CHAPTER 2
2. Literature Review

The literature review which covers both the global and domestic scenarios is organized as follows:

Section 2.1 reviews the literature on Ratio Analysis based evaluation of post-merger performance of select commercial bank mergers in India. Section 2.2 reviews the post merger efficiency evaluation of commercial banks in India using Data envelopment analysis (DEA) approach and section 2.3 provides a review of marketing implications / customer perception of commercial bank mergers in India.

2.1 Ratio Analysis approach for evaluation of post-merger performance of select commercial banks in India

M&As represent a popular strategy employed by firms for many years, but this strategy has not met with much success. In fact it has been found in several studies that, on average, firms create little or no value through mergers and acquisitions (Hitt, Harrison, & Ireland, 2001). Though there is an enormous amount of research on M&As, there appears to be almost no agreement on the reasons for their outcomes (King, Dalton, Daily, & Covin, 2004). A review of the research done on M&A impact studies in general and in the banking sector in particular is furnished below.
2.1.1 Studies to evaluate the impact of Mergers and Acquisitions (Global scenario)

M&A is one of the hotly debated topics from the perspective of finance or strategy. M&As, as a strategy for speedier growth and increased market share among other things, has been researched intensively across the globe over the last two decades or so. One interesting and pertinent question that engages the attention of any researcher is “Does M&A Pay”? To evaluate acquisition success, financial economists have used a number of measures. Studies of post-merger performance usually follow either of the two approaches. i) Change in the value of the company at the time of the announcement  ii) Accounting based studies, which look at the change over time (usually 1 to 5 years) in some measure of earnings, operating cash flows, margins or productivity. Both approaches have their strengths and limitations. In the former approach, the analysis assumes that the acquisition event is completely unanticipated by investors and efficient market hypothesis (EMH) holds good. The aggregate returns to the acquisition understate its true impact to the extent that the acquisition is partially anticipated. Researchers control for this by stretching the event window chosen for measuring the returns, over a number of days before the acquisition announcement. The empirical evidence finds that the announcement returns do convey information about the acquisition’s subsequent success. Kaplan and
Weisbach (1992) found that combined acquisition announcement returns to be significantly positively related to success (Kaplan, 2006).

This method of analysis, popularly known as event-studies, has employed market-based measures to capture gains from synergy which in turn impact valuation of the combined firm. According to these studies, the value generated by mergers and acquisitions is reflected in the stock prices (Singh and Montgomery, 1987). This in turn is based on the theory of efficient market hypothesis. But there are critical commentaries on whether announcement returns are meaningful. The fact remains that there is noise in the announcement returns and the information which the acquisition announcement itself releases may not completely reflect the value of acquisition alone. It is an empirical question as to whether the noise and other information are great enough to mask the information about the acquisition itself (Kaplan, 2006). The empirical research in this field suggests that the shareholders of the target firm enjoy returns that are significantly and materially positive but when it comes to acquiring firms, the conclusion is that in the aggregate, abnormal (or market-adjusted) returns to buyer (acquirer) shareholders from M&A activity are essentially zero (Bruner, 2004). Asquith, Bruner and Mullins (1983) reported results consistent with the size effect. The practical implication of this is that the impact of smaller deals, which account for a major chunk of the M&A activity is lost in the noise. To put
it differently, what we know about the profitability of Mergers and Acquisitions is a blend of noise and large deals.

The second type of studies, accounting based studies, use information from financial statements and compare pre-merger and post-merger performance of companies to evaluate whether the merger or acquisition has resulted in changes in reported costs, revenue or profits (Ravencraft and Scherer, 1987; Healey et al; Pawaskar, 2001). Geoffrey Meeks (1977) investigated the gains from merger for a sample of transactions (233 observations) in the UK between 1964 and 1971. Meek’s findings indicate a decline in Return on Assets (ROA) for acquirers following the transaction, with performance touching the lowest point five years thereafter. For nearly two-thirds of acquirers, performance was below the industry standard and the mergers in his sample suffered “a mild decline in profitability” (Robert F. Bruner). Ravenscraft and Scherer (1987) studied 471 acquisitions between the years 1950 and 1977. Their major finding is that profitability is 1 to 2 percent less for acquirers than for control firms and these are significant differences from a statistical standpoint.

Healey, Palepu, and Ruback (1992) studied the post-acquisition accounting data for the 50 largest US mergers between 1979 and mid-1984 and found that the announcement returns based on stock price changes of the merging firms are significantly associated with enhancement in post-merger operating performance, indicating that
anticipated gains drive the share prices at announcement. They also found significant improvements in asset productivity for these firms following the acquisition. Sharma and Ho (2002) investigated the impact of acquisitions on the operating performance of Australian firms employing a sample of 36 Australian acquisitions occurring between 1986 and 1991. The results showed that corporate acquisitions did not result in significant improvements in post-acquisition operating performance.

While Andrade, Mitchell, and Stafford (2001) of Harvard Business School found improvements in accounting performance post-merger, Kaplan and Weisbach (1992) and Makismovic and Phillips (2001) found mixed results and Ravenscraft and Scherer (1987) found negative results (US samples). In other words, unlike announcement results, there is no clear-cut evidence that acquisitions lead to accounting based or productivity based improvements. (Steven N Kaplan, 2002). Many theories in the literature explain the reasons for the poor performance of merged entities – executives’ desire to head a large empire leading to ego based decision making and consequent increase in amount paid as purchase price-Hubris, low productivity, poor quality, voluntary turnover and related costs and untapped potential (Buono, 2003).
2.1.2 Studies to evaluate the impact of M&As in India

