Chapter 5

Statement of Problem and Review of Literature

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Statement of Problem and Review of Literature

5.1 Introduction:
The antecedent chapter dealt with Mergers and Acquisitions (M&A's) in the global economy and analyzed the deals that have taken place in the international arena in various sectors. Its growth as a tool for development and expansion is evident by the recent trend examined by the Researcher. In the present Chapter the statement of problem and issues relating to the thesis are stated. It is followed by a critical review of various literatures available on Mergers and Acquisitions (M&A's). The Researcher has reviewed research papers, books and thesis dating from 1972 to 2010 for the purpose to provide an insight in to the work related to Mergers and Acquisitions (M&A's). An attempt has been made to make a critical review of the available literature in order to trace the research gap and design the study for the thesis.

5.2 Statement of Problems and Issues

5.2.1 Statement of Problem
The study under investigation here is related to analyzing the profitability of Mergers and Acquisitions (M&A's) of Indian Steel Industry since Liberalization. Also the Researcher makes an attempt here to investigate the impact of the merger on the profitability of the merger. It is seen whether the merger undertaken is in the interest of the parties involved that is the shareholders, management, employees, creditors etc. of both the target and bidder firms.

5.2.2 Issues
a. Synoptic view of Mergers and Acquisitions (M&A's):
Sector-wise analysis of Mergers and Acquisitions (M&A's) in the international and domestic arena is made to develop an understanding of the ongoing trend in the global and domestic arena.
b. Indian Steel Industry:
A brief study of the Indian Steel Industry is made in terms of growth and development and a synoptic view of major Mergers and Acquisitions (M&A's) is made.

c. Post Merger Valuation:
The major issue this thesis deals with is the effect of the merger and its measurement in terms of the post merger financial performance. The Researcher makes an attempt to identify the effect of the merger on the performance of the companies involved in order to establish the viability of the merger.

d. Identifying the Variables Effected by the Merger:
Various statistical and accounting techniques are employed to calculate various variables and statistics related to the company and an attempt is made to find out the effect of the merger on them.

e. Identifying the Cause for Movement in Figures:
Another issue dealt with in the thesis is yearly analysis of the movement in figures and studying them in the light of both macro and micro factors.

f. Impact of Recession
A major issue faced is the financial crisis which hit the world economy in the year 2007 and had a deep impact on the Mergers and Acquisitions (M&A's) worldwide and also the valuations and post merger profitability of firms where operation were affected more by the macro factors than the micro factors.

The year 2007 was marked by a global financial crisis which started due to the sub-prime mortgage crisis in the United States of America and later caused a severe liquidity and credit crisis adversely impacting almost all the major economies of the world. However it did not have a major impact on the number of M&A's deals affected in the financial Year 2007 which amounted to $1637 billion which was 21 percent higher than the previous record which was set in 2000. As a matter of fact the latter half of 2007 witnessed the $98 billion acquisition of ABN-AMRO Holding NV by the consortium of Royal Bank of Scotland, Fortis, and Satander which was the largest deal in banking industry at that time and the acquisition of Alcan (Canada) by Rio Tinto (United Kingdom). Despite the environment of uncertainty and fear prevailing in the economic sector it is worth noting that FDI inflows in developing countries surged by 33 percent in 2007 to reach $1248 which was another world record. Also, the United States continued to be the world’s largest FDI recipient country. In the European Union there was a fresh wave of M&A's due to the
revamping exercise which took place in the enlarged European Union market. However the global financial crisis is having its toll on FDI with M&A's in the first half of 2008 slowing down as compared to the latter of 2007. From the Indian perspective the growth rate is shrinking today. While it averaged 8.8 percent in the past five years a negative growth rate of 1.5 percent was recorded for February, 2009 although it was over 9 percent during the previous year. The movement of the BSE Sensex was also between 8000 to 10000 points which is symbolic of the weakness of the Indian markets. The status of FDI’s was indeed the surprise factor with it being not influenced much by the economic turmoil. As a matter of fact FDI for the year ending March 2009 was at US $ 27309 million which was 11 percent increase over previous year. The withdrawal of FII’s severely affected our fore reserves. However, one can safely say that the fundamentals of Indian economy have shown resistance due to which the global financial crisis has not crippled our economy as it has done many other world economies. A tight monetary policy was pursued as a result of that which eventually dried domestic liquidity and firms had look for external financing which had an adverse impact due to the prevalent financial turmoil and depreciation of Indian rupee. Though the bank rates have been cut considerably, a lot more is desirable to be done in this field keeping into account the depth of the crisis.

5.3 Chronological Review of Literature

Shick, Richard A. (1972) worked on a paper whose main purpose was to determine if mergers and acquisitions increase return on investment for the shareholders of acquiring firms for which an equation is formulated. Samples of chemical industry are taken for the analysis. He also questioned earlier works that stated mergers do not create value for shareholders. Though the sample size is relatively small for evaluating mergers in general, results indicate that success or failure of mergers was immediate and fairly constant and that this merger evaluation technique can be successfully employed. Aaronovitch, Sam and Sawyer, Malcolm C. (1975) studied in their paper the impact of mergers on growth and concentration of firms and attempted to find the relation between the size of firms and acquisition intensity and also whether acquisition activity by firms persists through time. The authors suggested that for concentration purposes the dynamic aspect should be considered
along with the static aspect. The findings of the study were that acquisition contributed to the growth only marginally. There was no trade-off between internal and external growth and also found that large firms had better survival record than smaller firms. Also it was found that growth was not systematically related to growth. However, the study has been drawn from a study of a sample for a particular period and cannot be applied generally and especially in today’s circumstances. Attempts have been made previously to evaluate the effects of mergers but suffer from shortcomings. Honeycutt, T. Crawford (1975)\(^6\) mentioned the Lev and Mandelkar’s (L&M) attempt to highlight corporate mergers effect upon various aspects of a firm’s performance by using a paired sample technique, pairing merging firms with control firms that are non-merging but are of identical size and within same industry but the conditions of pure competition that are assumed seldom exist indicating that that the LM samples were poorly selected where only 18 out of 62 met requirements. Other contradictions were also reported and it can be seen that the observed results of the study are not conclusive.

Nagaraj, K. (1977)\(^7\) made a study of issues related to iron and steel production in India. India’s competency in producing iron and steel is highlighted where all vital raw materials are available in abundance. An analysis of the five year plans is made to scrutinize government policy towards steel and also the rationale behind keeping steel under public sector as it required heavy capital investment. However, the public sector instead of becoming an exchequer to the government ran into financial losses and became a burden instead which paved the way for the growth of private sector. The production and growth in demand for steel during the period was analyzed and the impact of the worldwide recessionary trend was also examined. However, the study is dated a long period back and various changes have been incorporated since then and its relevance is questionable. Firth, Michael (1979)\(^8\), examined the profitability of recent takeover and mergers using an efficient market theory framework. Conflicting earlier works the author found that there were no gains associated with takeovers and there was actually a very small loss incurred in the period 1972-4. The stock market reactions were generally correct and needed no corrections on an average. The study found that takeovers were generally were for growth purposes. It also found that acquired firms earned huge profits which were set off by the losses made by the acquiring firms and the premium paid was a major determinant for that. Also maximizing the management utility was found to be a major objective behind
takeovers. However, lots of conflicts with earlier works are found here and this study cannot be relied in totality. Yeager, Mary A. (1980) discussed trade protection which is granted as a subsidy and a protection measure to an industry. It is a common phenomenon for USA and American Steel Industry depicts the mechanism for the application of trade protection as a commodity input into Steel Industry. Protection is viewed as a ‘commodity input in the production of steel’ and a vital factor in the ever changing national and international economy. In the post-war era steel was viewed as a priority sector for empowering self-sustained growth and trade protection was vital to compete in the international market. However the relevance of the study in the present arena is questionable where tariffs and protection measures employed by countries are a burning issue with the failure of the WTO talks. The increasing growth and stature of developing countries like India and China has forced the developed countries to re-think their strategies towards providing heavy subsidies and protection to its domestic industries.

Shughart II, William F. and Tollison, Robert D (1984) prepared a paper by using annual data on US mergers from 1895 to 1979. Though the sample size is small it was earlier deduced from the same data that mergers occur in ‘waves’ but this study fails to reject the hypotheses that merger levels are characterized by a white-noise process or by a stable first-order autoregressive scheme. However the authors accept the various limitations and assumptions.

Jemison, David B. and Sitkin, Sim B (1986) in their paper suggested that choice perspective be supplemented with a process perspective according to which acquisition process itself is a critical factor determining acquisition activities and outcomes. According to them attention should be focused on acquisition process which is discontinuous and fractionated and it re-enforces four impediments, i.e. activity segmentation, escalating momentum, expectational ambiguity and management system misapplication. The paper focuses on acquisition process prior to the merger but overlooks the post-merger implications.

