CHAPTER 3

RESEARCH METHODOLOGY
Chapter 3

Research Methodology

3.1 Research Methodology

An Army man prepares blue print before he launches an attack, while an architecture prepares a strategy before doing construction. An artist makes a design before he executes his ideas. Many practical men make a plan before they undertakes work so also the researcher makes a plan of his study before he starts his research work. This enables the researcher work effectively and efficiently. Such type of strategy of study or blue print for study was called Research Methodology. Research methods were used to deliver a methodical tactic that reflect to research and helps in ordering the data collection and make easy for doing analysis it and conclude whether all results are particularly associated with research question or not. There were basically two approaches are used such as quantitative approach and qualitative approach.

Research Methodology defines as a highly intellectual human doings used in the examination of various environment and matter and deals specifically with the manner in which data is collected, analyzed, discussed, interpreted, and concluded. The technique of piloting the study requires a lot of consideration and devotion to be paid, for it has a direct bearing on obtaining consistent and significant information. It is because of this reason that the research methodology accepted for a study needs to be particularized. At the same time of conducting research, methodology helps the researcher to give his reasons for implementing a certain course of action while presiding out the other. With the great objective of conducting research, the methodology has been independently stated in all studies.

In many cases researches use one of these approaches or combine both. In our case we had used a mix both. We had used survey method as a means of collecting data and also performed an analysis of the data using logic and critical approach.
This necessitated a thorough review of the literature. The literature study revealed a need to do empirical research measuring the effectiveness of the Bancassurance and growing insurance. In this study concerned with the research methodology and strategy used to measure the likely success with the effectiveness of the Bancassurance of public sector banks. Figure 3.1 on the next page illustrates the research process as used throughout the study.

**Figure: 3.1: Model of research methodology**

```
<table>
<thead>
<tr>
<th>Define the research questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refine the research questions</td>
</tr>
<tr>
<td>Research proposal (Chapter 1)</td>
</tr>
<tr>
<td>Research Design (Chapter 6)</td>
</tr>
<tr>
<td>Design strategy (type, purpose, time frame, scope)</td>
</tr>
<tr>
<td>Data collection</td>
</tr>
<tr>
<td>Sampling design</td>
</tr>
<tr>
<td>Questions and Instrument</td>
</tr>
<tr>
<td>Pilot testing</td>
</tr>
<tr>
<td>Data analysis and interpretation</td>
</tr>
<tr>
<td>Research findings and reporting (Chapter 7)</td>
</tr>
</tbody>
</table>
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Source: Adapted from Cooper and Schindler (2001: 61)
The most important objective of the study is to examine whether the effectiveness of the Bancassurance of public sector banks.

This is a formal study which highlights research problems and hypothesis statements and involves exact actions and collection of data sources. This chapter offers the main problem statement, main and sub-objectives of the study, all the formulated hypotheses and both types of data collection methods. This chapter also describes how the research questionnaires were designed and measured to ensure that the researcher obtained valid responses from the respondents. Measurement levels and key performance measures are provided to determine effectiveness of the Bancassurance of public sector banks. The final section of the chapter concerns the data processing, analysis and characteristics of sound measurement.

The research proposal was introduced in Chapter 1, in which the research problem and questions were stated. As explained above, this chapter takes an in-depth look at the research design, data collection and sampling design. The data analysis and interpretation of the research findings are presented in chapter 4 and 5.

3.2 Research Objectives

The primary objective of the study is:

To make an analysis of the effectiveness of bancassurance with specific reference to Public Sector banks and to suggest the ways and means to improve the existing performance

The secondary objectives of the study are:

- To focus on the financial performance of Public banks in bancassurance and their contribution to the overall progress of the bank.
- To analyze the factors of effect Indian customer's attitude towards banks and insurance companies in relation to the establishment of insurance products.
- To investigate the customer preferences in selecting particular Public bank as a distribution channel in case of their willingness to obtain Insurance policy in future.
➢ To measure the initiatives taken by Public banks in endorsing insurance products.
➢ To examine relationship building by Public banks with its customers, understanding their needs and making suitable recommendations
➢ To discover how motivated the bank sales staff are to generate cross sales and to provide quality service during the Lead generation process

3.3 Problem and Hypothesis

With the changing environment, changing needs, preferences, changing awareness scenario, banks and insurance companies had also seen new heights. According to data available from last decade, marketers provide answer to customer's needs/requirements based on their analysis but now there was a complete shift regarding customers' preferences. Now a days due to rise in self-awareness, work unions, trade unions, working conditions, competition and other aspects of social responsibility before making a decision goes through various stages. So research problem/hypothesis is formulated for the research.

