Chapter 2
RESEARCH DESIGN

Chapter objective:
To give an insight about the research methodology used to conduct this research. It throws light on basics of this research, operational definitions of the terms used, details of the sample and sampling technique, data collection and analysis methods.

2.1 Introduction:
Reserve Bank of India, in one of its important report (Report of the committee on Customer service in banks) depicts that, “The approach of banks to customer service is a matter of close public scrutiny these days. It is, therefore, important that every approach to customer care or related aspects must be judiciously weighed for its pros and cons”.

The period of last decade or so has seen growth in the banking sector with consequent increase in the volume of banking transactions fully aided by the growth and innovations in the banking technology. The technological improvements in banking have also, to a large extent, facilitated the banks in improving their level of customer service.

Almost all the banks now work in a computerized environment with Core Banking Solution (which facilitates anywhere banking from the earlier branch concept) is a common phenomenon. A large number of banks also offer banking on the telephone or internet or mobile platforms (restricted facilities). Money transfer is an area that has been largely benefitted through technological developments.
Core banking systems are basically the heart of all systems running in a bank and it forms the Core of the bank's IT platform. Amongst other functionalities, it provides the customer information management, central accounting and the transaction-processing functions, which by far are the most fundamental processes in a bank. With the advancement in technology and with passage of time, core systems nowadays tend to cover more and more functionality giving the bank an integrated solution for most of its operations in different business lines. Alongside, it also provides a central operational database of customers' assets and liabilities giving facility to generate a 360 degree view of the customer’s relationship with the bank, which is fundamental for the relationship management strategy of the bank. Core banking systems reside either in the heart of a bank's data center or in other words can also be termed as the heart of the data-center itself.

Core Banking Solutions (CBS) is the process which is completed in a centralized environment i.e. under which the information relating to the customer’s account (i.e. financial dealings, profession, income, family members etc.) is stored in the Central Server of the bank (that is available to all the networked branches) instead of the branch server. Depending upon the size and needs of a bank, it could be for the all the operations or for limited operations. This task is carried through advanced software by making use of the services provided by specialized agencies. Due to its benefits, almost all the banks in India in recent years have taken steps to implement the Core Banking Solutions with a view to build relationship with the customer based on the information captured and offering to the customer, the customized financial products according to their need.

For all the banks it is a common challenge now to attract the new customers and also to retain the existing one. Installation of Core Banking System has occasioned multiple service delivery channels in banking. Unlike traditional branch banking, now a customer can avail banking services through e banking, ATM, phone banking, mobile banking, kiosk banking, POS, any branch banking etc. Every bank now has to gear up to provide various service delivery channels to its customers and try to
increase their level of satisfaction. Needless to say a satisfied customer himself is the brand ambassador in service industry, especially in the banking industry.

In order to increase the satisfaction level amongst the customer it is challenging to the banks to always provide increased quality of services. It will be advantageous to the banks to use a proven tool to measure the quality of services namely “servqual”. Many researchers are successful and have given the positive opinion about usage of this tool in measuring the service equality in varied service industries. Previous researchers have also termed this tool as e-servqual when they have applied the tool to measure the quality of services in e environment.

2.2 Statement of the problem:

Customer satisfaction is a critical issue in the success of any business system, traditional or online. In a powerful e-commerce competitive environment, in order to sustain the growth and market share, service providers need to understand how to satisfy customers, as customer satisfaction is critical for establishing long term relationships. It is evinced by the fact that over the last decade, customer satisfaction surveys have become common in many financial institutions. Additionally, the need for research in retail banking customer satisfaction has been emphasized by increased competition in the core banking environment especially one of its major channel e banking which majorly includes internet banking, mobile banking, phone banking and ATM banking.

Under e banking channel, banks are offering their customers a variety of services 24 hours a day. In this e banking environment, compared to traditional banking, the system heavily involves non-human interactions between customers and the service providers. The e banking system has brought a sea change in the way retail banks build and maintain close relationships with their customers. Due to rapid and continuous technological change and stiff market competition, service quality
becomes an increasingly important issue. Hence understanding service quality issues with the new delivery channel become very important to satisfy the customer.

At this juncture, it becomes very important to know the ‘quality’ of core banking services offered by the banks to the retail customers, so that if there is a lacuna, steps can be exercised to fill it up. Hence, the very next issue to be addressed will be, measuring this service quality. Many previous researchers have used SERVQUAL tool to measure the service quality successfully. According to the model suggested by them, service quality is the outcome of reliability, assurance, responsiveness, empathy and tangibles. In this context, efforts are required to analyse the servqual profile of the respondents.

Another question which arises now is to recognize the comparative prominence of these quality attributes. Though many researchers have used different quality attributes, they have not brought out the relative importance among the attributes.

Literature review has revealed that, even at the international level, no researcher has used or developed any ‘new dimension’ of usage of servqual tool to measure the service quality or to study the GAP between perceived and expected service quality.

Some of the past literature reveal some researchers arguing service quality having influence on customer satisfaction and generates customer loyalty (Chang et al., 2009). One of the reviewed literature, Zeithaml et al (2008) developed a conceptual model that correlates Service Quality, Customer Satisfaction and Customer Loyalty in one frame. According to the model, service quality is the outcome of reliability, assurance, responsiveness, empathy and tangibles. Several researchers attempt to find the interrelationships between service quality, customer satisfaction and customer loyalty in the retail banking sector. Hence, it can be concluded that there is a positive relationship between each of the study constructs. Most of the researchers pointed out that there is a positive relation between the service quality attributes and customer satisfaction and customer satisfaction is positively related to customer loyalty. To address this argument, attempts can be made to establish a relationship between service quality measurements with the market share of the
respective banks. Going a step ahead, unlike previous researchers, efforts also can be put to recognize the presence of any association between service quality measurement, customer satisfaction and the profitability of the respective bank.

**2.2.1 Purpose of this study:**

To provide an understanding about, how to effectively measure the perception of e banking customer with respect to the e banking services he uses and to compare and contrast the Perception and Gap scores, also to establish a relationship between the measured service quality with market share and profitability of the respective banks.

The research conducted is presented under the following heads:

2.1 Introduction  
2.2 Statement of problem  
2.3 Review of literature  
2.4 Research Gap  
2.5 Definitions used  
2.6 Objectives of the study  
2.7 Hypotheses  
2.8 Scope of the study  
2.9 Methodology  
2.10 Research approach  
2.11 Sources  
2.12 Variables under study  
2.13 Tool preparation  
2.14 Pilot Study  
2.15 Reliability of the tool  
2.16 E banking user population  
2.17 Sampling Unit  
  2.17.1 Sampling technique  
  2.17.2 Sample size  
  2.17.3 Criteria for selection of sample  
2.18 Period of data collection  
2.19 Expert opinion survey  
2.20 Data Analysis  
2.21 Limitations of the study  
2.22 Chapter Scheme
2.3 Review of Literature

Parmita Saha Yanni Zhao\(^{11}\) has used a nine parameter dimensions for the purpose of measuring service quality. Nine service quality dimensions in Internet banking are identified in this study (i.e., efficiency, reliability, responsiveness, fulfillment, privacy, communication, personalization, technology update, and logistic/technical support). The quality performance of all the nine dimensions was shown to have a strong impact on customer satisfaction.

