CHAPTER -3
RESEARCH METHODOLOGY

1.1 Introduction:
The world progresses through research, as new knowledge is created through research (Khawaja Khalid, HaimHilman and Dileep Kumar M., 2012). Research is derived from the Latin word which means ‘to know’. In other words research means to re-search (Sekaran, 2006). “Research is a systematic inquiry aimed at providing information to solve managerial problems.”(Cooper and Schindler, 2003). Research involves an eclectic blending of an enormous range of skills and activities (Bryman and Bell, 2003). Research is based on primary and secondary sources, often together with original data collected via research "instruments" (surveys, interviews, questionnaires, "focus groups," etc.) to produce new knowledge on a particular topic (Saunders, Lewis and Thornhill, 2009). In addition to primary sources and original instruments, secondary sources are used to provide an overview of existing published knowledge on a topic, and possible current debates about the topic (Walliman, 2005). The background provided by secondary sources provide a contextual background and establishes how new knowledge described on paper differs from what is already known (Cooper and Schindler, 2006). In order to conduct productive research, one has to understand the specific methods used to conduct research, understand the subject which is under study, and be able to understand and interpret the results (Sekaran and Bougie, 2010; Walliman, 2005).

This implies, once the background for the research topic is established through literature review with the knowledge gap identified, the next logical step is to draw a route map for answering the research questions including the identified research proposition (Bruns, 2007). Therefore, this chapter will discuss the research design, research objective, research hypothesis, research methodology, data collection methods and statistical tools for analysis and interpretation. (Bryman and Bell, 2003; Cooper and Schindler, 2003, 2006; Stuermer, 2009).
3.2 Research Design:

A critical part of the research activity is to develop an effective research strategy or design (Zikmund, 2000; Zikmund, Babin, Carr and Griffin, 2009) Research design provides a structure for the collection, measurement and analysis of data (Saunders et al., 2009).

This research makes an attempt to evaluate the pre-merger versus post-merger performance of public sector banks vis-à-vis private sector banks in India that have merged during the period 1993-1994 to 2004-2005 by analyzing the variables elucidated in the CAMEL model. “The research process can be presented in the form of a model which usually starts with a broad area of interest, which is the initial problem that the study attempts to analyze.” (Zikmund, 2000).
Problem Discovery and Definition

Selection of exploratory research

Secondary (historical) Experience survey Pilot study Case study

Problem definition (Statement of Research Objectives)

Selection of research Methods

Experiment
  Laboratory Field
 Survey
  Interview Questionnaire
 Observation

Sampling

Selection of Research technique

Probability Non-probability

Collection of data (fieldwork)

Editing & coding data

Interpretation of Findings

Report

Data Gathering

Data Processing and analysis

Conclusions & Report

Source: (Zikmund, 2000)
After the initial discovery and definition of the problem the research study has to focus on the initial interest in the form of a specific question, which can be reasonably studied (Bwisa, 2008). This might also involve formulation of a hypothesis or an assumption (Ohab, 2010). After the formulation of the hypothesis, the research study engages in ‘observing’ the question of interest. Having gathered the data, it can be analyzed in a variety of ways (Bryman and Bell, 2003).

The research study gets invaluable aid with the research design as it helps in the allocation of the limited resources by posing choices such as: (Goodwin, 2005; Saunders et al., 2009; Sekaran and Bougie, 2010)

- “Is the blueprint to include experiments, interviews, observation and the analysis of records, simulation or some combination of these?
- Are the methods of data collection and the research station to be highly structured?
- Is an intensive study of a small sample more effective than an intensive study of a large sample?
- Should the analysis be primarily quantitative or qualitative” (Bryman and Bell, 2003; Sekaran and Bougie, 2010)

Research design needs a thorough analysis to ascertain the outcome of the project. In order to carry out effective research, all the available methods should be considered, and only the most appropriate method should be selected (Sekaran and Bougie, 2010). Each method has its own pros and cons and a careful blending of one or more methods, can lead to generation of relevant information, pertaining to the objective of the study. The sections ahead detail the research methodology, the research model, the sampling plan, data collection (quantitative or qualitative) that were used in the study and the statistical tools for analyses and interpretation.

3.2.1 Exploratory Research:
“Exploratory research is conducted to clarify the nature of ambiguous problem”, (Zikmund, 2000). “Exploratory research clears concepts, establishes priorities, develop operational definitions, and improves final research design”, (Saunders et al., 2009; Sekaran and Bougie, 2010).
In the present study, exploratory research was carried out in the initial stages to obtain adequate information with the help of desk research. This was done to find out the data regarding those mergers and acquisition deals that have been undertaken in the Indian banking sector during the period under study, the motives and causes for these deals, the performance evaluation techniques in Indian banks and the audited financial statements of the banks, so as to enable to effectively complete the study. An important factor that aided in the collection of this data is the fact that the retail banking industry in India is a very organized sector with detailed information available through banking literature, annual audited financial statements and reports, and online resource. Access to such information was also possible, with the cooperation of banking executives, through in-depth interviews with officials of banks in the sample banks under study, that were involved in the deal, that willingly assisted with important literature for the present research. The main context of covering in-depth interviews is that the study can also bring the perspectives of the banking professionals, on the reasons for acquisition by the acquirer banks. The only limitation associated with the in-depth interviews was that it could not be conducted for all sample acquirer bank involved and it was conducted only for banks where top executives appointment could be sought, which is considered for the analysis.