A. Hypotheses:

In this study it was decided to state hypotheses rather propositions, due to the fact that several business research authors state that a hypothesis is a testable proposition (Cooper & Schindler, 2001 :47 ; Lewis, Saunders & Thornhil, 1997 : 344). Blumberg, Cooper and Schindler (2005: 36) agree, stating that a proposition is a statement about concepts that may be judged as true or false if it refers to observable phenomena. When a proposition is formulated for empirical testing, it is called a hypothesis. Zikmund (2003: 43) agrees that propositions are statements concerned with the relationships among concepts: an assertion of a universal concerned with the relationships among concepts: an assertion of a universal connection between events that have certain properties. The researcher adds that a hypothesis is a proposition that is empirically testable. It is an empirical statements concerned with the relationships among variables.
Therefore the hypotheses are stated below and the hypothesis testing is presented in Chapter 4, which indicates that the hypotheses will be tested empirically. Furthermore, the null hypothesis (Ho) indicates that there are no differences between groups or no relationship between measured variables. The alternative hypothesis (Ha) indicates that there is a difference or relationship between measured variables.

Keeping the lack of ample pertinent literature in view, investigator proposed following hypotheses:

1. **Null Hypothesis H1o:** There is no significant contribution of financial performance of Public banks in bancassurance to the overall progress of the bank.
   
   **Alternative hypothesis H1a:** There is significant contribution of financial performance of Public banks in bancassurance to the overall progress of the bank.

2. **Null Hypothesis H2o:** There is no significant Influence of Indian customer’s attitude towards banks and insurance companies in relation to the provision of insurance products effectively.
   
   **Alternative Hypothesis H2a:** There is significant Influence of Indian customer’s attitude towards banks and insurance companies in relation to the provision of insurance products effectively.

3. **Null Hypothesis H3o:** There is no significant preferences by the customers regarding investigation on Public bank as a distribution channel to obtain Insurance policy in future.
   
   **Alternative Hypothesis H3a:** There is significant preferences by the customers regarding investigation on Public bank as a distribution channel to obtain Insurance policy in future.

4. **Null Hypothesis H4o:** There is no significant connotation of initiatives taken by Public bank employees in endorsing insurance products.
   
   **Alternative Hypothesis H4a:** There is significant connotation of initiatives taken by Public bank employees in endorsing insurance products.
5. **Null Hypothesis H5**: There is no significant recommendation of Relationship building by Public banks with its customers and understanding their needs.

*Alternative Hypothesis H5*: There is significant recommendation of Relationship building by Public banks with its customers and understanding their needs.

6. **Null Hypothesis H6**: There is no significant variance in the performance of Bank employees/bank sales staff regarding bancassurance.

*Alternative Hypothesis H6*: There is significant variance in the performance of Bank employees/bank sales staff regarding bancassurance.

**B. Hypotheses testing**

The hypotheses testing is the procedure which will be done in chapter 4 where researcher examines whether null or alternative hypothesis will be accepted or rejected. According to Zikmund (2003: 500) the significance level is a critical possibility in selecting one between the null hypothesis and the alternative hypothesis. The level of statistical significance is mentioned above in this chapter. The level of significance controls the probability level such as 0.05 or 0.001, that may be considered deserve support of the null hypothesis.

<table>
<thead>
<tr>
<th>State of null hypothesis in the population</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H0 is true</td>
<td>Accept Ho</td>
</tr>
<tr>
<td></td>
<td>Correct – no error</td>
</tr>
<tr>
<td></td>
<td>Type I error</td>
</tr>
<tr>
<td>H0 is false</td>
<td>Type II error</td>
</tr>
<tr>
<td></td>
<td>Correct – no error</td>
</tr>
</tbody>
</table>

*Source: Zikmund (2003: 504)*

On the assumption that the null hypothesis always being tested is true, if the probability of existence of the observed data is smaller than the level of significance, then the data suggests the null hypothesis testing. Above four possible situations can
happen when the null hypothesis can be either true or false, and the statistical decision will be either to accept or reject the alternative/null hypothesis.