Polonchek, John A. and Sushka Marie E. (1987) viewed mergers as an outcome of a firm’s capital budgeting process where the two explanatory variables are 1) cost of capital and related financial effects 2) output effects. A model on merger activity is developed by integrating the literature on aggregate investment in fixed capital into a micro-finance framework. The results from the model indicate that mergers pattern is considerably affected by economic activity and financial conditions. They also
emphasized that conglomerate boom of merger activity in 1967-9 was in line with merger behavior during the remaining of the period. However financial and economic reasons do not alone determine the level of merger activity. Lubatkin, Michael, and O'Neill, Hugh M. (1987) examined the relation between merging firms and risk components by dividing 297 mergers into four relatedness categories and three measures of risk- unsystematic, systematic and total. They claimed that mergers can be used as a tool to reduce external risks but the reasons attributed to it are not true. They used various statistical tools in their research and found that despite the relatedness of the mergers, unsystematic risk for the acquiring firm increase post-merger. They noted a considerable decrease in systematic risk in case of related mergers. Also single, unrelated and vertical mergers were found to be not associated with minor decrease in total risk. They concluded that mergers are closely related with increased levels of systematic and total risk and are strongly influenced by market conditions. However their study suffers from various statistical limitations where various characteristics and conditions of merging firms are ignored. Nahavandi, Afsaneh and Malekzadeh, Ali R (1988) presented a model which focused on process of adaptation and acculturation in M&A. They observed that the degree of congruence between acquirer and acquired organization’s preferred modes of acculturation will affect the level of acculturation stress. They even proposed an interdisciplinary model of planning and implementation of mergers as a strategic alternative. However the model explores only three variables and more theoretical exploration is required. Davidson III, Wallace N. et al. (1989) did a study that re-examined the revaluation of shares surrounding the cancellation of mergers over the years 1976-85. They concluded that the revaluation that Dodd (1980) found disappears when target firms do not get engaged in consequent mergers but they do persist when targets take part in subsequent mergers irrespective whichever party cancels the merger. However, if the mergers are cancelled by a party other than target/bidder firms there is no permanent share revaluation as these firms are not involved in subsequent mergers. Also bidders generally do not gain from mergers that fail. The paper concentrates on failed mergers and not profitability of mergers. Trautwein, Friedrich (1990) surveyed theories of merger motives and divided them in to seven groups. He attempted to order them according to plausibility and consistence with the evidence. He suggested that merger motives be viewed in the framework of decision processes, conflicting goals and ambiguous private
information. The importance of capital market efficiency theory was highlighted and the study was based on actual performance rather than stock market studies. However the validity of efficiency theory and merger prescriptions is debatable.

Slusky, Alexander R. and Caves, Richard E. (1991)\(^7\), tested the value created by mergers on premia paid in a sample of 100 recent acquisitions. They analyzed the determinants which were responsible for creation of value in mergers, i.e. real and financial synergies, behavior of managers in both target and acquiring firm, arbitrage between real and financial assets. The evidence indicated that there was no evidence of real synergies, some evidence of arbitrage and clearly significant effects of both agency and financial synergy. Statistical limitations however do exist.

Vithala, R. Rao. (1991)\(^8\) dealt with the recent spurt in M&A activity in USA which has created a situation where firms are looking to identify complementary firms to carry out expansion and diversification plans. Based on Farquhar and Rao, Balance Model an attempt is made to evaluate and screen the potential acquisition partners using experimental methods where the context of the cosmetic industry is taken for the application of the model. They concluded that the balance model is quite appropriate for taking decisions related to acquisition, multi-firm acquisitions and evaluating the role and impact of brand strength in acquisition/divestment. According to them, the success of a merger depends to a large extent on the balance between the merging partners. However, the model was tested in a limited manner and there is scope to test it further. Due to complex nature of each merger its predictions cannot be generalized. Evaluation of post-merger profitability is absent. Levy, Haim (1991)\(^9\) talked about the CAPM and GCAPM model for explaining synergies from mergers. As per the CAPM model all the investors hold risky assets, the mean return should not be related to the size of the firm and the risk premium should not be related to the specific risk of the firm and the value additivity principle holds. The fourth implication is harder to test. The GCAPM suggest about the breakdown in the value additivity which explains Mergers and Acquisitions (M&A's). It further suggests that profits may become negative in the case of additional mergers if they are continued beyond a certain limit. Also small firms earn an abnormal profit. These results are not in sync with what is predicted by the CAPM model. The paper concludes that that Mergers and Acquisitions (M&A's) in general can be explained by GCAPM and economies of scale in production do not characterize the conglomerate merger waves. However the assumptions undertaken in the model may not be always applicable in the real market.
Mcguckin, Robert H. (1992) studied the effect of horizontal merger by analyzing the share prices of the rivals to the merging firms. For the purpose a standard market model is developed and it is found that the merger premium for rivals is much less than that for the merging firms. However the study relies on mainly market data and information which is ambiguous and cannot be relied on. Also the study cannot be used in cases where the merged firm has no rivals. There is a scope to use other options like bond, options and future prices too. Agrawal, Anup. et al. (1992) attempted to investigate the post-merger performance of acquiring firms using a virtually comprehensive sample of mergers between NYSE acquirers and NYSE/AMEX targets and it is found that stockholder’s of acquiring firms suffer a loss of 10 percent which is statistically significant. The study also reveals that the firm size effect and beta estimation are not the cause of the negative post-merger returns. A hypothesis is also assumed to find whether this result is caused by a slow adjustment of the market to the merger event but the results do not support the hypothesis. However the reasons leading to the wealth loss are not studies in this paper. Schumann, Lawrence (1993) examined the impact of the announcement of the mergers on stock prices and suggested that it is difficult to identify the source of gains accruing to the target and bidder firms. Abnormal stock returns of the firms which undertook horizontal mergers and their rivals were examined. A study is made of the mergers challenged by the Federal Trade Commission over the period 1987-89. It examines and questions the effect of such mergers in mitigating the competition as according to the Researcher abnormal returns on an average are earned by the rivals when the announcement of the merger is made. Also the anti-trust complaints on the smaller and larger rivals are scrutinized and it is suggested that the abnormal returns might be causing higher prices. According to the Researcher, the results do not support the view that the challenged mergers were anti-competitive and the federal anti-trust authorities generally challenge the horizontal mergers which would enhance competition and lead to lower prices. According to the research paper the abnormal returns of an anti-competitive merger is positive at the time of merger announcement and negative in anti-trust challenge. In case of efficiency enhancing merger, the pattern is difficult to determine. Efficiency that occurs as a result of the merger may lower the prices and enhance the competition and it may also result in a situation where major players merger to form a cartel of sort leading to higher prices.
Achampong, Francis. K and Zemedkun, Wold (1995) in their paper discussed the interest of the management in a merger decision and makes a study of the various factors influencing it for which non-parametric statistical tools are used. It further elaborates that personal interest might also play a part and this aspect is explored ethically in the light of various theories. It is suggested that as mergers dilute the internal ownership it benefits the management as they can greater control and use the finances as pleases them. Various ethical theories are provided to provide guidelines on the basis of which a decision related to a merger should be taken by the mergers to protect the interest of the shareholders. The managers should not base their decision for personal gains under the pretence of ignorance. The study shows that self-interest plays a critical role and ethical theories can be used as a basis. However these cannot be forced on the management as it is a matter related to conscience, values and principles and it is difficult to keep a check or frame a legal framework for the same.

Lee, Kyungmook. and Pennings, Johannes M. (1996) said in their paper that resource complementarity and organizational compatibility are vital factors affecting M&A outcomes. They analyzed 461 M&A's in the history of Dutch Accounting Industry during the period 1880-1990 and focused on two classes of events following M&A's-organizational dissolution and involvement in subsequent M&As, with the firm continuance following the M&A as the "non-event." They analyzed both the acquiring and acquired firm and mainly focused on the survival of the created firm. They concluded that compatibility is not associated with the dissolution rate but related to the probability that the firm will engage in additional M&A's. According to them for finding a strategic fit it is imperative to find complementary partners or firms with which it would be profitable to integrate and would also permit full utilization of resources. Undertaking future acquisitions can always not be a cited as a reason for determining whether a Mergers and Acquisitions (M&A's) is compatible or not. Also the study is based on a single industry and cannot be generalized. Also the study does not undertake financial appraisal to determine merger success.

Lubatkin, Michael. et al. (1998) took the case of firms of Britain and France to analyze the concept of administrative approach as reflected in the four integrating mechanism, i.e. structural, systems, social and managerial. In cross border mergers the administrative approach was reminiscent of respective national heritages. They concentrated on studying the influences that administrative heritage has on the integrative mechanisms used in domestic and cross-national mergers. They concluded
that the acquiring firms were generally stable in their policy making and made both strategic and resource decision centrally or allow their subsidiaries complete latitude. A suggestion is made to establish a transnational network which would link headquarters and subsidiaries in an asymmetrical integrative mechanism. However the study is conservative in context with the global environment where mergers are becoming increasingly popular as it is based on two nations only, i.e. Britain and France. Also implementation costs of administrative heritage and influence of these costs are ignored. **Barnes Paul (1998)** attempted to make a foray in predicting and identifying takeover targets. He took cue from cases in UK and USA where takeover targets are chosen and forecasted by employing methods like bankruptcy position. According to him published accounting data alone or along with share price changes would not serve the purpose of effective forecasting. He concluded that his study supported efficient capital market hypothesis. This paper is mainly based on the predictive accuracies of the model but the results showed that takeover targets could not be predicted. **Fluck, Zsuzsanna and Lynch, Anthony W. (1999)** examined a recent trend where there is a tendency by firms to divest post-merger and it is noted that these firms performance is satisfactory in the interim period. A theory and model of mergers and divestiture is prepared to explain the said phenomenon in creation of value-increasing mergers. Also it demonstrates merging as a technology that allows marginally profitable projects to be undertaken and finds no diversification benefits associated with merger. It predicts that conglomerations which is undertaken to utilize financial synergies increases in situations when profitability is low and when managers at helm are in total control. However changes occurring in different business cycles are difficult to predict. The theory is applicable in situations of financial stress and those facing managerial problem and cannot be universally applied. **Komoto, Keisho (1999)** examined the increasing trend in mergers and acquisitions in 1999 and explored the post-merger results through Return on Assets (ROA) and equity ratios for analyzing earnings and financial conditions respectively. The financial statements of listed companies in a particular industry based on Tokyo Stock Exchange’s 33-industry classification were used to find industry indicators for calculating the pre-merger and post-merger values. They found that mergers do not have a significant impact on business performance and effect on stock prices fluctuates depending on the industry involved. However, due to small sample size their results cannot be statistically verified.
Walker, M. Mark (2000) investigated the impact of corporate strategy on the acquiring firm’s shareholders by examining a sample acquisitions between January 1, 1980 and December 30, 1996. The results of the study were that acquiring firm’s shareholders earn higher returns following cash offers and in takeovers that expand the firms operations geographically or increase its market share. However there was no evidence to support whether acquiring firms consistently gain a strategic advantage over rival firms. He suggested that acquiring firms managers should carefully consider the amount and mode through which premium is paid and also contemplate about alternatives to corporate takeovers. The interests of the acquired firms’ shareholders are not taken into account though.