In the area of mergers and acquisitions, studies in India are relatively few and quite a few of them are case based analyses. Pawaskar (2001) observed no significant differences in the financial characteristics of the merging firms when pre- and post- merger performance was compared. Surjit Kaur (2002) studied the impact of mergers in India taking a sample of 20 firms and found that the ratios EBITDA/Sales, ROCE and Asset turnover declined in the post merger period, though the decline was not statistically significant. Beena (2004) investigated the performance of 84 domestic acquiring firms and 31 foreign-owned acquiring firms in the manufacturing sector in India during the period 1995-2000 and could not find any significant difference in the selected financial ratios of acquiring firms. Pramod M & Vidyadhar Reddy A (2007) studied the impact of mergers on the operating performance, taking a sample of public limited and traded companies in India covering the period between 1991 and 2003. Their findings point to minor variations in terms of impact on operating performance following mergers in different time intervals in India. Rajkumar (2009) observed that, on an average, merger induced changes in industry-adjusted profitability; asset efficiency and solvency position were statistically insignificant.
2.1.3 Studies to evaluate the impact of Mergers and Acquisitions (M&As) in the Banking Sector (Global evidence)

A major portion of the empirical work examining the benefits of mergers focuses on changes in cost efficiencies employing accounting data. Berger and Humphrey (1992) examined the mergers occurring in 1980s involving banks with a minimum asset size of $1billion. They observed using frontier methodology that bank mergers led to no significant gains in X-efficiency. They also analyzed return on assets (ROA) and total costs to assets and reached similar conclusions. Akhavein, Berger and Humphrey (1997) analyzed changes in profitability using the same data set based on ROA and ROE measures and found no significant change in these ratios following consolidation. Srinivasan and Wall (1992) investigated all commercial and bank holding company mergers that occurred during the time period from 1982 to 1986. Their finding revealed that non-interest expenses had not come down in the post-merger scenario.

In this context, the work done by Stephen A Rhoades (1994) is noteworthy. His findings of the operating performance studies (a sample of 19 bank mergers) were generally consistent. Almost all of these studies found no improvement in efficiency or profitability following bank mergers, the findings being robust both within and across studies and over time. He also observed that, on balance, evidence from event studies (taking a sample of 21 bank mergers) did not lend much support to the
hypothesis that financial market expected mergers to improve bank performance because of efficiency gains or other factors. According to him, problems associated with the event study approach with regard to the effects of bank mergers appear to be substantially more troublesome than those inherent in the operating performance methodology. One is therefore justified in attributing greater weight to the findings of the operating performance studies which indicate on a consistent basis, that bank mergers do not generally result in gains in efficiency or general operating performance.

The only serious study of the European market in this regard is the work by Cybo-Ottone and Murgia (1996) in which they analyzed 26 mergers of European Financial Services firms (not just banks) taking place between the years 1988 and 1995 in thirteen European banking markets. The results were qualitatively mostly similar to those obtained in respect of American banks. Average abnormal returns of targets were significantly positive and those of acquirers were essentially zero. Cybo-Ottone and Murgia’s (2000) event study analysis of 54 mergers and acquisitions covering 13 European banking markets of the EU and the Swiss market for the period 1988 to 1997 found significant increase in value for the shareholders of bidder and target banks at the time the deals were announced. Houston, James and Ryngaert (2001) in their study of 64 large bank acquisitions announced during the period 1985-1996, find negative and significant cumulative abnormal returns to
bidder banks in a 4-day window around the announcement date. The abnormal returns to target banks were also found to be significant and sizeable (20.80%). Another noteworthy study in this area was that of Pilloff (1996) who combined both the approaches to investigate a sample of 48 mergers of publicly traded banking organizations that merged between 1982 and 1991. This was an improvement over similar studies conducted by Cornett and Tehranian (1992). The results obtained by Pilloff were in line with the bulk of the merger literature. On an average, Pilloff did not find any significant change in performance induced by mergers, suggesting that managers were not able to generate benefits from such deals. He also observed that the mean overall change in shareholder value to be quite small.

2.1.4 Studies to evaluate the impact of M&As in the Banking Sector in the Indian context

Khanna (1999) who studied the impact of financial reforms on industrial sector in India observed that the banking sector reforms had failed to achieve their primary goal of making this sector more efficient. The Verma committee (2000) which went in depth into the problems of weak banks, identified and examined their problems and came out with a strategic plan of financial, organizational and operational restructuring for them recommending among other things, recapitalization. Singh (2001) attempted an assessment of the impact of reforms on the operational performance and efficiency of the commercial banks in India
using ratio analysis. His findings indicated that total income as a percentage of working funds and /or total assets and spread as a percentage of total income/working funds/total advances/total deposits improved in the post reform period as compared to the pre reform period. Bhide, Prasad and Ghosh (2002) who conducted a study on the banking sector reforms in India observed that there was commendable improvement in the profitability of the public sector banking system, as indicated by operating profits and net profits.

A quote from the G-10 report (2001) on mergers in banking is worthy of mention in this context.

“M&As do not significantly improve cost and profit efficiency and on average do not generate significant shareholder value. There is evidence in favor of exploiting scale economies in retail banking up to a certain size. (well below that of the most recent very large deals). Economics of scope are harder to pin down; there is no clear-cut evidence of their existence” (T.T. Ram Mohan).

T T Ram Mohan (2005) in his concluding remarks in a paper published in Economic and Political Weekly observed as under: “Mergers also do not seem to result in improvements in cost efficiency; Not least mergers do not in general enhance shareholder value: the target firm benefits but not the acquiring firm, resulting in a zero or negative sum game. Size is not an impediment to Indian banks competing with foreign banks in India; no amount of merger will enable Public Sector Banks (PSBs) to
compete in the international market place in the foreseeable future. Besides, there seems to be no obvious correlation between the sizes of PSBs and their performance. Often mergers result in gains not because of enhanced size but because of diversification benefits. As PSBs are for the most part have diversified portfolios additional gains from merger may not be significant.”