3.4 Research Design: Exploratory Research

The research methodology which is presented below specifies the methods and procedures for the data collection, management, tools application and analysis of data that the researcher reach his objectives. The reason behind choosing exploratory research design is very obvious because it is only this research which helps in engendering valuable insight, also produces results and hypothesis rather then computing or calculating them. This is generally conducted for a problem about which the researcher knows nothing. That is in exploratory research, the major emphasis is on discovery of ideas, insight and to bring out new relationship.

This research includes:

1) Consulting Experts
2) Observational Studies
3) Group Discussions
4) Getting Feedback from the Employees

A. The experimental design

According to Cooper and Schindler (2001: 136), an experimental design is appropriate when one wishes to discover whether certain variables produce effects in other variables. Experimentation provides the most powerful support possible for a hypothesis of causation.

The empirical study consisted of quantitative research in which three different researches were formed. First is based on last five years' annual reports of selected bank which show financial status of banks and their insurance. And two questionnaires were used to obtain information from respondents. In terms of evaluating bank performances, it has been suggested that measuring only quantitative (i.e. economic) results of a bancassurance i.e. filled by employees. Therefore,
measurement of the effectiveness of the bancassurance was given to respondents, to
information deliver, to measure the respondents' level of knowledge and skills as well
as training expectations and needs and the second questionnaire measured the
customers' expectation, preferences and reaction with their banks.

B. Classification of experimental designs
Experimental designs vary widely in their power to control contamination of the
relationship between independent and dependent variables. According to Cooper and
Schindler (2001: 403), the most widely accepted designs are based on this
characteristics of control and can be divided into the following four designs:

- Pre-experimental designs;
- True experimental designs;
- Extensions of true experimental designs;
- Field experiments (quasi-experiment).

This study was based on a true experimental design which can be classified as the
Pretest-Post-Test Control Group Design in which:

- Randomly assigned group members to a group
- Exposure of a group to an experimental treatment
- Observation or measurement of the dependent variable

Cooper and Schindler (2001: 406) state that the Pretest-Post- Test Control Group
design consists of an experimental group is exposed to a treatment and the control
group is not. There was random assignment of respondents before the selection and
screening processes. Randomization is the basic method by which equivalence
between experimental and control groups is determined (Cooper and Schindler, 2001:
153). In extension of the design, a follow-up observation (six months after the
training) was added to strengthen the experimental design and improve the scientific
contribution to the field of study.
C. Sampling design and data collection methods
For the selection of the target group out of the population it is important to describe the deciding elements that determine the profile of the selected target group. The determining factors that were taken into consideration when the sample was selected is known as the sampling frame.

D. Data collection
The method of data collection was based on an employees and customers’ of same banks study, in which data was collected by means of personal responses. First research was conducted in the form of a literature review to support the foundation and background of this study. Secondary research was conducted in the form of data collection resulting from the research questionnaires used.

E. Sample selection and size
As already indicated, the sample size consisted of 10 banks, 450 customers and 100 employees. Each population elements have an equal chance of being included in the sample. For the purposes of this study the sample was restricted, which indicates that each sample element (banks, employees, and customers) was not drawn individually from the population at large (Cooper & Schindler, 2001: 185). Judgmental sampling was used because the research selected sample members. According to Zikmund (2003: 392), the advantages of judgmental sampling are that it is useful for certain types of forecasting and the sample is guaranteed to meet specific objectives. A disadvantage may be bias, due to projecting data beyond the scope of the sample. A sample of 10 banks, 450 customers and 100 employees was selected as part of the target population to represent that population.

F. Subjects’ perceptions
Cooper and Schinder (2001: 139) emphasize that the usefulness of a design may be reduced when people in a disguised study perceive that research is being conducted. The 10 banks, 450 customers and 100 employees who completed the questionnaires might have perceived deviations as researcher-induced, as they knew research was being conducted.
G. Data Collection Method:
Special attention should be given to the data collection method because data are all the relevant materials, serving as the basis for study and analysis. There are mainly two types of data:-

1. **Primary Source:**

All the information gathered through questionnaires were studied and analyzed. Important parameters were identified that were most preferred by the customers of Bancassurance. These parameters were rated and the result was then tabulated. Based on the tabulation Graphs were drawn to graphically represent the preferences of Customers of Bancassurance.

All countless other parameters of conscription were also identified through several open-ended questions that presented an understanding into the various practices that were widespread in the Bancassurance Sector. These findings helped, to find and match the various observes of the various banks and insurance companies. This also helped in finding the applies that were dominant.