*Efficiency, reliability, responsiveness, fulfillment, privacy was found to be the core service quality dimensions in Internet banking. Finally, technology update and logistical or technical support was two new dimensions found in this study.*

Eastin (2002)’s model which demonstrate the adoption of four e-commerce activities currently available to Internet users are considered in this research viz. (1) online shopping, (2) online banking, (3) online investing, and (4) electronic payment for an Internet service (i.e., access to exclusive sites). Author also explained six attributes common to the model. These are – perceived convenience and financial benefits, risk, previous use of the telephone for a similar purpose, self-efficacy, and Internet use and all six attributes play a significant role in the adoption processes.

Mainly in this paper, it is tried to get a better understanding of the relationship between service quality and customer satisfaction in Internet banking sector. Based on the objectives of the study the first research question focused on *what are the service quality dimensions in Internet Banking and how do they affect customer satisfaction in Internet banking.*

The second research question focused on *how the relative importance of the service quality dimensions can be described in Internet banking in relation with the satisfaction.*

\(^{11}\) Parmita Saha Yanni Zhao, “Relationship between Online Service Quality and Customer Satisfaction - A Study in Internet Banking”, Nov 2006
Dr. Manoj Kumar Dash & D.M. Mahaptra\textsuperscript{12}, Researchers here feel that, to improve the quality of services offered, it has to be measured first, hence they have concentrated on the different models available for measuring customer satisfaction in the banking Industry. They have referred ISO model in this regard and they have quoted the following models for the same. KANO model, The profit chain model, The service expectation model, Variability in the service process model, The Common Measurement Tools (CMT) and The Customer Satisfaction Index (CSI).

Vasya Kenova & Patrik Jonasson\textsuperscript{13} - Researchers here have tried to measure the quality of Online banking services, which means, banking services delivered over the Internet. These include opening/closing of account, domestic/foreign money transfer, standing orders, direct debit, debit card application, loan application, credit card application, insurance investment, mutual funds investment, foreign/domestic equity investment, deposit account opening, life insurance contract, traffic insurance contract and etc. They have used e-servqual tool to measure the service quality.

Taking into consideration the huge investments banks make in Internet infrastructure, customer satisfaction and retention are turning into the crucial factors for success in online banking.

In the underlying study the authors have made an attempt to develop a model for measuring the quality of online banking services based on already developed model for measuring quality of online services. The conducted research showed that some changes were necessary to the initial theoretical model in order for higher reliability and consistency to be achieved. They feel that there is need for further research and testing of the developed instrument in order for better understanding of the quality dimensions of online banking services and their relative importance to be achieved.

\textsuperscript{12} Dr. Manoj Kumar Dash & D.M. Mahaptra, "Measuring Customer Satisfaction in The Banking Industry" - Galgotia College of Engineering & Technology, Greater Noida, Lecturer, GNIT, Greater Noida, June2006

\textsuperscript{13} Vasya Kenova & Patrik Jonasson, "Quality Online Banking Services", IJIR, Feb 2002, pp 88-91
Vivek Sylvin\textsuperscript{14} The study suggests that customers distinguish four dimensions of service quality in the case of the retail banking industry in India. These four dimensions of customer-perceived service quality are: attitude, competence, tangibles and convenience.

The researcher feels that this research addresses an issue that has important implications for services marketing theory and practice. Continued refinement of the scale for measuring service quality in retail banking, proposed in this study, is certainly possible based on further research and trends in retail banking. Although in this study it was attempted to cover all aspects of service quality, there may be certain aspects that may have been omitted or that may become relevant as new trends in banking evolve.

P. Munhurrun & P. Naidoo\textsuperscript{15} - This paper has developed and empirically tested a conceptual model of the impact of internet banking service quality on customer satisfaction and behavioral intentions. They have found that reliability and security was perceived as the most important dimensions in internet banking transactions that influences satisfaction and behavioral intentions. Customer satisfaction was found to mediate the relationship between customer behavioral intentions.

In this study, the relationship between service quality, customer satisfaction and behavioral intentions, namely willingness to recommend and the likelihood to complain in the internet banking industry has been examined. They found that from the customers point of view, the larger the gap, the more serious the internet banking service quality shortfall, implying that customers’ expectations of service quality were not met. The results show that customers’ perceptions are consistently lower than their expectations.

The researchers feel Future study can extend this study to all banks offering internet banking services in Mauritius and as there is no standard tool to measure internet

\textsuperscript{14} Vivek Sylvin, “The Dimensions of Service Quality: A Study of the Indian Retail Banking Environment” Dec 2002

\textsuperscript{15} P. Munhurrun & P. Naidoo, “The Impact of Internet Banking Service Quality on Satisfaction and Behavioral Intentions” - University of Technology Mauritius, Apr 2009
service quality in banks a tool can be developed in this regard. Future research could also examine the influence of demographic variables on customers’ perception of internet banking.

**Minjoon Jun & Las Cruces**\(^{16}\) - This paper focuses on the issue associated with internet banking service quality. Customer anecdotes of critical incidents in internet banking were content analyzed. Researchers have identified 17 dimensions of internet banking service quality which were broadly classified into 3 categories, customer service quality, banking service product quality and online systems quality. They have recommended to improve internet banking service quality and hence customer satisfaction.

They feel, further research can look into the investigation of overall internet banking service quality and customer satisfaction as the validated quality dimensions are not purified by employing a factor of analysis in this study.

**Mohammed Sadique Khan and Siba Sankar Mahapatra**\(^{17}\) – This study has aimed at evaluating the service quality of internet banking (i-banking) services in India from customer’s perspective. They have identified seven quality dimensions, viz. reliability, accessibility, user friendliness, privacy/security, efficiency, responsiveness and fulfillment, based on principal component factor analysis. Demographic analysis of data has revealed that gender is hardly a bias for use and evaluation of service quality of i-banking in most of the cases across various categories of customers. The results in the paper have shown that customers are satisfied with quality of service on four dimensions such as reliability, accessibility, privacy/security, responsiveness and fulfillment, but least satisfied with the ‘user-friendliness’ dimension. The empirical

---

\(^{16}\) Minjoon Jun & Las Cruces, “The key determinants of Internet banking service quality: a content analysis”, New Mexico State University, New Mexico, USA, Apr. 2003

\(^{17}\) Mohammed Sadique Khan and Siba Sankar Mahapatra, “Service quality evaluation in internet banking: an empirical study in India”, National Institute of Technology, Rourkela 769008, Orissa, India, Nov 2008
findings have not only prioritise different parameters but also have provided guidelines to bankers to focus on the parameters on which they need to improve. They have felt the limitation of the study as, that the result should not be generalized, as the service quality of i-banking has been tested in urban India and the extension of this study can also include the providers (bankers) perspective to have a better understanding of the problem domain.