Manoj Anand and Jagandeep Singh (2008) analyzed five mergers (all private sector banks) in the Indian banking sector to understand the nature of the returns to shareholders following merger announcements employing the event study methodology. They observed that the merger announcements in the Indian banking industry had positive and significant shareholder wealth effect both for bidder and target banks. In summary, most studies failed to observe a positive association between merger activity and gains in either operating performance or stockholder wealth across a wide variety of methodologies, samples.

Most of the studies in the Indian banking sector which have evaluated the post merger performance have employed case method. Further, those studies which have used event study methodology have chosen small samples which may not permit broad generalization of conclusions. A few of the researchers have also adopted Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) approaches. While the DEA approach has been explored in greater detail in the subsequent pages, there have not been many studies
encompassing a comprehensive analysis of post-merger performance of the Indian banking industry spread over a major portion of the post-reform period (1994-2009). The present study which is a modest effort to cover this gap attempts a broader analysis taking a sample of 11 mergers in the Indian banking sector employing 29 parameters which reflect the profitability, productivity and risk management capabilities of the Indian banks.

2.2 Evaluation of post-merger performance of commercial banks using Data Envelopment Analysis (DEA) approach

2.2.1 Global evidence

According to the theory of Coase (1937), mergers increase value. Bradley, Desai and Kim (1983, 1988) argue that mergers create synergies. According to them the definition of the term synergies includes economies of scale, more effective management, improved production techniques and the combination of resources of complementary nature. In particular, various motivating factors have been identified as to why financial services firms engage in M&As (Hawawini and Swary, 1990). Some of these are:

- Access to information and proprietary know-how
- Achieve economies of scale and scope
- Enhance market power
- Achieve diversification
• Achieve certain tax related benefits

• Satisfy management’s goals (Example: Hubris)

From a strategic perspective, one of the main reasons for M&A activity in the financial services industry is capturing significant economies of scale and scope, both domestically and internationally (Walter Ingo and Smith Roy C, 1990). A review of the bank merger efficiency literature indicates that there is substantial scope for improvement in efficiency of banking organizations. X-inefficiencies are in the range of 20% to 25% of the costs in the banking industry (Berger and Humphrey, 1997). This suggests that cost efficiency in banking sector could be considerably improved through M&As, following the theory of managerial efficiency, by consolidating, say, back-office operations, data processing and eliminating duplication in the operating branches and other levels of management. Further there is potential for risk diversification through M&As, primarily geographic diversification (example: Merger of Centurion Bank of Punjab with HDFC Bank). The increased diversification would allow banks to take on additional credit risks and earn higher expected returns for the same amount of equity and overall risk. (Akhavein, Berger and Humphrey, 1997; Demsetz and Strahan, 1997).

Fare et al. (1992, 1994a) developed a DEA-based Malmquist productivity index which measures the productivity change over time. This index which is a useful tool for measuring the productivity changes of DMUs
(Decision making units) over time has been employed in this study to track changes in average bank productivity post-merger.

Berger, Hunter and Timme (1993) in their study pertaining to the efficiency of financial institutions reviewed past research on the topic and suggested how future research on this important topic might proceed. According to them, if the financial institutions (FIs) become more efficient, then we might expect enhanced profitability, larger amounts of intermediated funds, better pricing and improved service quality for consumers. These apart, improved efficiency of FIs could result in their greater safety and soundness if some of the efficiency savings are employed in augmenting the capital base that is necessary to absorb risk by providing the much needed buffer.

While scale and scope efficiencies have been extensively studied, primarily in the context of US financial institutions, relatively little attention has been paid to measuring a much more important source of efficiency differences – i.e., X-inefficiencies, or the deviations from the efficient frontier. That is, differences in managerial ability to control costs or maximize revenues appear to be greater than the cost effects of the choice of scale and scope of production differences, which on an average have been estimated at about 15% of the costs in banking.

Stephen A. Rhoades (1993) in his study on efficiency effects of horizontal (in-market) bank mergers conducted tests to determine whether banks
involved in horizontal mergers achieve efficiency improvements relative to other firms. The analysis covered 898 bank mergers from 1981 to 1986. Efficiency was measured by various expense ratios. The results based on OLS and logit analysis indicated that during 1981-1986, horizontal bank mergers did not result in efficiency gains. Notably, the findings are based on the mergers believed to be the ones most likely to result in efficiency gains, i.e., they are horizontal mergers, the firms exhibit considerable deposit overlap, and the acquirers are, on an average, more efficient than the targets. Allen & Roy (1996) estimated a global cost function for international banks to test for both input and output inefficiencies. Their findings for the time period 1988-1992 suggest that for banks in 15 countries, the input related X-inefficiencies far outweigh the output inefficiencies measured by economies of scale and scope. Another notable finding of their investigation was that while large banks in countries where there was no functional integration of commercial and investment banking, had the highest measure of input inefficiency as high as 27.5% of total costs as well as significant levels of scale diseconomies, the other banks had X-inefficiency levels in the area of 15% of total costs..

Allen N Berger (1998) argues that analysis of profit efficiency is more apt than the analysis of cost efficiency to the study of M&As because it includes the revenue effects changes in output that typically occur after
mergers. He adds that profit efficiency is a more general concept that includes cost X-efficiency effects of the merger plus any revenue and cost effects of changes in output.

Prager and Hannan (1998) studied the price effects of U.S. bank mergers that substantially increased local market concentration. They used the deposit interest rates offered by banks to their clients as their price measure. They found that, over the 1991-94 time period, deposit rates offered by participants in substantial horizontal mergers and their local market rivals declined by a higher percentage than did those offered by banks not operating in markets in which such mergers took place. The authors interpreted the results as evidence to establish that these mergers led to enhanced market power.