2. **SECONDARY SOURCE:**

To get the information about the company history and theoretical background following tools were used:

   a) Internet  
   b) Friends  
   c) Reference books  
   d) Annual Reports of selected banks

3.5 Research Instrument:

One cannot deny the fact that the exactness of research instrument determines the success and failures of the survey. Many a time, the survey attempts go waste, because the questionnaire does not mean the same things to the respondents as to the researcher. Therefore, while planning the study care has not only to be taken that the
relevant questions in view of the information require to be asked but they should be put in such a form that they are understandable. Questionnaire is a formalized schedule for collecting data from respondents. It is the link between the information needed and the data to be collected. Kinner and Taylor have prescribed a series of seven steps to be followed while forming a questionnaire

1. Preliminary Consideration
2. Decide on question content
3. Decide on response format
4. Decide on question sequence
5. Decide on physical characteristics
6. Decide on question wording
7. Pretest revision and final draft

A. Type of questionnaire: Structured and Non Disguised questionnaire

B. Type of questions:
   a. Closed ended questions
   b. Open ended questions
   c. Multiple choice questions

C. Questionnaire design, validity and measurement

According to Sudman and Blair (1998: 300), there is always a chance that some questions could cause problems and questionnaire testing is needed to identify and eliminate these problems. Therefore the next section provides a discussion of the validity of the research questionnaires used in this study.

D. Validity of the research questionnaires

The research questionnaires (Appendix B) were first-level pretested. Each specialist examined the questionnaires individually and their comments were then used and the questionnaires were adapted accordingly. This is an example of face (content) validity which refers to the subjective agreement among professionals that a scale logically
appears to accurately measure what it is intended to measure. Face (content) validity and other forms of internal validity are further explained. The questionnaires were then adapted and some unclear statements were changed or replaced. The validity of the sample was based on the accuracy and precision of the questionnaires. Although the questions presented in the research questionnaire did not lean in one direction more than another, some represented did not respond to certain questions asked. These questionnaires were not, however, discarded as they did not respond that the researcher obtained from the respondents. The design of each questionnaire is now explained.

E. Research questionnaire (employees) design

This questionnaire (refer Annexure B) was used for pre-testing of respondents before the actual training took place, and consists of 38 questions. These questions include statements dealing with measuring the effectiveness of the bancassurance. The research questionnaire can be divided into two sections. The first section of the questionnaire collected demographic data on the respondents: age, education, department income etc. The second section of the questionnaire collected data on the respondents' bank information: License, training, growth working profile satisfaction, results etc. The purposes of the section of the questionnaire was to collect data on respondents' knowledge and skills; they had to rate themselves on several topics. This research questionnaire (employees) was completed by employees group (n = 100) only.

F. Customer evaluation questionnaire (customer) design

This questionnaire (Customer) was distributed directly to customer respondents (refer Annexure B). This questionnaire consist of 33, including multi style questions. The research questionnaire can be divided into three sections. The first section of the questionnaire collected data on the respondents' demographic profile such as name gender income occupation, etc. The second part was having a questions related to their bank. The final section of this questionnaire gave the respondents the opportunity to evaluate their level of satisfaction with bank, bank policies, bank facilities and bank employees. This research questionnaire (Customer) was completed only by the experimental group (n = 400).
G. Measurement of research questionnaires

The research questionnaires (employees' questionnaire and Customer questionnaire) completed by both the experimental and control groups were adapted to slight extent.

The process structure (response strategies) that was used in the three research questionnaires consisted of the following questions:

- Dichotomous questions (closed, structured questions);
- Free-response questions (open-ended, unstructured questions);
- 5-points and scale summated rating questions;
- (An even-numbered scale was mostly used in the research questionnaires to avoid the average rating and mid-scores that suggest neutral, average or "don't know" concepts. This enabled the researcher to get usable responses).
- Single-response questions vs. multiple choice,

The last mentioned type of questions includes multiple options for the respondent, but only one answer is sought and question can be classified using the multiple-choice, multiple-response scale (also called a checklist).

There are four different types of scales of measurement: nominal scales, ordinal scales, interval scales and ratio scales, as seen in Table 3.2.