Dr. D Israel, Prof J Clement & Dr. M. Selvam\textsuperscript{18} - Alfred after umpteen number of empirical investigation on 10 determinants suggested by Parasuraman and his colleagues has come out with 15 attributes as follows: 1. Reliable (consistently do what they say) 2. Responsiveness (cheerfully do what they) 3. Competent (has knowledge and expertise) 4. Accessible (is available to talk to) 5. Courteous (treat with respect) 6. Communication (Listens carefully and explains expectations) 7. Credible (honest and trust worthy) 8. Security (information kept private and confidential) 9. Empathy (Understands views and shows genuine concern) 10. Tangible (Maintains clean office and dresses up properly) 11. Survey needs (asks and understands needs and expectations) 12. Need fulfillment (needs and expectations are identified and met) 13. Fairness (fair treatment) 14. Mistakes (mistakes are promptly corrected) 15. Treatment (Treat the way the customers should be) the same attributes are used by researcher in this paper and has found that service quality attribute image survey of select public and private sector banks reveal that much needed to be done for public sector banks in improving their performance by revamping the service marketing strategies.

Mohammed Hossain and Shirley Leo \textsuperscript{19} - This paper has tried to evaluate the service quality in retail banking in the Middle East in general, and Qatar in particular, based

\textsuperscript{18} Dr. D Israel, Prof J Clement & Dr. M. Selvam, ”The measurement of service quality perception in banking sector” Banking Finance, Nov 2001

\textsuperscript{19} Mohammed Hossain and Shirley Leo, ”Customer perception on service quality in retail banking in Middle East: the case of Qatar”, Department of Accounting and Information Systems, College of Business and Economics, Qatar University, Jan 2007, pp 23-26
on different levels of customers’ perception regarding service quality and has found that customers’ perception is highest in the tangibles area and lowest in the competence area.

**Chun Wang & Zheng Wang** - Researches feel that with the continuous growth of competition in the market place, understanding customers has become more and more important method of marketing. They have shown that high service quality contributes significantly to profitability.

An attempt has been made in this paper is to gain a better understanding of how Internet affects service quality in the banking sector. A qualitative research is adapted and case studies are conducted from both customer and banking perspectives in this study. They have also found that the Internet has improved the factors in service quality like responsiveness, communication and access. It is concluded that the Internet has an important and positive effect on customer perceived banking services and the service quality has been improved since the Internet has been used in banking sector.

**Mohammed Alam Atiq ur Rahman Khokhar** - Researcher states that, one of the most vital challenges of the Internet as a service delivery channel is providing and maintaining service quality. Service quality is an input of customer trust which becomes satisfaction and lead to loyalty as an output. This research has attempted to gain better understanding of the impact of the Internet on customer loyalty in Swedish banks.

In the research it was found that all the banks interviewed seem to have the same description, motivation and an underlining objective of customer loyalty and the Internet has affected from two different directions which are made up of both positive and negatives sides on customer loyalty creation by these banks. The

---


21 Mohammed Alam Atiq ur Rahman Khokhar, Impact of the Internet on Customer Loyalty in Swedish Banks, oppapers.com, June 2010
Internet has become more powerful media of providing bank services. Banks use the Internet as a new distribution channel for their products and services. The Internet facilitates home banking services which is becoming more popular in recent time. Another most important finding of this study, from both banks, is service quality which form an integral part of loyalty creation

**Dr. T. Vanniarajan, B. Anbazhagan**

- In this research, based on responses from customer, the current study identifies four dimensions – reliability, responsiveness, assurance and tangibles – which form the domain of customer’s evaluation of search quality in the financial services industry. Further, the relationship between these service quality factors and overall assessment of customer’s bank is also been investigated.

They have found, in the case of private and co-operative banks, the important discriminant service quality factors are reliability and responsiveness. These findings suggest that bank managers should be cognizant of service quality factors and their relations with the appropriate contingent variables.

A highly contentious issue examined in this paper relates to the SERVPERF scores of service quality construct. The highly perceived service quality of retail banking in public sector banks are feeling safe in bank transactions, up to date equipment and neatness of employees whereas in private sector banks, these are services at promised time, up to date equipments and physicals. In the co-operative banks, these are neatness of employees and telling customer exactly what they have done.

**Ashutosh K. Singh, Shiv K. Tripathi**

- Researches feel that the increase in the competition has made it mandatory for the service providers to develop

---

22 Dr. T. Vanniarajan, B. Anbazhagan, “Servperf Analysis In Retail Banking”, oppapers.com, July 2008
competencies in the areas as per the customers' requirement. This call for continuous monitoring and measurement of customers' perceived and expected service levels. Due to its highly intangible nature, the measurement of customers' expected and perceived quality becomes a difficult task. They have focused on Indian private sector banks and attempted to measure the gap in the service quality perception of both the service providers and customers.

The study has provided an insight into the perception pattern of customers and executives of Private sector banks in general and suggests the research may be further extended with larger sample size.

**Norailis Ab. Wahab** - Researcher states that, although significant studies had been done regarding issues and factors contributing to service quality and service climate in the banking industry, very little has been published regarding the connection between perceptions of these dimensions.

In this research, they have attempted is to describe an accomplished research to determine whether Malaysian local bank customers’ perceptions of service quality and its dimensions relate to employees’ perceptions of service climate and its dimensions; and to ascertain whether various background elements’ reported differences influence the relationships between the dimensions of service quality and service climate.

The main findings produced nine dimensions of service quality (Automated Teller Machine; corporate image; customer interaction and customer service; online and phone banking; physical feature and facilities; products and services; rates and charges; management and staff) and eleven dimensions of service climate (benefit, bonus, reward and salary; corporate image; customer service; facilities; organization; department and branch; management; organization output; products and services; benefits and salary; customer service; facilities; organization; department and branch; management; organization output; products and services; benefits and salary).

---

24 Norailis Ab. Wahab, “Dimensions of Service Quality and Service Climate: A Study of Bank Customers and Employees in four local Malaysian Banks”, *University of Stirling, Scotland, Apr 2011*
workforce; myself. There were significant relationships between service quality and service climate dimensions.

Osman M. Karatepea & Ugur Yavasb\textsuperscript{25} - By employing a multi-stage, multi-phase, and multi-sample approach, this paper reports on the construction of a service quality scale. Customer perceptions of service quality of retail banks in Northern Cyprus serve as the study setting. The parsimonious 20-item four-dimensional scale consisting of service environment (four items), interaction quality (seven items), empathy (five items), and reliability (four items) exhibits sound psychometric properties. Scale development procedures and managerial applications of the derived scale are discussed.

Dr. Arash Shahin\textsuperscript{26} - Service firms like other organizations are realizing the significance of customer-centered philosophies and are turning to quality management approaches to help managing their businesses. This paper has started with the concept of service quality and has demonstrated the model of service quality gaps.

SERVQUAL as an effective approach has been studied and its role in the analysis of the difference between customer expectations and perceptions has been highlighted with support of an example. Outcomes of this research outline the fact that although SERQUAL could close one of the important service quality gaps associated with external customer services.

\textsuperscript{25} Osman M. Karatepea & Ugur Yavasb, “Measuring service quality of banks: Scale development and validation” Emin Babakusca School of Tourism and Hospitality Management, Eastern Mediterranean University, Sep 2012

\textsuperscript{26} Dr. Arash Shahin, “SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors in Delivering Quality Services”, Department of Management, University of Isfahan, Iran, Nov 2008
Ruby Shukla, Pankaj Shukla\textsuperscript{27} - The researchers have attempted to present all the alternative providing banking service networks and to focus on the advantages and on the risks that the growth of electronic banking has brought about.