Bank mergers may enable banks to gain from new business opportunities that surface following changes in the regulatory and technological environment. Berger et al (1999) highlighted the consequences of M&As which may result in changes in efficiency, market power, scale and scope economies and availability of services to small customers.

Rhoades S.A (1998) studied the efficiency effects of bank mergers employing a sample of nine mergers. The sample of mergers selected for the study consisted of those mergers that seemed comparatively likely to result in efficiency gains. They involved relatively large banks generally with substantial market overlap, and most of them occurred during the
early 1990s when efficiency was getting a lot more attention in banking. All the nine mergers, without exception resulted in significant reduction in costs as expected prior to merger. While four of the nine mergers successfully resulted in improvements in cost efficiency but the remaining five did not. It was however not possible to isolate the specific factors that were most likely to produce efficiency gains. Generally, it was found that the largest volume of cost reductions were in the nature of staff retrenchments (over 50% of total cost reduction on an average) and data processing systems and operations. A majority of the mergers showed an improvement in Return on Assets (ROA) relative to the respective peer groups.

Allen N. Berger, Rebecca S. Demsetz, Philip E. Strahan (1999) developed a framework for evaluating the causes, consequences, and future implications of consolidation of financial services industry. They reviewed the extant literature in the backdrop of this framework, and made invaluable suggestions for future research. Their study yielded evidence which indicated increases in market power from some types of consolidation; improvements in profit efficiency and risk diversification. But it showed little or no improvement in cost efficiency on average and on the availability of services to small customers. Their study also shed light on possible improvements in payments system efficiency; and potential costs that might be imposed on the financial system from increase in systemic risk.
Another study by Jose. M.P (2001) analyzed the cost and profit efficiencies of a sample of 14 countries of the European Union (EU), as well as Japan and the United States of America (USA). The results showed that since the start of the 1990s increasing competition had led to gains in the profit efficiency in USA and Europe but not in the Japanese banking system. The results also highlighted the fact that inequalities of profitability between countries would be significantly reduced if inefficiencies were removed, *efficiency gains thus being a very important source of improvement in profitability.*

Berger and Mester (2003) investigated the effects of technological change, deregulation, and dynamic changes in competition on the performance of the banks in U.S.A. The most striking dimension of their findings is that during the time period 1991-1997, cost productivity declined while profit productivity improved significantly, particularly for banks involved in mergers. The data are consistent with the hypothesis that banks made efforts to maximize profits by increasing revenues and reducing costs. Banks appeared to provide additional or higher quality services that raised costs but also simultaneously augmented revenues more than the corresponding cost increases. The results suggest that approaches that leave out revenues in assessing performance could be misleading.

The Data Envelopment Analysis (DEA) approach has been widely applied in estimating the efficiencies in sectors like banking, education and
healthcare. The DEA methodology has increasingly been the preferred method to investigate the impact of M&As on bank efficiency, in particular, if the sample size is small. A list of earlier studies conducted to analyze a small number of M&As is furnished in the table 2.1

Table 2.1  
Examples of Small Sample Size in DEA Literature

<table>
<thead>
<tr>
<th>Researchers(Year)</th>
<th>Sample Size</th>
<th>InputsxOutputs</th>
</tr>
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<tbody>
<tr>
<td>Liu and Tripe(2002)</td>
<td>7 (7-14)</td>
<td>2x2=4 and 2x3=6</td>
</tr>
<tr>
<td>Avkiran(1999)</td>
<td>16-19</td>
<td>2x2=4</td>
</tr>
<tr>
<td>Oral and Yolalan(1990)</td>
<td>20</td>
<td>5X4=20</td>
</tr>
<tr>
<td>Vassiloglou and Giokas(1990)</td>
<td>20</td>
<td>4x4=16</td>
</tr>
<tr>
<td>Giokas(1991)</td>
<td>17</td>
<td>3x3=9</td>
</tr>
<tr>
<td>Haag and Jaska(1995)</td>
<td>14</td>
<td>3X4=12</td>
</tr>
<tr>
<td>Yeh(1996)</td>
<td>7</td>
<td>3x3=9</td>
</tr>
<tr>
<td>Sufian(2004)</td>
<td>10</td>
<td>3x2=6</td>
</tr>
</tbody>
</table>


Al-Sharkas, Hassan & Lawrence (2008) using Stochastic Frontier Approach (SFA) investigated the cost and profit efficiency effects of bank mergers on the US banking industry. The empirical findings indicate that cost and profit efficiencies of banks have improved post-merger. Further the evidence also indicates that merged banks have lower costs than non-merged banks because of their access to most efficient technology available (technical efficiency) as well as cost minimizing input mix (allocative efficiency). Another interesting finding of the study was that mergers might allow the banking industry to take advantage of the opportunities created by the improved technology.
Avkiran (1999) used Data Envelopment Analysis (DEA) to measure operating efficiencies, profit performance, employee productivity, and average relative efficiency for Australian trading banks from the year 1986 to 1995. According to his study, in general, efficiencies rose in the post-deregulation period. However, the acquiring bank did not always maintain its pre-merger efficiency. Hence, there is a need for the decision makers to be cautious in promoting mergers as a means of creating efficiency gains.

Milind Sathye (2001) empirically investigated the X-efficiency of Australian banks using DEA to compute the efficiency scores. Banks in the sample were found to have low level of overall efficiency compared to the banks in EU and US. Another interesting finding of the research study was that the inefficiency of the Australian banks could be attributed to wasting inputs (technical inefficiency) rather than choosing the incorrect combinations (allocative inefficiency). The study has important implications for government policy regarding deregulation and mergers in as much as it helps banks in strategy planning by clearly pinpointing the sources of inefficiency.