Kang, N and S. Johansson (2000) analyzed the recent trends, both inward and outward in Mergers and Acquisitions in various developed and developing countries especially in OECD countries across various sectors and industries such as the automotive, telecommunications, steel, oil and gas, and pharmaceuticals and also stressed on various factors which led to a spurt in M&A’s that increased six fold during the period 1991-98. M&A’s popularity as a direct mode of investment over other modes like greenfield investment is due to various factors at the macro level, industry level, firm level, technology related and government related. They further pointed that, “However, the main driver of M&A’s in place of greenfield investment is the need to acquire complementary intangible assets –technology, human resources, brand names, etc.” It concludes that an efficiently structured merger leads to improved performance and efficiency of both host and home countries and also the individual firms involved. However the business environment surrounding mergers and acquisitions plays a crucial role in the success of M&A’s. The financial performance of the firms involved is however not analyzed. It is the trends which are examined in detail. Kumar, Nagesh. (2000) recognized the growing importance and role of Mergers and Acquisitions (M&A’s) in industrial restructuring and FDI all over the world which is one of the major reasons for the recent boom in M&A activity. He made an attempt to explore the M&A’s in Indian Corporate sector associated with foreign MNE’s and their Indian affiliates for the period April 1993 to mid February, 2000 to analyze the industrial composition and motives behind the deals. Liberalization of FDI policies is cited as a major factor for the enhanced volume of M&A’s. It is found that the majority of deals were in the manufacturing sector and a rapid growth is being registered in the service sector. The mergers are found to be
predominantly horizontal in nature. The nature of study is however, mainly descriptive where the policies, framework and environment surrounding M&A’s are studied. Evaluation of mergers in terms of synergies and value created as a result of the merger is not done. Ghosh, Aloke and Lee, Chi-Wen Jevons (2000)\textsuperscript{32} examined the association between abnormal returns and expected managerial performance of target firms and found that there are alternative motives behind acquisition. They analyzed a sample of 338 target firms and found that investors are more optimistic about disciplinary rather than non-disciplinary acquisitions. Agency theory suggests that economic gains/abnormal returns from disciplinary acquisitions will be higher when target firms have agency problems. They concluded that target firms with high abnormal returns are primarily acquired to discipline target firms. The gains available to shareholder are analyzed but the financial performance of the firm after the merger is not studied.

Lyons, Bruce. R (2001)\textsuperscript{33} reviewed the success of mergers as a corporate strategy and for the purpose a framework was designed to explain the concept of profit decrease in horizontal mergers due to exogenous increase in competition. It is also stressed that in case of unprofitable situations, mergers are a preferable mode of exit. It is suggested that the major aim of the competition policy should be the welfare of customers and not providing management consultancy from the funds of the shareholders. However the study is limited to horizontal mergers, a particular kind of market structure. The post-merger synergies and other issues and complications arising after the merger are not dealt with over here.

Ahuwalia, Montek. S. (2002)\textsuperscript{34} analyzed the economic reforms of 1991 which were a necessity in the wake of balance of payment crisis that pushed India towards being an open economy and eventually made it the fastest growing economy of the world. Implications of Industrial Policy 1991, Trade Policy, Infrastructure Development, financial Reforms etc are explored. He feels that though the reforms were formulated in a broad perspective absence of labor market reforms is felt. Liberalization measures in agriculture are advocated. Areas where reforms have not yielded the desired results are highlighted and suggestions are made towards the same. However the study is devoid of a comprehensive and clear cut mechanism for successful implementation of reforms in core sectors. Lall, Sanjay (2002)\textsuperscript{35} discussed the growing popularity of Mergers and Acquisitions (M&A’s) as a strategic tool in investing overseas. It is now majorly responsible for bulk of FDI in developed world and increasing shares in
developing world. The paper attempts to investigate the associated economic costs and benefits. According to the author, FDI and Mergers and Acquisitions (M&A's) are propelled by identical factors like technology, globalization, competition, liberalization etc. in the comparative analysis made in the paper the author opines that Mergers and Acquisitions (M&A's) are superior to FDI as an investment tool. However the paper mainly focuses on theoretical analysis involving the advantages and disadvantages surrounding Mergers and Acquisitions (M&A's) and FDI and there is no analysis or comparison on the basis of value or synergies created after the merger.

Brito, Duarte (2002)\textsuperscript{36} in his paper discussed the welfare impact of a merger and promoted the use of complementary entry analysis by authorities for evaluating mergers. The purpose is to impress upon the fact that besides the post-merger impact study, the viability of the merger should be evaluated and also merger as a mode of entry, should be compared to other alternatives especially in issues relating to competitive firms. The main idea is to enable the authorities to have first-hand information about cost reductions to take a decision on efficiencies on the basis of which the decision to reject or accept a merger can be undertaken as the firms might exaggerate the value of the proposed cost reductions unduly. For the purpose a model is developed and the Researcher concludes that in the task of calculating the profitability of the merger, an analysis is required to measure the efficiency gains involved. The two important considerations are the number of insiders and the cost reductions involved. An input is provided here to the authorities to use this model for the purpose of maximising customer's surplus and ensuring maximum welfare. However it is to be noted that when a merger is undertaken, the authorities do not evaluate them only on the basis of cost reductions and other economics involved. The level of priority of goods concerned, nation's security, trade policy, foreign policy etc. are various other determinants employed while rejecting or accepting a merger proposal. Erard, Brian and Schaller, Huntley (2002) \textsuperscript{37}opined that regarding various issues related to M&A no optimizing model has been prepared yet. In this paper they prepared a model to link a firm's acquisition activities to its investment choices. A sample of 503 firms is taken and based on standard assumption, a theoretical framework is developed which predicts that both investment and acquisitions are positively related to firm's shadow value of capital. Investment and acquisitions are studied as a mode but post-merger analysis is not done. Mazumder,
S Mitra and Ghoshal, T (2003) in their paper talk about the various challenges faced by the Indian Steel Industry in a globalized arena and does a SWOT analysis for the same. Various measures are suggested for bringing about a turnaround for effective survival and growth. It studies the various problems and turmoil's that surrounded the steel industry. A deep and intensive study of the Indian Steel Industry is made as regards various major plants. Further various problems and challenges are discussed relating to price, demand, consumption and globalization. Various strategies are suggested but theory and practice may not be the same. Besides no practical model is used to test the solutions and strategies suggested.

Weber, Roberto A. and Camerer, Colin F. (2003), conducted laboratory experiments to examine merger failures which emerge as a result of conflicting organizational culture. It is generally observed that corporate mergers fail and an attempt is made to study cultural conflict as a reason for the same as this dimension is generally ignored during valuation of firms leading to overpayment. Cultural incompatibility makes it difficult for employees of the merged organization to view things in the same perspective. The study concludes on the note that in the absence of a mechanism to create co-ordination, cultural conflicts arises resulting in failure of mergers. However, causal affects of cultural integration is yet to be determined. Despite the effort it is observed that culture is a diversified phenomenon and no prescribed and universal formula can be applied in different situations.

Perry, Jeffery S. and Herd, Thomas J. (2004) in their paper devoted attention to the increasing number of failures being reported in the mergers taking place and he attributed them to poor synergy, bad timing, incompatible cultures, off strategy decision making, hubris and greed. According to them there is generally a huge gap between planning and implementation due to which exercising due diligence becomes inevitable in the challenging global environment. They suggested various tips for structuring successful mergers and emphasized on employing professional services to calculate expected synergies and other complex issues for effecting successful mergers and acquisitions. The solutions or the guidelines offered in the form of a theoretical framework and may have certain implications and problems when applied practically.

V, Harsh H. and Srividya, C.G. (2004) examined the rationale and superiority of M&A's over other modes of investment which according to them were easy entry, snuffing competition, access to funds, tax benefits, capturing market share etc. They discussed dynamic valuation techniques which are earning based valuation, market
based valuation and asset based valuation. The choice of method depends on a host of factors like timing of sale, stock market situation, economic cycles, and global situations etc. Case studies were done on IBM’s acquisition of Daksh e-services, Citigroup’s acquisition of e-Serve International and a hypotheses on a listed software company merging with an unlisted company. They concluded that a large number of methods should be employed to derive a range of values for calculating the valuation of a firm keeping in mind the risky issues related to synergy realization e.g. social and cultural issues. Financial and profitability analysis of the merging firm is not done though to evaluate the mergers undertaken. Nocke, Volker and Yeaple, Stephen (2004)^{42} provided a theoretical framework of international commerce for analyzing the pros and cons of various modes of investment where key factors are heterogeneity in firm’s capabilities, international mobility of these capabilities and their price determination based on endogenous supply and demand. Through equilibrium analysis of a model, equilibrium pattern of export, greenfield FDI and international mergers is determined. Through statistical tools, models and equations it is shown that for the composition of international commerce source of firm heterogeneity is a vital factor. Also cross border mergers and acquisitions involve either the most or the least efficient active firms depending on whether the firms differ in their mobile or non-mobile capabilities. The merger market clearing condition is also considered as an important aspect where the effect of country and industry characteristics on aggregate industry efficiency is mediated by the merger market. They also concluded that cross border M&A’s are noted to be generally less beneficial to host country’s economy than greenfield FDI. However, the firm’s characteristics assumed in this model might not exist in all cases.

Bruner Robert (2004)^{43} dealt with the various applications associated with mergers and acquisitions. It throws lights on the ethical issues and the rationale of entering into deals. The strategies and the origin of transactions are traced. The various waves and drives of merger and acquisition activities are discussed. The methodology and strategy to be adopted for affecting a deal and cross border deals are examined. The various methods and ways that can be adopted for valuing a firm prior to the merger and also the resultant synergies are proposed. It is followed by an elaborate framework which is suggested to take into account various aspects right from the selection of the target to managing the risk after the merger or acquisition has been formally done. Corporate governance and other issues arising as a result of the merger
in the form of competition from rivals and behavioral issues of employees are also taken up. The various forms of mergers and acquisitions that are auctions, takeover and the defences adopted in the face of these are also mentioned.