They conclude by saying E-banking offers a higher level of convenience for managing one's finances even from one's bedroom. However, it continues to present challenges to the financial security and personal privacy. Many people have had their account details compromised, as a result of online banking. Thus, if one is going to use it for financial transactions, he should be aware of the risks involved. Awareness of the risks enables him to take precautions for a more secured online banking experience.

Joshua AJ, Moli P Koshi\textsuperscript{28} - Researcher’s opinion here says that the need of the hour in banking sector is to build up competitiveness through enhanced service quality thus making the banks more market oriented and customer friendly.

They have attempted to evaluate the service quality of select banks in coastal Karnataka region and to identify area of improvements. Researcher says that the new generation banks out beat old generation banks in all the service quality dimensions. They suggest, modified service quality instrument can be used for comparison of service quality among different banks and also inter branch service quality as a future research.

Ashis K Sen\textsuperscript{29} - Researcher has attempted to prove that the top management of the bank is the custodian of the Quality Key. They have the responsibility to ensure that the key is properly used and is made to work for their bank. This can only happen if

\textsuperscript{27} Ruby Shukla, Pankaj Shukla, "E-Banking: Problems and Prospects", Chandigarh Business School, Landran, Mohali, Punjab & RIMT, Mandi Gobindgarh, Punjab, Dec 2012

\textsuperscript{28} Joshua AJ, Moli P Koshi, "Expectations and perceptions of service quality in old and new generation banks-a study of select banks in south canara region" oppapers.com, Jun 2010

\textsuperscript{29} Ashis K Sen, "Quality is never ending journey", Centurian Bank Limited Journal, Aug 2011
top management believes in and is committed to developing a Quality Services Bank.

Researcher feels, another important aspect of banking will be a bank’s ability to create needs. With the onward march of technology, a quality driven bank can create a product whose need was hitherto not known. For example, Anywhere Banking simply means that a customer may have an account in Mumbai but can transact business from any of the bank’s branches across the country. In this case, the customer is a customer of the Bank and not merely of a particular branch of the Bank. This pioneering service, Anywhere Banking, has now become almost a necessity for companies across the length and breadth of the country. This is true innovation and will be the hallmark of the banks that will lead. Therefore, all the banks remains committed to providing technology-backed quality service to its customers and in building a service quality approach to banking. Further studies in this regard can be made to improve the service quality of the banks as it is a common feature of every bank and a bank can win him only through quality of the service.

Sheeba Thomas30 - Researcher in this study has attempted mainly to have a comparative study between Indian and Foreign banks retails services. A study has been conducted on Gap 4, the service delivery and external communication gap comparing public sector, private sector and foreign banks in India.

A. Parasuraman31 - A comprehensive paper which talks about the development and usage of ‘e-Servqual’, having a multiple item scale for measuring the service quality delivered by the website, mainly for the online shopping websites.

---

30 Sheeba Thomas, “Retail Banking services – A comparative study of Indian and Foreign Banks” Bangalore University, Bangalore 2012
31 A. Parasuraman, Valarie A. Zeithaml, Arvind Malhotra, "E-S-QUAL - A Multiple-Item Scale for Assessing Electronic Service Quality", University of Miami, University of North Carolina at Chapel Hill, 2005
They say, two stages of empirical data collection have revealed two different scales were necessary for capturing electronic service quality. The basic E-S-QUAL scale developed in the research is a 22-item scale of four dimensions: efficiency, fulfillment, system availability, and privacy.

The second scale, E-RecS-QUAL, is salient only to customers who had non routine encounters with the sites and contains 11 items in three dimensions: responsiveness, compensation, and contact. Managerial implications stemming from the empirical findings about E-S-QUAL are also discussed in this paper.

**Marcelo Vallejo García** - Although this paper focuses on testing e-loyalty, it throws a considerable light on the usage of e-servqual tool to measure the quality of e-services. This paper presents a description of some models that can be applied to evaluate service quality on a website. The aim of the research here is to study if these models can be applied in assessing the level of loyalty provided by the website, emphasizing the principal factors controlled by each one.

The researchers have compared several available tools with e-servqual and they opine, in principle the e-SERVQUAL model can be considered of greater validity than other models available. This is due to the fact that whereas other models focus on measuring the quality of the website, e-SERVQUAL considers all the processes that take part in delivering the finished product.

They claim, due the success of the SERVQUAL model in service quality evaluation, an adaptation of this tool has been developed for it use in e-commerce context. As result, the e-SERVQUAL model was born. The e-SERVQUAL model is a conceptual model of service quality for e-tailing environments.

In comparison with the rest of models e-SERVQUAL has as advantage that it is based on the SERVQUAL approach, which has been extensively tested in measuring service quality in a variety of contexts. In spite of the received critiques, the model

---

32 Marcelo Vallejo García, "A Study on the applicability of Online Service Quality Models in testing E-Loyalty" - Juan Manuel Lombardo Enríquez, 2005
SERVQUAL constitutes the tool most used in collecting appraisals assigned by the users to the services they receive, because of his application to different sectors to evaluate the quality of service provided.

Hazlina Abdul Kadir, Nasim Rahmani & Reza Masinaei - This study tries to identify the effects of services offered by Malaysian banks through online media and ATMs on customer satisfaction. 500 students from different universities in Malaysia were chosen as a sample frame of the study.

Two analyses are employed to fully reflect the effect of online and ATM services on their satisfaction level. The first one was service quality model which compares the difference between satisfaction and expectation level in order to find out which dimensions need to be improved.

Second analysis was Two-Way ANOVA analysis which tried to identify the relationship between demographic factors and the study’s outcome. Finally, the study determined which factors have the most effect and which factors have the least effect on customer satisfaction level.

Researchers feel, there is a close relationship between service quality and customer satisfaction. Customer satisfaction can be protected by providing products or services with high quality. One of the famous tools to assess customer satisfaction is SERVQUAL model by Zeithaml et.al, (2000) but this model cannot used in internet banking because it has different service delivery process. E-SERVQUAL model is developed by Zeithaml, Parasuraman, and Malhotra's (2000) to cover all customers’ communication on websites and hence it is used in this paper.

Sankar Ganesh. K - In this research opinion of the customers about the service quality is assessed by implementing most successful instrument SERVQUAL

---

33 Hazlina Abdul Kadir, Nasim Rahmani & Reza Masinaei, “Service quality analysis: An application on online banking and ATM facilities”, Multimedia University of Malaysia, Dec 2011

34 Sankar Ganesh. K, “SERVQUAL Model for measuring service quality and analysis of behavioural intention of bank customers in Virudhunagar district”, Kalasalingam University, Jan-2012
developed by Parasuram et al. (1998) and similarly the Behaviour Battery developed by Zeithaml et al. (1996) is used to study the behavioral intention of the customers.

**Neha Dixit & Prof. Saroj Kumar Datta**\(^{35}\) - This paper analyses characteristics which influence the rate of adoption of online banking in India. The results in the paper shows that adopters of online banking perceive the service as more suited to those customers who are comfortable with PC and internet. Throughout this paper the importance of user's attitude and their characteristics towards online banking has been shown.