Aloke Ghosh (2001) using a sample of large acquisitions between 1981 and 1995 (Compustat database), found no evidence of operating performance improvement following acquisitions, the firms in question being matched on performance and size as a benchmark.
Isik et al (2002) investigated the impact of technical, scale and allocative efficiencies of Turkish banking industry over 1988-1996 period. The results suggest that the heterogeneous characteristics of banks significantly impact their efficiency and the cost and profit efficiencies of Turkish banks exacerbated over time. Another important finding of the study was that the main cause of inefficiency in Turkish banking was technical inefficiency rather than allocative inefficiency, attributable primarily to scale diseconomies.

Liu and Tripe (2002) used a relatively small sample of seven to fourteen banks and explored the efficiency of 6 New Zealand bank mergers during the period between 1989 and 1998. They found that the acquiring banks to be generally larger than the targets. While the results indicated that four banks experienced efficiency gains post-merger, they could not arrive at a conclusion on possible merger benefits.

Sufian (2004) using a small sample of 10 banks, investigated the impact of the merger programme on the domestically incorporated Malaysian commercial banks. He found that the inefficiency among these banks was attributable to scale suggesting that these banks were operating at sub-optimal levels.

Sufian et al (2009) studied the impact of M&As on the technical efficiency of the Malaysian banking sector during the period 1997-2003. Based on the empirical findings of the study the authors concluded that the merger programme of the Malaysian domestic commercial banks was
propelled by economic reasons. They also found improvements in technical efficiency during the post-merger period.

**2.2.2 Indian evidence**

Despite substantial studies conducted regarding the efficiency of financial services industry in the US, Europe and Asia-Pacific banking industries, such comprehensive studies in the Indian context are rare to come by especially in the area of commercial bank mergers. This is partly attributable to the non-availability of data sources and the small sample of banks that have undergone mergers.

Bhattacharyya, Lovell & Sahay (1997) examined the productive efficiency of 70 Indian commercial banks between 1986 and 1991 using DEA and technical efficiency scores. Their finding revealed that public sector banks were the most efficient when compared to foreign-owned and privately-owned Indian banks. Another interesting finding of the study was that though foreign banks were the least efficient at the beginning of the sample period, they became as efficient as public sector banks by the end of the study period, possibly through efficient adaptation to an increasingly competitive environment.

Gunjan M.Saneev (2008) analyzed the efficiency of Indian public sector banks for the period 2003-2007 using Data Envelopment Analysis (DEA) approach. His findings revealed that the efficiency of these banks had not increased over the study period.
Prakash Singh (2009) studied the impact of mergers in Indian banking using DEA approach. He analyzed the profit efficiency and cost efficiency of the acquiring bank to see whether any gains occur from consolidation. His conclusion is that the mergers do not seem to impact the cost and profit efficiency in an adverse manner.

Ray and Das (2010) used non-parametric DEA methodology to evaluate the cost and profit efficiency gains of the Indian banking sector during the post-reform period (1997-2003). Their study indicates the state-owned banks to be more efficient than their private-sector counterparts. Moreover, lower efficiencies were found to be associated with small banks (with assets up to Rs.50 billion) signifying the existence of scale diseconomies. They also found considerable variation in efficiency across various ownership categories of the banks.

In sum, the literature review suggests that bank mergers have the potential to improve performance of the firm through increased profitability by enhancing efficiency levels post-merger. There is however no consistent evidence about increased efficiency levels post-merger, in the banking sector across the globe. Most of the studies relate to bank mergers in US, Europe and Australia and have found no convincing evidence on the increase in efficiency gains resulting from bank mergers (Rhoades, 1993; De Young, 1997). There are other studies which have found improvements in technical efficiency in bank mergers [Al-Sharkas et al (2008) and Sufian et al (2009)]. While some studies have found
improvements in profit efficiency after bank merger, no such improvements have been observed in regard to cost efficiency in the same studies (Berger and Mester, 2003; Berger et al, 1999). Another interesting finding of a study was that bank efficiencies (in Australia) rose in the post-deregulation period and the acquiring bank did not always maintain its pre-merger efficiency (Avkiran, 1999).

Yet another study which investigated the effects of bank mergers on the cost and profit efficiency US banking industry found that both these efficiencies improved post-merger (Al-Sharkas et al, 2008). In another efficiency study on European banks, the scale economies were found to be ranging between 5% and 7%, while the X-inefficiencies were found to be much higher, ranging between 20% and 25%. By implication, banks, regardless of size, could generate greater cost savings by bringing down managerial and other inefficiencies. The study also showed that technical progress has also had similar influence (cost reductions were around 3%) on European banking markets between 1989 and 1997 (Altunbas et al, 2001). A notable outcome of the review of literature was that the acquiring banks were generally larger than the targets (Liu and Tripe, 2002).

Finally, a research study to analyze the cost and profit efficiency of a sample of banks drawn from US, Europe and Japan found that increasing competition had resulted in gains in profit efficiency in USA and Europe but not in Japan. This could imply that improvement in
bank efficiency is not uniform across the globe but might vary from country to country (Jose, 2001). Variation in efficiency across various ownership categories has also been observed in a cost and profit efficiency study of Indian banks during the post reform period (Ray et al., 2010).