3.2.2 Descriptive Research:

“Descriptive research seeks to determine the answers to who, what, when, where and how questions”, (Zikmund, 2000). “Descriptive survey is concerned with identifying and counting frequency of a specific population, either at one point in time or at various times for comparison”, (Bryman and Bell, 2003). Descriptive statistical analysis for the present research involved the following steps. First literature review was undertaken to identify the merger and acquisition deals that were done during the period under study, thereafter literature review also provided details on the various parameter influencing the performance of banks during the pre-merger versus post-merger period. Next interviews were conducted with banking executives to identify the impact of mergers and acquisition on the performance of the merged banks and also
to certify about the various parameter influencing the performance of banks during the pre-merger versus post-merger period that were identified through the literature review. Finally after establishing the sampling procedure, the methods of data collection and analysis was determined. The main purpose of using descriptive style of research design is that the data collected is very concise and structured which makes the analysis factual and uncomplicated. The study has collected data pertaining to Indian banking mergers and acquisition deals that have taken place during the period 1993-1994 to 2004-2005. Nine banking merger and acquisition deals were covered during the period under study. Out of these nine deals, seven deals are of public sector bank acquirers and two deals are private sector banks acquirer.Analyzing these nine deals with exploratory research is difficult and hence descriptive research design was used. The research examined the impact of these mergers and acquisitions on the performance of the acquiring banks during the pre-merger versus post-merger period and also analyzed the impact of mergers and acquisitions on the post-merger performance of acquiring public sector banks vis-à-vis acquiring private sector bank.

3.2.3 Causal Research:
“The main goal of causal research is to identify cause-and-effect relationships between variables”, (Zikmund, 2000).
The present study did not aim to establish any cause and effect between variables and therefore this method was not used for this study.

3.3 Statement of Problem:
Literature on mergers and acquisition in the Indian banking sector has shown that mergers and acquisitions has emerged as the most preferable option for restructuring in Indian banks, especially in the post liberalization period as a survival strategy. Under this backdrop the present
study, aims to analyze whether mergers and acquisitions have contributed towards the enhancement of performance of the banks. The primary objective of this research is to evaluate the impact of mergers and acquisitions on the performance of the acquiring Indian public sector banks and acquiring Indian private sector banks during the pre-merger versus post-merger period by analyzing the variables explicated in the CAMEL model, with reference to bank mergers in India during the period 1993-1994 to 2004-2005 and to study the impact of mergers and acquisitions on the post-merger performance of acquiring public sector banks vis-à-vis acquiring private sector bank by analyzing the variables explicated in the CAMEL model, with reference to bank mergers in India during the period 1993-94 to 2004-2005.

During this period there was a mix of both public sector bank acquirers as well as private sector bank acquirers as well as a blend of both voluntary as well as forced mergers and acquisitions.

It is proposed that the present research will be beneficial to the Indian banks and Indian banking officials and banking regulators, as, the results and conclusions drawn could be used to evaluate whether mergers and acquisitions in Indian banks have been an effective tool to improve the performance of the acquiring Indian public sector banks and acquiring Indian private sector banks and achieve the desired objectives set in the deal. The study will also enable the banking officials to evaluate whether mergers and acquisitions can be an effective tool for improving performance for both public sector banks as well as private sector banks and in both the cases of forced acquisitions as well as voluntary acquisitions. The findings of this research could create a base, as to whether mergers and acquisitions can be considered as a viable mechanism to improve performance by both public sector banks as well as private sector banks, so that banks can adapt this mechanism to positively influence their performance based on CAMEL Parameters.
3.4 The CAMEL Research Model:

The present study has been conducted by using the CAMEL Model parameters, the model for performance evaluation of banks. S. Padmanabhan Committee (1995) recommended for Indian banks, six rating factors viz. Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality, Liquidity, Systems and Controls (i.e. CAMELS), and for Foreign banks, four rating factors viz., Capital Adequacy, Asset Quality, Compliance, Systems and Controls (i.e. CACS) to evaluate the banking performance. For applying the model five main dimensions of performance (Capital adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity) are assessed. The pre-merger and post-merger performance of banks has been analyzed using these five CAMEL Model parameters.

| C   | Capital Adequacy                              | i. Capital Adequacy Ratio,   |
|     |                                             | ii. Debt Equity Ratio,       |
|     |                                             | iii. Total Advances to Total Assets Ratio, |
|     |                                             | iv. Government Securities to Total Investment Ratio. |
| A   | Asset Quality                                | i. Net Non-Performing Assets (NPA) to Net Advances Ratio, |
|     |                                             | ii. Gross Non-Performing Assets to Net Advances Ratio, |
|     |                                             | iii. Total Investments to Total Assets Ratio |
| M   | Management Efficiency                        | i. Total Expenditure to Total Income Ratio, |
|     |                                             | ii. Total Advances to Total Deposits Ratio, |
|     |                                             | iii. Assets Turnover Ratio,  |
|     |                                             | iv. Diversification Ratio,   |
|     |                                             | v. Profit Per Employee,      |
|     |                                             | vi. Business per Employee.  |
| E   | Earnings Quality                             | i. Net Profit Margin,        |
|     |                                             | ii. Return on Equity,        |

TABLE NO- 3.1: THE CAMEL MODEL REPRESENTATION
iii. Net Interest Margin,  
iv. Interest Spread,  
v. Interest Income to Total Income Ratio.

<table>
<thead>
<tr>
<th>L</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Cash to Deposit Ratio,</td>
</tr>
<tr>
<td>ii.</td>
<td>Government Securities to Total Assets Ratio,</td>
</tr>
<tr>
<td>iii.</td>
<td>Total Investment to Total Deposit Ratio.</td>
</tr>
<tr>
<td>iv.</td>
<td>Interest Expended to Interest Earned Ratio.</td>
</tr>
</tbody>
</table>

The five dimensions of CAMEL model can be used to evaluate the performance of banks as per circular on CAMELS and CACS Rating Framework including components rating and composite rating issued by Reserve Bank of India. (Gunsel N., 2007; Gyimah and Oscar, 2011; Loth, 2006; Rasidah et al., 2008).

3.4.1 The CAMEL Variables:

I. Capital Adequacy:

Capital adequacy reflects the overall financial position of a bank and also the ability of the management to meet the need for additional capital requirement. In a volatile economic environment, capital is the only protection that any bank can have with them. By using their capital, banks can honor their obligations even in a case of financial crisis or breakdown. Therefore depositors are keen to know the risk perception of the bank. Capital adequacy decides to a great extent that how well a bank can cope with the unexpected losses (Gunsel N., 2007). The following relations will analyze the Capital Adequacy in banks.

i. Capital Adequacy Ratio.