**Ramaksrihnan Ramanathan & Harika Karpuzcu**\(^{36}\) – Researchers have attempted to compare perceived and expected service quality of a company engaged in pharmaceutical distribution. Uniqueness of this paper is that, they have used Analytical Hierarchy Process (AHP) to analyse the servqual data. In this paper more emphasis is given about the usage of this tool. The results and feedback received from the respondents indicated that AHP can be advantageously applied to measure service quality of an organization.

### 2.4 Research Gap

The advancement in technology especially internet and information technology has led to new way of doing business in banking. Internet banking, mobile banking and ATM banking are the order of the day. Customers need not personally visit the branch or the bank to carry out many of the transactions. They can be completed at the fingertips of the customer using the desktop or the laptop, I pad or Mobile at his

---

\(^{35}\) Neha Dixit & Prof. Saroj Kumar Datta, "The Diffusion of Online Banking Among Indian Consumers": An Empirical Study, Mody Institute of Technology and Science, Rajasthan, 2010

\(^{36}\) Ramaksrihnan Ramanathan & Harika Karpuzcu, "Comparing perceived and expected service using an AHP model: an application to measure the service quality of a company engaged in pharmaceutical distribution", OPSERACH, Apr-Jun 2011, pp 137-150
office or residence. It is a common challenge now to all the banks to increase the satisfaction level of the customers and only way to do this is to increase the quality of the services provided. Many previous researchers have contributed in this regard through their articles in the means of research paper, published reports, survey on quality of banking services etc. Based on the review of previous researchers papers, following points are listed out as research gap:

- No researcher has put efforts to find out the superiority of each other amongst the study of perceived and GAP score analysis.

- None of the researcher has developed any new dimension in usage of servqual tool in measuring the service quality of e banking services like assigning the weights to the perceived and GAP score based on their relative importance/preferred ranking.

- Previous studies have limited to the comparison of service quality among different sectors of the banks and establishment of relationship between service quality and the customer satisfaction, none have taken it to the advanced level and put efforts to establish a link between customer satisfaction and market share of the respective banks.

- No researcher has so far tried to study of impact of customer satisfaction on different measures of profitability of the bank

An attempt is being made in this research to assess the quality of the e banking services provided by the banks and it is also tried to establish the relationship between quality of the e banking services with the ‘satisfaction level’ of the customer. Later efforts also are made to study the impact of the customer satisfaction with bank’s market share and profitability.

As stated earlier, a focused attention is driven on measuring the gap between the perceived and expected quality of e banking services by collecting and critically
analyzing the primary data. To get the better results, the said perceived and GAP scores are even analysed by assigning the suitable weights too. Literature review has revealed that, particularly the study of gap analysis is imperative but even at the international level none of the researches have attempted in this regard. Also none of the researchers have attempted to establish a relationship between quality of services - customer satisfaction – market share - profitably. In this context, this research has given a brand new dimension while using servqual data measuring the customer satisfaction in terms of usage of servqual tool and also establishment of relationship between customer satisfaction and market share or profitability.

Based on the above parameters, as their exist a vast research gap, the present research is an humble attempt to study the gap between perceived and expect quality while using e banking services and the satisfaction levels of the customers, also to study the impact of the same on the market share and profitability of the bank, hence this research, “Quality of Core Banking Services to the retail customers – A study based on GAP model”.

A research paper by Ramakrishnan Ramana & Harika Karpuzcu requires a special mention at this juncture. It is titled as “Comparing perceived and expected service using an AHP model: an application to measure the service quality of a company engaged in pharmaceutical distribution”, where the researchers have used Analytic Hierarchy Process (AHP), a recent tool to analyse the servqual data. Here the data is collected based on the ‘preference’ of the customer which has enhanced the value of the servqual data. Inspired by this, in the current study also certain data is collected on the preference ranking of the customer and the 2nd objective of the study is framed. Of course the value of the data is enhanced, but researcher could not use AHP tool to analyse the said data due to non-availability of an expert statistician who can use AHP. However, a simple analysis is performed and it has produced some interesting results.
### 2.5 Definitions Used

#### 2.5.1 Core Banking System:
Core banking is services provided by a group of networked bank branches. Bank customers may access their funds and other simple transactions from any of the member branch offices. –[wikipedia.com](http://wikipedia.com)

#### 2.5.2 Retail Customer:
Customer who uses retail banking services refer to both financial and non-financial services of a bank

#### 2.5.3 Service Quality:
Service quality includes dimensions of service and perceived service quality as a component of customer satisfaction

#### 2.5.4 Customer Satisfaction:
“Satisfaction is a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations” (Kotler, 2000, p.36). In other words, It is a collective outcome of perception, evaluation and psychological reactions to the consumption experience with a product/service

#### 2.5.5 Perceived score
The sum total of the score of customer’s actual experience in relation to e banking services based on seven quality attributes
2.5.6 Expected score
The total sum of the score based on customer’s expectations (before actually experiencing the e-service) in relation to e-banking services based on seven quality attributes.

2.5.7 GAP score
The result of ‘Perceived MINUS Expected score’. It is understood that, if the GAP score is negative, it means the customer is more satisfied and if the GAP score is positive the customer is dissatisfied.

2.5.8 Profitability:
For the purpose of this study, business per employee, profit per employee, return on assets and return on equity is treated as profitability.

2.5.9 Market Share:
In this research, market share is identified based on number of respondents of each bank during the first phase of data collection, where the size of the respondents were 429.

2.5.10 Reliability:
Reliability is the ability to perform the promised service dependably and accurately, where promises are delivered in a dependable and accurate manner.

2.5.11 Responsiveness
This includes the quality of response as willingness and adherence of the employees to the queries and complaints of the bank customers.

2.5.12 Efficiency
This includes the knowledge and ability of the bank's employees to answer the queries of the customers and also their competence in using the technology.
2.5.13 Security
Here Security means the confidence customers feel with the transaction and the information provided by the bank.

2.5.14 Ease of Use:
The usage of e banking services without difficulty, say when using e banking, site possesses a good search engine, and allows the customer to maneuver easily and quickly back and forth through the pages.

2.5.15 Aesthetics:
Appearance of website, ATM etc.,

2.5.16 Assurance:
The confidence the customer feels in dealing with the e banking services and is due to the reputation of the bank and the services it provides as well as clear and truthful information presented.

2.5.17 Servqual:
A 22-item instrument for measuring customers’ expectations and perceptions from a service along five quality dimensions: tangibles, reliability, responsiveness, assurance and empathy. (Parasuraman et. Al., 1991)

2.5.18 e banking services:
e-Banking services are banking services delivered over the Internet. The services provided by banks over the Internet which once included only checking of accounts, have recently evolved to include a full range of banking services. It is not rare the case nowadays, when nearly all services accessible at the branch or by phone can be accessed on the Internet as well.
E banking is also used interchangeably namely, Internet banking, net banking, desktop banking, laptop banking, tablet banking etc.

### 2.5.19 Mobile banking:

Mobile banking is a system that allows customers of a bank to conduct a number of financial transactions through a mobile device such as a mobile phone or personal digital assistant. Account balance checking, fund transfer, bill pay etc. are the transactions which can be performed using mobile banking.

The earliest mobile banking services were offered over SMS, a service known as SMS banking. With the introduction of smart phones with WAP support enabling the use of the mobile for banking transactions made possible. A separate programme should be downloaded from the bank sources and special settings to be enabled to avail this service.