Table 3.2: Characteristics of response strategies used in the questionnaires

<table>
<thead>
<tr>
<th>Characteristics Of data generated (measurement scales)</th>
<th>Dichotomous</th>
<th>Multiple Choice</th>
<th>Free Response</th>
<th>Likert Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>Nominal</td>
<td>Nominal and ordinal</td>
<td>Nominal</td>
<td>Interval (pragmatic view) and ordinal (purist view)</td>
</tr>
<tr>
<td>Two</td>
<td>Three to ten</td>
<td>Ten or fewer</td>
<td>None</td>
<td>Three to seven</td>
</tr>
<tr>
<td>Classification</td>
<td>Classification</td>
<td>Classification</td>
<td>Classification</td>
<td>Classification, order and distance</td>
</tr>
</tbody>
</table>

Source: Cooper and Schindler (2001: 351)
The nominal data type is used to collect information on gender that naturally or by design can be grouped into male or female categories that are mutually exclusive and collectively exhaustive. This study, however, focused solely on female respondents. According to Diamantopoulos and Schlegemilch (2002: 25), an ordinal scale establishes an ordered relationship between persons or objects being dignified. In ordinal scaling, numbers are used to specify whether a person, object etc., has more or less of a given representative than some other person or object. These authors add that an interval scale retains all the characteristics of an ordinal scale and, in addition, is considered by equality of intervals between together scale values. The last scale is the ratio scale, which has all the features of an interval scale plus an absolute zero point that also known as natural or true zero. All of these scales were incorporated in the research questionnaires.

H. Questionnaire Justification:

Each Question was put up in questionnaire after checking its validity and relevance to the objectives of the study. Researcher have made questionnaire for customers of Bancassurance. The questionnaire has been made to get more reliable data and realistic answers from the point of view of customer's awareness regarding Bancassurance. Researcher have analyzed awareness level with reference to public sector banks.

Questionnaire for Customers: Researcher have tried to choose the respondents on random basis to avoid biasness in the research.

Questionnaire for employees: For gathering the data from employees, selected randomly and prepare questionnaire for employees and collect the required whole information.

I. Sample Size

Researcher have taken 500 as research sample to which researcher have mailed the questionnaire. 483 were filled. Out of 483, only 417 respondents were aware of the term 'Bancassurance'. Researcher have selected 400 respondents the target
respondents randomly from banks (branches). For employees we tried to take interview of 137 employees but 107 gave the while information and researcher took the 100 employees.

Table: 3.3 Sample sizes of all types of respondents

<table>
<thead>
<tr>
<th>For Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Andhra Bank</td>
</tr>
<tr>
<td>2. Canara Bank</td>
</tr>
<tr>
<td>3. Corporation Bank</td>
</tr>
<tr>
<td>4. Industrial Development Bank of India</td>
</tr>
<tr>
<td>5. Oriental Bank of Commerce</td>
</tr>
<tr>
<td>6. State Bank of India</td>
</tr>
<tr>
<td>7. Punjab National Bank</td>
</tr>
<tr>
<td>8. Bank of Baroda</td>
</tr>
<tr>
<td>9. Dena Bank</td>
</tr>
<tr>
<td>10. Indian Bank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
</tr>
<tr>
<td>No. of Customers</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>Urban</td>
</tr>
<tr>
<td>Semi urban</td>
</tr>
<tr>
<td>Rural</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>No. of Customers</td>
</tr>
</tbody>
</table>

For Employees

<table>
<thead>
<tr>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Employees</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>Urban</td>
</tr>
<tr>
<td>Semi urban</td>
</tr>
<tr>
<td>Rural</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

J. The characteristics of sound measurement

According to Diamantopoulos and Schlegelmilch (2002: 33), the ensuring of validity and reliability is a prerequisite for research data in order to circumvent possible shortcomings and pitfalls in research results. Cooper and Schindler (2001: 210) agree and identify validity and reliability as two characteristics of sound measurement of a research study.
a) Internal validity

Zikmund (2003: 270) states that in an experimental design, internal validity indicates whether the independent variable was the sole cause of the change in the dependent variable. In other words, was the Bancassurance the sole cause of changes in the employees’ targets?

One widely accepted classification consists of three major forms of validity: content validity, criterion-related validity and construct validity (see Table 6.5). As already mentioned, in this study the principal one that the researcher and trainer encountered is known as content (face) validity — does the research questionnaire reflect the material that is included in the Bank and is it representative of the skill, knowledge or satisfaction. It indicates that a high content validity for a test will be one in which the majority of items included in the well-balanced programme are included in the test/questionnaire.