2.3 Marketing implications/Customer perception of service quality of banks in the face of commercial bank mergers in India

A detailed review of literature pertaining to the marketing implications of commercial bank mergers is furnished below:

2.3.1 Consumer perceptions of bank mergers (Global evidence)

Much of the literature on bank marketing in the face of mergers has appeared in trade publications and the articles have generally been published by bank executives and consultants. The articles published by academicians on banking services tend to focus, on general issues of bank/financial services marketing and not on mergers (Urban et al., 2000)

2.3.2 Trade Publications

comScore, Inc. (NASDAQ: SCOR), a leader in measuring the digital world, in a study of the U.S. online banking industry, released on 22nd January, 2009 found that the weak economy’s impact on consumer finances combined with the banking crisis have posed added challenges for banks to attract new customers and exploit opportunities to cross-sell to the existing clients.
The report on “Bank Mergers and the Public Interest” (February 01, 2006) published by Public interest advocacy centre, a Canadian law firm, outlines briefly the rules and policies that govern large bank mergers in the Canadian Banking environment. It looks at the reasons for turning down two large mergers in 1998 and whether the reasons adduced for the same had changed by 2002. It also investigates briefly the bank merger experiences in other jurisdictions, surveys financial services environment from a customer perspective and then evaluates how mergers might affect public interest issues of choice, access, and price. The report does not find any persuasive evidence that consumer choice and access to banking services will be enhanced by large bank mergers. It also finds no evidence that the cost of banking services will be reduced following a bank merger. The dominance of Canada’s major banks makes successful new entry of foreign banks or other domestic entities very difficult. The proposal that physical branches can be replaced by e-banking does not meet the varied banking needs of Canadians and small business. The reliance on e-banking also accentuates age and income divides. There is also no certainty that increased use of ATMs following a bank merger will result in reduced banking costs.

To understand the issues in proper perspective, further review of literature may be divided into two categories. The first category discusses the case studies in bank mergers and their findings in the context of their marketing/customer implications. The second category examines
the research done by academicians in the area of service quality perceptions of consumers of the banking services.

2.3.3 Case Studies

During the merger of BankAmerica (BA) with Security Pacific, BA was well aware that Security Pacific's wholesale banking clients would be aggressively sought out by competitors; it focused on client retention as the primary goal during the integration stage which was completed rapidly. Towards this end, client-focused strategies were developed with three key objectives of maintaining service quality, control, and compliance standards; retain business; and quickly maximize cost savings. (Foster, 1993). "The greatest challenge facing banks during M&As lies in properly understanding who constitute the core customers and treating them as an asset," says Fred Reichheld, Director of Bain & Co., Boston, and leader of its Loyalty Practice (Morrall, 1996). These statements succinctly bring out the importance of customer relationship management in the integration stage of bank mergers. In the recently announced merger of Byron bank with Chemical Financial Corporation, the importance attached to customer retention comes out clearly in the words of Byron Bank President and CEO Pat Gill: During that period, executives will “do everything they can to avoid a disruption in the relationships with our customers” (Mark Sanchez, 2010) (Business Review, West Michigan, April 16, 2010).
The merger of Bank of Madura with that of ICICI Bank in 2001 is an excellent example of a very successful merger in an altogether diverse community benefiting a large number of consumers. ICICI Bank branches have expanded from around 7 in 2000-01 to around 270 in 2005-06, the largest number of ICICI Bank branches in any state, thus penetrating the southern markets. (Ravi Kumar, 2007). According to Reichheld, there are three causative factors which prompt people to choose a financial institution (FI): people and service, product and pricing; and location and convenience. Systematically reviewing each of these regularly will enhance the customer retention prospects. (Morrall, 1996). A successful bank should address these underlying expectations in service delivery to be able to build long lasting customer relationships.

2.3.4 Empirical Research

Practitioner literature regarding bank mergers contains quite a few recommendations some of which are based on case analyses. The need therefore arises for a broad based empirical research into customer perceptions of commercial banks in the wake of mergers. But, research of this nature does not seem to have appeared in the academic literature in the Indian context.
2.3.5 Academic Research

Quality has been defined as superiority or excellence, or, as the consumer’s overall impression of the relative inferiority or superiority of the organization and its services. (Zeithaml et al, 1990; Taylor and Baker, 1994). Quality is sought by all organizations especially in the service sector and particularly, in the banking sector (Ch.Spathis, E.Petridou & N.Glaveli, 2002). Empirical evidence has shown that service quality can be seen as one of the main determinants of customer satisfaction which in turn may influence purchase intentions (Cronin and Taylor, 1992; Pruden et al, 1996; Bloemer et al;1998). Accurate measurement of service quality is a matter of keen interest to researchers and bankers alike as it will enable them to devise methods and techniques to achieve competitive advantage and build customer relationships. (Zahorick and Rust, 1992; Palmer and Cole, 1995). Perceived service quality is a form of attitude, a consumer judgment of the overall excellence or superiority of the service rendered. It results from a comparison of consumers expectations with their perceptions of service delivered by the suppliers (Kagnis and Voukelatos, 1997). Expectations could be formed from a variety of sources, which may be broadly categorized as personal or organizational. While the former refers to the personal needs and wishes (Edvardsson et al, 1994), the latter focuses on the promises made by staff, advertising, implicit service promises (such as price, image and reputation, service encounters and verbal and non-verbal behavior),
evidence of service and distribution channels (Zeithmal and Britner, 1996).

There are several reasons for the banks to merge their operations. The first and foremost reason often cited in literature is realization of synergies: Financial, Operational (Porter, 1985) and Managerial (Porter, 1987). The second reason is increased earnings and market share. Merged banks may be in a stronger position to compete globally. They may be able to provide a more diversified product mix to their clients at competitive prices because of economies of scale and scope. They may access information and proprietary technologies, achieve greater diversification and earnings stability, tax-benefits and even satisfy management’s goals (Hubris) (Hawawini and Swary, 1990). Mergers may also result in reduced operating costs (Standard and Poors, 1997).