### 2.5.20 Phone banking:

When a customer calls the bank from the telephone and responds to voice prompts by dialing inappropriate keys, can be termed as phone banking. Phone banking also gives you the option of talking to a customer care executive of the bank. No programme need to be set in the phone to avail this service.

### 2.5.21 ATM:

An automated teller machine (ATM) also known as an automated banking machine (ABM) (Canadian English), cash machine, cashpoint, cashline or hole in the wall (British, South African, Sri Lankan, and Hiberno-English), is an electronic telecommunications device that enables the clients of a bank to perform financial transactions without the need for a cashier, human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date or CVV.
Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, get debit card cash advances, and check their account balances as well as transfer the funds, bill pay etc.,

2.5.22 ABB (Any Branch Banking):
In Any Branch Banking, bank will be offering following services to its customers; the Bank's customer having ATM card can withdraw the Cash from any ATM of the Bank, The Bank provides the facility to withdraw / deposit / transfer the cash through the counter from any of bank’s branches. The customer can deposit his/her cheque in any of the branch of the bank.

2.5.23 RBI Classification of Banks:
For the current study, following classification of the banks are used as suggested by Reserve Bank of India.

- Nationalised Banks (Excluding SBI) (Including IDBI)
- SBI & Associates
- Private Sector Banks
- Foreign Banks

2.6 Objectives of the study
Having understood the required operational definitions, focus can be brought to recognize the objectives of this study on which the entire research is performed:

1. To describe the servqual profile using the gap and perceived quality scores of customers with special reference to RBI classification of banks and to critically evaluate the gap and perceived quality scores.

2. To determine the relative importance of select quality attributes and to determine the weighted (weights based on relative importance) Servqual profile using gap and perceived quality scores of the retail customers with special reference to RBI
classification of Banks and to critically evaluate the weighted gap and perceived quality scores.

3. To study the relationship between Servqual profile of a bank using gap, perceived quality, weighted gap and weighted perceived quality of a bank and the market share of a bank

4. To assess the impact of Servqual profile of a bank using gap, perceived quality, weighted gap and weighted perceived quality of a bank on the select profitability measure of a bank

5. To make appropriate suggestions

2.7 Hypotheses

1. While describing the servqual profile of sample customers, Hypotheses were framed and tested for each of the variables (Reliability, Responsiveness, Efficiency, Security, Ease of use, Aesthetics & Assurance) for both perceived and gap scores as under, totally 14 hypotheses:

Hypothesis

There is no significant difference in Mean score of RELIABILITY dimension of Servqual attributes among four types of Bank Classification.

2. While establishing the relative importance of select quality attributes based on customer preference ranking following hypotheses were framed and tested for each of the quality variable, totally 18 hypotheses including two for overall attributes ranking and two for weighted servqual scores.
Hypothesis

There is no significant difference in Mean rank score of Perceived RELIABILITY attribute among four types of Bank Classification.

3. Later, to find out the relationship between service quality attributes of banks and market share of the select banks based on both with weighted and un-weighted perceived score and gap score hypotheses were framed and tested, totally two hypotheses

Hypothesis

There is no significant relationship between Market share and Mean Weighted perceived overall servqual score.

4. Then to find out the relationship between service quality attributes of banks and profitability of the select banks based on both with weighted and un-weighted perceived score and gap score and overall score, hypotheses were framed and tested, totally four hypotheses

Hypothesis

There is no significant relationship between business per employee and overall perceived scores of servqual attributes.

2.8 Scope of the Present study

Following is the scope of the present study:

- The present study is conducted to measure the quality of core banking services offered to the retail customers and to establish the GAP between perceived and expected quality of e banking (as per GAP 5 of Zeithaml, Parasuraman and Berry Model)

- The current study is restricted to e banking and branch banking is not included. e banking here also includes ATM, mobile and phone banking.
• Servqual is the tool is used to measure the quality of e banking services provided by the banks.

• Though 22 variables are available under servqual tool, suitable seven quality variables are used in the current study.

• Responses are collected from the customers of 27 banks categorised under Nationalised (including IDBI) other than SBI & its associates, SBI & its associates, Private Sector and Foreign banks. Exclusivity of this study with respect to geographical area is, it is not limited to a specific geographical area, though data is collected mainly from Bangalore, responses were received from all over including few NRIs sharing their Indian banking experience.

• During the study, amongst the different service delivery channels like e banking including ATM banking, Phone Banking, Mobile banking, branch banking, kiosk banking, POS etc., emphasis is given only to e banking and allied channels.

2.9 Methodology:

Several methods can be followed to conduct a research. Most of these can be classified on the basis of researcher concerns about the problem before starting the investigation. According to Yin, there are three classifications of research available when dealing with a research problem; Exploratory, Descriptive and Explanatory.

The research purpose and research questions of this study are primarily explanatory and descriptive. This study is descriptive since it was intended to describe the area of research and try to begin to explore the collected data in order to find out the differences and similarities. This study can also be termed as Survey Research as the data for the research is collected through survey method.
Researcher has also brought in the ‘cause and effect’ study in the research as finding out the cause for increase/decrease in the market share & profitability is also accomplished in the study hence this is an explanatory and descriptive research.

**2.10 Research Approach:**

There are different types of approaches for conducting a research. Denzin and Lincoln mentioned two types of approaches which are a) Quantitative and b) Qualitative approach. The best method to use for a study depends on the study’s research purpose and accompanying research questions.

Current study can be classified under qualitative research as efforts are put to bring meaning and contextual understanding the phenomenon of e banking services. Generalization is not the purpose of the study but rather a qualitative research is conducted to gain deeper and detail understanding of regarding issue.

**2.11 Sources:**

The sources of data collection were both primary and secondary.

**Primary data:** The data for primary information was collected by administering a structured specifically designed online questionnaire. The questionnaire included both open-ended and close-ended questions. The data was obtained through personal e mails with the selected group of respondents. It was collected through online by mailing the request with the questionnaire link to all the different groups which researchers were in touch with, also had requested respondents to forward
the mail to their friends/groups to generate good number of responses from varied group of customers.

**Interviews:** Interviews were scheduled to elicit information on bankers. The qualitative information was obtained from senior bankers and the banking ombudsman.

**Secondary data:** Secondary data was collected from books, internet, literature, magazines, journals, web resources such as online libraries, websites especially RBI website and other relevant documents.

### 2.12 Variables under study:

Following are the variables in the study:

**18. Table 2.3 Table showing the Variables**

<table>
<thead>
<tr>
<th>VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
</tr>
<tr>
<td>Responsiveness</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Security</td>
</tr>
<tr>
<td>Ease of Use</td>
</tr>
<tr>
<td>Assurance</td>
</tr>
<tr>
<td>Aesthetics</td>
</tr>
</tbody>
</table>

In case of 3rd and 4th objective of the study, Market share and Profitability are used as dependent variables
2.13 TOOL PREPARATION:

Data were collected through a structured questionnaire. For design of questionnaire to assess service quality, SERVQUAL Questionnaire designed by Parasuraman et al. (1988) was used which later was customized after taking the opinion of academicians, bankers, and customers’ responses. Though 22 quality variables are available under this tool, seven suitable variables are chosen and prepared the tool.

