking EVA as a tool of financial performance HLL and ITC stand at the top of the list. Also important is the relation between EVA and total operating capital employed (assets). This would show how much value the company has generated in relation to the assets it has deployed. It is argued that stock prices move up as a company adopts EVA as an internal performance criterion.

**KPMG-BS Study (1998)** assessed top 100 companies on EVA, sales, PAT and MVA criteria. The survey has used the BS-1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period 1996-97. Sixty companies have been found able to create positive shareholder value whereas 38 companies have been found to destroy it. Accounting numbers have failed to capture shareholder value creation or destruction as per the findings of the study. 24 companies have destroyed shareholder value by reporting negative MVA.

**Anand et al., (1999)** revealed that EVA, REVA (Refined Economic Value Added) and MVA are better measures of business performance than
NOPAT and EPS in terms of shareholders' value creation and competitive advantage of a firm. Since conventional management compensation systems emphasize sales/asset growth at expense of profitability and shareholders' value. Thus, EVA is a measure that shifts focus on an organizational culture of concern for value.

Bao and Bao (1999)\textsuperscript{88} revealed the association between EVA and the value of the Indian firms, which are included in the COMPUSAT-Global Vantage database. The results of the study show that the EVA is positively and significantly correlated with the firm value. The results are consistent with the theory in that firms with EVA created value and firms with higher created value have higher stock prices. The study also reveals that explanatory power of EVA is lower than that of earnings and book value of firms under consideration.

Harihar (1999)\textsuperscript{89} highlighted some myths regarding EVA. According to the author, Stern and Stewart were not the founders of EVA concept; rather it was first propounded by General Motors in early 1920's. Further, EVA calculations are not simple and need a lot of adjustments in the financial books. The author is also of the view that EVA can not be used for comparison among companies of different industries. The next myth is that EVA figures can be manipulated to suit the needs of management. The last and most dangerous myth discussed is that the high EVA companies are cash rich. For looking at cash adequacy another measure called CVA (Cash Value Added) can be used.

Thenmozhie (1999)\textsuperscript{90} explained the concept of EVA and compared it with some other traditional measure of corporate performance viz. ROI, EPS, RONW, ROE, ROCE, etc. He used the coefficient of determination to demonstrate that the traditional measures do not reflect the real value of the shareholders, and thus EVA has to be taken into account to measure the value
of shareholders' wealth. He has also described the concept of EVA in the Indian scenario with specific reference to companies like NIIT, Hindustan Lever and ITC. Thenmozhiie has referred to some of the shortcomings of the concept of EVA but maintains that EVA is a better measure of corporate performance as compared to the traditional measures.

Banerjee (2000) attempted to find out whether Stewart's claim that market value of a company is equal to the discounted value of all future EVAs, holds good in the Indian context or not. For the purpose of the study the researcher selected a sample of 200 companies over a time span of four years (1994-95 to 1997-98). According to him, market value of firm is the function of two components viz., Current Operational Value (COV) and Future Growth Value (FGV). COV is equal to the book value of beginning invested capital plus the capitalized value of current year EVA, where as FGV represents the present value of all future expected future improvements. Based on the analysis of his data he comes to the conclusion that in many cases there is a considerable divergence between MVA and the sum total of COV and FGV.

Parasuram (2000) discussed the EVA position of 14 major public sector banks, 7 new private sector banks, 5 old private sector banks and 2 foreign banks. Among the strength indicators, deposit, return on assets, interest income as a percentage of total assets, interest yield spread as a percentage of total assets and EVA were considered. The study concludes that EVA is an important measure to judge a bank performance in view of the current scenario of banks. EVA has been found to have a high degree of correlation with ROA but not with any of the other measures. It signifies a fact that banks realize the importance of measuring EVA separately even if they do well on other fields.

Thampy and Beheli (2001) studied the economic profits of commercial banks in the public and private sectors during 1990s. It also
moves the benchmark of performance of banks from accounting profits to economic profits and shareholder wealth creation. The study has been restricted to 12 commercial banks consisting of 4 public and 8 private sector banks. The period covered under the study is three years starting from 1995-96 to 1997-98. Beta has been calculated on the basis of daily stock prices data with Bombay Stock Exchanges BSE 200 index returns during January 1, 1997 to March 31, 1998 as the proxy for the market returns. The study shows that the performances of the Indian banks as measured by EVA is not very satisfactory. The results of the study reveal that the commercial banks under consideration have not created any positive EVA due to: (a) banks could be overcapitalized and (b) returns are very poor from banking business.