CAR reflects the ability of a bank to deal with probable loan defaults. Capital Adequacy Ratio is a measure of the bank’s core capital expressed as a percentage of its risk-weighted asset. The RBI guidelines stipulates Indian banks to maintain a CAR of minimum 9% for banks in India. It is arrived at by dividing the Tier I and Tier II capital, by risk-weighted assets.
Percent threshold varies from bank to bank (9% in this case, a common requirement for regulators conforming to the Basel accords) is set by the national banking regulator of different countries. The higher the CAR, the stronger the bank.

   ii. **Debt-Equity Ratio.**
Debt-Equity Ratio is arrived at by dividing the total borrowings and deposits, with shareholders’ net worth, which includes equity capital and reserves and surplus. Company used debt than equity because they can get tax benefit in paying the interest on debt, hence they would have additional cash to generate higher return in their business. (Nissim and Penman, 2001). High debt to equity ratio indicates high leverage and that the bank has been aggressively financing its growth with debt.

   iii. **Total Advances to Total Assets Ratio.**
This is the ratio of the Total Advances to Total Assets. Total Advances also include receivables. The value of Total Assets excludes the revaluations of all the assets. It is a measure of a bank’s aggressiveness in lending, which results in increasing the bank’s profitability.

   iv. **Government Securities to Total Investment Ratio.**
This ratio measures the amount of risk free assets invested by a bank in government securities as a percentage of the total investments held by the bank.

   **II. Asset Quality:**

The term “Assets Quality” and its sound management, establish to a great extent, the degree of growth and profitability of a bank and its financial strength. The prime dictum behind measuring the assets quality is to ascertain the component of Non-Performing Assets (NPAs), as a percentage of the total assets. This indicates what types of advances the bank has made to generate interest income. This establishes that, quality of assets jeopardizes the earning capacity of the bank. It also indicates, the quality of debtors, the bank has in its present financial statements, as it depends on the quality of loans, which if given, to highly rated companies, the
rates attracted are lower than that of lower rated doubtful companies. Thus asset quality indicates the type of debtors of the bank. The following relationships are analyzed to gauge the Asset Quality: (Gunsel N., 2007; Nimalathasan, 2008)

i.  **Net Non-Performing Assets to Net Advances Ratio.**
The ratio portrays the quality of the asset class in the portfolio and also the extent of deterioration of the quality of the asset portfolio. This dimension of CAMEL analysis conveys the portfolio risk the bank is subjected to and the effects it could have on the overall performance of the bank. Net NPAs are Gross NPAs net of provisions on NPAs and interest in suspense account. In this ratio, Net NPAs are measured as a percentage of Net Advances.

ii.  **Gross Non-Performing Assets to Net Advances Ratio.**
This is a measure of the quality of assets in a situation, where the management has not provided for loss on NPAs. The Gross NPAs are measured as a percentage of Net Advances. The lower the ratio, the better is the quality of advances.

iii.  **Total Investments to Total Assets Ratio.**
Total investments to total assets indicate the extent of deployment of assets, in investment as against advances. This ratio is used as a tool to measure the percentage of total assets locked up in investments, which, by conventional definition, does not form part of the core income of a bank. It is arrived at by dividing total investments by total assets. A higher ratio means that the bank has conservatively kept a high cushion of investments to guard against NPAs.

**III. Management Efficiency:**

This parameter is used to appraise management efficiency so as to assign high value to better quality banks and discount ill managed ones. Management efficiency of bank includes its administrative aptitude to react in dissimilar circumstances. The term management efficiency above all involves the capability of management in generating business and in maximizing profits. To analyze the possible dynamics of management efficiency affecting the performance of
the banks, the following ratios are calculated in the present study. (Gunsel N., 2007; Kaur, 2010; Reddy and Prasad, 2009).

i. **Total Expenditure to Total Income Ratio.**
This ratio measures the percentage of operating income that is used towards meeting the operating expenses of the bank. Smaller the percentage implies that the management is efficiently managing the banks expenses, so that a larger proportion of operating income is converted into profits after making due deductions for provisions.

ii. **Total Advances to Total Deposits Ratio.**
This ratio measures the efficiency of the management in converting the deposits available with the bank (excluding other funds like equity capital, etc.) into high earning advances. Total deposits include demand deposits, savings deposits; term deposits and deposits of other banks. Total advances also include the receivables.

iii. **Assets Turnover Ratio.**
This measure indicates the total revenue earned for every rupee of assets that bank owns.

iv. **Diversification Ratio.**
This is a measure of banks income other than the interest income in the proportion of total income of bank.

v. **Profit per Employee.**
This measure indicates the average profit generated per person employed by a bank. It measures the efficiency of employees at the branch level. It also gives valuable inputs to assess the real strength of a bank’s branch network. It is arrived at by dividing the Profit after Tax (PAT) earned by the bank by the total number of employees (No. of EMPLOYEES). The higher the ratio, higher is the efficiency of the management.
vi. **Business per Employee.**

This tool measures the efficiency of all the employees of a bank in generating business for the bank. This indicates the efficiency of bank in terms of doing business with lesser number of employees. It is arrived at by dividing the total income ($INC$) by total number of employees ($No. of EMPLOYEES$). By business, we mean the sum of total deposits and total advances in a particular year.

**IV. Earnings Efficiency:**

The quality of earning is a very important criterion that determines the ability of a bank to earn consistently, even in the future. It basically determines the profitability of the bank. This parameter lays importance on how a bank earns its profits. This also explains the sustainability and growth in earnings in the future. This parameter gains importance in the light of the argument that much of bank’s income is earned through non-core activities like investments, treasury operation, and corporate advisory service etc. (Gunsel N., 2007).