### Table 3.4: Summary of validity estimates

<table>
<thead>
<tr>
<th>Type</th>
<th>What is measured</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Degree to which the content of the items adequately characterizes the universe of all applicable items under the study.</td>
<td>Tabulations and interpretations</td>
</tr>
<tr>
<td>Criterion-related</td>
<td>Degree to which the forecaster is satisfactory in taking the relevant aspects of the criterion. Concurrent: explanation of the present, data is available at same time as predictor scores Predictive: forecast of the future, after a way of time</td>
<td>Descriptive analysis</td>
</tr>
<tr>
<td>Construct</td>
<td>Attempts to identify the underlying construct(s) being measured and define how</td>
<td>ANOVA</td>
</tr>
</tbody>
</table>
well the test characterizes it (them).

Source: Copper and Schindler (2001: 211)

b) External validity

Cooper and Schindler (2001: 403) state that external validity is concerned with the interaction of the experimental treatment with other factors, and the resulting impact on the ability to generalize to (and across) times, settings, or persons. In other words, external validity is concerned with whether the research findings indicate a generalization of results in this study in order to accept or reject the hypotheses stated in this chapter.

c) Reliability of the measuring instruments

Reliability is concerned with whether the measure is reliable to the degree that it supplies consistent results. In this study, however, when looking at the basic definition of reliability, if a measuring instrument/questionnaire is applied at the start of the bancassurance and the same constructs could be made that the training had failed by not producing the essential change.

Table 3.5: Summary of reliability estimates

<table>
<thead>
<tr>
<th>Type</th>
<th>Coefficient</th>
<th>What is measured</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel forms</td>
<td>Equivalence</td>
<td>Reliability of a test or instrument is inferred from examinee marks.</td>
<td>Factor, Chi Square test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Same test is administered twice or more to same respondents.</td>
<td></td>
</tr>
<tr>
<td>Test-retest</td>
<td>Stability</td>
<td>Degree to which alternative forms to be calculated as the same amount produce the similar results.</td>
<td>ANOVA, Pearson’s correlation</td>
</tr>
<tr>
<td>Split-half, Kuder-</td>
<td>Internal</td>
<td>Degree to which instrument items</td>
<td>Cronbach’s</td>
</tr>
</tbody>
</table>

\[\text{Equation} \]
Richardson formula 20 and Cronbach’s Alpha consistency are homogeneous and reflect the same underlying construct(s).  

Source: Cooper and Schindler (2001: 216)

According to Rae (2002: 74), in practice the same test/questionnaire is administered by a significant change, provided the same test/questionnaire is administered under the same sort of conditions to the same group that has followed a common programme. According to Diamantopoulos and Schlegelmilch (2002: 34), if a measure is not reliable then it cannot be valid, but if it is reliable it may or may not be valid: put differently, a measure that is valid is also reliable but the reverse is not necessarily true. Reliable instruments are robust, they work well at different times under different conditions. This distinction of time and condition is the basis for frequently used perspectives on reliability - stability, equivalence and internal consistency as seen in Table 4. Below table shown the values of the Cronbach’s alpha.

<table>
<thead>
<tr>
<th>Source: Cooper and Schindler (2001: 218)</th>
</tr>
</thead>
</table>

Table 3.6: Test of Cronbach’s alpha

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s Alpha</td>
</tr>
<tr>
<td>Employees</td>
</tr>
<tr>
<td>.368</td>
</tr>
<tr>
<td>Customers</td>
</tr>
<tr>
<td>.033</td>
</tr>
</tbody>
</table>

Source: Primary data

Cooper and Schindler (2001: 218) state that reliability can be improved by:

- That can minimizing external sources of variation;

- All the standardizing conditions under that measurement happens (During this study this was struggled by the researcher as the measurement was done under the same circumstances and situations for both the experimental and mechanism groups);

- It is assumed that expansion the sample of measurement questions used by other similar questions to the data collection implement.
3.6 Analysis of Data

The data was analyzed based on the primary and secondary data. It is a firsthand data which was collected personally. The data collected is both qualitative data (charts) and quantitative data (description). To analyze it properly, tables, graphs are used.

A. Data processing and analysis

Data processing generally begins with the editing and coding data. According to Zikmumud (2003: 72), editing involved checking the data collection forms for omissions, legibility and consistency in classification. Thereafter, the questionnaires are processed by the Department of Statistics at the inferential statistics. Data analysis usually involves reducing collected data to a practicable size, developing extractions, looking for patterns and applying statistical techniques. Scales responses on questionnaires and experimental tools often require the analysis to derive various purposes, as well as to discover relationships among variables (Cooper & Schindler, 2001: 82).