Man, Ard-Pieter de. and Duysters, Geert. (2005), focused on the effect of innovative performance of the companies involved in various alliances. They investigated the trends in strategic technology alliances and Mergers and Acquisitions (M&A's) which according to them was a strategic tool in keeping up with the rapidly changing technology despite the poor success rate of mergers. They found that the innovativeness of firms was propelled by alliance. However the analysis did not focus much on the quantitative aspect. The paper concentrates on the innovation aspect only which is an important factor but there are other critical aspects involved in Mergers and Acquisitions (M&A's) too which are overlooked here. Bogetoft, Peter and Wang Dexiang (2005) in their study made an attempt to introduce simple production models for the purpose of estimating potential gains from mergers. For the purpose a model is developed and the gains are divided into technical efficiency, size and harmony. Different alternatives are undertaken for evaluating the same. Data Envelopment Analysis (DEA) is undertaken for estimating potential gains from mergers with the case study being focused on Denmark relating to merger of agricultural extension offices. The study finds that a merger might cause a unit to improve its performance on an individual basis and also affect its scale of operations, mix of inputs available and outputs demanded. This framework can be applied for keeping multiple input multiple output framework during the process of production and be used in areas such as environment regulation and be used to develop responses to them as well for developing a process in which the needs of different farms can be met through mergers.

Agarwal, Manish. and Singh, Harminder. (2006) investigated in their paper the role of insider trading activity in Indian Capital Market based on private and non-public information prior to merger announcements. For the purpose a modified market model is used which is based on a sample of 42 Companies for which merger announcement date was during the period 1996-99. The authors recommend investigation in six Companies by relevant authority, i.e. SEBI regarding possible insider trading as it leads to inefficiency and distortion in the performance of capital markets. In the paper the stock price movements around merger movements are explored to investigate discrepancies but insider trading may not be the only reason
for abnormal movement in stock quotes. Besides, insider trading is not a very big revelation in Indian market and even if it is detected it is extremely difficult to prove. **Mehta, Jay and Kakani, Ram. Gupta (2006)** focused on concentration of banks into few larger banks and aimed to study the motives behind Mergers and Acquisitions (M&A’s) in the Indian Banking Sector and compares it with the scenario in the international arena. They recognized that the environment has a major role to play in Mergers and Acquisitions (M&A's). The major motives for M&A’s are cited as stability, return and risks to shareholders, CAR norms and other regulatory framework, management of bankruptcy risks and growth. Also M&A’s are used as a tool and opportunity for development. A study of cross-border Mergers and Acquisitions (M&A's) in banks is also made. They concluded that ease in regulatory framework and the existing poor infrastructure are the major reason for the increased consolidation in the banking sector. The paper discusses the motivations that lead to Mergers and Acquisitions (M&A's) but does not evaluate or analyze, whether the motivation actually yields synergistic results and profits. **Breinlich, Holger. (2006)** explored the growing importance and increase of M&A’s in the wake of liberalization for the purpose of industrial restructuring where resources are transferred from less to more productive firms and in the bargain the quantitative magnitude of overall transfers significantly increase. An attempt is made in this study to investigate; whether CUFTA increased M&A activity, resources are actually transferred from less to more productive firms in M&A activity, investigate amount of inter-firms transfer of output and employment in North America due to M&A where sample period is 1985-1988. Results of the research show that M&A are important alternatives to the adjustment mechanism of firm and establishment closure and contract contractions as emphasized in earlier studies. Also M&A activity show stronger inter-industry variation and is negatively related to initial tariff levels. CUFTA based in 1989 is taken as a basis which is about two decades back. Also the characteristics of CUFTA may not apply in other cases. **Spearot, Allen (2007)**, studied a model of domestic and foreign Mergers and Acquisitions (M&A's) with heterogeneous firms in relation to a closed economy and shows that aggregate productivity in acquisition is positively influenced by the transfer of capital from the least efficient to higher efficient firms for the purpose of which a non-parametric test is undertaken. The study is extended to open market economy models as well. The Researcher concludes that tariff choice of domestic and
foreign government should be expected to influence firm decision both within and outside border. The theoretical relationship between trade policy choice of outsiders and composition of investment in New Zealand is not collaborated by empirical evidence. Pradhan, Jaya Prakash. (2007) studied the recent wave of rising overseas acquisitions by Indian Multinationals and also the associated trends and location determinants. The recent trend affirms the use of Mergers and Acquisitions (M&A's) as a popular tool for structuring overseas investments as a response to the growing globalization of world economies and the corresponding liberalization of Indian economies. The positive micro and macro-economic indicators further assisted in pushing the overseas acquisitions of Indian firms. The manufacturing sector leads the number of acquisitions at 47.5 percent followed closely by services at 44.9 percent. Indian firms generally target developed countries for acquisition. The motives range from market access to benefits from operational synergies and also exploiting advantages that are not present in the home market. The empirical analysis also focuses on the motivational aspects where it is found that Indian firms tend to concentrate in markets where skilled manpower is abundant and imports from India are of a significant proportion. The study does not explore much the benefits, value, synergy or the profitability of the concerns that are involved in such overseas acquisitions which is a critical aspect to evaluate the viability of the Mergers and Acquisitions (M&A's) that are being undertaken at a brisk pace. Devos, Erik et al (2008) explored the gap in Mergers and Acquisitions (M&A's) studies by analysing the importance of various sources that cause a gain in mergers. The paper contradicts previous findings that synergies are created due to taxes, market power or improvement in the performance or efficiencies. For the purpose Value Line Forecast of cash flows is of 264 large mergers is made relating to acquiring, target and combined firms. Merger synergies is calculated and the average gains from the mergers are calculated which come out to be 10.03 percent. According to the study that in case of mergers 1.64 percent is contributed by tax saving and operating synergy provide for the remaining 8.38 percent as regards additional value. The Researchers suggest that these gains in mergers are more importantly dependent on resource allocation as compared to tax planning and increased market power. The study however relies on cash flow and does not take into consideration other qualitative aspects that culture and technical know-how. Besides the resource allocation, the utilization of resources is also an important aspect.
Foster, Stanley Reed et. al. (2007) in their book dealt with the concept and various issue related to Mergers and Acquisitions (M&A's). The basic terms related to mergers are described followed by the process related to the same. It deals with the selection of the target company and the legal framework and also the issues of valuation and pricing in detail. Various sources for financing and the procedures to be followed for finalizing the deal are discussed at length. The integration efforts to be employed after the merger with relevant examples are discussed. Various case studies and legal aspects are discussed to throw light on the practical implications.

Gaughan, Patrick (2007) in his book gave an elaborate description of various issue related to mergers relating to the types, valuation, financing, objectives etc. A brief overview of the history related to mergers is followed by the legal framework and merger related strategies. A section is also devoted to various aspects of hostile takeover relating to the measures and tactics employed for the same. The various aspects of corporate restructuring are described in detail followed by bankruptcy situations with special reference to USA. For the purpose of structuring a deal valuation of the target company is vital. The author deals various methods of valuation and also the tax related issues. Galpin, Timothy J. And Herndon, Mark (2007) in their book provide detailed guide lines for bringing affecting a successful merger or acquisition deal. The motives behind structuring a deal are discussed followed by the various steps which the authors suggest are necessary for a successful deal. They stress on diligence and enterprising management. Various models are suggested for organizing and coordinating the deal. The management has to integrate the employees and garner their cooperation for making the deal a success for which effective communication is suggested. Special focus is given to cultural integration and addressing problems that are faced in implementing a deal. Various case studies are also taken up for the same.

Mantravadi, Pramod. And Reddy, A. Vidyadhar (2008) analyzed the impact of mergers on operating performance of acquiring corporate in different industries based on pre-merger and post-merger financial ratios with samples involving public limited and traded companies in India between 1991 and 2003. The results suggest that there are minor variations in terms of operating performance following the mergers. However differential impact is noticed, that is the type of industry has an impact on the post-merger performance. A period of 3 years before and after the merger is taken to assess the impact of merger which is not appropriate as the affect of the merger is
not visible in the short-period. The sample size undertaken is small to generalize the results. Also the study has ignored the impact of differences in accounting methods of different firms. Nayyar, Deepak (2008) did a study on the rapid expansion of foreign direct investment and overseas acquisition from India in the past decade. Liberalization measures provided the impetus but it was the capacity and ability of Indian firms which mainly facilitated the FDI flows and acquisitions. The expansion of FDI from India has been attributed to the growing Mergers and Acquisitions (M&A's) abroad. The share of India in total purchases by developing countries, reported as cross-border mergers and acquisitions, was 3.2 percent but the determinants of FDI fail to shed light on the recent surge in overseas Mergers and Acquisitions (M&A's) which are mainly in the manufacturing sector. However, the economic implications relating to internationalization of firms at micro and macro levels are not explored deeply in this paper. Margsiri, Worawat. et al. (2008) explores internal investment and acquisition as modes for growth where the former consumes considerable time and the latter provides instant cash flow. In their research paper the authors aimed to investigate the relationship between pre-merger announcement price run-up and negative announcement returns with the integration cost and synergies resulting from the acquisition. The Researchers believe that internal investment is a fall back strategy in case negotiations for investments fail which would affect both the decision to acquire as well as the acquisition price. It is also seen that acquisitions with low level of synergies or relatively high integration costs do not maximize the social surpluses. The Researchers find that there are negative stock reactions in case of acquisitions initiated by buyer while in case of seller it leads to negative stock movement when seller has significant bargaining power. The paper mainly concentrates on movement of stock prices and the more vital concept of synergy and value creation is overlooked.