Following six ratios are calculated for evaluating the earning quality of banks.

i. **Net Profit Margin:**

This is a significant parameter to appraise the earnings quality of a bank. A steady Net Profit margin signifies that the bank has stable and steady earnings. Stakeholders look at net profit margin thoroughly because it signifies the quality of earnings of the bank that is reflected in its ability in converting revenue into profits available for shareholders. (Brigham and Houston, 2007).

ii. **Return on Equity.**

Return on equity (ROE) is defined as Profits after Tax (PAT) divided by common equity. ROE is used to identify the shareholders’ return. This also indicates management’s performance (Brigham and Houston, 2007). The higher the ROE means surplus funds can be invested to improve banking business operations without having additional investment of capital from shareholders (Graham, Zweig and Buffett, 2003).
iii. **Net Interest Margin.**

This ratio is an important measure of a bank’s core income (income from lending operations). It is defined as the difference between interest earned and interest expended as a proportion of average total assets. Interest income includes dividend income. Interest expended includes interest paid on deposits, loans from RBI, and other short-term and long-term loans. A higher spread indicates better earnings given the total assets.

iv. **Interest Spread.**

This measure indicates how much the interest earning capability of the bank falls short or exceeds its interest cost obligation. A large spread clearly indicates that the bank is profitable as against a small spread that indicates otherwise.

iv. **Interest Income to Total Income Ratio.**

Interest income is a basic source of revenue for banks. The interest income to total income indicates the ability of the bank in generating income from its lending. This ratio measures the income from lending operations as a percentage of the total income generated by the bank in a year. Interest income includes income on advances, interest on deposits with the Reserve Bank of India and dividend income. It indicates the ability of the bank in generating income from its lending.

V. **Liquidity:**

Liquidity is very important for any organization dealing with money. Liquidity is the bank’s capacity to meet its short term obligations as well as loan commitments. Liquidity is most imperative factor especially in banking sector as banks are considered as liquidity initiator in the market. For a bank, liquidity is a critical aspect which represents its ability to meet its financial obligations. It is of utmost importance for a bank to maintain correct level of liquidity, which will otherwise lead to declined earnings. Amongst bank’s assets, cash investments are the most liquid. A high liquidity ratio indicates that the bank is highly
prosperous. Therefore, if the liquidity management of a bank is not proper, it can adversely affect the performance of the banks (Gunsel N., 2007).

i. **Cash to Deposit Ratio.**

Liquid Assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice. Of all the above mentioned liquid Assets, Cash is the most liquid of all liquid assets. The ratio gives a picture of overall liquidity position of the bank.

ii. **Government Securities to Total Assets Ratio.**

This ratio measures the proportion of risk free liquid assets invested in G-Securities as a percentage of total assets. This ratio indicates the proportion of total assets that are held in government securities.

iii. **Total Investment to Deposit Ratio.**

This measure establishes the effectiveness of the bank to convert their deposits into investments and the agility in which it pays its depositors.

iv. **Interest Expended to Interest Earned Ratio.**

This ratio measures the ability of the bank to service its interest expenditure from the interest income generated from advances.

### 3.5 Scope of the study:

During the period of study there were nine banking mergers and acquisitions where the acquire was a public sector bank or a private sector bank and the present study covered all the nine commercial banks (7-public sector acquirer banks and 2-private sector acquirer banks) that had merged between 1993-1994 to 2004-2005. The period was so chosen so as to ensure that the
performance evaluation of bank during the post-merger period could be studied for a period of ten years ending 2014-2015.

TABLE NO-3.2: LIST OF MERGERS AND ACQUISITIONS WITHIN THE SCOPE OF THE PRESENT STUDY

<table>
<thead>
<tr>
<th>Public Sector Banks</th>
<th>Target Bank</th>
<th>Acquirer Bank</th>
<th>Merger Year</th>
<th>Reasons</th>
</tr>
</thead>
</table>
3.6 Research Objectives:

3.6.1 Main Objective:

1. To analyze the pre-merger versus post-merger performance of acquiring Public Sector Banks and acquiring Private Sector Banks.
2. To analyze the post-merger performance of acquiring Public Sector Bank vis-à-vis acquiring Private Sector Bank.
3. To find out if mergers and acquisitions can contribute for improvement in performance of Indian Public Sector Banks and Indian Private Sector Banks.

3.6.2 Sub-Objective:

1. To understand the perspective and views of banking experts on the motives of Indian banking mergers and acquisitions.

3.7 Research Hypothesis:

In order to achieve the research objectives, research hypothesis need to be formulated (Ohab, 2010). On the basis of the research problem, research objectives and the review of literature, the following hypotheses have been formulated for this study:

Hypothesis-1

$H_0$: There is no significant difference in the pre-merger versus post-merger Capital Adequacy Ratio of acquiring bank.

$H_1$: There is a significant difference in the pre-merger versus post-merger Capital Adequacy Ratio of the acquiring bank.

<table>
<thead>
<tr>
<th>Private Sector Banks</th>
<th>Target Bank</th>
<th>Acquirer Bank</th>
<th>Merger Year</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Times Bank Ltd.</td>
<td>HDFC Bank Ltd.</td>
<td>1999-2000</td>
<td>Voluntary Merger-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Market driven</td>
</tr>
<tr>
<td>2.</td>
<td>Bank of Madura</td>
<td>ICICI Bank</td>
<td>2000-2001</td>
<td>Voluntary Merger-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Market driven</td>
</tr>
</tbody>
</table>
Hypothesis-2
H₀: There is no significant difference in the pre-merger versus post-merger Debt Equity Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Debt Equity Ratio of the acquiring bank.

Hypothesis-3
H₀: There is no significant difference in the pre-merger versus post-merger Total Advances to Total Asset Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Total Advances to Total Asset Ratio of the acquiring bank.

Hypothesis-4
H₀: There is no significant difference in the pre-merger versus post-merger Government Securities to Total Investment Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Government Securities to Total Investment Ratio of the acquiring bank.

Hypothesis-5
H₀: There is no significant difference in the pre-merger versus post-merger Net Non-Performing Assets to Net Advances Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Net Non-Performing Assets to Net Advances Ratio of the acquiring bank.