B. Descriptive statistics

In quantitative research, data analysis is normally used to refer to the process of breaking down collected data into essential parts in order to find answers to research questions. Descriptive statistics is the method used to describe characteristics of a targeted population or a sample. It therefore aims at describing data by considering the distribution of scores for each variable and by defining whether the scores on different variables are related to each other or not and also calculated the close association of data collected from the sample. (Terre Blanche & Durrheim, 2012: 105).

The Mean

The sample mean is the average and is computed as the sum of all the observed outcomes from the sample divided by the total number of events. We use \( \bar{x} \) as the symbol for the sample mean. In math terms,
Where \( n \) is the sample size and the \( x \) correspond to the observed valued.

**Standard Deviation**

The Standard Deviation is a measure of how spread out on statistics. It is symbolized as \( \sigma \) (the greek letter sigma). Imagine a manufacturing is estimating the mean weight of widgets produced in a large batch. So far, one sample has been taken. The engineer then takes another sample, and so on continues until a very larger number of samples and thus a larger number of mean sample weights (assume the batch of widgets being sampled from is near infinite for simplicity) have been collected. It has been generated a sample distribution.

As the name suggested, a sample distribution is simply a distribution of a particular statistic for a particular population. for example, the statistic is mean widget weight and the sample size is ‘\( N \)’. If the engineer were to plot a histogram of the mean widget weights, he/she would see a bell-shaped distribution. This is because the Central Limit Theorem guarantees that as the sample size approaches infinity, the sampling distributions of statistics calculated from said samples approach the normal distribution. Conveniently, there is a relationship between sample standard deviation (\( \sigma \)) and the standard deviation of the sampling distribution (\( \sigma_{\bar{X}} \) - also know as the standard deviation of the mean or standard error). This relationship is shown in equation below:

\[
\sigma_{\bar{X}} = \frac{\sigma_X}{\sqrt{N}}
\]

An important feature of the standard deviation of the mean, \( \sigma_{\bar{X}} \) is the factor \( \sqrt{N} \) in the denominator. As sample size increases, the standard deviation of the mean
decrease because data variances is reduced, while the standard deviation, \( \sigma \) does not change appreciably.

C. Factor analysis

Factor analysis is a method used for data reduction or minimizing the data. It does this by seeking original unobservable (latent) variables that are reproduced in the observed variables (manifest variables). For calculating the factor analysis there are many different methods such as maximum likelihood, principal axis factor, generalized least squares, and unweight least squares etc. There are also many different types of rotations that can be done after the initial extraction of factors, containing orthogonal rotations, such as varimax and equimax, which execute the constraint that the factors cannot be correlated, and oblique rotations, such as promax, which allow the factors to be connected with one another. One can also need to determine the number of factors that one want to extract or use. Given the number of factor analytic techniques and choices, it is not unexpected that different research / statistical analysts could reach very different results analyzing on the same data set. However, all analysts are looking for simple construction. Simple construction is design of results such that each variable loads highly onto one and only one factor.

Factor analysis is a procedure that requires a large sample size. Factor analysis is based on the correlation matrix of the variables involved, but correlations matrix is usually need a large sample size before calculation of the data. Tabachnick and Fidell (2001, page 588) cited that Comrey and Lee's (1992) assistance about sample size i.e. 2.5% cases are very poor, 5% cases are poor, 10% is fair, 15% cases are good, 25% is very good, and 42.5 or more is excellent. As a rule of thumb, it is to be assumed minimum 10 observations as per variable is /is not essential to escape computational complications.

D. ANOVA

The one-way analysis of variance (ANOVA) is used to calculate the variance between he samples and group and also regulate whether there are any major differences between the means of three or more independent (unrelated) groups.
ANOVA will provide a brief introduction as to how to use the calculation for the one-way, including the assumptions of the test and what should be tested. If anyone is familiar with the one-way ANOVA, it compares the means between the groups and the samples, the interested in and determines whether any of those means are significantly different from each other. Specifically, it helps to test the null hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \cdots = \mu_k$$

Where $\mu = \text{group mean}$ and $k = \text{number of groups}$. If, however, the one-way ANOVA returns a significant result, we accept the alternative hypothesis (HA), which is that there are at least 2 group means that are significantly different from each other.

E. Chi-Square

Chi-square is a statistical test commonly used to compare collected and observed data with data anyone would expect to obtain according to a specific hypothesis. For example, if, according to Mendel's laws, you expected 100 of 200 offspring from a cross to be male and the actual observed number was 80 males, then one might want to know about the "goodness to fit" between the observed and expected. It means it is to calculate the difference between observed and expected results.