Riceman, et al (2002) argued that the EVA is a performance measure that is being used by an increasing number of companies, but academic research on EVA is limited. In this study, researchers examined the effect of EVA on the performance of individual managers. Specifically, researchers observed whether managers on EVA-based bonus plans outperform managers on traditional accounting-based bonus plans. The results suggest that managers on EVA bonus plans who understand the EVA concept perform better than managers on traditional bonus plans. However, it is found that the increase in performance results from increased consistency or congruency in the manager's evaluation-reward process rather than from superiority of EVA as a performance measure. It is further established that the effect of EVA bonuses and EVA understanding differs depending on the area of the firm in which the manager is employed. This suggests that EVA may not be an universally appropriate base for reward systems.

Costigan and Linda (2002) observed that the EVA is a new measure of performance that is purported to better align managers’ incentives to that of the shareholders. Accordingly, firms that experience higher agency conflicts should be more included to use this performance evaluation system.
Additionally, the organizational strategy of the firm should influence the likelihood of employing EVA. One hundred and fifteen firms were identified as being adopters of EVA. Logistic regression was performed to contrast these firms to a control group of 1,271 non-adopters. The results indicate that firms using EVA exhibit a percentage of institutional ownership and a lower percentage of insider ownership than non-adopters. Prospector firms as defined by a higher ratio of research and development to sales tend to use EVA less than defender firms. Accounting adjustments are a focal point of the EVA formulation and the results presented in this study suggest that providing appropriate incentives may be more complex than the developers of EVA imply.

Mangala and Simpy (2002) discussed that maximizing shareholder value had become the new corporate paradigm. Although shareholder’s wealth maximization has been recognized by managers and researchers as the ultimate corporate goal, the maximum has gained a new dimension only in the recent years, due to the introduction of the concept of EVA. EVA is the most important driver influencing the market value of a share. So, if the company improves EVA by increasing its return on capital employed and lowering its cost of capital, its market value will increase. The study attempts to study the relationship between EVA and market value among various companies in India. The EVA of 15 companies among five industries (Fast Moving Consumer Good, Information Technology, Pharma, Automobile, Textile) has been computed. The results of the analysis confirm Stern’s hypothesis and conclude that the company’s current operational value (COV) is more significant in contributing to a change in market value of shares in Indian context.

Bhata and Dayal BhatNagar (2003) in their study started that EVA cannot be used for comparison among companies of different industries. EVA figures can be manipulated to suit the needs of management. The last and
most dangerous myth discussed is that the high EVA companies are cash rich. The author positive EVA figures do not ensure high financial performance. A new variable formed as EVAPRI (Economic Value Added Per Rupee of Investment) has been calculated by dividing the EVA figure by the invested capital of the previous year.

$$\text{EVAPRI} = \frac{\text{EVA}_t}{\text{Invested Capital}_{(t-1)}}$$

It was considered proper to contemplate on a relative measure of EVA so that all companies in an industry could be viewed from a common platform, while comparing their respective EVA. The above results, industry wise standard deviations for EVA and EVAPRI were also computed. As expected, the distribution for EVAPRI was found to be much less dispersed in all industry groups as compared to EVA.

Shaveta Gupta (2007) in his study value based performance Management: Creating value for shareholders. The basic objective of every organization is to create value for its owners. It must strive to at least provide dividend in the form of returns to those who have invested their money and expect a reward for such investment. If the companies are successful in generating value, then not only are the investor but also the society at large is benefited. It is the pursuit of value that directs the resources to be utilized optimally and productively. To assess the company’s worth, not only the resource utilization but also the external performance systems. A distinct economic evaluation methodology is to be applied to the different operations of a company. A few of such innovations are Economic value Added (MVA) and value scorecard.