2.13.1. Development of the Tool:

a. Selection of the tool: A structured questionnaire and a Likert scale was regarded as appropriate to assess Service quality of e Banking Services.

b. Construction of the questionnaire: A structured questionnaire was prepared to assess Service quality of e Banking Services.

The following steps were used to prepare the research tool:

- Review of related literature
- Preparation of blue print
- Consultation with experts from banking field, academic and research field

c. Description of the tool: The structured questionnaire consisted of two parts:

Part i : Consisted of socio-demographic characteristics of sample respondents considering gender, age, marital status, occupation, educational qualification, name of the bankers transacted with, term(period) of use of e banking Services with the respective bank.

Part ii : Consisted about their expectations and experience in e banking Services in terms of quality attributes. Here each question had two pars as ‘a)’ and ‘b)’. ‘b)’ part of the question had the questions about the ‘experience’ of e banking service by the respondents whereas ‘a)’ part of the question had a scale about customer’s ‘expectations’ regarding the same aspect.
19. Table 2.4 Table showing the section/variable wise statement

<table>
<thead>
<tr>
<th>Section/Variables</th>
<th>Number of statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio demographic</td>
<td>10</td>
</tr>
<tr>
<td>Reliability</td>
<td>08</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>07</td>
</tr>
<tr>
<td>Efficiency</td>
<td>10</td>
</tr>
<tr>
<td>Security</td>
<td>07</td>
</tr>
<tr>
<td>Ease of use</td>
<td>05</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>03</td>
</tr>
<tr>
<td>Assurance</td>
<td>05</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>14</td>
</tr>
</tbody>
</table>

(Source: questionnaire used to collect the primary data)

2.13.2 Scoring pattern:

a. ‘a’ part of the question was provided with a scale based on ‘expectations’ of the respondents on the point mentioned in the second part of the question. The scoring pattern was 5,4,3,2,1 symbolizing 5 as ‘high expectations’ and 1 as ‘low expectations’.

b. ‘b’ of each statement in the case of dependent variables was considered and provided a five point scale: Strongly agree, agree, not sure, disagree, and strongly disagree. Also, considered: Always, Most of the Times, Sometimes, Rarely and Never. The scoring pattern here was 5,4,3,2 and 1 respectively for positive statements and vice versa for negative statements.
2.14 Pilot study

A pilot study was conducted before taking up the full-fledged field study. First, the questionnaire was mailed to around 30 customers and tested the feasibility of conducting the study, evaluated the effectiveness of the structured questionnaire.

Researcher also met Banking Ombudsman to get his expert opinion before finalizing the questionnaire. Few suggestions regarding the simplification of questions and choices were well received and incorporated in the said questionnaire.

2.15 Reliability of the tool:

The reliability of the research tool was assessed by conducting Cranach’s alpha reliability test and tested the internal consistency of the tool. Following is the reliability test results:

Reliability test results:

Reliability means repeatability of measure. It also reflects the consistency of the responses. There are several types of reliability such as, test-retest reliability, inter-rater or inter-observer reliability, parallel forms reliability and internal consistency reliability. The type of reliability test that has been used in the study is Cranach’s alpha. It is a statistic which measures the internal consistency of the instrument. Alpha coefficients range between 0 to1. The higher the value of alpha (preferably more than 0.70), the more reliable the scale is. According to Nunnaly (1978), an alpha score of 0.7 or more can be accepted as a good reliability coefficient.
### 20. Table 2.5 – Table showing Reliability test (Cronbach’s Alpha) of the tool

<table>
<thead>
<tr>
<th>Attribute</th>
<th>No. of items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELIABILITY</td>
<td>8</td>
<td>0.757</td>
</tr>
<tr>
<td>RESPONSIVENESS</td>
<td>7</td>
<td>0.794</td>
</tr>
<tr>
<td>EFFICIENCY</td>
<td>10</td>
<td>0.831</td>
</tr>
<tr>
<td>SECURITY</td>
<td>6</td>
<td>0.809</td>
</tr>
<tr>
<td>EASE OF USE</td>
<td>7</td>
<td>0.770</td>
</tr>
<tr>
<td>AESTHETIC</td>
<td>3</td>
<td>0.675</td>
</tr>
<tr>
<td>ASSURANCE</td>
<td>5</td>
<td>0.817</td>
</tr>
<tr>
<td><strong>OVERALL</strong></td>
<td><strong>46</strong></td>
<td><strong>0.924</strong></td>
</tr>
</tbody>
</table>

**Interpretation:**

It is observed from the above that Cranach’s alpha score of RELIABILITY (0.757), RESPONSIVENESS (0.794), EFFICIENCY (0.831), SECURITY (0.809), EASE OF USE (0.770) and ASSURANCE (0.817) are greater than 0.70. This indicates good internal consistency of items in the scale for above attributes. Only in case of AESTHETIC the Cranach’s alpha is 0.675, as this value is close to 0.70 we consider that there is an internal consistency of items for this attribute too and, when OVERALL score is observed which is 0.924, it also communicates the good internal consistency of overall items.

### 2.16 Sampling

Sampling is an important component of any piece of research because of the significant impact that it can have on the quality of the findings. To accomplish this, responses were collected from 775 respondents of 27 banks. The data collection was done in two phases to achieve this number.
2.16.1 e banking user population:

India has 205 million\textsuperscript{37} internet users and ranks third among the internet penetration of 12.6% after China and US. The number of internet users in urban India is 137 million, while in rural it is increasing by 58% year on year growth. However, most of the use is limited to communication purposes (90%), whereas, e banking transactions are limited to only 10% of total population. It means the total size of population for this study can be considered as around 20 million.

2.16.2 Sampling Unit:

An retail banking customer who is the resident of India/NRI (who has Non Resident Ordinary Bank – NRO ac.) having an e banking facility and have used it for a minimum of three months in an Indian bank was a sample unit for this study.

The sampling study was conducted in two phases; e survey was the method chosen for field collection of data in the first phase of sampling because of it better reach, time and cost efficiency and ease of use.

2.16.3 Sampling process:

Data collection was started in the month of February 2013. An e-questionnaire was constructed and mailed to the known sources like family members, friends, friends of friends etc. At the end of the process, though the expected number of samples was collected but, when grouped it was found out that there were less number of representations from few of the banks. It was found that 14 banks had a small representation which was not adequate to answer the 3\textsuperscript{rd} and 4\textsuperscript{th} objective properly and hence there was requirement for few more representations from these banks say, at least 20 from each bank. Finally, it was decided to go in for a second phase of sampling to fulfill this requirement.

\textsuperscript{37} IAMAI & IMRB report cited in P. 189, IRACST- International Journal of Research in Management & Technology, ISSN: 2249-9563 Vol. 3, No.6, Dec 2013
The entire sampling process was performed in two phases.

a) Phase I

b) Phase II

**Phase I**

The sampling technique used here was convenience - snowball sampling. The researcher mailed the questionnaire to his family members, friends, students and Rotarian friends with request to respond. Further, he has requested them to mail the same to their acquaintances with a request to respond. Attempt was done to cover as many age group, income group and to include male and female, different business and profession, student, housewife respondents as possible. Thus though the sample was a convenient sample, it had all the qualities of a random sample.