From the customer’s perspective, bank mergers can result in customers receiving more services which generally include larger loan limits, more branches and more Automated Teller Machines (ATMs) (Turillo and Sullivan, 1987). The American Economic Review (Dario Focarelli and Fabio Panetta, 2003) has reported that there is strong evidence that although consolidation generates adverse price changes, these are of a temporary nature and in the long run, efficiency gains dominate over the market power effect, leading to more customer friendly pricing of bank services. The merged bank can serve the end user in a better way through providing under one roof a variety of services like conventional
banking, merchant banking, mutual funds, insurance products leading to innovation and emergence of new products like bank assurance (Universal Banking). Consumers complained vociferously after service levels declined with Wells Fargo's acquisition of Norwest in 2000, and during a series of acquisitions undertaken by Fleet Bank. (Knut Meyer, Everest Group, 2004). According to a survey conducted by Ethos Consultancy, Customers in the UAE are happier with services offered by their banks now than they were during the boom period (Andi Sambidge, 2009). Customer retention is critical in any post-merger acquisition, but in the current troubled banking environment, in which every dollar or euro counts, banks must defend the deposit balances of high value customers at all costs.

In traditional bank mergers, customer attrition of 5 to 10 percent is typical, driven by consumer dissatisfaction with the acquiring bank and branch consolidation or changes in service levels. However, this loss is usually offset by cost reduction (K.Unnikrishnan, 2006). Today, customer loss after a merger can be anywhere from 10 to 20 percent, owing to customer skittishness about the solvency of the merging “troubled” banks and the security of their deposits. High-value customers are the most likely to leave as they seek low-risk, top-quality institutions in which to place their significant assets. They can and will depart at the slightest hint of instability, and they are being aggressively courted by stronger banks. Even relatively minor customer-facing operational
problems such as a glitch in the ATM network or delays in posting deposits could result in significant attrition of customers (Booz&Co, 2008). A recent study of thousands of U.S. bank mergers by Stephen Rhoades, an economist at U.S. Federal Reserve Board concluded that service to customers did not improve as a consequence of any of the mergers. Other U.S. studies have found that mergers led to increased fees, branch closures and low level customer service. (Canadian Community Reinvestment Coalition, 2006). Apart from the above, mergers have an impact on customer retention. According to Reichheld, there are a few controllable events that prompt customers to leave. They are “a perception of exorbitant fees for services, inadequate employee service; gaps in the menu of services and products, delays on account of bank mistakes and low deposit interest rates(payments”. Customer retention will be facilitated by understanding what attracts customers to the bank. (Morrall, 1996)

Schneider et al (1980) find in their study on “Employee and Customer Perceptions of Service in Banks” some strong relationships between employee perceptions of branch practices and procedures in relation to service and customer perceptions of service practices and quality. Roger Hallowell (1980) examines the relationship of customer satisfaction, customer loyalty, and profitability in retail banking environment from a survey of 1200 customers. His research illustrates that customer satisfaction; customer loyalty and profitability are related to one another.
Similar results were obtained in another empirical study conducted by g Lee.M.C and Hwan. I.S. (2005) in the Taiwanese Banking Industry. In a recent study of four Quatari banks, Mohammed Hossain and Shirley Leo (2009) observe that in order to achieve higher levels of quality service in retail banking, banks should make sustained effort to deliver higher levels of service quality and the customer preferences follow the descending order starting from infrastructure facilities followed by timing of the bank and return of deposit. The ever increasing competition in retail banking should impel bank managers to rethink on the ways and means of improving customer satisfaction with respect to the quality of service rendered by banks.

Coksun.A and Frohlich.C.J (1992) have argued in their study entitled “Service: the Competitive Edge in Banking” that since customers are demanding banking with more human face, banks must make efforts to narrow the gap between supply and demand by evaluating their marketing deficiencies and becoming more proactive. Mosad Zineldin (1996) argues that no bank can be the best bank for all the customers. He discusses some strategic issues related to bank positioning. In a survey of Swedish banks concerning how a bank has been selected and perceived from the customers’ view point in relation to its competitors in the market, he has found the functional quality to be more important than traditional marketing activities. He also observed that convenient
location, pricing and advertising had an *insignificant* impact on bank selection.

Lee-Mortimer (1992) in his study “Banking on new ideas” finds that reward system for employees has not only improved service quality but has also kept employee enthusiasm for TQM at high level. Nicolaus Lundahl et al (2009) find in their study on SME (Small and Medium Enterprise)’s’ relationships with banks that SMEs seem to evaluate their relationship with banks not only on the basis of the service outcomes but also the care and the manner in which bankers deliver services. This brings out the HR dimension of service delivery which is equally important. Adrienne Curry and Susan Penman (2004) have examined the importance of technology in enhancing customer relationships in banking. In a study involving personal banking customers, conducted in Scotland, they have, based on the analysis of their results, underlined the need for delicately balancing the personal interaction and technologically delivered services if customers are to be retained over time. A similar view was echoed by Avkiran (1999) who found in his study that high technology solutions could not be a comprehensive substitute for branch staff as such a proposition was ignoring the essence of customer service quality which necessarily involved staff-customer contact. It therefore follows that adequate staff numbers should be provided to serve customers and staff should be trained to be responsive and professional in their conduct.
Javalgi (1992) uses a segmentation approach to understand customer satisfaction and dissatisfaction and choice behavior in relation to affluence in the financial services market. Affluent customers lay more emphasis on safety of funds, availability of diversified product and service mix and knowledgeable people who can offer personalized service or professional advice. Less affluent customers place more emphasis on interest rates on loans and deposits among others. The essence of the study is that affluent customers differ in their needs and perceptions from the less affluent ones. Pamela A. Kennett et al (1995) from their study of mature customers (who are an attractive segment in terms of their wealth) and their financial needs have emphasized that financial services providers should recognize them as a separate segment besides their heterogeneity while devising various programs for them for gaining sustainable competitive advantage.