Hypothesis-6
H₀: There is no significant difference in the pre-merger versus post-merger Gross Non-Performing Assets to Net Advances Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Gross Non-Performing Assets to Net Advances Ratio of the acquiring bank.
Hypothesis-7
H₀: There is no significant difference in the pre-merger versus post-merger Total Investment to Total Assets Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Total Investment to Total Assets Ratio of the acquiring bank.

Hypothesis-8
H₀: There is no significant difference in the pre-merger versus post-merger Total Expenditure to Total Income Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Total Expenditure to Total Income Ratio of the acquiring bank.

Hypothesis-9
H₀: There is no significant difference in the pre-merger versus post-merger Total Advances to Total Deposit Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Total Advances to Total Deposit Ratio of the acquiring bank.

Hypothesis-10
H₀: There is no significant difference in the pre-merger versus post-merger Asset Turnover Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Asset Turnover Ratio of the acquiring bank.

Hypothesis-11
H₀: There is no significant difference in the pre-merger versus post-merger Diversification Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Diversification Ratio of the acquiring bank.
Hypothesis-12
H₀: There is no significant difference in the pre-merger versus post-merger Profits per Employee of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Profits per Employee of the acquiring bank.

Hypothesis-13
H₀: There is no significant difference in the pre-merger versus post-merger Business per Employee of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Business per Employee of the acquiring bank.

Hypothesis-14
H₀: There is no significant difference in the pre-merger versus post-merger Net Profit Margin of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Net Profit Margin of the acquiring bank.

Hypothesis-15
H₀: There is no significant difference in the pre-merger versus post-merger Return on Equity of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Return on Equity of the acquiring bank.

Hypothesis-16
H₀: There is no significant difference in the pre-merger versus post-merger Net Interest Margin of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Net Interest Margin of the acquiring bank.
Hypothesis-17
H₀: There is no significant difference in the pre-merger versus post-merger Interest Spread of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Interest Spread of the acquiring bank.

Hypothesis-18
H₀: There is no significant difference in the pre-merger versus post-merger Interest Income to Total Income Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Interest Income to Total Income Ratio of the acquiring bank.

Hypothesis-19
H₀: There is no significant difference in the pre-merger versus post-merger Cash to Deposit Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Cash to Deposit Ratio of the acquiring bank.

Hypothesis-20
H₀: There is no significant difference in the pre-merger versus post-merger Government Securities to Total Asset Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Government Securities to Total Asset Ratio of the acquiring bank.

Hypothesis-21
H₀: There is no significant difference in the pre-merger versus post-merger Total Investment to Total Deposit Ratio of the acquiring bank.
H₁: There is a significant difference in the pre-merger versus post-merger Total Investment to Total Deposit Ratio of the acquiring bank.
Hypothesis-22
H_0: There is no significant difference in the pre-merger versus post-merger Interest Expended to Interest Earned Ratio of the acquiring bank.
H_1: There is a significant difference in the pre-merger versus post-merger Interest Expended to Interest Earned Ratio of the acquiring bank.

Hypothesis-23
H_0: There is no significant difference in the post-merger Capital Adequacy Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Capital Adequacy Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-24
H_0: There is no significant difference in the post-merger Debt Equity Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Debt Equity Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-25
H_0: There is no significant difference in the post-merger Total Advances to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Total Advance to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-26
H_0: There is no significant difference in the post-merger Government Securities to Total Investment Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Government Securities to Total Investment Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
Hypothesis-27
H_0: There is no significant difference in the post-merger Net Non-Performing Assets to Net Advances Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Net Non-Performing Assets to Net Advances Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-28
H_0: There is no significant difference in the post-merger Gross Non-Performing Assets to Net Advances Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Gross Non-Performing Assets to Net Advances Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-29
H_0: There is no significant difference in the post-merger Total Investment to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Total Investment to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-30
H_0: There is no significant difference in the post-merger Total Expenditure to Total Income Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Total Expenditure to Total Income Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-31
H_0: There is no significant difference in the post-merger Total Advance to Total Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H_1: There is a significant difference in the post-merger Total Advance to Total Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

Hypothesis-32
H_0: There is no significant difference in the post-merger Asset Turnover Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Asset Turnover Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-33**
H0: There is no significant difference in the post-merger Diversification Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Diversification Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-34**
H0: There is no significant difference in the post-merger Profit per Employee of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Profit per Employee of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-35**
H0: There is no significant difference in the post-merger Business per Employee of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Business per Employee of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-36**
H0: There is no significant difference in the post-merger Net Profit Margin of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Net Profit Margin of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-37**
H0: There is no significant difference in the post-merger Return on Equity of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Return on Equity of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-38**

H0: There is no significant difference in the post-merger Net Interest Margin of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Net Interest Margin of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-39**

H0: There is no significant difference in the post-merger Interest Spread of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Interest Spread of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-40**

H0: There is no significant difference in the post-merger Interest Income to Total Income Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Interest Income to Total Income Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-41**

H0: There is no significant difference in the post-merger Cash to Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Cash to Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-42**

H0: There is no significant difference in the post-merger Government Securities to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.
H1: There is a significant difference in the post-merger Government Securities to Total Asset Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-43**

H0: There is no significant difference in the post-merger Total Investment to Total Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Total Investment to Total Deposit Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

**Hypothesis-44**

H0: There is no significant difference in the post-merger Interest Expended to Interest Earned Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

H1: There is a significant difference in the post-merger Interest Expended to Interest Earned Ratio of acquiring public sector banks vis-à-vis acquiring private sector bank.

### 3.8 Research Methodology:

Differing requirements of information, availability of time and need patterns have led to development of various types of research methods (Cooper and Schindler, 2006). The various methods available today are the result of various modifications and improvements that have been made over time. These have helped develop methods that are more appropriate and applicable to specific areas of research. The need of any research method, however still remains the same, to get information (Bryman and Bell, 2003). The reason behind the use of any method for research should justify the generation of optimum results (Bryman and Bell, 2003; Cooper and Schindler, 2006). In order to select the appropriate method(s) for the study, the strengths and weaknesses of various methods were analyzed so as to choose the best method for optimum results.