At the end of this 1st phase, 429 responses were collected and when grouped the same, it resulted in to 27 banks. As explained earlier as the representation from 14 banks were less in number, it was decided to go for another phase of sampling to get a decent representation from these bank.

**Phase II**

Under this phase, quota sampling technique was used to collect the desired data. The quotas per bank were fixed so that there were at least 20 respondents from each of the bank. In this phase of sampling, researcher has collected the data through personal interview using the same questionnaire. The sample size at the end of both the phases came to 775 having a reasonable representation from all the 27 banks.
2.16.4 Sample size

The final sample of 775 respondents was grouped into 27 banks and the profile is follows:

The sample included customers from the banks categorized under, SBI & its associates, Nationalised Banks, Private Sector Banks and Foreign Banks. There were cases where the respondents were using the services of more than one bank, separate questionnaire was used for each bank they bank with in such cases.

**21. Table 2.2 Table showing the sample under study**

<table>
<thead>
<tr>
<th>Bank Category</th>
<th>Number of Banks</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Nationalized other than SBI &amp; Associates</td>
<td>13</td>
<td>300</td>
</tr>
<tr>
<td>SBI &amp; Associates</td>
<td>03</td>
<td>140</td>
</tr>
<tr>
<td>Private Sector</td>
<td>07</td>
<td>262</td>
</tr>
<tr>
<td>Foreign</td>
<td>04</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>775</td>
</tr>
</tbody>
</table>

2.16.5 Criteria for selection of sample

Inclusion criteria:

1) Respondents included customers who were willing to participate
2) Respondents who were using e banking facilities for a minimum of 3 months
3) Respondents who were literate & capable of understanding CBS environment

2.16.6 Period of data collection:

The data was collected during February 2013 and September 2013. The questionnaire could be completed by the respondent 10 to 15 minutes. Personal Interviews were also conducted during the second phase of the collection of the
date. After receiving the completed tool through mail/personal, tabulation of the data is made enabling the analysis of the same.

### 2.17 Expert Opinion Survey:

One important part of the data was collected based on customer’s ranking of the SERVQUAL attributes. Customers have ranked the attributes based on their preference. During the analysis of the data, it was decided to assign the weights to the said perceived and gap score. As none of the previous researchers have performed this kind of weighted SERVQUAL analysis, there was no ready methodology available to assign the weights to this preference scored data.

To meet this challenge, it is decided to conduct an expert opinion survey and frame the methodology for the same. Further, an expert opinion survey was conducted and has successfully devised a ‘method’ to assign the weights to the preference scored data. The expert opinion was collected from four Professors comprising each from Commerce, Management, Statistics and Education.

### 2.18 Data Analysis

The data obtained was analyzed and interpreted with the help of using statistical techniques such as Descriptive Statistics, Regression analysis, Analysis of Variance (ANOVA) Test to find out:

- The servqual profile of the respondents
- The relative importance between quality variables
- The weighted servqual profile of the respondents
- The relationship between servqual and market share of bank
- The relationship between servqual and different profitability aspects of the bank
The data was interpreted with a focus on the objectives of the study using descriptive and inferential statistics as follows:

- Data was categorized and organized in the master coding sheet.
- The Frequency and percentage to arrive at the socio-demographic characteristics of the sample under study was calculated.
- Weights were assigned to the data to understand the relative importance of quality variables.
- The Analysis of Variance (ANOVA) was used to understand the significant difference amongst each of the quality variables mean score with special reference to the four types of bank classification.
- Regression Analysis was carried out to identify the magnitude of the relationship between the Independent and Dependent Variables.
- The analyzed data has been presented in the form of a report. Graphs and diagrams have been used to present the data.

### 2.19 Limitations of the study

The limitations of the study were found to be:

- The study was confined to 27 banks falling under the groups - SBI & its associates, Nationalised Banks (including IDBI), Private banks & foreign banks.
- The study is based on the data supplied by the respondents at a specific point of time and they may be subject to change.
- The study is restricted to e banking, branch banking is not included.
- The response from the sample customer is with reference to only e banking services of the respective banks not otherwise.
- The scope was limited to the study of satisfaction level of only retail bank customers.
2.20 Organization of the thesis/ Chapter Scheme

The organization of the thesis is as detailed below:

**CHAPTER 1- Introduction**

This chapter provides a general description of Services Marketing, Customer Expectation & Customer Satisfaction, Service Quality, Service Quality in Banks, Background of the Study, Key Drivers of Satisfaction in Banking services, Banking in India, Retail and Corporate Banking, The Rationale of Study - Background of the study, The Present Study - what is GAP?, Servqual, Perceived score, GAP score, relationship between customer satisfaction, profitability and market share etc.

**CHAPTER 2- Research Design**

This chapter details the research design of the study, the literature reviewed for the study, statement of problem, objectives of the study, hypotheses tested, scope of the present study, operational definition of concepts, research methodology, sampling design, method of sampling, development of scale, data collection instruments, field work, plan of analysis, limitations of study and organization of the thesis.

**CHAPTER 3- Profile of Banks**

This chapter provides details of the profile of the banks selected for the study, type of banks, type of services offered and general profile of the banks.

**CHAPTER 4- Profile of Sample Customers**

This chapter details the profile of the selected sample customers. It gives a clear picture about the demographic factors of the customers and also speaks about the descriptive statistics related to customers and their e banking usage.
CHAPTER 5 - Analysis - Profile of respondents based on servqual quality attributes using Perceived and GAP score

This chapter details the servqual profile of the customers with special reference to RBIs classification of banks. The profile of the respondents of these banks is interpreted and hypotheses are either rejected or accepted. The significance of the results is explained by critically evaluating the gap score and the perceived quality score assessing service quality.

CHAPTER 6 – Analysis - Relative importance of servqual quality attributes

This chapter details the relative importance of select quality attributes and efforts are put to analyse the weighted servqual profile of the customers with special reference to RBIs classification of banks. These are interpreted and hypotheses are either rejected or accepted. The significance of the results are explained by critically evaluating the role of ranking score in assessing service quality.

CHAPTER 7 – Influence of servqual quality attributes on market share of the select banks

This chapter tries to find out the relationship between service quality attributes of banks and market share of the select banks. This is interpreted and hypotheses are either rejected or accepted. The significance of the results are explained based on both with weighted and un-weighted perceived score and gap score.

CHAPTER 8 – Influence of servqual quality attributes on select profitability measures of the banks

This chapter tries to find out the relationship between SERVQUAL quality attributes on select profitability measures of the banks.
Attempted to establish relationship between the SERVQUAL quality attributes with

- Business per employee
- Profit per employee
- Return on equity and
- Return on assets.

This is interpreted and hypotheses are tested. The significance of the results are explained based on both with weighted and un-weighted SERVQUAL perceived score and gap score.

**CHAPTER 9 - Summary of Findings and Suggestions**

The findings of the study including suggestions to SBI & its associates, Nationalised Banks (including IDBI), Private banks & foreign banks are presented in this chapter.

This whole thesis is presented using the above chapter scheme for any easy understanding. The next chapter gives a detailed discussion about the respondent banks, their profile, how these 27 banks surfaced? etc.