Were the value (differences between observed and expected) the result may be by chance, or were they due to other factors' effects. How much resulted value can occur in front of the person, the researcher, must conclude that something other than chance is at work, causing the observed to differ from the expected. The chi-square test is always testing what researcher want the null hypothesis, which states that there is no significant difference between the expected and observed results.

F. Statistical significance

The hypotheses that were stated earlier in this chapter will be tested and their acceptance and rejection in Chapter 4. Since any sample will almost certainly vary somewhat from its population, it must be judged whether these differences are statistically significant or insignificant (Cooper & Schindler, 2001: 486). A method of
presenting the results of a statistical test reports the extent to which the test statistical
disagrees with the null hypothesis. The method has become very popular because
analysis want to know what percentage of the sampling distribution lies beyond the
sample statistic on the curve and most report the results of statistical tests as
probability values ($p$ values). The $p$ value is compared to the significance level ($\alpha$)
and on that basis the null hypothesis is either rejected or not rejected. If the $p$ value is
less than the significance level (0.05 or 0.001), the null hypothesis is not rejected.

G. Procedure:
The final schedule was prepared keeping in view the insight and experience gained
during pilot run. Special attention was given to clarity of the meaning contained in
items.

Questions that usually are asked in survey researcher like this are:

(a) How much time was required for respondents?

(b) How the researcher avoided introducing his own bias into the situation.

(c) How co-operative the subjects throughout

(d) The impact of social desirability factors on the responses.

All these questions are relevant because they impact one's understanding of the
quality of the data and raise questions about their validity.

With regard to above mentioned questions, it has already been mentioned that
structured schedule was used for collection of the data. Since in the beginning they
were informed of the amount of time they have to invest and they have a chance to
refuse to respond, it was realized that there was no difficulty in terms of willingness to
respond. While trying to establish report with the respondents, the investigator briefly
described the need, intention and pattern of data collection. They were also promised
to be given summary of the research findings, which the investigator intends to give,
that apparently made them all the more enthusiastic and responsive to the research
project.
A field diary was also prepared on the basis of information obtained during data collection phase, to be used to substantiate the information obtained from questionnaire to provide the balanced understanding of the situation. This being a survey research, it cannot be guaranteed in definite terms, but the researcher tried his level best to avoid introducing his own biases by keeping the action with the respondents limited to the minimally necessary pleasantries and sticking to the progress of going through the schedule.

Presuming that the social atmosphere during data collection was free from felt or actual pressures towards conformity, the investigator was reasonably convinced that the data contained were by and large, not significantly affected either by the researcher's own biases or by the impact of social desirability on the responses. Of course, one can't be overly sure in this account. The investigator wishes to submit with humility that these difficulties are part of survey research like the present one.

### 3.7 Limitations of the Study

In most of the research studies, the amount of work is always limited by shortage of time and resources. This one too was not an exception. These limitations are poised by the environment – some external and some inherent. This study has been conducted with utmost consideration to the adequacy of data and quality of information, though as mentioned earlier the reliance on the source cannot be minimized to zero in context of precision. The limitation can be enlisted as here under:-

2. Information collected from various information from different sources such as magazines and websites should be Reliable and consistence.
3. Big amount of respondent are there who do not express their true feelings. In such care their habit, preference, practice, and many more cannot be assessed correctly.
4. The preparation level of the respondents.

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5. All can provide but some of the respondents refuse to give their important information.

However, in spite of these limitations all efforts have been put to make the report correct, genuine and fulfilling the objectives of the research reports.

3.8 Structure of Research

The study consists of five chapters:-

Chapter – I
Chapter one deals with the introduction which is made up of background information of the research, statement of the research problem, objectives, conceptual definition of terms, and finally the banks of the study.

Chapter – II
Include the review of literature by various authors; the researcher focusing particularly on banks and bancassurance.

Chapter – III
Chapter would discuss the objective of the study, research methodology, research hypothesis, criteria for data sources, collection and procedure, analysis of data limitations and scope of the research and its limitation.

Chapter – IV
In this chapter data would be analyzed with help of various statistical tools. Statistical analyses of findings and discussions are captured in chapter four. This chapter would also include the interpretation and finding of the study.
Chapter- V

Present the conclusion and suggestions made by the researcher. Represents the briefing of the entire chapter described above.

*References

**Appendix