Carrying out a research task is by no means an easy or an inexpensive task. The use of the right method leads to useful information and a wrong method leads to wastage of time, money and resources (Sekaran and Bougie, 2010). The choice of a wrong research process can prove fatal for a company, as it might lead to the implementation of strategic plans that may not be suitable for the current period of time or the current market. Therefore, before conducting any research it becomes utmost importance to outline the aims of the research, i.e. what the research aims to
accomplish (Sekaran and Bougie, 2010). Two broad types of philosophies available for research are the positivistic and phenomenological paradigms. (Hussey et al, 1997) differentiates both types of paradigms by classifying positivistic as quantitative, objectivist, scientific, experimentalist and traditionalist (Bryman and Bell, 2003, Saunders et al., 2009). Whereas, phenomenological paradigms are associated with qualitative, subjectivist, humanistic and interpretive approach (Cooper and Schindler, 2006; Sekaran and Bougie, 2010). Positivist paradigm is the philosophy on which the current study is based. The research methodology can be classified broadly into inductive and deductive (Rothchild, 2006).

3.8.1 Inductive Methodology:
Inductive reasoning moves from a particular to the general. “It gathers together particular observations in the form of premises, then it reasons from these particular premises to a general conclusion” (Aqil Burney, Nadeem Mahmoud, 2006; Decoo, 1996; Rothchild, 2006).

CHART NO- 3.2: INDUCTIVE REASONING

![Diagram of inductive reasoning process]

Source: (Trochin, 2001)

The present research fell under well-defined theories of mergers and acquisitions, financial performance evaluation and acquirers’ post-merger performance evaluation.

3.8.2 Deductive Methodology:
Deductive moves from general to particular. “It takes a general premise and deduces particular conclusions” (Aqil Burney, Nadeem Mahmoud, 2006; Decoo, 1996; Rothchild, 2006). Positivist
paradigm is the philosophy on which the current study is based and the overall methodology used is deductive. “Deductive methodology is a method for generating new theory from various types of research” (Bryman and Bell, 2003; Rothchild, 2006; Zikmund, 2000). Among others, the positivism philosophy entails the deductive methodology, which was found the most suitable basis to develop this research study. In the deductive approach, a theory and hypothesis (or hypotheses) is developed and a research strategy is subsequently designed to test the hypothesis (Saunders et al., 2003). The deductive research process by (Bryman and Bell, 2003) applied to this study is illustrated below.

**CHART NO- 3.3: DEDUCTIVE RESEARCH PROCESS**

(Adapted from Bryman Bell, 2003)

In adopting the above model to the research, the process began with review of mergers and acquisitions that have taken place in the Indian banking sector during the period under study and the underlying motives for these acquisitions highlighted from research literature. As a result of literature, nine banking mergers, that have taken place during the period under study was selected, based on which the study identified the suitable method for evaluation of pre-merger versus and post-merger performance of Indian public sector banks vis-à-vis Indian private sector bank and specified The CAMEL banking performance evaluation model as well as suitable data collection methods. Thereafter based on the findings from the data collected and model considered each of the performance evaluation parameters were assessed and subsequently appraised for significant differences in the pre-merger and post-merger performance of banks.
merged during the period under study as well as for any significant difference in the post-merger performance of Indian public sector acquiring bank vis-à-vis Indian private sector acquiring bank. This led to revision of theory, from which a clear understanding was achieved if mergers and acquisition led to increase in performance of the acquirer bank as well as increase in performance in the post-merger period of both or either of Indian public sector bank and Indian private sector bank.

Although this study followed a deductive approach which is typically related to quantitative research, qualitative data was still valuable and relevant as suggested by (Saunders et al., 2003). Moreover, the research study approached the idea of triangulation (Bryman and Bell, 2003), following which both quantitative and qualitative methods were combined and both primary and secondary data were collected in order to increase the validity of the findings.

More distinctively, a structured in-depth interview method relating to qualitative research was also conducted. The in-depth interviews with top level banking executives assisted to collect actual information on the merger motives in banks as well as to analyze the impact of mergers and acquisitions on the performance of the acquiring bank.

3.9 Sampling Method:

“Sampling is one of the major aspects of research, which is concerned with collecting, analyzing and interpreting data. It involves the study, in considerable detail, of relatively small number of informants taken from a larger group”, (Agarwal, 1997). The process of sampling means to identify and select certain elements which would represent the entire population under study (Lind et al., 2008). The chief decision that the study had to decide was to whether implement the census study or the sample approach. Census means that each and every element that forms a part of the research will be investigated and sample means that few elements that represent the entire research will be investigated (Bluman, 2009). In the present study the census sample is chosen, hence the study analyses all the bank mergers and acquisitions that have taken place during the period 1993-1994 to 2004-2005.

As the research aimed to analyze the pre-merger and post-merger performance of Indian public sector banks vis-à-vis Indian private sector banks merged during the period 1993-1994 to 2004-
2005, an important determining characteristic of the census sample was the fact that the banks chosen have experienced mergers and acquisition and above all, the banks chosen are for such period of study that there was a blend of both public sector bank acquirers as well as private sector bank acquirers as well as a mix of voluntary acquisitions as well as forced acquisitions. Also whilst analyzing the post-merger performance of Indian public sector banks vis-à-vis Indian private sector banks, the post-merger period is taken as a period of ten years, so that the study can cover a post-merger period of ten years ending 2014-2015, since mergers and acquisitions is a long term strategic decision, the time horizon within which the acquisition will show results will be a longer period. Hence, keeping in perspective this view as well taking cue from the interviews of banking executives, the post-merger performance evaluation of public sector banks vis-à-vis private sector banks is done for a period of ten years post the merger and acquisition ending 2014-2015.