Wang, Cong and Xie, Fei (2008) explored the benefits that arise from change in control as a result of Mergers and Acquisitions (M&A's). According to the paper in cases where the acquirer is dominant than the target in terms of shareholders rights, it would benefit the resultant corporate governance at the target and the reverse case would be present in case where the target shareholders rights are stronger. For the purpose 396 acquisitions by US firms between 1990 and 2004 are undertaken and the results indicate that they support the assumption above, where stronger the acquirer shareholders rights as compared to that of the target, higher would be the synergy
created. It is found that stock market anticipates the efficiency gains to be realized and reacts to Mergers and Acquisitions (M&A's) announcements accordingly. The managerial capability and ignorance is ignored. In the paper the shareholders rights is considered as a basis for determining managerial control but it cannot be treated as the only ground. Also the entire focus is on the control at the target immediately after the merger but in reality the efficiency of the managerial control should be evaluated on the basis of the synergy and performance after the merger has been structured.

Steigner, Tanja (2008)\textsuperscript{59} in his thesis analyzed with the return of bidder companies in USA in regards to cross border Mergers and Acquisitions (M&A's). According to the study the cultural aspect is a cause of concern for the shareholders initially but later the bidder firms get positive benefit from the exchange of technical expertise. A hypotheses study is made to explain abnormal bidder firms returns by making a comparison of first mover hypotheses to late mover hypotheses in cross border Mergers and Acquisitions (M&A's). The findings suggest that these acquisitions do not create value for the strategic pioneers unless the cultural distance between USA and the target country is large and when the cultural distance is small it leads to positive effect for the followers. Chaufla, Sandeep (2008)\textsuperscript{60} in his paper provide an insight into the regulatory environment in India with regards to the investment climate relating to the tax aspects. India is an attractive investment decision mainly due to the growing economy, robust GDP, unutilised resources, skilled manpower and a well-developed regulatory environment. Post-liberalisation FDI rules have been relaxed where up to 100percent FDI is allowed in most sectors. The paper further provides the various forms of ownership structure that can be used in India. Provisions under Company Act 1956, FEMA 1999 and Income Tax Act 1961 etc. are studied to provide a synoptic view of the regulatory environment. The paper provides a synoptic and theoretical view of the regulatory environment. However the paper ignores the practical aspects relating tom application and overlooks the present environment relating to the market conditions etc.

Hunt, Peter A. (2009)\textsuperscript{61} in his book provided a guide to creating shareholders value. He dealt intricately with aspects related to shareholders value and the valuation and financial analysis of mergers and acquisitions. It deals with the various parameters that are required to be studied for the purpose of analysis of financial statement and cash flows. It also suggests undertaking comparisons between companies and transactions for studying the viability of the deal structured. Various methods to
analyse the merger, leveraged buyout and stock price are mentioned. For the purpose of studying the practical implications of mergers and acquisitions case studies are undertaken. Other forms of deal like divestitures, sale of assets, joint ventures etc are also discussed. It is followed by aspects related to corporate restructuring and recapitalization. The legal framework surrounding the merger acquisition deals and the anti-takeover measures are also elaborately dealt with. Methods and strategies for finalizing a deal are discussed further along with the suggestions for effecting a post-merger integration.

DePamphilis, Donald (2010) in his book gave a detailed description of various concepts related to mergers and acquisitions and its impact on various parties who are affected by it along with few case studies. The laws and regulations as applicable to mergers and acquisitions in USA are also dealt with elaborately. It is followed by extensive review of the process of mergers and acquisitions. A detailed study of the acquisition of Merill Lynch by Bank of America is provided along with merger and acquisition valuation and modelling. Various modes of valuations are discussed elaborately along with the analysis of the Privately Held Companies. Cross border mergers and acquisitions are analyzed along with various alternative ways of restructuring and expanding. The author has discussed the various issues related to mergers and acquisitions in the light of various relevant case studies.

5.4 Research Gap

Review of literature done above sheds light on various gaps in the previous researches carried out in this field. The Researcher intends to put in an honest effort to provide her sincere contribution in this regard.

It is seen that in most works, it is the trends, policies; framework and requisites are investigated while the profitability and financial analysis of the mergers are not given due importance as was done in the case of Kang, N and S. Johansson (2000) and V, Harsh H. and Srividya, C.G. (2004). Also it is observed that the assumptions about characteristics of the firm, market condition, regulatory framework etc. might not apply in all cases. As is seen in the case of Breinlich, Holger. (2006) the provisions of CUFTA do not apply in all Mergers and Acquisitions (M&A's). Some studies highlight the problem as in the case of Agrawal, Anup. et al. (1992) which reports that shareholders of acquiring firms suffer 10percent loss as result of merger
but appropriate measures to make the merger profitable are not dealt with. While some studies mention the theoretical implications of Mergers and Acquisitions (M&A's) they do not look into the practical application of it as is seen in the case of Perry, Jeffery S. and Herd, Thomas J. (2004)⁷⁷ and Lee, Kyungmook and Pennings, Johannes M. (1996)⁷⁸. However the major limitation is seen that in most of the studies, post-merger analysis, i.e. analyzing how the merged or resultant company performs financially after the merger is not done which is extremely important to study the viability and success of the Mergers and Acquisitions (M&A's) as is seen in Vithala, R. Rao. (1991)⁷⁹, Jemison, David B. and Sitkin, Sim B (1986)⁸⁰, Ghosh, Alok and Lee, Chi-Wen Jevons (2000)⁸¹, Kumar, Nagesh. (2000)⁸², Lall, Sanjay (2002)⁸³ and Lyons, Bruce. R (2001)⁸⁴. Some studies cannot be generalized as the sample size taken is very small as in Shick, Richard A. (1972)⁸⁵ while some works suffer from statistical limitations as in Slusky, Alexander R. and Caves, Richard E. (1991)⁸⁶ and Shughart II, William F. and Tollison, Robert D (1984)⁸⁷. The Researcher has made an effort to address these research gaps and has made an attempt to make a complete and conclusive study on Mergers and Acquisitions (M&A’s) .The research related to Mergers and Acquisitions (M&A’s) in different countries is compiled, analyzed and reviewed in order to develop an understanding about the topic and also understand the work that has been carried out in this area. It is found that Mergers and Acquisitions (M&A’s) is of late becoming a potent tool in the hands of the Indian corporate. It is found that though lot of studies have been done on this topic the merger mania in the last few years is creating waves all over the world and the thesis has been so designed so as to evaluate the latest Mergers and Acquisitions (M&A’s) involving Indian corporate in the Indian Steel Industry which is having a huge international presence.

5.5 Conclusion

The critical review of literature gives a wide understanding related to the previous research work on the topic of Mergers and Acquisitions (M&A’s). The research work to be carried out is designed on the basis of previous work, present data and future prospects along with innovative methods and ideas. The research gap is traced and the
work that the Researcher intends to do in this thesis is proposed. Having reviewed the available literature on Mergers and Acquisitions (M&A's) the Researcher moves on to develop a research design and methodology in the next chapter for the thesis.

5.6 References

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74 Lyons, Bruce. R op. cit. pp. 409
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76 Slusky, Alexander R. and Caves, Richard E. op. cit. pp. 278
77 Shughart II, William F. and Tollison, Robert D op. cit. pp. 500
Chapter 6

Research Design and Methodology

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6.2 Scope of the Study
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Chapter 6

Research Design and Methodology

6.1 Introduction:
The previous chapter reviews a wide amount of literature on Mergers and Acquisitions (M&A's) in both the domestic and international arena. It reviews various studies entailing diversified aspects of mergers and acquisitions in various sectors. It traces the research gap in the studies reviewed and proposes research work to be undertaken for the thesis.

This chapter highlights the scope and objectives of the study and also the research design and methodology employed by the Researcher in the study. All the statistical and accounting tools that are used to measure the impact of the merger are discussed elaborately here.

6.2 Scope of the Study

In the year 1991 the economic boundaries of India were opened due to which the investment climate in India underwent sweeping changes. The economic and corporate scene in India is discussed at length in order to investigate the past and present scenario of Mergers and Acquisitions (M&A's). A realistic attempt is made to make a prediction about the future of the ongoing drive of Mergers and Acquisitions (M&A's) on the basis of trends and reports.

The study encompasses mergers and acquisitions taking place in various sectors worldwide. An attempt has been made to cover all relevant mergers which have taken in various important sectors both in the domestic and international scene. Also the various issues relating to mergers and acquisitions are being investigated in detail. A separate section is devoted to study the impact of Mergers and Acquisitions (M&A's) in the Steel sector predominantly.

The study forays into the Financial Analysis of Mergers and Acquisitions (M&A's) to study the synergies and values that are created as a result of the merger. Various
measures are employed for that purpose to discuss the financial and operating performance of the entities involved before and after the merger. The main idea is to assess the impact of the merger in terms of performance of the companies and find out if the effect has been positive or negative.