Manor Selvi. and Vijaya Kumar.A (2007) studied the performance of Indian Automobile industry : Economic Value Added (EVA) approach as maximizing shareholders value is becoming the new corporate standard in
India. The company has been successfully able to create value for its shareholders on comparing industry wise composite frequencies for EVA for all years, it was found that there has been a significant increasing trend in EVA of the Automobile Industry firms which means that companies have a positive trend to improve their firms value. A majority of the companies are still not prepared to enjoy the EVA technique to evaluate their financial performance because of certain inherent difficulties associated with the computation.

Vijaya Kumar.A and Manor Selvi.A. (2008) the present study makes an attempt to find the relevance of Stem and Stewart’s claim and the hypothesis that MVA of the firm is largely positive associated with its EVA generating capacity in Indian context. The study also portray the temperament of association between MVA and other selected traditional financial variables like Earning Per Share (EPS), Return On Capital Employed (ROCE), Net Operating Profit After Tax (NOPAT) and Return On Net Worth (RONW). The result of the study reveals that supporting Stem and Stewart’s claim positively associates the relationship between MVA and EVA. Further, the results revealed ROCE as the most significant related variable with MVA followed by EPS and EVA. The study concludes that EVA and MVA itself positions in an appearance as the most outstanding factors in the definitive analysis as having a decisive on a firm’s value.

Section IV
Research Gap

From the above review of empirical works it is clear that different authors have approached performance appraisal in different ways in varying level of analysis. These different approaches helped in the emergence of more and more literature on the subject over time. It gives an idea on extensive and diversified works on performance appraisal. It has been noticed that the studies
on financial performance in various sectors provide divergent results over the study period. The main reason for the divergence in the results is the different in the method used for the measurement of factors specially profitability, solvency, liquidity, asset productivity, capital structure and growth rate in the operating performance and social performance all the studies aimed to analyse the financial performance in Indian industries with number of factors. Very few studies appeared which used economic value added (EVA) to explore the financial performance of the industries.

From the synoptic appraisal of afore mentioned findings on economic value added, it is evidently clear that the concept has originally emerged in the west and later turns out to be time-honored across the world. Many researchers have applied sophisticated econometric tools for accessing the impact of EVA concept on corporate financial performance. Starting from stern (1990) to Bhata et al., (2003) it may be revealed that Indian researchers started contributing to this field in 1997. In the beginning, the researcher wrote on the conceptual aspects of EVA but later some empirical studies hare also been accomplished. However, as a mater of chance, no study has been conducted at such a colossal extent in India and therefore, to conduct a study of automobiles companies for the period of 11 years. There is no denying fact that early researchers have made valuable contribution, yet their work had some specific restraints particularly relating to the raw data and its computational course of action. The present study is an attempt to offer a detailed examination of the EVA with special reference to Indian automobile industry.

It has been noticed that review of empirical works on profitability gives an idea on extensive and diversed works on profitability. It facilitates to understand the various structural and non-structural variables that determine profitability. It has been noticed that studies on the profitability analysis in various industries used the variables like seller’s concentration advertising
intensity, economics of scale, leverage, profit variability, firm growth and size. In the late 1990’s few studies appeared which used the quantum of sales, return on investment and appropriation of profits to explore the profit variation of the manufacturing industries. Researchers have verified and extended the results over the years.

The survey of the existing literature indicates that so far no specific work has been carried out to examine the financial appraisal of Indian automobile industry in the manufacturing sector, although the performance of such a study can not be underestimated, the present study is an attempt in this direction and therefore, aims to enrich the literature of financial performance relating to Indian automobile industry. Further, this study is intended to employ different sophisticated statistical and economic techniques before qualifying any aspects of performance appraisal for wider acceptability and appreciation. The present study is a humble attempt in this regard.

From the above discussion, it is clear that the different authors including economists, financial theorists, management scientists and practicing business executives have approached performance appraisal in different ways and at varying level of analysis. Though there are various approaches, only a few of them can be considered in this study. The approaches that are included in the study cover analysis of important profitability ratios, analysis of profitability trends, determinants of profitability, analysis of financial position, measuring the long-term and short-term solvency and economic value added analysis in the Indian automobile industry.


analysis, ESRC Center for Business Research, University of Cambridge, Working paper No. 248.