3.9.1 Sample Size:

The size of the sample depends on the type of information required from the research study and the cost involved (Saunders et al., 2009). This means calculating beforehand, the degree of accuracy required in the results of the study. Careful thought should also be given to the time-constraint (Saunders et al., 2009). Cost and accuracy are closely related with the time taken to complete the research study, and to some extent there is bound to be conflict. Considering all these factors, the sample size chosen for the study was mergers and acquisitions taken place during the period 1993-1994 to 2004-2005. The study aimed at studying the performance of banks on the CAMEL Model parameters for a period of 5 years pre-merger and five years post-merger. Towards meeting the second objective of the study that evaluates the post-merger performance of the bank, during the period of the study, it was decided to take the post-merger period of 10 years so that the study can cover a post-merger period of ten years ending 2014-2015.

During this period there were nine banking mergers and acquisitions, out of which seven were where the acquirer was an Indian public sector bank and in two cases the acquirer was Indian private sector bank.
<table>
<thead>
<tr>
<th>No.</th>
<th>Target Bank</th>
<th>Acquirer Bank</th>
<th>Merger Year</th>
<th>Period of 5 years Pre-merger and 5 years Post-merger</th>
<th>Post-Merger period of 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Sector Banks</td>
<td>Target Bank</td>
<td>Acquirer Bank</td>
<td>Merger Year</td>
<td>Period of 5 years Pre-merger and 5 years Post-merger</td>
<td>Post-Merger period of 10 years</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------</td>
<td>------------------</td>
<td>-------------</td>
<td>------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pre-merger period</td>
<td>Post-merger period</td>
</tr>
</tbody>
</table>
3.10 Data Collection:

Two forms of data collection and information collection system exists in the research setting (Cooper and Schindler, 2003). Both the data collection techniques are listed below:

1. Secondary data collection.
2. Primary data collection.

Data can be collected through primary data sources or secondary data sources or through a combination of both.

3.10.1 Secondary data collection:

Secondary data collection is an essential part of this study and was implemented to understand and build a framework for analysis. The study has used the secondary form of data for the present research. The collection of secondary data involved the proactive seeking of data, both qualitative and quantitative, that already existed and which was useful in the analysis and planning of the present study. Secondary data on Indian banking mergers and acquisitions and their impact on performance of the bank was collected from official publications, business magazines, software’s for generating industrial information like CMIE, ACE Analyzer, Industry Interface, analysts’ reports of research companies, Reserve Bank of India’s official publications, local and international newspapers, articles, World Wide Web, brochures and books. The audited financial statements of the banks have been the most important source of secondary data collection in the present study.

Material was generally sourced from:

1. Online bank modules
2. Reports and publications by Reserve Bank of India
3. Data contained in the banks information system.
4. Annual reports and audited financial statements and accounts of the bank.
5. Online sources.

Since the present research is essentially based on secondary sources of data, the study has collected financial information from the respective acquiring banks. This financial information
over the period was studied which involved collection of financials for certain years before the merger and after the merger.

3.10.2 Primary data collection

Primary data is that type of data which is collected for the first time and for the specific purpose of the research (Cooper and Schinlder, 2003). In simple words the data does not prevail to be collected unless the need is desired for it. This type of information is the first hand information collected exclusively for the purpose of research (Saunders et al., 2009). Primary data can be collected in four ways:

I. **Observations:** Observational method of collecting information can be either participative or non-participative. In a participative observation, the researcher becomes a part of the population and observes the areas of study. In non-participative observation, the researcher studies the population from a distance (Saunders et al., 2009). Three methods of observation generally used in research are audits, recording devices and watching people’s behavior. This method does not offer help in this research study as it is unsuitable for the aims of this research, besides it would also involve privacy concerns of banks.

II. **Experimentation:** Experimentation centers around controlled experiments in which efforts are made to hold conditions constant, thus enabling the efforts of a particular factor or variable to be studied or measured (Saunders et al., 2009). This method was not suitable as the impact of mergers and acquisition on the performance of Indian public sector banks vis-à-vis Indian private sector banks was being researched into.

III. **Focus groups:** “In focus group the researcher tries to generate discussion about one or several topics in a group of 6 to 12 people”, (Dibb et.al, 1994). Since focus groups are qualitative devices, with limited sampling accuracy, focus groups cannot be considered a replacement for quantitative analysis (Saunders et al., 2009). Besides this study involves all the merger and acquisition deals that have taken place during the period under study, hence this method is unsuitable to the present study.
IV. **Surveys:** The descriptive research approach gives a variety of methods and the one suitable for this study is the survey method. Surveys are research measurement procedures that involve asking questions to respondents (Saunders et al., 2009). Surveys can range from a short paper and pencil feedback form to an intensive one-on-one in-depth interview. The survey is a non-experimental, descriptive research method. As the phenomenon under study could not be directly observed, the survey method through an intensive one-on-one in-depth structured interview with banking top level executives of acquirer banks was considered appropriate to collect data. In this research study, both exploratory and descriptive studies were used to get adequate information for the achievement of the research objectives. Survey method was chosen because of the need to get detailed information from the banking executives that are interviewed.

The research instrument intended for the study is in-depth structured interviews with top level banking executives from acquirer banks. The primary form of data collection technique would enable data gathering by conducting in-depth interviews with top level executives of acquiring banks. The main aim of the interview here was to collect first-hand information as to why the acquiring bank entered into the mergers and acquisitions deal and what are the synergies that are derived from the merger. Towards this a detailed guideline questionnaire was prepared that assisted in collecting primary data in a desired manner which would not lead the interview to go in another direction.

**3.11 Structured Interviews:**

The study involved in-depth structured interview with top level banking executives to collect first-hand information as to why the acquiring bank entered into the merger as well as to analyze the impact of mergers and acquisitions on the performance of the acquiring bank. Since the difficulties in approaching the potential interviewees were foreseen, it was decided that the sample for interview would be as large as possible within three constraints.