6.3 Objectives of the Study

The main objectives this thesis deals with are enlisted as below:

i. Study the major Mergers and Acquisitions (M&A's) deals that have taken place globally and in India. Analysis of success of Mergers and Acquisitions (M&A's) as a tool of investment, expansion and growth.

ii. Sector-wise study of global and domestic Mergers and Acquisitions (M&A's) in terms of value of deals.

iii. Study the growth and development of Indian Steel Sector since 1991 and evaluate its financial performance in the last few years.

iv. Examine the Pre and Post merger financial reports to examine whether the Mergers and Acquisitions (M&A's) led to a profitable situation for the merging and the merged firms. For the purpose various accounting and statistical measures are used.

v. Investigate the reaction of the market to Mergers and Acquisitions (M&A's) by making a comparison of the movement of Market Price per Share (MPS) and Earning per Share (EPS) both before and after the deal.

vi. Analyze the relation between the movement of the Profitability and MPS before and after the merger to explore the reaction of the investors to a merger announcement.

vii. Calculate the effect of merger on financial and operating performance before and after the merger.

viii. Detailed introspection of the motives and success rate of major Mergers and Acquisitions (M&A's) deals that have taken place in the Steel Sector as a part of corporate structuring both globally and at the domestic level. In the thesis a detailed introspection is made of the same to analyze the motives and success of these Mergers and Acquisitions (M&A's).
6.4 Hypotheses of the Study

1. Testing the relationship between Pre and Post Merger Profitability
   \( H_0 \) (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability
   \( H_a \) (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability

2. Testing the relationship between Pre and Post Merger Capital Employed Turnover Ratio (CETR) or Fixed Asset Turnover Ratio (FATR)
   \( H_0 \) (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR or FATR
   \( H_a \) (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR or FATR

3. Testing the relationship between Pre and Post Merger Interest Coverage Ratio (ICR)
   \( H_0 \) (Null Hypothesis) = There is no relation between the Pre and Post-merger ICR
   \( H_a \) (Alternative Hypothesis) = There is a relation between the Pre and Post-merger ICR

4. Testing the relationship between Pre Merger Profitability and Pre Merger Market Price per Share (MPS)
   \( H_0 \) (Null Hypothesis) = There is no relation between the Pre-merger Profitability and MPS
   \( H_a \) (Alternative Hypothesis) = There is a relation between the Pre-merger Profitability and MPS

5. Testing the relationship between Post Merger Profitability and Market Price per Share (MPS)
   \( H_0 \) (Null Hypothesis) = There is no relation between the Post-merger Profitability and MPS
   \( H_a \) (Alternative Hypothesis) = There is a relation between the Post-merger Profitability and MPS
6. Testing the relation between Pre Merger Market Price per Share (MPS) and Post Merger Market Price per Share (MPS)

H₀ (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS

Hₐ (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS

7. Testing the relationship between Pre Merger Earnings per Share (EPS) and Post Merger Earnings per Share (EPS)

H₀ (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS

Hₐ (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS

8. Testing the relationship between the Pre and Post Merger Profit Margin

H₀ (Null Hypothesis) = There is no effect of Merger on the Pre Merger and Post-merger Profit Margin

Hₐ (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Margin

9. Testing the relationship between the Pre and Post Merger Profit Rate

H₀ (Null Hypothesis) = There is no effect of Merger on the Pre Merger and Post-merger Profit Rate

Hₐ (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Rate

6.5 Research Design

The study is designed to study a wide range of International and Indian Companies that expand through Mergers and Acquisitions (M&A's). An attempt is made to collect data and use it for testing abnormal returns around the announcement of a Mergers and Acquisitions (M&A's). The Researcher studies the financial profile of the merging and the merged company both before and after the merger and applies various financial and accounting tools to evaluate the effect of the merger on the financial and operating performance of the undertakings involved. The financial data of the acquiring company before and after the merger is collected. These are
organized in the form of Comparative Statements and Ratio Analysis. The data for Pre and Post Merger is analysed separately and then relevant statistical tools are used to test the effect of the merger on the financial and operating performance of the entities involved.

6.5.1 Instruments of Data Collection

Relevant literature and other research material were extensively analysed for the purpose of the study to develop know how about the various aspects related to the topic. Various libraries and databases maintained were studied in order to collect the secondary data. Online databases of various agencies and universities were also accessed for the purpose of data collection which helped in the formulation of the Research Design.

Major thrust of the study is based on secondary data which has been gathered from available published records in Annual Reports of Companies, Newsletters, Reports, Surveys, Websites, and Proclamations etc. Data has been collected from the Securities and Exchange Board of India (SEBI) which currently is maintaining database on tender offers relating to the companies registered on Indian Stock Exchanges. Market prices of shares and other relevant information about the stocks of companies has been collected from the database of Companies maintained by various Stock Exchanges, i.e. NSE, BSE, NYSE, Singapore Stock Exchange, London Stock Exchange, etc. Data has also been collected from Centre for Monitoring Indian Economy (CMIE) which has been publishing data on Mergers and Acquisitions (M&A’s) since January 1997. Relevant data related to Steel Industry in India has been accesses from the database maintained by the Ministry of Steel, Government of India. Data was also collected through World Investment Reports, UNCTAD, Grant Thornton Reports, AT Kearney Reports, PricewaterhouseCoopers Reports, RBI Monthly Bulletin, Economic Surveys, Handbook of Statistics, Mergermarket Report, Budgets and other relevant sources.

6.5.2 Data Compilation and Tabulation

After collecting the data from various published resources the data was verified against alternate data bases to be assured about the accuracy and reliability of the data. It was compiled and tabulated by using various software programs as well as
manually for the purpose of interpretation and analysis. The information so interpreted was then used for analysing the financial viability of the deals undertaken.

6.5.3 Presentation Instruments
The data collected would be analysed and presented using tables, schedules, pie charts, bar diagrams and graphs etc.

6.6 Research Methodology
For the purpose of analyzing the profitability of Mergers and Acquisitions (M&A's) various accounting and financial measures are undertaken.

The sales and cost of sales of the company to be analysed for few years before and after the merger or acquisition are undertaken. Annual percentage changes are computed to investigate the financial performance in terms of annual percentage changes in the figures. The movement in the figures around the announcement of the merger or acquisition is studied in detail.

Financial ratios are also calculated to analyze the profitability, capital structure, liquidity, productivity and solvency of the concern. These ratios are calculated for several years before and after the merger and the changes in them for each year are reported.

Various Hypotheses are formulated to find if there is an effect of Mergers and Acquisitions (M&A's) on Profitability, Fixed Assets Turnover Ratio (FATR), Capital Employed Turnover Ratio (CETR), Interest Coverage Ratio (ICR), Earnings per Share (EPS) and Market Price per Share (MPS). For the purpose of analysis Correlation Coefficient (r), Coefficient of Determination (r^2), Regression Analysis and Student-T test are undertaken.

Also Profit Rate and Profit Margins before and after the merger or acquisition are calculated for the concerned firms in order to find the impact of the merger on the financial and operating performance.
6.7 Statistical Tools and Techniques Used

i. Correlation Coefficient (r): In cases where relationship between two or more variables is to be analyzed correlation coefficient (r) is used. It helps in determining the direction and degree of relationship while the cause and effect cannot be found by this technique. The degree of relationship depends on the value of (r) found which is explained below.

Table 6.7.1: Determining the Degree of Correlation

<table>
<thead>
<tr>
<th>Degree</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perfect</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>2. Limited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Very High</td>
<td>Above +.9 and up to +.99</td>
<td>Above -.9 and up to -.99</td>
</tr>
<tr>
<td>b. High</td>
<td>Above +.75 and up to +.9</td>
<td>Above -.75 and up to -.9</td>
</tr>
<tr>
<td>c. Moderate</td>
<td>Above +.25 and up to +.75</td>
<td>Above -.25 and up to -.75</td>
</tr>
<tr>
<td>d. Low</td>
<td>Above 0 and up to +.25</td>
<td>Above 0 and up to -.25</td>
</tr>
<tr>
<td>3. Absence</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>


However the existence of correlation does not always imply that there is a causation effect or a functional relationship but implies just an existence of covariance.

For the purpose Karl Pearson’s correlation coefficient \( r \) is calculated which is calculated as below:

\[
 r = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}
\]

Where

\( x = (X-\overline{X}) \) and \( y = (Y-\overline{Y}) \)

\( \overline{X} = \text{Mean of Series X} \)

\( \overline{Y} = \text{Mean of Series Y} \)

i. Coefficient of Determination \( (r^2) \)

After having calculated the correlation coefficient \( (r) \) we can find out the coefficient of determination \( (r^2) \) by squaring the value of correlation coefficient \( (r) \). It explains the percentage variation in the dependent variable Y which can be expressed in the terms of the independent variable X. This helps in ascertaining the Coefficient of Determination.
ii. Regression Analysis

Once the degree and direction of the relation is found out we move on to formulate the regression equations. It helps us to establish the cause and effect relationship between the two variables that is estimating the value of one variable if we have the value of another. Correlation Coefficient \( r \) provided us with just the degree and direction while the regression analysis attempts to estimate the value of one variable if the value of the other variable is given. It helps us to find out how many units movement will result in the dependent variable as a result of a unit movement in the independent variable. The Researcher has used linear regression analysis and has formulated regression lines for the purpose.

The regression line formulated for the purpose is

\[ Y = a + bX \]

Where;

\( Y \) = Dependent variable
\( a \) = intercept
\( b \) = Slope
\( X \) = Independent variable

For the purpose of formulating the equation the value of the two numerical constant \( a \) and \( b \) are required to be computed which is done through the following formulae.

\[ Y - \bar{Y} = r \frac{\delta x}{\delta y} (X - \bar{X}) \]

Where

\( Y \) = value of Y variable to be predicted
\( \bar{Y} \) = Arithmetic mean of Y Series
\( r \) = correlation coefficient
\( \delta x \) = standard deviation of X series
\( \delta y \) = standard deviation of Y series
\( X \) = value of X variable corresponding to which the value of Y variable is to be calculated
\( \bar{X} \) = Arithmetic Mean of X series

In place of \( r \frac{\delta x}{\delta y} \) when actual mean is taken then \( \sum dx dy \) can be used

\[ \sum d^2 y \]

\( dx \) = deviation from series X
\( dy \) = deviation from series Y
iii. Testing of Hypothesis

Testing of Hypothesis means formulation of an assumption about the population from which the sample is drawn and then test to find whether the formulated hypothesis is true or not. For the purpose of Hypothesis testing first of all a hypothesis is formed. A sample is collected and then it is tested whether the hypothetical value and the actual value are the same. In the study nine hypotheses have been formulated and brief descriptions of all have been provided.

iv. Null Hypothesis and Alternative Hypothesis

The usual approach is to formulate two hypotheses that is the Null Hypothesis and Alternative Hypothesis.

a) Null Hypothesis (H₀) assumes that there is no statistically significant relationship between the sample and the population for the matter under consideration.

b) Alternative Hypothesis (H₁) assumes that there is a statistically significant relationship between the sample and the population for the matter under consideration.

v. Level of Significance

After that a level of significance is required to be set up and is expressed in percentage. It is basically the probability of rejecting the Null Hypothesis when it is true. The Researcher has tested the level of significance for 5 percent level. It means that the probability that an error is being committed is 5 in 100.

vi. Student t-test

The t-test is applied when the size of the sample is less than 30 and is derived mathematically under the assumption of normal population.

\[ t = \frac{\overline{X}_1 - \overline{X}_2}{S} \sqrt{\frac{n_1 n_2}{n_1 + n_2}} \]

- \( \overline{X}_1 \) = Mean of first sample
- \( \overline{X}_2 \) = Mean of second sample
- \( n_1 \) = number of observations in first sample
- \( n_2 \) = number of observations in second sample
- \( S \) = Combined Standard Deviation

\[ S = \sqrt{\frac{\sum (X_1 - \overline{X}_1)^2 + \sum (X_2 - \overline{X}_2)}{n_1 + n_2 - 2}} \]
The degree of freedom \((v)\) is calculated as \(n_1 + n_2 - 2\). Once the degree of freedom is found the table values for 5percent level of significance is found. If the calculated value of \(t\) is greater than the value of \(t\) at 5percent level of significance \((t_{0.05})\), the Null Hypothesis is rejected and the Alternative Hypothesis is accepted. Alternately if the calculated value is less than the table value of \(t\) at 5percent level of significance \((t_{0.05})\) then the Null Hypothesis is accepted and the Alternative Hypothesis is rejected.

6.8 Sample Size and Period of Study

For the purpose of the study major steel producers of India have been taken and the major deals affected by them have been scrutinized. The study takes up the major Mergers and Acquisitions (M&A's) deals which have taken place in the private and public sector. In Chapter 8 five significant domestic deals are studied while Chapter 9 takes up three major cross border deals in the steel sector.

The major deals that have taken place in the steel sector since 1991 to 2009 have been taken up in brief in Chapter 7. The deals to be analyzed have been taken randomly over the period 1991 to 2009. The financial profiles of the companies involved have been scrutinized minutely before and after the merger in order to study the impact of the merger or acquisition on the performance of both the merged and merging entity both before and after the merger.

6.9 Brief Description of Samples (Deals) Undertaken:

For the purpose of study nine major Mergers and Acquisitions (M&A's) involving Indian Steel producers are undertaken. Five domestic deals and four cross border deals are taken up. A brief description of the deal and the companies involved is provided below.

I. Domestic Mergers and Acquisitions (M&A's)

i. Merger between SAIL (Steel Authority of India Limited) and Visvesvaraya Iron and Steel Limited:

The merger between SAIL and its subsidiary Visvesvaraya Iron and Steel Limited was carried out in 1998-99

a. SAIL which is a public sector undertaking is one of the largest producers of steel in India and has five integrated steel plants in different parts of the country. It is
owned and operated by the Government of India and is among the top five profit earning corporate of the country.

b. **Visvesvaraya Iron and Steel Limited** which is located in Bhadravati and is involved in the production of alloy steel and pig iron. It was taken over as a subsidiary of SAIL in 1989. It was running into heavy losses and subsequently merged with SAIL in 1998-99.

ii. **Merger between SAIL (Steel Authority of India Limited) and IISCO (Indian Iron and Steel Company):** With the wave of consolidation sweeping the Steel industry SAIL also joined the mania and merged it's another loss making subsidiary and further enhanced its operating capacity.

a) **SAIL** is one of the fastest growing public sector units in India and the merger with SAIL provided it with an impetus in production capabilities while it is engaged in huge modernization and expansion programs for its plants.

b) **IISCO** Steel plant is located at Burnpur near Asansol and was the second integrated steel plant to be set up in India after Tata Iron and Steel Company (TISCO). It was taken over by the Government in 1972 and later nationalized and made a subsidiary of SAIL. It was merged with SAIL in 2005-06.

iii. **Merger between Indian Metals and Ferro Alloys (IMFA) and India Charge Chrome Limited (ICCL):** IMFA merged its subsidiary ICCR with itself in 2006 with a view to consolidate its operations and financials in 2006. The merger made IMFA the largest fully integrated producer of Ferro alloys in the country.

a) **IMFA** is based in the eastern state of Orissa was set up in 1962 and is India’s largest producer of Ferro alloys.

b) **ICCL** was set up in 1982 at Bhubaneswar in Orissa and was a subsidiary of IMFA till it was merged with its parent company in 2006.

iv. **Takeover by Pittsburgh Iron and Steel Limited of Bellary Steels and Alloys Limited:** Pittsburgh Iron and Steel Limited entered in to the manufacturing and trading of steel through its merger with Bellary steel in 2006.

a) **Pittsburgh Iron and Steel Limited:** SandY Mills which was formed in 1964 discontinues its business in textile and ventured into steel with the acquisition of Bellary Steel in 2006.
b) Bellary Steel and Alloys Limited: Bellary Steel and Alloys Limited is situated in Bellary and was incorporated on 17 May 1984 in Karnataka. It mainly deals with the manufacturing and marketing of reinforcement bars and carbon and alloy steel rounds.

v. Takeover by JSW Steel of Southern Iron and Steel Company Limited (SISCOL): JSW took over SISCOL in 2007 in a deal where 1 share of Jindal was exchanged for 22 shares of SISCOL.

a) JSW Steel: JSW Steel has carved out a niche for itself and is one of the fastest growing enterprises in India. It is a part of the $8 billion O.P Jindal Group.

b) SISCOL: The Company was incorporated as a public company in 1991 and was merged with JSW Steel in 2007.

II. Cross border Mergers and Acquisitions (M&A's)

i. Takeover by Tata Steel of NatSteel: Tata Steel acquired the Singapore based NatSteel for a deal valued at US$ 468.1 million in 2005 as part of its strategy to be a world class facility in terms of steel. In the process it got access to new technology and access to new market.

a. Tata Steel was established in Jamshedpur in 1907. Tata steel has grown to be the world’s sixth largest steel producer which has operations in more than 20 countries.

b. NatSteel is based in Singapore and is one of the largest player in steel in the Asia-pacific region and has operations in seven countries.

ii. Takeover of Corus by Tata Steel: After hectic lobbying and rival bidding Tata Steel was finally able to carve out a deal where it took over Corus for US$ 12.04 billion which was the largest ever by an Indian company.

a. Tata Steel has now a huge global presence with operations in more than 20 countries and commercial presence in 50. Its recent spate of Mergers and Acquisitions (M&A's) has further consolidated its position as a major steel group.
b. **Corus** was formed as a result of the merger between British Steel and Koninklijke Hoogovens. It is the largest producer of steel in Europe and had operations in UK and Europe.

iii. **Takeover by Essar Steel of Algoma Steel:** Essar Steel took over Canada’s Algoma Steel for 1.85 billion Canadian dollars in 2007 which was expected to give access to Essar Steel to the market in North America

a. **Essar Steel** is a major producer of steel in the world and has got operations in Canada, USA and Asia. It is India’s largest exporter of flat steel products.

b. **Algoma Steel** established in 1901 is based in Ontario in Canada and mainly deals in rolled steel products. It was acquired in 2007 by Essar steel and was renamed as Essar Steel Algoma Inc.

### 6.10 Comparative Analysis, Ratio Analysis, Profit Rate and Profit Margin

#### i. Comparative Analysis:
Annual Percentage changes for sales and cost of sales is calculated to find out the percentage variations. The percentage variation around the announcement of the merger helps in analyzing the effect of the merger or acquisition. Also the percentages have been calculated elsewhere for Profit Rate and Profit margin for the purpose of comparative analysis and calculating the impact of the merger on the movement of figures on the financial and operating efficiencies of the concerns involved.

#### ii. Ratio Analysis

a. **Ratios Used**

1. **Debt Equity Ratio (DER)** = \[ \frac{\text{Long term Debt}}{\text{Shareholders' Equity}} \]

Shareholders Equity = Equity Shareholders fund + Reserves and Surpluses

2. **Current Ratio (CR)** = \[ \frac{\text{Current Assets}}{\text{Current Liabilities}} \]
3. **Capital Employed Turnover Ratio (CETR)** = \[
\frac{\text{Sales}}{\text{Capital Employed}}
\]

4. **Fixed Asset Turnover Ratio (FATR)** = \[
\frac{\text{Sales}}{\text{Fixed Assets}}
\]

5. **Interest Coverage Ratio (ICR)** = \[
\frac{\text{Earnings before Interest and Tax (EBIT)}}{\text{Interest Expenses}}
\]

6. **Profitability (percent)** = \[
\frac{\text{Profit after Tax} \times 100}{\text{Sales}}
\]

b. **Statistical Implications of Ratio Analysis**

The ratios which are calculated are divided into two sections that are Pre Merger and Post Merger Ratio Analysis. The Researcher then applies statistical tests on them to test the impact of the merger on these ratios. The correlation coefficient (r) is calculated to find out the degree and direction of relationship between the pre and post merger ratios. Coefficient of determination (r^2) is then calculated to explain the percentage of variance which is explained by the known variable. It is followed by Regression Analysis where equations are formed to find out the cause and effect relationship between the tested variables. Finally, student-test is undertaken to test the statistical significance of the relationship. It is tested at 5 percent level of significance.

iii. **Profit Rate and Profit Margin**

a. **Profit Margin** = \[
\frac{\text{Profit after Tax (PAT)}}{\text{Net Sales (NS)}}
\]

b. **Profit Rate** = \[
\frac{\text{Profit after Tax (PAT)}}{\text{Total Assets (TA)}}
\]

The Profit Margin and Profit Rate are calculated for each year and then a pre merger and post merger average for each company analysed is carried out in order to ascertain the impact of the merger on the financial and operating performance. The Profit Margin gives an idea of the financial efficiency while the Profit Rate gives information about the operating efficiency. The percentage change after the merger or acquisition in each of the two is then calculated to assess its impact on them.
6.11 Importance and Utility of the Study

There have been fundamental changes in the world economy which has greatly changed the economic set up of economies worldwide. The period after 1990's saw Mergers and Acquisitions (M&A's) rise by six fold during 1990-98 with an increasing tendency towards very large scale unions (Kang, N and S. Johansson (2000))\(^\text{10}\). Countries like USA which had abundant financial capital and state of art technology took keener interest in carving out Mergers and Acquisitions (M&A's) to extend and capture newer markets. While in some cases Mergers and Acquisitions (M&A's) was the only alternative to survive the global onslaught and competition. It was a strategy for survival. Changes in government policies and legal framework which have made the legal and economic boundaries more transparent and also the opening and shrinking of economic boundaries is one of other major motivation for the upward surge in Mergers and Acquisitions (M&A's).

In the last decade mergers and acquisitions have been a worldwide phenomenon. Increasing mergers are taking place not only in the USA but all over the world.

The need of mergers and acquisitions in the global economy can be justified through the following points:

**a) Synergies created by Mergers and Acquisitions (M&A's)**

The primary reason cited for fostering mergers and acquisitions is creation for synergy. Literally speaking synergy refers to a process where combined worth of two identities is more than the sum of their individual worth (i.e. \(2+2=5\)). In other words synergistic operating economies are created which are expected to arise from the combination of two separate identities and create mutual benefit as the outcome or output is expected to increase more than proportionately. The joint entity is expected to create more shareholder value than it would have been created individually.

While acquiring a firm different models of valuation are used. However, the acquiring firm generally pays a price which is more than the pre-merger valuation. The premium paid is attributed to the synergistic forces which are expected to be created after the merger. The buyer effects the merger in the hope that he would be able to benefit from the synergies that would be created after the merger.

For the seller the synergy represents the future prospects of their concern. The given equation helps to calculate the synergy and evaluate the financial sense of the deal:\(^{11}\)

\[
\frac{\text{Pre-merger value of both firms} + \text{Synergy}}{\text{Post-merger number of shares}} = \text{Pre-merger stock price}
\]
The basic aim is to find out whether the buyer is benefited by the post-merger value of the firm or not. However the expected synergies do not take place often. Synergies are classified into various heads which are summarized below:

**Operating Synergy:** The concept of creation of operating synergy is related to creation of economies of scale and scope. A merger or acquisition may enhance both scale and scope. Acquiring a new facility may add to the available factors of production creating economies of scope through diversification where the available skills and resources are utilized to produce a related line of goods and services. Economies of scale may also be created by increasing the level of production. The fixed cost is distributed over a larger number of goods and services. The increased operations create synergies which are realized in the form of reduction of cost. However the anticipated synergies have to be evaluated against the cost to be incurred in bringing about the integration of facilities.

**Financial Synergy:** It refers to the integration of enterprises for the purpose of creating synergies or benefits in the financial aspect by entailing reduction in the cost of capital. This can be done for both the acquiring and the acquired firm as well. Financial synergy can be achieved by investing in unrelated business thereby reducing the associated systematic risk, increasing the size of the company or by creating an internal capital market. However there is a school of thought that vehemently opposes the creation of financial synergies and says that it does not exist in efficient capital markets.

**Managerial Synergy** is also a form of synergy anticipated to be realized after the merger or acquisition is affected. A merger or acquisition also involves integration of the managerial acumen and each one's managerial efficiency might complement the other where specialization of one might used for the benefit for other and thereby create managerial synergies.

**b) Easy and Quick Entry:** Mergers are an easy growth strategy as entry to a new market is provided. Firms while expanding their operations do not have to start from scratch as they simply merge with a functional entity and get the benefits of synergistic operations as well. The cost and risk involved is also comparatively less as functional capabilities are already available. Also in case of territories where governmental restrictions exist in terms of setting up new businesses, merging opens the backdoor. An attempt of this sort has been made by Wal-Mart by merging with Bharti in India to enter in the retail sector of India.
c) Eliminating Competition and Dependence: Mergers and Acquisitions are an effective tool for meeting competition. A horizontal merger between firms dealing with the same business makes them complementary rather than as competitors. Both firms use each other's areas of specialization in arena of marketing, production, technology, infrastructure, etc. irrespective of the state of development. Elimination of competition proves to be a big booster. In an underdeveloped country, big firms merge and acquire smaller firms to attain monopoly as was done by the cola giants, Coca-cola and Pepsi in India. In a developed economy, competition is wiped out through these consolidation strategies.

A vertical merger or acquisition enables the merging firm to acquire a hold over its supply chain and establish a backward linkage. Also efficient control over the marketing channels and direct contact with customers can be established for forward linkage. An integrated unit is in a better position to control and monitor its supplies and resources making it more efficient.

d) Economies of Scale: A large number of resources are at the disposal of the merged entity and the bigger size enables it to benefit from economies of scale which accrue due to better utilization of resources and benefits available from all areas like, marketing, production, finance, human resource, technology, research and development etc.

Duplication of efforts are done away with and better utilization of resources lead to decreased cost and improved operational efficiency.

e) Diversification: Once a firm has established itself in a certain market, it looks for expanding its operations to other areas. In other words it looks for geographical and market diversification to benefit from its existing goodwill and market position. Merger is indeed one of the easiest ways to diversify, as in this case there is an understanding with an existing firm and the cost and formalities to start a new business can be done away with. The conglomerate undertaking that is created enhances the debt, financial, business, production, marketing capacity. Besides the risks are also diversified and the management of the acquired firm can provide necessary inputs for efficient operations.

f) Availing Tax Concessions: Another motivating factor for mergers and acquisitions is the tax concessions available by the government in this regard. Section 72A provides for the merger of a sick unit in to a profit making company which
enables the latter to set-off its profits against the losses of the former which reduces its tax liability.\textsuperscript{15}

g) **Benefits of Synergy:** Synergistic benefits as mentioned above relates to the increase in output more than proportionately than the sum of inputs of individual firms and refers to better use of complementary resources.

h) **Boon to Small Firms:** Though small units enjoy various benefits and concessions from the government, there is always a desire to grow big. Besides in today’s era of MNC’s and other bigwigs it is becoming increasingly difficult for smaller units to compete and survive. Merger and acquisition is proving to be an efficient tool for these firms to sustain. These combine with other smaller firms or a bigger firm as they do not have the financial capability to expand alone. Also they benefit from technological expertise and also have to offer efficient management and other advantages to the acquiring or merging firms in turn.

i) **Balanced Growth and Complementary Skill Sets:** Mergers and acquisitions are a potent tool for fostering balanced growth. It is often seen that different entities have different areas of proficiency. For example there might be a firm having superior know-how regarding technology, while another may be specializing in marketing or production. If a merger is effected between these, all of them can benefit mutually from each other’s capability and complementary skills.

j) **Cross-selling:** If two related enterprises merge they can benefit from cross-selling their products to each other’s customers. For example if a merger is effected between a bank and an insurance undertaking, the insurance unit can sell its policies to the bank customers and the bank can encourage the customers of the insurance unit to open their accounts with the bank and hence the customer base of both the undertakings would be widened.

k) **Potential Turnaround Situation:** For a sick unit mergers and acquisitions provide a fresh lease of life protecting the diversified interests of all the concerned parties, i.e. shareholders, creditors, employees, managers etc. For this reason mergers are supported by the government also as they provide a ray of hope to the ailing and sick units and provide an opportunity for them to recover and survive.

l) **Increase in Shareholders Wealth:** An announcement of merger generally gives an impetus to the shareholders wealth and the synergistic operations lead to an increase in the Return per Share (RPS) and the market price of shares. However the shareholders of the acquired company are better off the shareholders of the merged
entity. The shareholders of the merging firm gain in the long run due to the growth prospects available.

m) **Benefits to Management**: it is very important to involve the management of the firm while effecting mergers because an unwilling management may pose lot of problems while effecting a merger. Managers usually benefit from increased salary, perks, bonus, security, stature etc. if doubts exist in the mind of the management in terms of their future and job security after the merger, they do not cooperate, which results in difficulties in effecting the merger or acquisition.

### 6.12 Limitations of the Study

The major limitation of the study relates to availability of published data relating to the Mergers and Acquisitions (M&A's), trend and the associated financials of the industry. Also the financials of the companies which are involved in Mergers and Acquisitions (M&A's) are not readily available. In case of non-listed companies it is even more difficult. The study related to the Mergers and Acquisitions (M&A's) of the Indian Steel Industry since liberalization and there is no single data base which keeps the financial profiles of all the relevant companies since then. The effect of the Mergers and Acquisitions (M&A's) is felt after few years and it is seen that the data base for years before the merger is not maintained necessarily. Also it is seen that once the Mergers and Acquisitions (M&A's) has been effected the financial details of the merging or acquired entity is difficult to access as often the merged or the holding entity does not maintain the data base for them and especially for previous years.

The problems faced by the Researcher in the computation of the data are mainly due to availability of data in the published sources. The annual reports of the companies have been collected from various sources but in certain cases due to the absence of certain figures few ratios could not be calculated. However an earnest attempt is made here to collect authentic data from various sources to ensure that the reliability of the results is not affected in any manner. Moreover the tests are calculated at 5percent level of significance which means that there is a probability that in a sample of 100 the result might be wrong 5 times.
6.13 Conclusion

In the present chapter the scope and objectives of the study has been carved out. The Research Design and Methodology has been discussed at length along with the description of various hypotheses that are undertaken. The samples, instruments of data collection and methods of tabulation are also discussed. The various statistical and accounting measures used in the study by the Researcher are discussed in detail. A mention of the limitations faced in the collection of the data has also been made.

After having discussed the Research Design and Methodology the next chapter deals with the study of the Indian Steel Industry since liberalization. It further gives a bird’s eye view of the major Mergers and Acquisitions (M&A's) that have taken place both in the domestic and international scene in the Indian Steel Industry.

6.14 References

1 Gupta, S.P (2005) Statistical Methods, 33rd Edition, New Delhi, Sultan Chand and Sons
3 Ibid, pp. 157
4 Gupta, S.P (2005) op. cit pp.882
5 Gupta, S.P (2005) op. cit. pp.883
6 Gupta, S.P (2005) op.cit. pp.884
7 Gupta, S.P (2005) op. cit. pp.911

13 Ibid pp. 289