Levesque and Dougall (1996) find in their study on the determinants of customer satisfaction in retail banking, a broader view should be taken towards identifying the components of service quality and the overall service offering, which would in turn yield valuable insights into the composition of the service quality from the customer's standpoint. Yavas et al (1997) investigate the role of customer-contact personnel in creation and retention of satisfied customers in Turkish Banking environment. They conclude that banks should not ignore the specific needs/motivations of customer contact personnel (internal public) in
their effort to deliver high quality service to their external publics (clients).

Marla Royne Stafford (1996) observes from her empirical study on demographic discriminators of service quality in the U.S banking industry such as age, gender, are related to perceptions of bank service quality. This inference focuses on the unique service needs of different demographic groups and implies that bank marketers have to take into consideration the demographic differences while developing banking products and devising promotional appeals.

Peter Kangis and Vassilki Passa (1997) conclude from a study to test whether or not awareness of charges by bank customers was related to expectations and perceptions of service quality, that price awareness has some influence on quality perception, but not on expectations. Laroche et al (1986) investigated (study carried out in Montreal, which was chosen for its highly competitive banking environment) across diverse demographic segments on the factors considered important in selecting a bank. They identified that speed of service, locational comfort, competence and friendliness of bank personnel were among the crucial factors in addition to services relating to chequing accounts. Further they found significant changes in attitudes and opinions between the sexes, language, age, income and educational level of the groups surveyed.
Minjoon and Shaohan Cai (2001) in their study regarding the key determinants of internet banking service quality have identified 17 dimensions of service quality, which can be broadly classified into three categories; Customer service quality, Banking service product quality & Online systems quality. The study also found that substantial differences existed between internet only banks and traditional banks offering internet banking services. The most frequently referred dimensions as the main sources of satisfaction or dissatisfaction were reliability, responsiveness and access & accuracy.

Yonggui Wang et al (2003) in their study on Chinese Banking find that both service quality and product quality have a significant influence on bank reputation and hence it is important for China’s retail banks to improve both product and service quality to enhance their reputation and attract an increasingly larger share of profitable customers to maintain sustainable competitive advantage. Barbara R.Lewis (1991) attempted an international comparison of Bank customers’ expectations and perceptions regarding service quality. Her findings indicate that there were significant differences between UK and US respondents in regard to their perceptions on various dimensions of service quality. (E.g: Location, personal characteristics of staff, bank’s responsiveness to their needs etc).

Yavas et al (2004) describe the results of their study of private bank customers in Germany. The authors find that different aspects of service
quality and *different consumer characteristics seem* to be associated with different outcomes. The results of analysis reinforce the importance of a bank’s front-line personnel, particularly in attracting new customers. Since banking is a business based on trust and privacy, a great deal of perception of service is a function of employees themselves and as such financial institutions may pay greater attention to personal touch which may prove profitable in the long run. Spathis et al(2004) discuss the service quality of Greek banks on the basis of their customers’ perceptions of service quality dimensions such as effectiveness and assurance, access, price, tangibles, service portfolio and reliability. The results of the study generally support the hypothesis that *gender affects service quality perceptions* and the relative importance of various banking service quality dimensions. The bank managers will do well to factor this aspect in formulating their operational, human resource and marketing strategies.

Sigala Marianna(2008) in her commentary on the interrelationships and implications of Service quality and customer relationship management emphasizes that service quality is no more sufficient to increase customer loyalty and customer relationship management(CRM) has now a days been widely argued as a strategic necessity for enhancing the competitiveness of the firm. Hence there is an imperative need to consider both the operational and marketing implications (particularly customers’ perceptions and reactions) when designing and implementing
a service quality based CRM strategy. Chander et al (2002) in their study on the linkages between service quality and customer satisfaction find that the two are closely related. The true gains of quality revolution come only from delighting the customer, which to a large extent depends on his or her perceptions of overall service quality.

2.3.6 Indian evidence

Singh(1996) in his study of 36 banks, suggested that giving proper representation to marketing function in bank’s organizational structure, adopting a unified approach to marketing activities, and provision of trained marketing manpower would go a long way in making the marketing function effective in management of banks.

Prabhakaran and Satya (2003) examined the service attributes of Indian banking sector and concluded that quality service is a winning edge in the highly competitive environment.

Uppal (2008) investigates the customer perception of e-banking services of Indian Banks, in the context of banks moving towards e-banking from traditional banking. He concludes that most of the customers of e-banks are satisfied with different e-channels and their services, but lack of awareness about these services is hampering the spread of e-services.

Singhal et al (2008) in their study to identify the major factors that contribute to customer perception towards internet banking, had used an 18-item questionnaire out of which seven items were related to convenience and flexibility and the remaining eight items were related to
transaction benefits. Their study revealed that utility request, security and fund transfers were prominently figuring among the major factors influencing customer perception.

This phase of the research study is an attempt to fill the gap in published literature about the marketing implications of bank mergers in India. It presents the results of a bank customer/consumer survey concerning the relationship between bank mergers and service quality perceptions in the Indian context. A host of literature available on service quality perceptions of bank customers though very comprehensive in itself and provides vital leads and recommendations for future research and for more effective bank management, does not take into account the effect of bank mergers on service quality perceptions, more so in the Indian context. Hence there is a need for further research to determine if this relationship extends to service perceptions in the face of bank mergers. For researchers who are interested in researching consumer perceptions of service quality as a result of mergers and acquisitions, empirical research would offer an important benchmark for further studies. A cumulative result of such research could be a working model of consumer response to bank mergers and acquisitions that would have both theoretical and managerial appeal. To summarize, the central theme in this part of the research study is to examine the relationship between consumers’ selected demographic/behavioral characteristics and service quality perceptions in the context of consolidation of Indian banking
sector. This research follows logically from the research gaps reported in the academic and practitioner literature reviews and it is expected to be an important first step in filling the demonstrated research needs.