1. Interviewees were of those acquirer banks that were merged or acquired during the period under study or interviewee can also be regulator.
2. Interviewees held top level management position in the banks.
3. Different interviewees held different positions in the top level management cadre.
The reason for the first constraint was to ensure interviewees are of the acquirer bank that belonged to the sample under study so that the analysis was accurate. With regards to the second constraint the focus was to ensure that interviewees have relevant experience to understand and contribute to the research topic. The last constraint was set in order to ensure the findings capture the viewpoints of different levels within the banks involved in mergers and acquisitions. Accordingly, interviewees were bank managers of the acquiring banks, banking executives at senior managerial positions, officers at bank’s headquarters and regulators.

Once the interviewee criteria were generated, the banks that were under the study period were listed. A request for an interview was made either by email or by telephone. A dual approach recommended by (Bryman and Bell, 2003) was taken up for the present research study. First was to make a telephone call to a named person who was most likely to be appropriate for the interview, and then to follow this up with an introductory letter that clearly clarified the research purpose, process and requirements. Finally, a telephone call was made or an email was sent to ask their willingness to participate and make an appointment for the interview. The initial contact was made with a group of people who were relevant to the research study and then these contacts were used to establish contacts with others. Such actions enhanced the accessibility to potential respondents, which increased data credibility. All participants expressed their desire to facilitate the interview process. The study had six interviewees in total with the details provided in Table No – 3.4.
TABLE NO- 3.4: DESCRIPTION OF INTERVIEWS

<table>
<thead>
<tr>
<th>Name of the Organization</th>
<th>Position</th>
<th>Experience</th>
<th>Interview time</th>
<th>Interview type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewee-1</td>
<td>Indian Banking Association.</td>
<td>Chief Executive Office</td>
<td>45 years</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Interviewee-2</td>
<td>Bank Of India</td>
<td>DGM</td>
<td>35</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Interviewee-3</td>
<td>ICICI Bank</td>
<td>Deputy Branch Manager</td>
<td>7</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Interviewee-4</td>
<td>SBI</td>
<td>DGM</td>
<td>23</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Interviewee-5</td>
<td>BSE</td>
<td>Head-Business Strategy and Corporate Marketing Communications and Legal Commercial.</td>
<td>21</td>
<td>35 minutes</td>
</tr>
<tr>
<td>Interviewee-6</td>
<td>Union Bank of India</td>
<td>DGM</td>
<td>37</td>
<td>40 minutes</td>
</tr>
</tbody>
</table>

3.11.1 Design of the structured interview parameters

The interview questions were constructed following the process recommended by (Bryman and Bell, 2003). A list of standardized questions covering specific topic was developed which could be used as an interview guide. The interviewing topics covered a wide category of issues like demographics of the acquiring bank, motives for the deal, impact of mergers and acquisitions on the performance of the acquiring banks and the Indian banking sector. The questions were organized into four parts:

Part-I- Demographic
Part-II- Motives for the deal
Part-III- Impact of mergers and acquisitions on the performance of the acquiring bank.
Part-IV- Mergers and acquisition as a tool to improve performance in Indian commercial banks.

The set of questions started with general questions and then moved to more specific ones. Most of the questions were of open-ended nature in close connection to the research objective.
Nevertheless, the order of the questions varied depending on the conversation flow between interviewers and interviewees. Moreover, along the conversation, the interviewers raised additional questions in order to clarify the interviewees’ answers as well as to explore the issues further. Whilst designing the interview questions careful attention was paid to the drafting, terminology and sequencing of questions, Inspite of this the list of questions had been amended after the mock interview which was conducted on one interviewee to pre-test the interview questions, also, after the first interview, some minor changes were made in order to make the questions clearer.

The structure of the interview is provided in Appendix No – 1.

3.11.2 Interview process:

Of the six interviews, five were conducted face-to-face and approximately ranged from thirty minutes to fifty minutes. Recognizing the fact that notes-taking during the interview process could distract the attention of the interviewer as well as distort the interviewee’s answers, permission was sought of the interviewee, before commencing with the interview, of using a recording device. The process of recording the interview did help in reducing errors in memorizing and deducing answers. The interviewees were assured that the entire recorded interview would remain confidential and would not be made available without their permission.

The recorded interviews were transcribed and summarized to form the basis for data analysis and sent to all interviewees to check the validity of the information. In conclusion, some information was obtained directly from the interviewees’ conversation while some others were inferred from the interview.

3.12 Statistical Tools and Techniques:

1. In order to analyze if there is any significant difference in the pre-merger versus post-merger performance of the acquiring banks under study for the period of study, the Paired t test is applied to the CAMEL performance evaluation parameters of the acquiring banks during the pre-merger and post-merger period at 95% level of confidence.
The Paired t-test is the relevant test to compare a sample group’s scores before and after an intervention, in order to measure whether means from a within-subjects test group vary over 2 test conditions.

Therefore, to evaluate if there is any significant difference in the pre-merger versus post-merger performance of the acquiring banks under study for the period of study the paired t-test was applied as a test of significance at $\alpha = 0.05$.

The pre-merger period and post-merger period consists of a period of five years before and five years after the merger.

II. In order to analyze if there is any significant difference in the post-merger performance of Public Sector acquiring banks vis-à-vis Private Sector acquiring banks on the CAMEL parameters, the Independent-samples t-test was applied at 95% level of confidence to check for the significant difference.

The Independent samples t-test is probably the most commonly used Statistical Data Analysis procedure for hypothesis testing. It is the relevant test to analyze whether or not two independent populations have different mean values on some measure.

Therefore, to evaluate if there is any significant difference in the post-merger performance of Public Sector acquiring banks vis-à-vis Private Sector acquiring banks under study for the period of study on the CAMEL parameters he Independent Samples t-test was applied as a test of significance at $\alpha = 0.05$.

The post-merger period consists of a period of ten years after the merger or acquisition.

III. The hypotheses were tested using paired t-test and t-test.

IV. For smooth and accurate analysis of the data, advanced statistical analysis software SPSS, version 16 is used.

V. The research findings are tabulated and illustrated with the help of tables, charts and other graphical representation tools.
3.13 References:


