A STUDY ON INTERNET BANKING IN NEPAL: PRESENT STATUS AND FUTURE PROSPECTIVE

A Thesis

Submitted By

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VIVA-VOCE SHEET

We have conducted the viva-voce examination of thesis Presented by

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and we found the thesis to be the original work of the student written according to the prescribed format. We recommended this thesis to be accepted as partial fulfillment of the requirements for Master of Business Studies (M.B.S).

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A STUDY ON INTERNET BANKING IN NEPAL: PRESENT STATUS AND FUTURE PROSPECTIVE

is a dissertation work which has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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DECLARATION

I hereby declare that the work reported in this thesis entitled **"A Study On Internet Banking in Nepal: Present Status and Future Prospective"** submitted to the Faculty of Management, Tribhuvan University is my original work done. It is done in form of partial fulfillment of the requirements for the Master's Degree in Business studies (MBS) under the Supervision and guidance of **Associate Prof. Basanta Dhakal** Nepal Commerce Campus.

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ABBREVATIONS

ABBS	:	Any Branch Banking System
ATM	:	Automated Teller Machine
BOD	:	Board of Director
CVC	:	Central Vigilance Commission
e.g	:	For Example
Ed.	:	Edition
eds	:	Editors
HBL	:	Himalayan Bank Limited
i.e	:	That is
IB	:	Internet Banking
IBS	:	Internet Banking Services
ISP	:	Internet Service Provider
IT	:	Information Technology
JV	:	Joint Venture
KBL	:	Kumari Bank Limited
LC	:	Letter of Credit
MBS	:	Masters in Business Studies
MS	:	Micro Soft
NGO'S	:	Non-Government Organizations
NIBL	:	Nepal Investment Bank Limited
NRB	:	Nepal Rastra Bank
NRS	:	Nepali Rupees
PCS	:	Personal Computers
PIN	:	Personal Identification Number
RBI	:	Reserve Bank of India
SDB	:	State Development Bank

SWIFT	:	Society for World Wide Inter-Bank Finical Telecommunication Network
UK	:	United Kingdom
USA	:	United States of America
VDC	:	Village Development Committee
Vol.	:	Volume(s)
WTO	:	World Trade Organizations
WWW	:	World Wide Web

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Nepal is located in the South Asia between China and India. It's total area is about 1,47,181 sq. km. Nepal is one of the least developed country which is divided into 75 districts, 58 metropolitan cities and around 4000 VDC'S (Village Development Committee). From the view point of human development index 2005, Nepal is ranked into 144 positions. Our per capita income is about $735 (CBS, 2011/12), economic growth rate is around 4.63 percent (CBS, 2011/12). Likewise the adult literacy rate above age of 15 is around 59.14 (World Bank Report, 2009) percent. As we know this 21st century is the period of information technology. According to the CBS report 20011 the persons using communication facilities per 1000 people who uses telephone is 7.37, whereas cellular subscribers and internet users are 64.63 and 3.33 respectively.

For the overall development of any country its economic development plays a vital role. No any change ca be made within a one night, it should be made phase wise and simultaneously. Though today's economic development of our country is not so satisfactory but it is not in worse condition also. Especially banking sector are the backbone of today's Nepalese economy. As economic system in the country is made up with various components like infrastructure development, technology, industries, regulating laws, governing bodies and financial systems, all these components should work properly and in order for the sound economic development. Economy of any country depends upon its financial system because it facilitates smooth flow of funds; maintain good balance between demand and supply of fund, etc. Financial system of an economy consists of various banking institutions like commercial banks, development banks, finance companies, micro credit co-operatives and non-banking financial institutions like insurance companies, mutual funds and provident fund.

In this fiscal year 2008/2009 there has been tremendous increment in branches of commercial banks. In comparison of past year, this year around 114 more new branches has opened. At the end of year there were 752 branches of commercial banks, whereas at the end of last year there were only 558 branches. Today the number of branches has reached up to 1425 (NRB, Banking and Financial Statistics, July 2012). Some of banks have aimed to expand their branches up to 100. Those banks which have been closed due to safety reason are also re-launching their branches.

Last year five new development banks had been added while the increment in number of commercial banks was only one and that was "SANIMA". According to NRB number of "A" grade financial institution has been decreased from 32 to 31. However, this decrement will be 30 due to the merger process of Global IME Bank with Commerz and Trust Bank. Because MOU between these two banks was finalized and will be merge within Chaitra 2070. There are 69 C class financial institutions. Besides twenty one more micro finances have been licensed by NRB. (NRB, Banking and Financial Statistics, 2011).

In context of our country Nepal, our financial system is in developing phase like our economy. In past days around ninety percent of people of Nepal were depended upon agriculture now the trained has become change people are aware about money markets, financial transactions, banking activities etc. In 1837, "Nepal Bank Limited" was established as the first formal banking institutions in Nepal. Firstly the word bank had been developed from the Italian word "Banco" which refers desk/bench. The first modern bank was founded in Italy at Genoa in 1406 A.D. which was called "Benco di san george" (Bank of st.George). Then after "Nepal Rastra Bank" came in existence as the central bank on April 26, 1956 A.D. Likewise second commercial bank "Rastriya Banijya Bank" was established in 1966 A.D.

In the last decade business sectors have faced a rapid shift under the forces effecting the marketing environment. One of the major forces behind these changes is technology, it is creating new products, services market opportunities and development more information and system oriented business and management processes (Liao and Cheung, 2002). The history of internet is well known. The first physical network was constructed in 1969, linking four modes: University of

California at Los Angeles, SRI (in Stanford), University of California at Santa Barbar and University of Utah. The network has wired together via 5Kbps circuits (source internet). According to Yudkin (1995), there are as many definitions of internet as there are researchers. By Chaffy 2000, "the internet refers to the physical network that links computers across the globe".

As an information medium, the internet offers different information services that have been over time. The services are e.g. electronic mail, file transfer protocol and the World Wide Web (WWW). The internet has no central owner but the connected networks are owned and administered by different universities, companies' authorities and other organizations in the future the customers will be able to buy the goods and services on the internet from all over the world and over the internet with minimal risk (Fraser Etal, 2000).

Electronic commerce refers to the use of electronic means and technologies top conduct commerce-including within business, business to business and business to consumer's interaction. The enabling technologies, of course, are also used for non-commercial activities such as entertainment, communication, filing and paying taxes, managing personal finance, research and education, which may still include the services of online companies. E-commerce is the application of information technology to facilitate business exchanges among different parties (Rayport and Jaworski, 52).

Banking is one of the most information intensive sectors and is ideal domain for the successful development of E-commerce (Kardaras and Papathanassiou, 2001). The internet banking refers to the use of the internet as a remote delivery channel for banking services (Furst et al, 2002; Suganthi etal,.2001; Dannenerg and Kellner, 1998; Zineldin, 1995). For banks, technology has emerged as a strategic resource for achieving higher efficiency, control of operations, productivity and profitability. For customers, it is the understanding of their anywhere, anytime, anyway banking dream. This has prompted the banks to embrace technology to meet the increasing customers' expectation and face the tough competition. Internet banking would help banks present a potentially low cost alternative to bricks and mortar branch banking. Internet services are crucial for long term survival of banks in the world of electronic commerce (Burnha, 1996). The market for internet banking is forecast to grow

sharply in the next few years, affecting the competitive advantage enjoyed by traditional branch banks (Duclaux 1996; Liao etal., 1999). Indeed, it also was estimated that financial institutions that failed to respond to the need for internet banking services would likely lose more than 10 percent of their customer base by the year 2000 (Orr, 1998).

The recent trends show that most brick and mortar banks are shifting from a product-centric model to a customer-centric model as they develop their new e-banking capabilities. They have, over a long time, been using electronic and telecommunication networks for delivering a wide range of value added products and services. The delivery channels include direct dial up connections, private networks, public networks etc and the device include telephone, Personal Computers including Automated Teller Machines, etc. With the popularity of PCs, easy access to internet and World Wide Web (WWW), banks increasing use internet as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as internet Banking, although the range of products and services offered by different banks vary widely both in their content and sophistication (RBI, 2001).

Internet banking involves consumers using the internet access their bank account and to undertake banking transactions. At the basic level, internet banking can means the setting up of a web page by a bank to give information about its products and services. At an advanced level, it involves provision of facilities such as accessing accounts, funds transfer and buying financial products or services online. This is called "transactional" online banking (Sothye, 1999). It is reported that more than 35 million consumers in the USA used PC banking by the end of 2003 (Barto, 1999), some 7 percent of UK customers used PC based internet banking and this was expected to rise to 28 percent by 2004 (Gandy, 1999), these figures being similar to those of Sweden, Norway and Germany (Bons, 1999), the proportion of people in Finland who have adopted online banking is higher than anywhere else in the world. As early as 2000, almost 40 percent of all retail banking transactions in Finland was made over the internet. All finish bank offer a full range of internet banking services (Mattila etal., 2003).

There are two ways to offer internet banking. First, an existing bank with physical offices can establish a website and offer internet banking in addition to its traditional delivery channels. Seconds, a bank may be established as a branchless, internet only or virtual bank. Broadly, the level of banking services offered through internet can be categorized in three types: (i) The Basic Level Services use the banks websites which disseminate information on different products and services offered to customers and members of public in general. It may receive and reply to customer queries through email. (ii) In the next level are Simple Transactional Websites which allow customers to submit their instructions, application for different services, queries on their account balances, etc., but do not permit any fund-based transactions on their accounts. (iii) The third level of internet banking services are offered by Fully Transactional Websites which allow the customers to operate on their accounts for transfer of funds, payment of different bills, subscribing to other products of banks and to transact purchase and sell of securities, etc. most of the banks providing internet banking product and services offer, to a large extent, an identical and standard package of banking services and transactional capabilities (RBI, 2001).

A website plays very significant and key role in internet banking. Website should be able to convey fall the information for both current customers and potential new customers via the internet (Jayawardhena and Foley, 2000). If the content of the site fails to pass sufficient information on account capabilities, then the site is not fulfilling its objectives.

A well designed website creates an internet interest in the firm and its offerings, and it should also offer the users opportunities to reconstruct the websites in their minds so that it matches their cognitive structures (Gronroos et al., 2000). The webs interactive features multimedia content and capacities for inexpensive customization (Kling, 1994) have increasingly attracted the attention of commercial enterprises (Dholakia and Rego, 1998). Non-price competitive advantages have become ever more critical because instant price and technical comparisons on the wave are essentially cost free and feasible for consumers (Hof et al., 1998). A sense of loyalty that comes from online company offering better service than its competitors is the determining factor in customer loyalty (Reichheld and Schefter, 2000). Therefore, focusing on quality of service is the primary concern of internet based e-commerce

(Griffith and Krampf, 1998). The internet, if properly utilized, can be a powerful tool to increase overall service offering and create higher standard in various industries (Griff and Palmer, 1999).

According to Chaffey (2001), the bank's website provides a better way for communication. When accessing the success of a website, the role of the internet in communicating with customers, other partner can best be considered from two perspective, first, organization to customer direction: how does the internet complement other channels in communication of proposition for the company's products and services to new and existing customers with a view to generating new leads and retaining existing customers? Second, customer to organization: how can the internet complement other channels to deliver customer services to these customers?

Customer's perception of service quality and their satisfaction are profoundly influenced by their encounters. The term service encounters can be defined as: "A period of time during which a customer directly interacts with a service." (Shostack, 1985, p.243).

This concept encompasses all aspect of the service firm with which the customer may interact, including its personnel, its physical facilities, and other tangible elements, during a given period of time (Bitner et al.,). It involves both interpersonal and non-human interactions with service providers? (Meuter etal., 2000).

The internet banking started with the popularity and the use of internet all over the world. Banks also started using the internet as a medium of doing banking transactions with the customers. They use internet as an alternative way of delivering the products and services. The main advantage of E-banking over traditional banking was the low cost in operation, access to world market, and convenience to the customers. Although E- banking was used many years earlier than 1995, the provider of true E-banking was Security First National Bank, which started its operation since October 18, 1995. Gradually the scope of E-banking increased in the products and services of banks. The area of E-banking expended globally.

1.2 Focus of the Study

It is known fact that a number of countries have been developed their financial sector through an extensive use of IT as the medium of growth. Due to increase in computer users, internet users has been also increase in prospects of Nepalese banking sector, the application of internet facilities for various purposes like account opening, balance checkup, statement of transactions etc. In today's era internet banking is much more important because it has made a drastic change in Nepalese banking sector. Banking industry as a service provider cannot naturally lag behind in this movement toward the new techno age.

In the western countries and same of the largest financial institutions of India offer fully secure, fully functional online banking for free or for a small fee. Today in Nepal also most of the banks like standard chartered bank, NABIL Bank, Himalayan Bank, Kumari Bank, Machhapuchare Bank etc offer limited access or functionality for instance, you may be also to view your account balance and history, fund transfer between accounts, inquiry about bank interest rate, web shopping on the internet etc.

In recent years, the banking sector has been an interesting case for service innovation as it more towards using the web for commercial purposes through internet banking. As internet banking allows customer to have direct access to their financial information and to undertake financial transaction with no need to go to the bank. From the banks' view point, use of the internet banking is expected to lead to cost reductions and improved competitiveness. Such service delivery channel is seen as powerful because it creates certain web-based customers who continue using banking services from any location. More than this, internet banking provides opportunities for the bank to develop its market by rating a new customer base from existing internet users. In underdeveloped countries like ours where people demonstrate a poor banking habit with a still very less number of internet users in very few cities all over Nepal.

The concept of internet banking in Nepal is still a very new for both consumers and banks and many more aspects of internet banking yet to evolve in our country. Knowing the fact that rare studies are made on this topic and the base line information regarding this topic is also very limited. Therefore, this research work is

focused on virtual banking, case served by e-banking, major cost involved for both the user and the provider and more than this. How necessarily is internet banking in today's era? What about the problems and prospects of operating internet banking in Nepal?

1.3 Statement of the Problems

All the banking sectors are doing well except few and they are increasing their competitiveness. Manually their activities are appreciable but due to lack of online or net base working activities they seem to be not performing well.

Today Nepalese commercial banks are generally find to have been adopting the services of internet banking as competitive tools and as a stop towards innovative services. In developed countries like America, UK online culture and infrastructure of information technology are becoming a part of social life. Whereas in underdeveloped countries like Nepal it is yet quiet ambiguity for the application of internet banking.

The internet banking customers such as internet shoppers and electronic commerce business who use internet for their daily business and banking activities via personal computer may face with the following questions when they have to determine which internet banking services would be the best for them.

- Do all bank (s) provides internet banking services in Nepal?
- Which banking services and features are available on the internet?
- What are the fees and charges for each internet based transaction?
- Which bank is the best internet banking service provider in Nepal?
- Furthermore, in this research work following problems will be studied:
- Why internet banking is necessary in the present context and future perspective?
- What methods of tools and technique are adopted for implementation of internet banking?
- What are the problems faced by Nepalese banks before adopting internet banking services?

1.4 Objective of the Study

The basic objective of this study is to stress on the comparison of internet based banking services which are available in Nepalese banks. To appraise the existing internet banking practice in Nepal. The main purpose of this study is to scrutinize the internet banking in Nepal. So, the specific objectives which are studied in this research work are as follows:

- ✓ To explore how internet banking is evolved in Nepal and finding the reasons for adopting it.
- ✓ To examine the facilities provided by banks to their customers.
- ✓ To examine the opportunities and threats of adopting E-banking system in the present context.

1.5 Significance/ Importance of the Study

It is obvious that in future days no banks can survive without application of internet banking. Hence, banks seem to be prepared to exploit the opportunities that globalization and financial liberalization provides. This study mainly helps the commercial banks to get an idea about the prospective of online banking and its necessity for future time span also. This study will provide a useful feedback to the IT policy makers of the bank and also becomes useful reference for other commercial banks of Nepal as well as central bank (NRB) for the formulation of appropriate strategies.

Till now many of Nepalese people are still not aware about the online transactions. This thesis work will help them to get the conceptual idea of online services available in Nepalese banks. This study is more significant to all banking sectors of Nepal because it helps to find out the current status of online banking of system. It also suggest about the further improvements which should be made in banking area. Such type of study will be baseline for the future researchers too. Besides, this research work will provide us valuable suggestions and ideas which can be used as a road map for uplift of internet banking in Nepal.

1.6 Limitation of the Study

The time available for this study was limited, and aspects of the topic were many. This research focuses only on internet banking in Nepal and its necessity in today's Era. However, we aim to provide a better understanding on how internet banking is adopting in this present scenario. Due to the initiation stage of internet banking services available in Nepal, many people are not aware of or do not understand the nature of internet based banking services. Many respondents were not able to determine the level of overall quality of the internet based banking services available. However, the information collected from the subjects via formal questionnaire and interview were used for data analysis and determine the level of awareness instead of overall quality of the service in this study. All the respondents included here in this research are the internet banking users, and it excludes the other customers of traditional banking services. The internet banking users are taken only from Kathmandu valley, so the results may be different if similar study is to be conducted considering the whole population of the country.

Similarly, this study is highly dependent upon the facts and figures, provided by the banks. Due to the restriction, the concerned officials did not disclose information's regarding the subject matter. Interview conducted within the concerned department officials and the survey made among the internet banking users has been the main sources of primary data.

However, some other limitations are:

This study has been prepared as a past of partial fulfillment of MBS degree and adequacy of the study might have weakened due to time resource, constraint.

This research is only a descriptive study on internet banking in Nepal and its necessity in today's Era.

The whole study is based on opinion survey of different professionals, which may not be free from the limitations due to individual response and biasness.

This study has been done with limited volume of population sample, and finding of the study cannot be fully generalizes as more rigorous study is needed with initial reference from this study.

1.7 Structure of the Study

The structural framework of this thesis has been categorized into five chapters. Each chapter covers facts related to the internet banking. The titles of the chapters are following down:

Chapter 1 : Introduction

Chapter 2 : Literature Review

Chapter 3 : Research Methodology

Chapter 4 : Presentation and Analysis of Data

Chapter 5 : Major Summary/Findings, Conclusion and Recommendations

Under this study the first chapter presents the introduction of the whole study topic and field. The conceptual ideas, articles published regarding IB are stated here.

Similarly, chapter second presents the literature reviews followed by the conceptual framework of reference in the same chapter.

Likewise, in chapter three we have mention about the research methodology followed in the study.

In chapter four we have present and interpret the collected data from different sources using graphical and statistical tools, tables, chart, average percentage and arithmetic mean etc.

Finally, in chapter five the sum up of the whole research study, derived conclusions and the recommendations required on the basis of findings are discussed. In this way this research study has been scheduled.

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is an essential part of any research. It is a process of finding previously uncovered facts on research topic. Furthermore it is also a way to avoid investigating problems that have already been definitely answered. The purpose behind review of literature is to develop some expertise in the area, to see what contributions can be made and to review some ideas for developing a research design.

"The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study, and what remains to be done. The literature survey also minimizes the risk of pursuing the dead ends in research". (Sekaran 1992)

"A critical review of literature helps the researchers to develop through understanding and insight into previous research work that relates to the present study. It is also a way to avoid investigating problems that have already been definitely answered". (Woolf and Pant, 2004:39)

It is separated into two parts. One is theoretical review and another section is research reviews. The first section presents the theoretical concept on electronic and internet banking and the second part review the relevant dissertations and concerned reports.

2.1 Theoretical Review

In this section attempt has been basically focus on review of theoretical concepts on internet banking. This includes historical background of banking in Nepal, How it is different from traditional banking, internet banking and its origin in Nepal, and its future prospective too.

2.1.1 History of Banking Services in Nepal

Nepalese economy is one of the less industrialized and agro based economy. Nepalese financial system is still in creeping phase, when it will start to run is a matter of discussion. In past days existence of unorganized money market consisting of landlords, Sahaukharas (Rich merchants) Shopkeepers and other indigenous individual money lenders has acted as barriers to institutionalized credit. Since, 1877 A.D. from the period of Radodip singh a number of financial and economic reforms were introduced. The establishment of the "Tejarath Adda" fully subscribed by government in the Kathmandu valley was one of them. "Tejarath Adda" disbursed a credit to the people especially on the collateral of gold and silver. Thus, the establishment of the "Tajarath Adda" could be regarded as the first piller foundation of modern banking in Nepal.

Beginning of modern banking in Nepal started from the establishment of Nepal. Bank limited on November 1937. It is considered as foundation of modern financial system in Nepal. It was a joint venture between government and the private sector. After then, the Nepal Rastra Bank came into existence as the central bank on April 26, 1956 A.D. The second commercial bank Rastriya Banijya Bank was established in 1966 A.D. Besides Nepal Bank Limited and Rastriya Banijya Bank; other commercial banks did not come into existence until 1904 A.D. The commercial bank act 1974 was amended in 1904 A.D. to increase the competition between commercial banks. As per the provision made in this act, private sector (including foreign investment) was given freedom in opening new commercial banks consequently, Nepal Arab Bank Limited (NABIL) was established in 1984 A.D. as a joint venture bank. Likewise Nepal Indo-Suez Bank Ltd and Nepal Grindlays Bank Ltd, (Renamed later as standard chartered Bank Ltd) were established under joint venture in 1986 and 1987 A.D. respectively.

After the initiation of democracy in 1990 A.D., NRB adopted more liberal policy in establishing the commercial banks. Today, we have 30 commercial banks, 58 development banks, 79 finance companies, 17 cooperatives and 47 NGO's with limited authority are providing a banking services in Nepal.

2.1.2 Internet Banking Services and its Overview

Internet banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting banking institutions. The following terms all refers to one form or another of electronic banking; personal computer banking (PC) banking, Internet banking virtual banking, online banking, home banking, remote electronic banking and phone banking PC banking and internet or online banking is the most frequently used designations. It should be noted; however, that the terms used to describe the various types of electronic banking are often is used interchangeably.

Internet banking has revolutionized the banking industry worldwide and became a part of major issues of various studies globally. However, there has constantly been a literature gap on this issue in Nepal. The aim of this research is to help and fill significant gaps in knowledge about the internet banking background in Nepal. Technology plays a key role in current markets. Diverse technological innovations are significantly changing however services are provided in different sectors (Bitner, Brown and Meuter, 2000). In this regard, new digital and internet related technologies and customers interact in service encounters (Alba et.al.1997): Hoffman and Novak, 1996).

The internet is globally wider spread in use, becoming an integral part of IT within business as well as many homes. A vast market has developed on the internet; online purchasing and banking have been by products of this growth. IT revolution is changing the way of banking business everywhere. The banking industry has not only kept pace with technological developments but has also forced the computer industry to continuously keep pace and innovate products to suit its needs. In developed countries, computer based banking was introduced in early 1970's A.D. Technological innovations in the banking industry have converted paper checks into electronic checks, flex advice into electronic advice, signature card album into magnetic spots on discs, telegraphic transfer into electronic transfer and so on. (Mahat N.d.).

With the introduction of internet, the changes in the field of banking started with banks hosting their websites. These websites used to provide details about the

products being offered by the bank and other information about the bank such as the interest rate, BOD, financial highlights etc. That website used to act like a promotional channel for the banks. In early days of internet banking, many organizations rushed to provide internet based services in order to gain competitive advantage. The internet only online bank egg was one of the first success stories, whose perceived threat spread the larger high street banks on to create their own Internet banking services (Gold finger, 2002). Now, with so many high street retail banks having online presence not to mention the online only banks just providing an internet banking services will not offer any real advantage over competitors.

Specifically, internet banking services is defined as banking service that allows customers to access and perform financial transactions on their bank accounts from their computers with internet connection to banks' web sites using web browser software, such as Netscape Navigator or Microsoft Internet Explorer (Well Fargo Bank, 2000). Since 1995, Internet has become less expensive and available for customers to access information, exchange products and services worldwide from their personal computers and moderns at home or work. The day to day increasing population of internet customers and demand for payments via the internet has an impact on banking services to customers on the internet. Many new internet-based banking services have been initiated and launched into the market and attract both new and old customers to continue their services with the banks.

E-banking may be defined as the banking through the internet. Services like opening of accounts, balance enquiry statement of accounts, sending requisition for check books, drafts, fund transfers, sending stop payment orders, affecting remittances for services like telephone, electricity etc. E-banking allows the customers to access their accounts online from any part of the world. The transactions in e-banking are instantaneous and the user is alerted immediately. (Mahad, n.d.)

To obtain e- banking facilities, one must have an account with the bank of one has already such account; he needs to fill up an additional application form available at the website of banks. Banks provide internet banking password to the customers which is required to be entered in order to get access with the bank.

2.1.3 IT/ ICT in Nepal

Our today's modern sophisticated life is hard to imagine without information and communication technology as it has changed our day to day life dramatically. It is truth that most of us can live single day without food but not without the technologies. Now innovations and developments in the information and communication technology have made our world like a small village. The revolution of IT and effects of globalization process are getting more apparent even in our country, after the introduction of first computer in 1972 A.D. and sound development in telecommunication sector, Nepal also has experienced a lot of cyber activities and IT is getting into the newer of the society. Study and statistics are showing that Nepal is also gradually moving towards the online world with growing number of ISPs, which reached 36 till and of 2008 A.D., around 10,00,000 internet users and visitors in AN Info Tech reached around 4,00,000 in year 2008. There are numerous institutes and colleges providing education related to IT and in school land also computer education has been incorporated in the basic curriculum. These statistical symptoms indicate that IT is growing in Nepal and more people are getting used to with the technology. Information Technology Scenario of Nepal is as follows:

First computer	1972 A.D.
Personal computer	980 A.D.
Internet service	1994 A.D.
Internet service providers	36
Radio raging operators	8
Video conferencing	1
Fax mail services operators	6
Fixed telephone subscribers	4,70,212
Cellular mobile subscribers	3,85,996
WLL Subscribers	45,032
GMPCS	358
VSAT service providers	10
VSAT users	90
Code ISP	3
No. of registered internet users	7,55,437

Source :(Annapurna Post 13th April, 2010)

2.1.4 Basic Internet Banking Services

Basic internet banking services refer to services and financial transactions commonly requested by customers via the internet (Mathew et.al, 1999, Marius and Dorothee, 2000). The basic internet services available by many banks for their customers may include:

- Inquiry about outstanding balance
- Inquiry about credit card and ATM card
- Inquiry about currency and exchange rate
- Inquiry about bank interest rate
- Inquiry about news and business information
- Inquiry about economic data and information
- Fund transfer between accounts
- Transfer payment for public utilities
- Print account statement
- Provide LC, BC, FCD and Miscellaneous services
- Change password and user id
- E-phone banking on the internet
- E-cash card on the internet
- Web-shopping on the internet

An e-saving account service, for example, allows customer to make inquiry about saving account and to perform multiple transactions, such as, withdraw, transfer, and print their statement via internet-based computers and printer from home and/or work place. By using e-saving account, both customer and the banks can save their time and costs in waiting line and traveling expense for updating savings deposit passbooks over the country inside the bank (Chanaka and Paul, 2000).

2.1.5 Electronic Banking

Functions of electronic banking are not so vast different from that of traditional functions of banks like accepting deposits, lending and other ancillary and agency services. Only the difference in the electronic banking is delivering banking

services through the medium of IT, ICT technology and virtual communication network of these technologies.

2.1.5.1 Channels of Electronic Banking

According to the current electronic banking services availability, the channels of electronic banking are as follows:

- Automated Teller Machines (ATM)
- Point of Sales (POS)
- Telephone Banking (Tele Banking)
- Mobile Banking (SMS)
- Internet Banking

Automated Teller Machines (ATM)

An Automated Teller Machine (ATM) is a computerized tele-communication device that provides the customer of a financial institution with access to financial transaction in a public space without the need for a human clerk or bank teller. On most modern ATMs, the customer are identified inserting the plastic ATM card with the magnetic stripe or a plastic smart card with a chip that contains unique card number and some security information, such as an expiration date or CVC. Security is provided to the customer giving personal identification number (PIN). Customers of any bank using ATM of another Bank then every transactions charges rupees Twenty Five. Today all twenty six commercial banks are providing ATM facility to their customers.

Point of Sales (POS)

POS mean a retail shop, a checkout counter in shop, or the location where a transaction occurs. More, specifically, the point of sale often refers to the hardware and software used for checkouts the equivalent of electronic cash register. Points of sales systems are used in supermarkets, restaurants, hotels, stadiums and casinos as well as almost any type retail establishments.

Telephone Banking (Tele Banking)

It is service provided by a financial institution, which allows customers to perform transactions over the telephone. Most telephone banking use as automated phone answering machine system with phone keypad response or voice recognition capability. To guarantee security, the customer must first authenticate through a numeric or verbal password or through security questions asked by live representative. With obvious exception of cash withdrawals and deposits, it offers virtually all the features of an ATM: account balance information and list of latest transactions, electronic bill payments, and funds transfer between customer's accounts etc.

Mobile Banking (SMS Banking)

Mobile banking refers to provision and accessibility of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities of performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking today is most often performed via, SMS or the mobile internet but can also use special program downloaded to mobile device.

Internet Banking

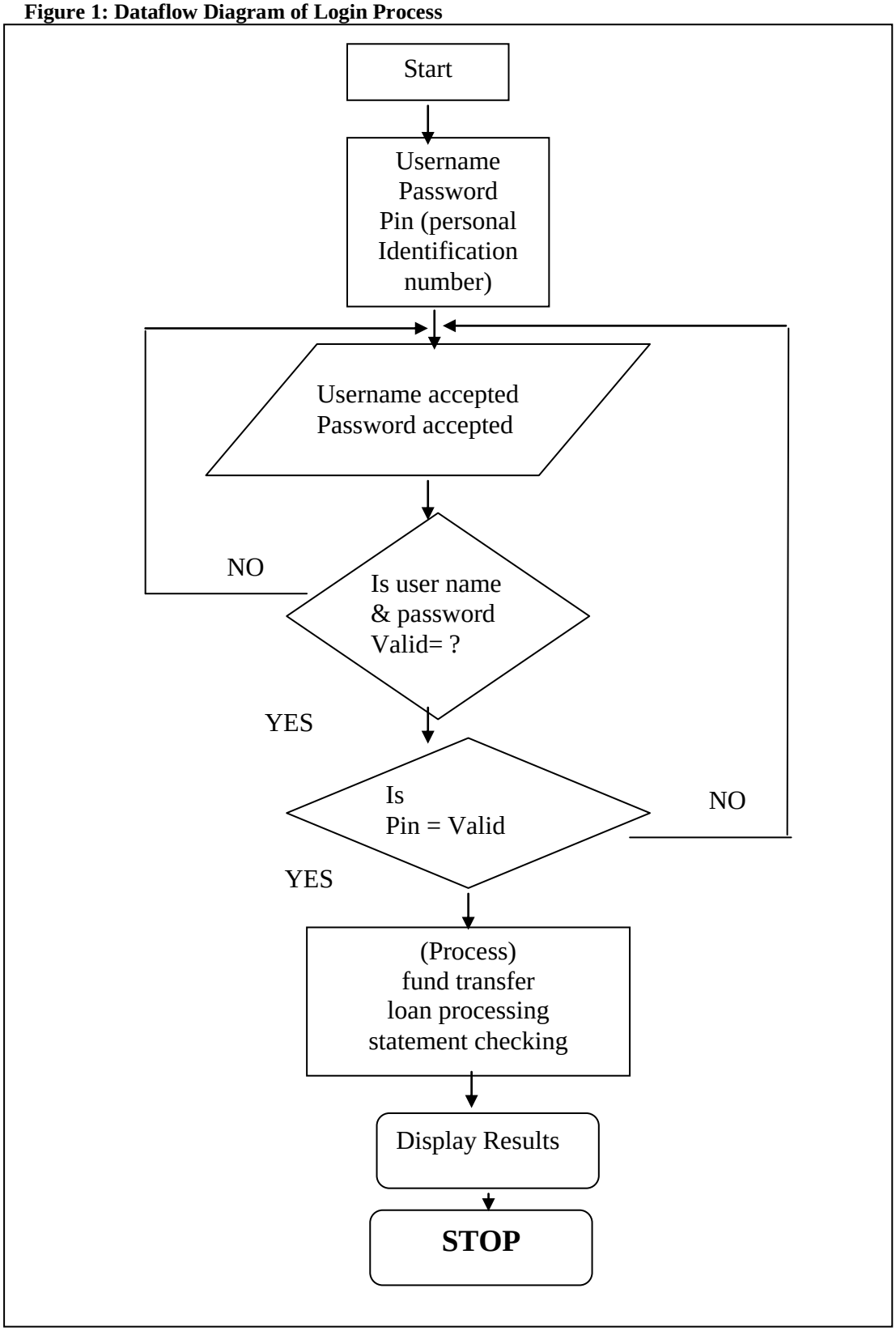
Internet banking also is a channel of providing banking services through the internet facilities. It allows customers to conduct financial transactions on secure website operated by their retail or virtual bank and credit unions. Online banking solutions have many features and capabilities. Such as account-to-account transfer of funds, paying a bill wire transfer and applications, apply for loan, new account etc. And non-transactional facilities like getting bank statements over the internet. In the developed countries like US and other European countries, internet banking has become so popular that nearly half of the banking consumers are now using internet for their banking transactions and the trend is slowly appearing even in the South Asian nations. Furthermore, the developments of internet and World Wide Web pages have made it possible for the operation of virtual banks.

For using internet banking service, first of all, customer must have a checking account in his bank and a computer connected to internet service with a modem, plus web browsing software such as Microsoft's Internet Explorer or Netscape's Navigator. Next, customers need to pick up one-page application (usually available online) form the bank or have it mailed. The application tells the bank who can access the account and which accounts are involved. Four to five days later, customer will receive online software (if the bank doesn't offer web-based service) in the mail, personal identification number including password. Now we can do our banking right from our home with the help of our PC. On banking website, we can find guides to walk with us through the steps of how to register the accounts we wish to pay from and payee account we wish to pay to. We only need to enter the account information once; our private banking site will keep accounts available until we remove them. We can always change the account from we wish to pay our bills and add more payees as needed.

As per the international practice, for all kinds of e-commerce site where we can make financial transaction, the website should be authorized by certification authority as a secure website to e-commerce activities. In Nepal, we can find VeriSign logo to certify the website as secure for e-transaction provided by an international certification authority.

a) Login Process

Figure 1: Dataflow Diagram of Login Process



2.1.5.2 Instruments Used in Electronic Banking

Credit Card

Credit card provide facility and freedom to rent cars, reserve hotels, book vacations, pay bills and shop everywhere the card is accepted without checks and currencies. This facility is provided by some of the banks like Standard Chartered Bank Ltd. NABIL Bank, Nepal Investment Bank Ltd. to name few.

Wired Plastic Cards

It lets you set your own limits by pre-funding the amount your need to spend. Unlike other cards there are no annual fees, no transactions fees, no interest charges of debt to repay, no reload fees. Get the prestige and purchasing power of your own wired plastic card.

Plastic Master Card

This card is not available in Nepal. Master Card is one of the most popular instruments of online banking as it can be used in most of the online payment all round the world.

Advanta Computer Card

Business can apply for the Advanta Platinum Business Master Card and earn rebates on computer equipment and other electronics products. Some features of this card are great introductory rate, high credit limit and a customized card with the consumer's business name. This card is not available in Nepal and has a great opportunity to the growing IT markets.

Visa Electron Debit Card

Nepal Investment Bank Ltd. In Nepal introduced this card. It is different from Credit Card, to use this card you have to open an account with the bank and you can use the card up to your minimum balance imposed by the bank.

2.1.6 History of Electronic Banking in Nepal

History of electronic banking in Nepal is not much long and the short history of the service has been outlined as following.

- Evolution of Banking
- Banking started in Nepal in 1937 by "Nepal Bank Limited" (Government Sector).
- Evolution of Joint Venture (JV) Banks and E-Banking
- Establishment of first joint Venture Bank, Nepal Arab Bank Limited (now NABIL Bank), in 1984.
- Introduction of Credit Cards in Nepal in early 1990 (NABIL Bank).
- Automated Teller Machine (ATM) was first introduced by another JV Bank, Himalayan Bank Limited, in 1995.
- Himalayan Bank Limited was also the first bank to introduce Tele-Banking (Telephone Banking) in Nepal.
- Major Milestones
- Evolution of joint Venture Bank in Nepal (NABIL Bank) in 1984.
- Introduction of Credit Cards in 1990.
- Establishment of first ISP in 1994 (Mercantile Office Systems).
- First ATM launched by Himalayan Bank Limited in 1995.
- Himalayan Bank Limited introduced Tele-banking facility in 1997.
- Formulation of IT policy in 2000.
- Evolution of Private Sector Bank (Kumari Bank) in Nepal, in 2001.
- Kumari Bank first introduced internet banking in 2002.
- SMS-Banking (mobile banking) was launched by Kumari Bank in 2004.
- Electronic Transaction and Digital Signature ACT (revised in 2005, yet to be brought in practice).

Today's Online Banking Versus Traditional Banking

'Virtual banks' are increasing their competition with each other in an attempt to deliver added value to their online customers. Internet Banking has advertised the advantages of on-line transactions over the traditional form, *'Clicks over Bricks'* ('Traditional Vs virtual service', Credit Union Magazine, 2002) has been coined the phrase to advocate the advantages, whilst traditional banks emphasis the advantages of integrating both types of banking. The convenience of on-line banking is its most reputable advantage, being able to conduct transactions 24 hours a day, 7 days a week, anywhere in the world. Customer service can be rapidly improved through on-line banking, with quicker responses to transactions and no long waiting queues. Leading internet banks offer excellent navigation, layout and on-line banking demonstrations, a key marketing tactic to entice more customers to adopt this new technology.

However, the advantages offered by traditional forms of banks should not be neglected considering the fact that people are reluctant to alter their banking habits. Research indicates that many people would preferably conduct their banking in an institution that has a physical presence. The loss of personal touch that online banking brings with it is widely acknowledged and used as one of the key arguments by non-advocates of the system. Security and privacy of information is another key argument against the use of on-line banking and research indicates the people are way of on-line banking and are unconvinced of its security.

Virtual banking has tried to combat some of its drawbacks and adapt the advantages of traditional banking systems into this technology. An example of this is their attempt to establish a physical presence. "Though service centers, kiosks, and automated teller machines (ATM) networks in an effort to combat the anti-virtual bank sentiment among the general on-line consumer base" (Mark Sievewright, Credit Union Magazine, 2002)

Despite the slowly growing popularity of on-line banking, statistics have shown that a mere five out of twenty-five virtual bank will survive over the next three years or so. More evidence suggests that Internet-only banks as well as banks that operate on the

net are doing a poor job, “So bad, in fact, they’re sending customers fleeing for the cyber exits” (Who’s Afraid of Online Banking?, Business Week, 1999)

In an attempt to overcome the failure of on-line banking, virtual banks have observed and adopted the successful principles of traditional forms of banking; it has been deemed ‘Restoration of the store’. (‘Resurgence of the physical channel’, Bank Marketing, March 2002)

Interestingly, a study by Gomez.Inc (an Internet quality measurement firm) entitled ‘Customer satisfaction in on-line banking: An exercise in Relationship Management’ (‘On-line privacy concerns continue to linger’, Community banker, 2001’) revealed that the more on-line bankers use the internet to meet their banking needs, the more satisfied they are with the financial institution-customers who use the internet as their primary means of primary report the highest levels of satisfaction.

These articles were valuable by providing a theoretical foundation for this assignment and dealing with the factors we have deemed most likely to affect the use of internet banking namely age and gender. These articles have given us an insight into the levels of fears surrounding security and other benefits and drawbacks of internet banking as perceived by its users within a wide social context.

Rationale for Banks to Provide Internet Banking Services

Rationale for banks to take advantages of Internet Banking services are summarized and presented as follows: (1) cost savings, (2) increase customer, (3) enable mass customization for e-business services, (4)extend marketing and communication channel, (5) search for new innovation services, (6) explore and development of non-core business [Downes and Mui (1998), Wylie (1998), Quelch and Klein (1996), Prescott and Van Slyke (1997), Mandeville (1998)]. The emerging new consumer behaviors among Internet shoppers have increased potential Internet-related to banking services. It is suggested by e-Marketer that many potential services have emerged from the following new service via the Internet:

- E-mail (85 percent);
- Research (78 percent);
- Education (71 percent);

- General surfing (67 percent);
- News (67 percent);
- Products/services (58 percent);
- Health information (52 percent);
- Investment information (49 percent);
- Games (48 percent); and
- Shopping (48 percent)

Dataquest, as reported by NUA (http://www.nua.ie), has estimated the consumer online. Purchases could reach US$380 billion by 2003 (up from an estimated US$31.2 billion in 1999). According to e-Marketer, Gartner Group research project that holiday shopping for 1999 would exceed US$ 12.2 billion Worldwide. However, customer ability to subscribe to the Internet-based banking services depend on several factors, such as,

- User-friendly interface
- Level of internet experience
- Type of services provided (for example, e-mail, file transfer, news, online financial services, shopping, and multimedia services)
- Attitude and perception
- Access and delivery time
- Experience (if any) with the internet

Therefore, management of customer requirement is vital to development of rational for the banks to initiate, explore and develop Internet Banking services that meet their needs and changes.

Difficulties and Drawbacks in Internet Banking

Today the main problem banks are facing for getting the immense popularity by providing the Internet Banking facility is the lack of computer literate people. People in Nepal not even have properly developed the banking habits, let alone using the E-banking facilities. Most people are not aware of the ongoing changes around the world. Since this service is completely new for the Nepalese customers, the banks

believes that it is quite difficult to gather as many customer as it can be possible. Many customers lack awareness. And a very little portion of the total population has access to the Internet facilities. And few of those who are aware of these changes are also reluctant to go for the internet banking as this facility has just been started in Nepal. They want physical presence i.e. they do not want to take a risk by performing their transactions without their physical presence. Also, many customers believe that internet cost it too heavy. They cannot ear the internet cost and would like to visit the bank instead. The bank also has to bear technical difficulties in terms of computer hardware. Apart from the above difficulties, following are the problems of E-banking:

1. Operational Risk

The quality of the software, its potential may be one of the pitfalls of the internet banking. The security must be maintained. Operational risks may arise through the misconduct of customers and the development of software and software used.

a. Security Risk

Because of the development of the technology, different access points have hindrance to establish proper security system. Professionals Hackers can spread the viruses in the computer system and can interchange the account status creating the liability to the bankers.

b. Software Design Risk

The bank uses the software made by the outsource people or agency. They cannot develop the software themselves. Any problems in the software they have to depend upon the outsourced people or agency for maintenances. Besides, the bank's software system may not be the same as that of the customers. In this condition, the customers may not be able to get internet banking services from the bank. Sometimes it may take a long time for bank to upgrade the system software; the result is that the customers would not get internet banking services.

2. Reputation Risk

If the system doesn't work in accordance with the customers' perception, the reputation risk arises. If the bank cannot solve the problem arising from the operation of the internet banking to the customers, hackers continuously hack the banking system, spread the viruses to the system, information cracking from the bank, then the customers will not believe in the bank operation.

3. Legal Risk

If the rules and regulations or terms and conditions for the use of internet banking cannot be applied, the legal risk arises. In the context of Nepal, the operation of the internet banking had been started but His Majesty of Government and Rastriya Banijya Bank had not formulated any kind of the Law, policies regarding the internet banking operation, responsibility and authority. Besides that, the law prevailing in one country may not be same as in another country, which is also the cause of Legal Risk.

4. Cross Border Risk

Different countries have their own policies and laws of internet banking. The mismatch between the laws of different countries creates the Cross Border Risk. If the Service Providers of the cross border countries refuse to perform their obligations, loss is incurred and the recovery may not possible due to the different law prevailing in that country.

5. Other Risk

The traditional risks are also associated with operation on internet banking such as:

a. Credit Risk

In the process of providing services to the people all over the world, loans given in the remote banking process may create credit risk. Banks using electronic bill payment may face the credit risk if the customer doesn't pay the amount to the bank.

b. Liquidity Risk

No ability to pay the money in time creates liquidity risk. The promise of the bank to pay the money in time, and if sufficient cash is not maintain in the bank in time of payment, the liquidity risk arises. Huge money transfer may also create liquidity risk.

c. Interest Rate Risk

The inverse movement of the interest rate to the bank creates the interest rate risk to the bank.

d. Marker Risk

Change of the price in the market and the change in the foreign exchange rate also create the market risk to the banking operation in the concerned area.

The bank believes that since the internet banking services is the new concept for the Nepalese customers, it might take time to gather more customers.

Quality of Internet Banking Services

According to American society of Quality Control, quality is defined as a "conformance to requirement" or "fitness for customer use". Quality can be defined as the totally of features and characteristics of a products or services that bear upon its ability to satisfy stated or implied needs (ISO 8402). However, the eight dimensions of quality presented by Garvin (1987) are simple and can be applied for measuring internet-based banking services. The eight dimensions of quality include:

(1) Performance: It refers to product's primary operating characteristic which is based functional requirements, not taste which is circumstantial preferences.

(2) Feature: It refers to the "bells and whistles" which supplement the basic functioning and features objective and measurable attributes.

(3) Reliability: It refers to probability of product malfunctioning or failing within a specified period;

(4) Conformance: It refers to degree to which product design and operating characteristics meet established standards.

(5) Durability: It refers to the amount of use one gets from a product before it deteriorates and has both economic and technical dimension and as such is redefined as the amount of use gets from a product before it breaks down and replacement is preferable to continued repair.

(6) Serviceability: It refers to speed, courtesy, competence and ease of repair.

(7) Aesthetics: It refers to how a product looks, feels, sounds, taste, smells which is clearly a matter of personnel judgment and a reflection of individual preference.

(8) Durability: It refers to customer ability to have complete information about a product or service attributes; indirect measures like reputation.

Therefore, in this study, quality model presented by Garvin (1987) is reviewed and used as an underlying research model in the next section.

Banking is no longer confined to the traditional brick and mortar branches. Customers are being provided with multiple modes of accessing banking transactions, including mobile banking. ATM and points of sales terminals and now internet banking. Internet banking has been there for quite some time in the international banking sector. However, this concept has only recently been implemented in Nepal by a few commercial banks. Though internet banking has now been fully implemented in Nepal, a vast majority of people are not aware of the details. Authentic research studies are also not available on the subject.

Although research on internet banking is not very extensive, most of the concepts in this study have been occasionally examined before, but mostly in western context. Only a little work covers Asia, usually Singapore or Hong Kong, which are very developed economies and not representative of all Asian countries. Thus, to gain deeper understanding of the issues, this research will conduct a qualitative study to explore the perceptions of internet banking in the Nepalese context. Using a qualitative approach provides richer details for exploring viewpoints in earlier stages

of research, allowing the researcher to gain a better initial understanding of the problem and to identify the phenomena, attitudes and influences.

Internet Banking in Asia and Pacific

Internet banking in Asia and Pacific are new and gaining awareness in many countries such as China, Hong Kong, Singapore and Thailand.

In china, the internet penetration into business and home has an impact on the development of on-line banking system of China financial reform plan in 2000. Many new e-businesses are emerging and become vital issues for China's financial and strategic policies. China has decided to take advantages of financial restructuring process of internet revolution in Asia. China's central bank has initiated and encouraged the development of electronic-based banking service since May 31, 2000. The new electronic-based banking system focuses on the internet and telephone based technologies to provide financial transaction services. It provides twenty-four hour access to customer bank accounts, transfer transaction between accounts, personal financial consulting, online stock trading, shopping, and utilities fee payments. Speed, convenience and lower prices have become major factors that enable growth on online banking on China. The governor of the State Development Bank (SDB), for example, has decided to develop a plan to build and E- banking on the internet to connect to the global network with wholesale services as its core function. SDB also promote E-banking service that can connect business payment system with daily office automation system and accounting system. A credit and risk management system, a basic database system and remote auditing system are also being under development at SDB (China online, 2000).

In Hong Kong, the financial gateway to the East, it is among the first countries in Asia that provide electronic banking services via the internet since 1990. However, on August 1st, 2000A.D, Hong Kong Bank (HSBC), launched its first internet based retail banking services called online@hsbc to the public. It provides deposits, stock trading, bill payment and foreign exchange services for qualified customers at discounted transaction fees. HSBC also has decided to reduce online stock trading commissions for 0.5 to 0.25 for the internet-based service in order to increase visiting rate and profit form online@hsbc. HSBC continued to extend the online@hsbc

services to its major depositors until the end of 2000. By the first half of year 2001, HSBC delivered and started a Chinese language internet-based banking service to the customers. However, the bank's move toward internet banking service does not result in closing existing local branches in Hong Kong (Honk Kong Bank, 2000).

In Singapore, internet-based banking service has been implemented in Singapore since 1997. For examples, Oversea Union Bank (OUB), DBS Bank, Citibank, Hong Kong's Bank of East Asia, Oversea-Chinese Banking Corp. (OCBC) offer E- banking service called "finatiQ" to their customers in Singapore. The concept of "finatiQ" is to provide internet-based banking services to customers at their convenience time from their personal computers and internet connection via modems. Many new internet-based banking service providers are emerging in Singapore and Hong Kong, therefore, the challenges for banks in Singapore are to grow and gain new market share in the new cyber market in Singapore and neighboring countries. Therefore in Asia and Pacific, many banks, credit card companies such as VISA, and computer vendors such as IBM have formed alliance in order to develop internet-based banking services standards for their customers. Example is the interactive financial services (IFS) alliance founded in Singapore with alliance from banks in Singapore, Australia, Indonesia, Korea, Hong Kong, Taiwan and Thailand. Through IBM global network standard, members are able to provide and exchange their electronic banking services to their alliance customers. In the future, the alliance intends to develop new services such as securities trading, smart cards, e-invoice and loan applications. It also plans to offer banking services through interactive television. The alliance also intends to develop standards and services that are compatible with those of the integration Financial Network, an electronic financial consortium owned by eighteen major North America banks. This will eventually allow seamless, interactive banking and other e-business services across these banks and other E-business services around the world (Mun, 1998).

2.2 Review of Articles

Troy J. Strader and Anthony R. Hendrickson have stated that the internet and web provide an infrastructure that enables buyers and sellers to find each other online. Companies now have a new sales channel for their products and services, and numerous electronic markets are available for buying and selling at offer prices or

through various auction mechanisms. Early studies of electronic markets took a simplistic view of consumers as economic agents whose behavior was guided by a search for the lowest cost transactions. While this view is sufficient for identifying some of the explanations for the growth of electronic markets, consumer behavior in these markets cannot be completely understood by economic analysis alone. The papers published in this issue were originally presented at the 2000 Americas Conference on Information Systems (AMCIS) in Long Beach, California. They represent the best papers from the Marketing and Consumer Behavior in Electronic Markets mini-track. Each paper addresses consumer behavior issues that are relevant to identifying better ways to design commercial web sites.

The issues addressed by these studies are important for several reasons. The internet and web provide significant new tools for marketing, there is tremendous growth and opportunity in electronic commerce, and companies are having a difficult time identifying their target market and how they can design their digital storefront to attract and retain these potential online customers.

A number of conclusions can be drawn from the current state of electronic market activity and research. The web is an effective tool for marketing that reduces many costs and enables enhanced communications and relationships between companies and their customers. Because of this, advertising and sales revenues will continue to grow for some time in many industries. There is tremendous opportunity because online advertising and retail sales are still a small percentage of traditional advertising and retail sales. And because electronic markets provide an effective new sales channel, and their use is expected to continue growing, there are an endless number of research issues that must be addressed to understand how to effectively compete in these new market places.

The implications for companies are that they must identify their online customers and design their online strategy to attempt to differentiate themselves from their competitors in this highly competitive market. The implications for researchers are that there are more questions than answers, but there are some published articles to provide a starting point. In particular, it seems that demographics alone does not predict online buying so more complex psychological and sociological issues must be

addressed such as the factors that affect consumer willingness to buy online, use of the online channel for information search, and actual online purchase behavior.

Monica Parzinger, Paul Schrick and Ravi Nath (2001) have mentioned that the purpose of this research was to gauge perceptions of banks regarding the strategic and operational value of web-based banking, its benefits to customers and banks, and the key technology considerations. The results show that internet banking is in its nascent stage--only a small number of banks offer web-based banking to customers and the full benefits of internet banking are still to be realized by many banks. On the other hand, a significant number of the banks believe that providing these services to customers in the new economy is essential for survival and thus, mandatory. Respondents felt that banks not providing e-transaction capabilities would lose customers to competitors who offer such services. This perception is supported by the fact that a large percentage of the banks who currently do not offer web-based banking plan to do so in the near future. Another benefit of internet banking was the impression it gave to the public of a cutting-edge bank, thereby enhancing its reputation.

This study also showed that e-banks are not perceived as a threat by many bricks-and-mortar banks. In fact, most e-banks are attempting to form alliances and partnerships with banks, financial institutions, and other businesses with physical presence in order to provide services that cannot be delivered on the web alone (e.g., cash withdrawals', effective customer service) (Business Week, 2000). For example, National Inter-bank is planning on partnering with Mail Boxes etc. to allow its customers to drop of deposits at any of the 3,400 Mail Boxes etc. locations (Beckett, 2000). Given this trend, banks that do not offer internet banking should quickly move towards integrating web-based services into their existing business models and channels.

From an operational perspective, this research indicated that banks with web-based banking realized significant benefits. First, e-transactions significantly lower the cost per transaction and thus contribute to the bottom line of the bank. Second, internet banking allows banks to offer ancillary services such as insurance, brokerage services, ad mortgage payments through their web site. Such services are offered either directly or through a partner firm. Revenues generated from these services are

an added bonus to the bank. Third, successful launch of an e-commerce site improves service quality as the customer is presented with several options (Internet, in person, ATM, phone, interactive voice response, etc.) to transact with the bank. These options can result in an increased number of customer accounts.

Internet banking allows customers to conduct certain transactions (e.g., checking balances, funds transfers, bill payment, etc.) online at any time and thus it reduces the number of physical visits to a bank. This added convenience to the customer lowers transaction costs to the bank--a win-win proposition for the bank and its customers. This study also suggests that a majority of the banks sampled were concerned about a reduction in customers' trust in the bank and degradation in the customer-banker relationship as a result of internet banking. This finding is contrary to what some experts believe are the key benefits of web-based banking a loyal customer with access to many financial services that are bundled together on the web site. A possible ex-plantation for this apparent contradiction might be the fact that internet banking is still in its infancy and the realization of its full potential will take time. Areas where there is cause for concern are the security of internet transactions. In light of the fact that many online retailers' web sites have been attacked by hackers, security and confidentiality must remain a paramount concern of banks and customers alike.

Technologically, implementing web-based banking so that it is transparent to the end-user (customer) is challenging. Careful planning is a prerequisite, if full benefits are to be realized. For example, even after the web site is launched, provisions for online help have to be made so that customer e-mails and other inquiries are handled expeditiously and with care. Compounding this issue is the fact that there is a dearth of qualified technology and business savvy individuals to run e-commerce operations. Such paucity hinders the ability of many banks to launch web-banking unless they decide to outsource these operations.

In sum, banks are embracing e-commerce--albeit slowly. They appear to realize the potential of this profound change and do not want to be left behind. Banks are cognizant of the strategic and operational value of the internet as an effective channel and seem to realize that the benefits outweigh the costs. However, they have a variety of concerns ranging from security to the integration of the internet channel

with existing business processes and systems. Despite these concerns, in the future, banks will have to include web-based services in their portfolio of offerings to customers or else risk losing customers to banks that do.

Surendra Bhandari (CEO, Kumari Bank Ltd), electronic banking is the wave of the future. It provides enormous benefit to the bank and consumer in terms of ease and cost of transaction. Some of the banks in Nepal have already initiated in this direction.

Continuous technology innovation and up-gradation among local banks have allowed for much wider array of banking products and services to become accessible and delivered to retail and wholesale customers through an electronic distribution channel. The channels in Electronic Banking available in Nepal are as follow:-

- Automated Teller Machines (ATM)
- Debit Cards
- Credit Cards
- Tele Banking
- Remote Banking
- Internet Banking

Any-Branch Banking

Of all the E-banking products internet banking has been the most momentous development of E-banking in Nepal. It is more complex and varied than any other products. It represents new Era of banking. Has transformed the dynamics of banking plus opened new vistas for business that never existed. For integrated customized services and superior cost efficiencies relative to any currently available distribution channels were allowed. Internet banking was first introduced in Nepal by Kumari Bank Limited in 2002.

This system allows individuals to perform banking activities from any place any time anywhere via the internet. Basically, it does not involve any physical exchange of money.

Internet banking services are of two types

Financial

Non-financial

Through internet banking you can monitor your account no matter where you reside or where you are. You can enquire your balance, you can transfer funds from one account to another, you can request the bank to make payment to third party, you can requisite for cheque-books and demand drafts and many more banking activities can be carried through this versatile channel of modern banking. The bank has moved forward by providing convenience of payment through the net for school, colleges, utility bills which has greatly reduced the inconvenience and has provided convenience to its customers. Internet is expected to become a mainstream distribution channel for banking services within the next five years. Internet is already having a profound effect on certain financial services and has raised the service bar in the provision of banking services to the Nepalese who are well versed.

- 24 hour, 7 days a week service
- Instantaneous transaction processing
- No need to leave desk/home
- Customer interactivity allows for the development of highly customized banking services.
- Customers can quickly ascertain comparative services (and pricing) being offered by competitor banks.

The relevance of e- banking in Nepal is in the growth phase of the technology life cycle, evolving internet technology and standards and access to the internet has spread to mainstream users. Now there are more than 7 lakhs net users in Nepal. Customers' has acceptance across a wider range. Some banks in Nepal have to come to grips with the explosive growth in the wider use of the internet and consider its implications for retail business.

- Nepalese living abroad already have footholds in Nepal by operating their account through the net.

- The internet has allowed for online banks to adopt a price and service leadership strategy to "cherry pick" traditional banks' profitable customer segments.
- For banks in Nepal, the internet is a major opportunity for growth, efficiency and marketing initiatives.
- In order to enable the bank and the economy to capitalize on the enormous benefits of E-banking and E-commerce the government need to:
- Understand the level of benefits to the customer, to the banks and to the country
- Understand the risk associated
- Develop the requisite law and framework i.e.Cyber law
- Recognize Digital Signatures
- Create environment for development of e-commerce
- Develop

Moreover, technology has empowered top management of banks in Nepal to gain greater visibility and control. It provides a wide range of financial options and greater convenience with borderless approach. It has opened the banking services and products beyond local market, especially for Nepalese residing abroad to have banking relationship with their banks in Nepal and Monitoring accounts and doing transactions from outside the country has now became easy and cheaper.

Despite limitations Nepalese Financial Sector is now ready to provide world class products and services to its customers. There are multiple delivery channels including net payment system and credit cards. Now you can bank upon with Nepalese banks wherever you are and can get world class services with a simple click through your net. Vivek S. Rana, Chief of IT/MIS at Nepal Bank also has presented the different aspects of E- banking in Nepal in his research study, "Banking and E-payment Practice in Nepal" conducted during 2004. Specifying the need of E-Payment in his study he has stated that servicing globally using local competitiveness, lower transaction cost, fast and efficient services and new business synergies need e-payment mechanism.

According to him major challenges for e- banking in Nepal are unequal and very limited internet access to the mass people, low literacy rate on IT, hesitation in the both business and consumer sides to go for electronic dealing and transactions. His study recommends that there is no longer choice of e-commerce as the forces of globalization has made one world and one economy and cost of being left out are permanent sentence to isolation and marginalization and there are enormous benefits and risks in joining the global economy but the greatest of all is the risk of not participating in it.

2.2.1 Review of Thesis Works

According to the research study by Devinder Thapa on his thesis study, "Future Prospective on Online Banking", he found in his survey that out of 300 people surveyed only 5 percent people were satisfied with the traditional banking system and 95 percent of those people suggested for new and more convenient banking system. In the same study, he managed to find that difficulties in the traditional banking with the customers were about time for 93 percent of the people. This study showed that the long processing time of traditional banking was annoying factor for the most to the banking customers. As per the study conducted in the year 2003, people were seeking a faster way of receiving secure banking services. The study has pointed out following major findings;

- Only five percent are satisfied with the traditional banking system.
- Time was the main problem for 95 percent of the surveyed people.
- Opinion of the 95 % people surveyed were in favor of fully functional online banking.
- The study also showed that only 50 percent of the surveyed people practically used the online banking.
- 99 percent of them were fully aware about the online banking like ATM, ABBA and Tele Banking.

At that time SWIFT was the only service, which was used by all the commercial banks while debit, and credit card facility was given by only some bank till that date. Out of 17 banks, 9 of them were using ABBS system.

The researcher found that the most important factor to online banking users surveyed was the overall security of their money. Those who responded to the survey also highlighted privacy, cost, convenience and access to financial information as key components to using online banking. Interestingly, the majority of online bank users – 44 percent -- perform their transaction using their bank's own computer network, 27 percent of the polled use the internet while 21 percent transact their banking needs through online service. Survey also reported that 18.2 percent of them were happy with their online banking services. There were very few banks using the online banking when the study had conducted by the researcher but now scenario of Nepalese online banking has changed very significantly as banks are making the new frontier of banking services as their competitive tool.

In another research report by a banker Prabal Khanal on his research study, "Online Banking in Nepal" he states that history of E-banking started with the introduction of credit card and ATMs by Nabil Bank and Himalayan Bank in 1990 and 1995 respectively. According to his study internet banking was started in Nepal in 2002 by Kumari Bank and another commercial Laxmi Bank started SMS banking and mobile banking in 2004. His studies found that there were 46 ATMs and 2000 PoS till 2005. He has shown in his study that out of 17 commercial banks 15 banks were providing ATM services for cash withdrawals and balance inquiry, 10 banks were providing SMS banking services, 5 banks were providing Tele-Banking and Internet Banking with limited functionality. He further pointed out about the statistics of internet users and it was around 200000 till that period, 95 percent of them were using dial-up, 50 percent of the internet users were from the Kathmandu Valley and there were 3000 internet banking users. In his study also, he focused on the security of the banking transactions as the main hurdle in the way of full-fledged online banking in Nepal. According to the research, all the banks providing online banking at that time had the security system like password controlled system entry; international certification as secure websites for electronic transactions called VeriSign issued digital ID for bank's website, secure socket layer (SSL) protocol for data encryption and Firewall setup.

Highlighting the future of E- Banking in Nepal he says in his report E- banking makes possible cash less transactions and people even from remote areas can have access to the banking services and make financial transactions via bank at minimum cost and

short time. People will have more choice of banking services like SMS banking, Tele-banking and through online banking people can have global connection, they can mobilize their fund in the foreign country and they can have access to banking services from anywhere in the world 24 hours.

Goi Lee Chai (2006), in his study has concluded that banking platforms need to cope with continuously changing business environments and a continuous flood of new requirements, while staying sufficiently agile. Banking platform renewal requires thorough preparation based on a business foundation, including a description of what functionality the business side can expect.

Two crucial factors face the financial services industry as it enters the third Millennium. First, consumers continue to demand individualized goods and services, and to demand them faster than ever. Second, the world is undergoing a "Knowledge Revolution" whose consequences will dwarf even those of the industrial revolution. These two trends converge in the new digital media that will allow everyone to interact and transact with their banks from virtually anywhere. The means and devices available to banks to conduct these transactions will be just as varied. People will choose whatever means is most convenient for any occasion. That could mean face-to-face at a branch, over the telephone, using a self-service device such as an ATM, or through a personal computer or television at home. Business, especially banking will continue to be people-led if increasingly technology-enabled. But one emerging benefit of the new revolution will be the recreation of the intimacy of small-town banking that existed when banks and businesses knew each other personally. These new E-communities will not be based on geography, but on need and interest (O'Connell, 2000).

E-Banking is offered by many banking institutions due to pressures from competitions (Yang, 1997). Banks will likely lose their competitiveness if they delay their actions in offering transactions based services on the internet because customers are very comfortable in using computers as well as remote banking services. The low costs of computer and communication devices will encourage customers to move in to E-banking much faster than they did in the case of ATMs. If banks can't meet these customer demands quickly, they will lose a substantial part of their business in the next 5 to 10 years. Traditional banks have to move into other markets quickly. As

cyber banks move into the investment market and merchant market in addition to retail banking, traditional banks will lose their competitive edge if they allow these cyber banks to become leaders in internet banking. In the end, to be successful, banks have to drive internet banking instead of being pushed into it by others. To add further convenience to the customers, many banking institutions are working together to form an integrated system. On the other hand, this has not been readily accepted by its users due to the concerns raised by various groups, especially in the areas of security and privacy. In order to reduce the potential vulnerabilities regarding to the security, many vendors have developed various solutions in both software-based and hardware-based systems. In order for E-banking to continue to grow, the security and the privacy aspects need to be improved. With the security and privacy issues resolved, the future of E- banking can be very prosperous. The future of electronic banking will be a system where users are able to interact with their banks "worry-free" and banks are operated under one common standard.

With the rapid growth of information communication and technology, especially in internet based services, with supports from the government, there has been increased interest in E-banking service. Finally, the future is not in information technology or technology that only facilitates transactions but in relationship technology.

Awamleh, Roed (2007), in his study has expressed that the banks in the United Arab Emirates and evaluated factors that are significant in determining the satisfaction of customers using internet banking. Banks in the United Arab Emirates do not use their websites strategically to improve customer relationship or to add real value. For instance, if banks want more of their customers to use internet banking, they will need to provide more value add services than the ones provided by ATMs or phone banking.

The study identified the factors that are significant for internet banking customer satisfaction. Security of transactions and convenience contribute significantly to satisfaction of internet banking customers. Banks while advertising their internet services should emphasize these points. In the case of new users of the internet banking services, banks should also concentrate on the independence aspect of this service.

Once proper developments in the design, infrastructure, and interface of internet banking in the United Arab Emirates are established, customers can be encouraged to take advantage of online banking by providing them with incentives. For example, successful online applications of frequent flyer programs in the airline industry may be a useful benchmarking exercise for internet banking.

Khan, Saadullah (2007), in his study has concluded that the findings from respondents' data identify lack of system security concerns as the prime reasons for slow adoption of internet banking in Pakistani firms. Bank managements should build a strong system security to attract customers and develop their trust. Trust is one of the most critical issues, including worries about security of the system, low reliability of transactions, and distrust of the service provider. The finding show that all respondents have greater level of worry regarding trust, do not have confidence to make any big financial transactions over internet, and have no satisfaction from internet banking services. Further, the delivery of financial services over the internet should be treated as a part of overall customer service and distribution strategy. The relationship developed could then be used as a gateway for delivery of product information. These measures could help in rapid movement of customers to internet banking environment, resulting in considerable saving in operating costs for banks.

2.3 Research Gap

This study made on internet banking of Nepal is a new study and no existing studies made on the topic were found to be reviewed. The study is based on the information collected from the customers and IT officers of the banks unlike other studies that use authentic published financial data of various financial data of various financial years. The study involves in making a subjective analysis rather than an objective one. As such, research gap analysis could not be made regarding this study about internet banking in Nepal. This study incorporates internet banking systems of Himalayan Bank Ltd., NABIL Bank Ltd., Kumari Bank Ltd., Laxmi Bank Ltd. and Nepal investment Bank Ltd. Information were collected through questionnaires from the customers and IT officers of the respective banks. Simple statistical tools like Percentage and average have been used in the study to analyze the data collected by the means of questionnaires.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

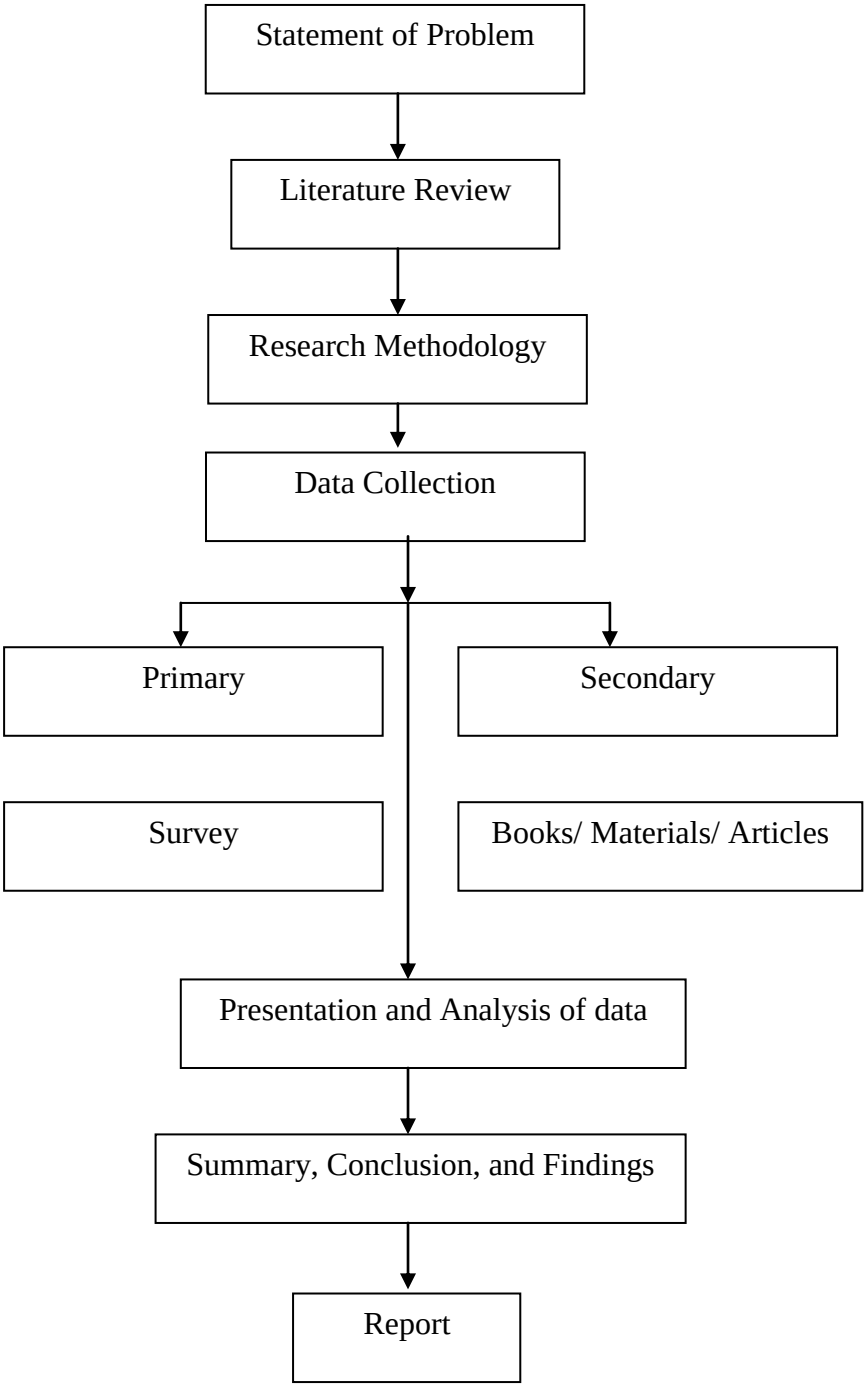
From the French word “Researcher” the term “Research” has been developed which means search again whereas “Methodology” refers to the process or steps applied in research work. Thus, research methodology is the process used to conduct a research study on the selected topic with objective of finding out research result. In other word research methodology can be understood as a science of studying how research has been done. The main purpose of this chapter is to make easy ladder for successfully climbing the research work and to achieve the objective of study.

Here we have included the overall research method comprising the theoretical aspect to the collection and analysis of data. This study covers quantitative methodology in a greater extent and cases the descriptive part based on both technical aspect and logical aspect furthermore this chapter explains about nature and sources of data collection, sampling procedure, presentation and analysis tools and techniques, limitations of methodology etc.

3.2 Research Design

According to the research purpose of the study researcher has followed descriptive research methodology. Here researcher’s intention is to describe the area of research and try to explain the collected data in order to focus on " Internet Banking in Nepal and its Necessity in today’s Era" some analytical process were also used as per the need and simple chart of research design came out which is as follows:

Figure 2: Research Design



For presentation and analysis of data the researcher has designed basically following questionnaires:

Banking Habit of People

- Preference of people in acquiring banking services.
- Awareness of internet banking services in Nepal
- Reasons for adopting internet banking services.
- Reasons for not using internet banking services available in Nepal.
- Internet banking users profile.
- Internet banking services and features available in Nepal.
- Important of IBS in today's era.
- Rating and ranking of IBS in Nepal.
- Fees and charges for IBS available in Nepal.
- Validity and reliability of IBS available in Nepal.
- Effects of IBS in flow of remittance and deposits.
- Effects of IB on overall performances of Banks.

3.3 Procedures and Sources of Data Collection

This research will use both primary as well as secondary sources of data which will encourage us to collect new and new facts related with this research. A survey will also be carried out among the customers of various commercial banks who are using banking services presently.

This study will be basically based on the secondary data. However primary data and information will be obtained through informal discussions' survey method, questionnaires etc. secondary data will be collected from the annual publications, financial reports of related banks, central bureau of statistics, NRB research and information and technology department, leaf lets, booklets, articles etc.

To make this research work effective the data mentioned under it plays a key role so our focus will be on gaining proper and authentic data, the quantitative data will be collected from the listed commercial banks and some qualitative data are

collected from the persons directly or indirectly related with this sector. Some descriptive data will be gathered from official staffs and some are collected from the past researches. Besides, views and ideas of some exports will also be included in this research work as far as possible.

Population and Sample

As this research aims at studying the "Internet Banking in Nepal and its Necessity in Today's Era", taking all commercial banks, as the population and five commercial banks as sample for the study. These banks are NABIL, HBL, NIBL, KUMARI, and LAXMI.

3.5 Tools and Technique Used

We have previously mentioned that this study is going to be carried out to examine the internet banking system of Nepal and to what extent it is more important for future prospects. Therefore, the data will be collected accordingly and managed ways further they will be analyzed and presented in suitable tables, formats, diagrams graphs and charts where there is necessity of it. Those presentations will be interpreted and explained whenever necessary. Here financial, accounting, mathematical and statistical tools are used and analyze and some other computer application programmes like MS word and MS excel will also be use to record data and process them.

3.5.1 Methods Used:

To present and interpret those research data in meaningful way different qualitative and quantitative method will be used.

Qualitative Method

Factor rating method (Lykert Type Scaling)

Quantitative methods

Percentage

Percentage is a number or ratio expressed as a fraction of 100. It is often denoted using the percent sign, % or abbreviation pct. The word percent is derived from the Latin word *per centum* meaning by the hundred.

Arithmetic mean

Arithmetic mean or simply the mean or average when the context is clear, is the sum of a collection of numbers divided by the number of numbers in the collection. The collection is often a set of results of an experiment, or a set of results from a survey. The arithmetic mean is often used to report central tendencies.

$$\overline{X} = \frac{\Sigma X}{N} = \frac{X_1 + X_2 + \ldots\ldots\ldots + X_n}{n}$$

χ2 test (Chi-Square Test)

χ2-test is a statistical measure used in the context of sampling analysis for comparing a variance to a theoretical variance. As a non-parametric test because it depends only on the set of observed and expected frequencies and degrees of freedom. It does not make any assumption about population parameters; it is also called a distribution free test. χ2-test is a test which describes the magnitude of difference between observed frequencies and expected (theoretical) frequencies under certain assumptions. In other words, it describes the magnitude of the discrepancy between theory and observations. It is denoted by Greek letter χ2 and was developed by Karl Pearson in 1990. This test is also used for analysis qualitative variables such as opinions of persons, religious affiliation, smoking habits and so on. This theory describes the magnitude of observed and theoretical frequency distributions by using following formula:

$$\chi^2_{cal} = \Sigma \frac{(E-O)^2}{E}$$ Where, O = Observed frequency

E = Expected frequency

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

Data presentation, analysis and interpretation always plays vital role in any research study. It is the main backbone of any research, which gives the necessary information, for proper presentation, evaluation, analysis and interpretation of data. In this chapter researcher has collected all the data from the users of banking services as well as from IT officers of the five banks with the help of questionnaire and interviews. The collected data had been systematically presented in the firm of tables, diagrams, using various mathematical, graphic and analytical tools an outcomes are interpreted.

4.1 Presentation and Analysis of Data

During the primary data collection process, the researcher approached around 100 sample bank customers and research questionnaire was administered asking them to fill up and express their opinion. Among them 75 responses were found to be useable. Therefore, this data analysis moves further with the data set of 75 responses only. Besides questionnaire for sample banks' IT section was also analyzed for qualitative output of this research.

4.1.1 Propoundment of Internet Banking

In Nepalese banking history kumari bank limited was the first bank who initiated internet banking services. Firstly, in January 2002 A.D. It had started this service. The testing of two months was done with employees before offering internet banking services to its customers. After that Laxmi bank limited started providing internet banking services in the same year December 2002 A.D. Later on the trend continued with NABIL Bank providing the services directly to its customers in 2003 A.D. Finally, Nepal investment bank limited started giving internet banking services in 2004 A.D. with 4-5 months testing and Himalayan bank limited started these services in 2005 A.D. respectively.

4.1.2 Demographic Profile of Sample Customers

The motto of gathering this information was to know about the demographic characteristics of the customers. People from different age groups, backgrounds, genders, level of educational qualifications, professions level of income, level of computer literacy, knowledge of internet as well as internet banking etc. were asked to give their opinion. Following demographic features were found while analyzing the data collected.

Table 4.1. 1: Demographic Profile

S.N.	Characteristics	Level/ frequency	Respondent %
1.	Gender		
	Male	55	73.33
	Female	20	26.67
2.	Age		
	10-20	7	9.33
	21-30	42	56
	31-45	22	29.33
	Above	4	5.34
3.	Education		
	Under grad	18	24
	Bachelor	36	48
	Master	20	26.67
	P.HD.	1	1.33
4.	Profession		
	Education	14	18.67
	Industry	5	6.67
	Government	4	5.33
	Business	24	32
	Others	23	30.67
5.	Income Per month NRs.		
	Less than NRS 15000	35	46.67
	15000-40000	20	26.67
	40000 above	2	2.67

6.	Computer Literacy		
	Don't knows anything	6	8
	Have same knowledge	36	48
	More knowledge	21	28
	Skilled in computer	12	16
7.	Knowledge about internet		
	Don't know anything	6	8
	Little knowledge (mail check)	24	32
	Regular user (entertainment)	39	52
	Work through web/E-business	6	8
8.	Known about internet banking		
	Money transfer from one account to another	8	10.67
	Inquiry about banking facilities through internet	9	12
	Just to do web shopping on net	-	-
	Providing banking services and financial transfer through net	6	8
	All of above	30	40
	None of above	17	22.67
9.	Internet access print		
	Home	18	24
	Work place	23	30.67
	Public/cyber	30	40
	Not response	4	5.33

Sources: Field Survey, 2013

From the table no. 4.1.2 it suggests that relatively higher number of male customers is 73.33 percent and 26.67 percent of female customers are currently using the internet banking facilities.

Here, if we analyze from age factor then persons using IB facilities between ages of 10 to 20 years old are 9.33 percent whereas within age of 21 to 30, 31 to 45 and 45 above are 56 percent, 29.33 percent and 5.34 percent respectively.

The accumulated results suggests that an overall of 24 percent of IB customers are under graduate, 48 percent have bachelor degree, 26.67 percent have master degree and 1.33 percent customers have doctoral degree or higher.

Profession wise if we categorize the IB customers than 18.67 percent are related with educational field, 6.67 percent are industry workers, 5.33 percent are found government service holder, 32 percent from business related sector are using IB facilities. In addition, 30.67 percent from other segments are the major users of IB facilities. A part from this 6.66 percent of customers remains silent they did not say anything. So, those who are silent are assumed to be jobless.

From fifth result regarding income level then it suggests that 46.67 percent. IB users have less than NRS 15000 salaries per month, similarly, 26.67 percent of them have the salary range of between NRS 15001-40000 salary per month. Lastly 23.99 percent i.e. around 24 percent of IB users have no jobs and they are using these facilities only from the pocket money given by their parents, spouse, and relatives.

The sixth result on level of computer literacy suggest that 8 percent of customers, do not have enough knowledge about computers but still they are using the facilities. 48 percent of them have some knowledge about computers, where as 28 percent. IB customers have more knowledge about computer and rests of 16 percent are skilled in computer possessing any ability to use and work on computers.

Here, seventh result regarding knowledge about internet suggests that 8 percent of IB customers don't have any knowledge about internet; they are using this facility just from help of others (wife using service on behalf of husband, father using service on behalf of children etc.).

32 percent of IB customers have little knowledge about computers (checking mails), likewise huge percentage of about 52 percent. IB customers are regular internet users and remaining 8 percent are advance users who also perform E-business and work through web.

Finally, the result about knowledge of internet banking 10.67 percent customers thinks that IB is only for purpose of money transfer from one account to another, 12 percent think it helps only for inquiry about banking facilities through internet, 8

percent believe it just provide banking services and financial transfer through internet. Similarly 40 percent IB users know about all of above facilities and 22.67 percent don't know any of above facilities. Rest of them 6.66 percent were idle did not say anything either they knew about IB or not.

4.1.3 Frequency of Bank Visit

In this study researcher have included the frequency of bank visit to find out whether this factor affects the using of IB. Normally people prefer IB when they are keep in touch with bank continuously so that every time they need not visit the bank personally.

Table 4.1. 2: Frequency of bank visit of IB users

Bank visit	Respondent	Percent (%)
Daily	15	20
Weekly	24	32
Monthly	25	33.33
Quarterly	5	6.67
Semi-Annually	3	4
Annually	2	2.67
No response	1	1.33
Total	75	100

Sources: Field Survey, 2013

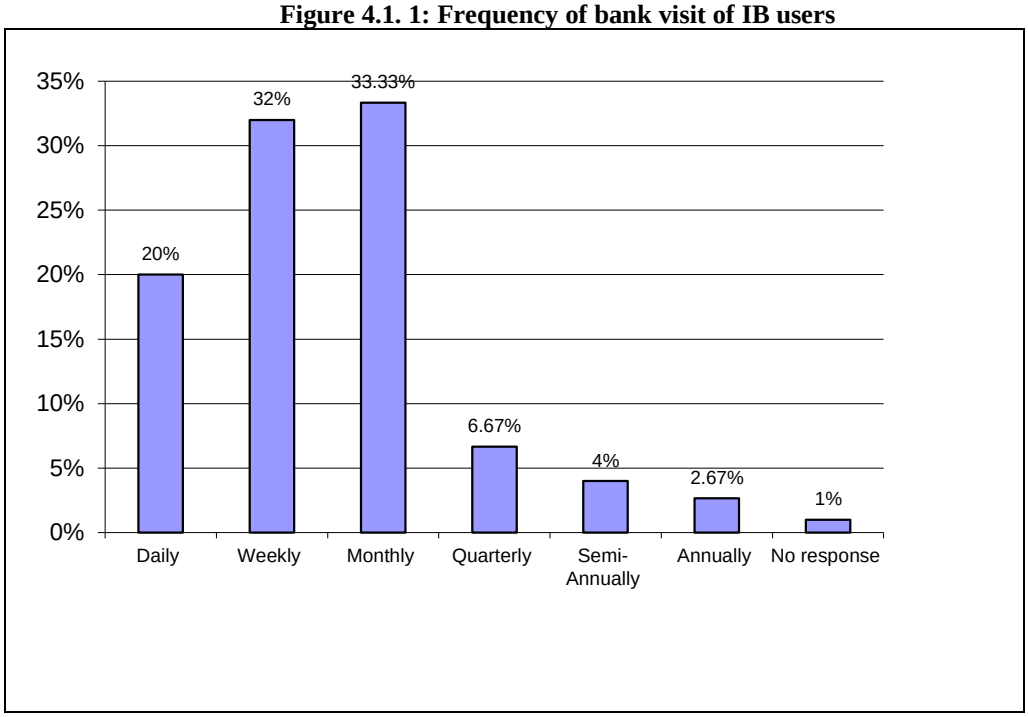
Table 4.1.3 shows the respondents visited daily to the bank is 20%, this figure followed by 32%, 33.33%, 6.67%, 4% and 2.67% for weekly, monthly, quarterly, semi-annually and annually respectively. But 1.33% respondents gave not any response.

Result of Chi-Square test

	Value
Chi-Square	61.733
d.f.	6
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 1: Frequency of bank visit of IB users



Sources: Table 4.1.3

Figure 4.1.3 indicates that the maximum respondents monthly visited to the bank and minimum respondents visited annually.

4.1.4 Preference in Getting Banking Services

Only few of private commercial banks in Nepal are providing IB facilities. However it is not very popular among the users because of various reasons which would be discussed later. Here researcher tried to find out from among the IB customers about their preferences in getting banking services.

Table 4.1. 3: Preference in getting banking services

Preference in getting banking services	Respondent	Percent (%)
Personally visit bank premises	50	66.67
You prefer service through mobile	2	2.67
You prefer service through internet	6	8
All of above	14	18.67
No response	3	4
Total	75	100

Sources: Field Survey, 2013

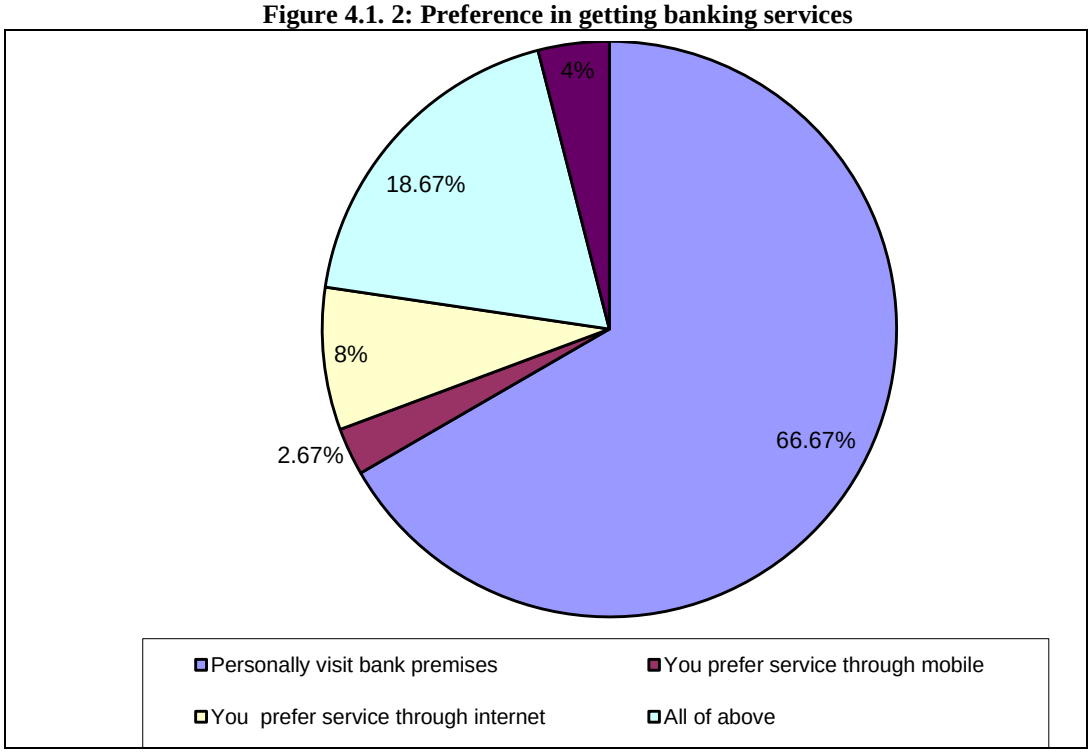
Table 4.1.4 shows the respondents personally visited the bank premises for using internet banking services and least of the people prefer to serve their services through mobile banking.

Result of Chi-Square test

	Value
Chi-Square	108.000
d.f.	4
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that H_o is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 2: Preference in getting banking services



Sources: Table 4.1.4

Table and figure 4.1.4 shows that though all the customers are using IB facilities, 66.67 percent prefer to acquire banking facility by personally visiting the bank because of the limited facilities offered by the providers of E-banking facilities, 2.67 percent customers prefer to acquire banking service through mobile, 8 percent of

users prefer to use services through internet and 18.67 percent get the services from all of above mentioned ways whichever is available and convenient. Lastly, 4 percent of total respondents did not response about the services which they prefer.

4.1.5 Reasons for Preferring IB

Among the whole banking services customers uses only a few portion of IB facilities. So, here the investigation is made on to find out what are the reasons that actually encourage the people to use IB.

Table 4.1. 4: Reasons for preferring IB

Reasons for preferring IB	Respondent	Percent (%)
You don't have to personally visit the bank	8	10.67
24 hrs facilities from any location	25	33.33
Because of more convenient	27	36
Because it saves lot of costs	8	10.67
No response	7	9.33
Total	75	100

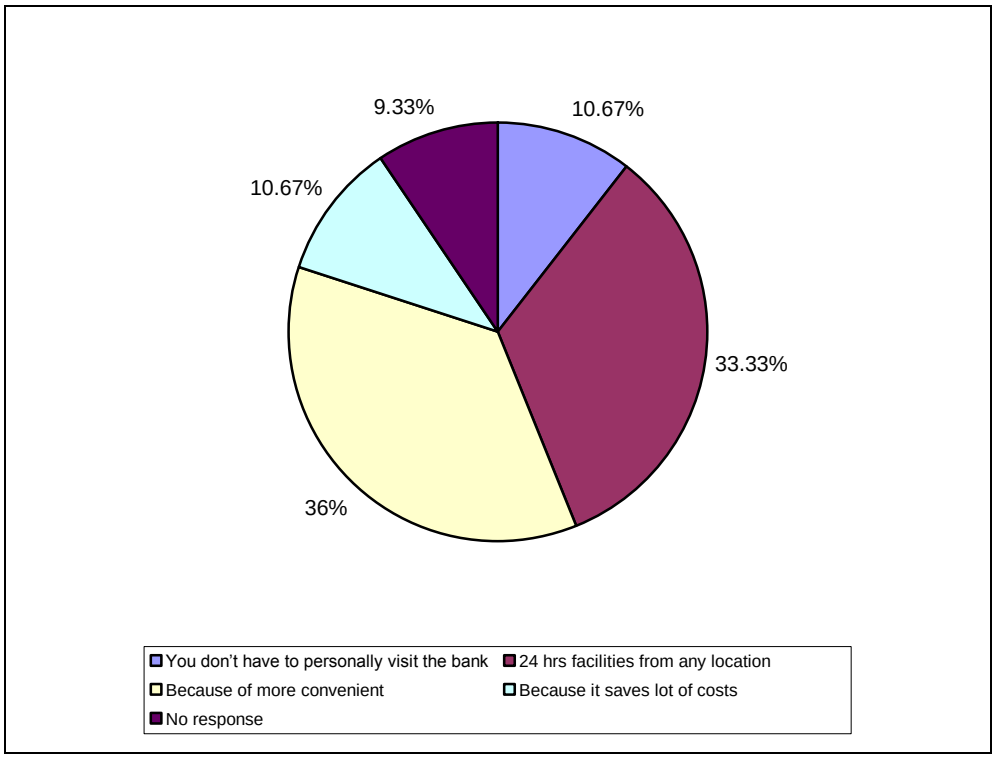
Sources: Field Survey, 2013

Result of Chi-Square test

	Value
Chi-Square	27.07
d.f.	4
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the version of respondents about the reasons for preferring Internet Banking.

Figure 4.1. 3: Reasons for preferring IB



Sources: Table 4.1.5

Table and figure 4.1.5 suggests that 36 percent of IB users prefer IB as they find it more convenient. They can acquire their services taking their own time, without waiting in the queue 33.33 percent of users prefer IB as they can acquire the banking services 24 hours from any location. They don't need to rush to banks within banking hours and E-banking facilities have enabled the users to get the service from any corner of one world. 10.67 percent customers prefer it because it saves both time and cost you don't have to personally visit the bank because they can do most of the works through their home or offices. The remaining 9.33 percent of users did not response for this questionnaire. Perhaps! There might be some other reasons for preferring IB services.

4.1.6 Awareness of Internet Banking Services in Nepal

As we have previously mentioned that a very small portion of Nepalese population is aware about the IB facilities, people are not so much aware regarding which banks in the country are providing this facilities. This study focuses in what

ratio is the awareness of IB facilities in Nepal. So, spaces of awareness are listed below:

Table 4.1. 5: Awareness of Internet Banking Services in Nepal

Bank	Aware		Not Aware	
	Provide IB	Not Provide IB	Don't Know	No Answer
Kumari	32	2	17	7
HBL	24	1	15	12
NIBL	16	3	17	11
NABIL	128	2	22	7
Laxmi	33	2	14	6
Sub total	113	10	85	43
Total	123		123	
Aware percentage	49 percent		51 percent	

Sources: Field Survey 2013

4.1.7 Reliability of Internet Banking Services Available in Nepal:

This study focuses on how reliable is the IB facilities provided by various commercial banks in Nepal, from the view point of IB users. Higher the reliance on acquiring banking facility through internet, higher will be the willingness of people in using it, soon greater will be its necessarily and popularity.

Table 4.1. 6: Reliability of Internet Banking Services Available in Nepal

Responses	Respondent	Percent (%)
Yes	41	54.67
No	10	13.33
Not sure	20	26.67
Not response	4	5.33
Total	75	100

Sources: Field Survey, 2013

Table 4.1.7 and fig 4.1.7 shows that 54.67 percent of users think that IB facilities available in Nepal is reliable. In the result 13.33 percent users claim that IB facilities

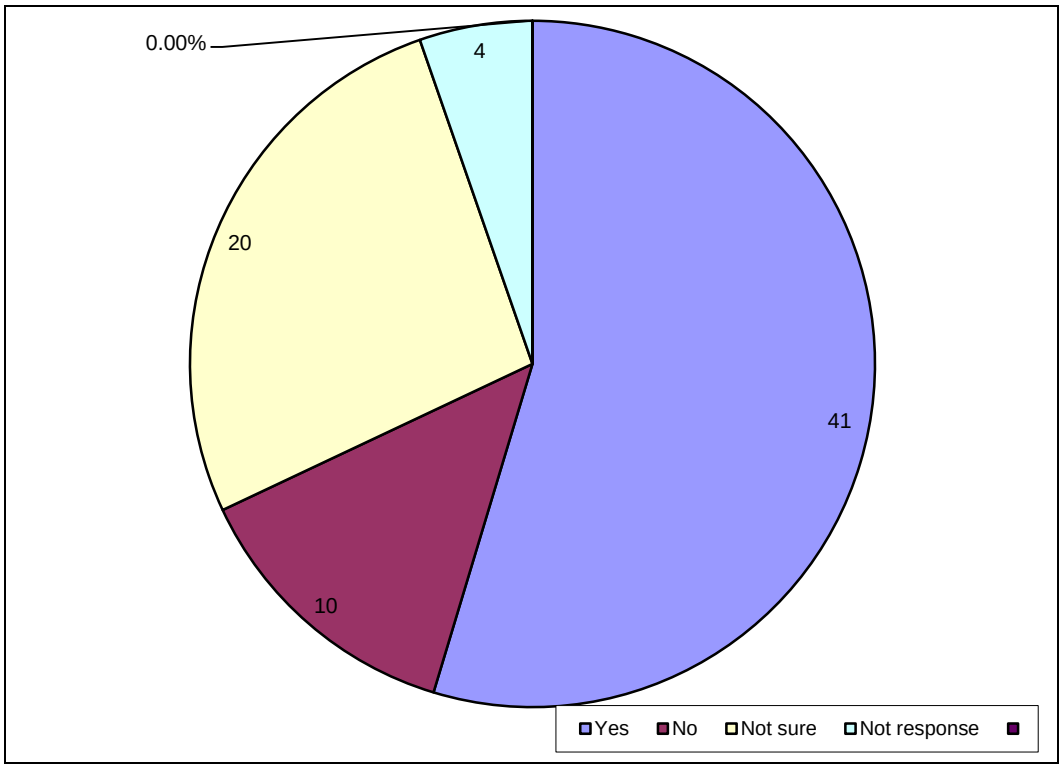
available in Nepal is not reliable where as 26.67 percent users are not sure about it and remaining 5.33 percent think that neither it is reliable, or not reliable or not sure. The result also indicates that the IB users in Nepal are quite reluctant to believe in IB available in Nepal. That is why it is the responsibility of the providers to assure the users regarding safety and privacy in transactions.

Result of Chi-Square test

	Value
Chi-Square	22.640
d.f.	2
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 4: Reliability of Internet Banking Services Available in Nepal



Sources: Table 4.1.7

4.1.8 Reasons for not Using Internet Banking Services Available in Nepal

There are huge numbers of customers of banking services who do not use IB facilities provided by the commercial banks. This study suggests that why people are unwilling to use IB services. Here, to explore the reasons behind reluctance in using e-banking facilities, the respondents were asked to select among the most probable reasons depicted so far.

Table 4.1. 7: Reasons for not Using Internet Banking Services Available in Nepal

Reasons for unwilling in using IB	Respondent	Percent (%)
Concern about security	20	26.67
Do not trust internet services	18	24
No computer skills	12	16
Difficult to use	4	5.33
Don't see benefit in it	5	6.67
No access to computer at work and home	10	13.33
Expensive to use	2	2.67
Never heard about IB	1	1.33
Take too much time to learn how to use it	2	2.67
Do not wont to use it	-	-
Not qualified to open an account	-	-
Not available through my bank	-	-
No response	1	1.33
Total	75	100

Sources: Field Survey,2013

The results from table and figure 4.1.8 suggests that first reason for not using IB is due to concern about security i.e. 26.67 percent, secondly, 24 percent of IB users are unwilling to use IB because they do not trust internet services. The third reason is due to lack of computer knowledge which is around 16 percent. Similarly, users are unwilling to use IB due to various many reasons like difficult to use 5.33 percent, Don't see benefit in it 6.67 percent, No access of computer at work and have 13.33 percent, 2.67 percent think it is too expensive to use, 1.33 percent users have never heard about it, 2.67 percent believe that it takes too much time to learn how to use it and finally 1.33 percent did not response why they do not want to use IB facilities.

4.1.9 Status of Traditional Banking System in Nepal

With the objective of studying the modern customers' perception about traditional banking system in Nepal, they were asked whether they are satisfied with the traditional banking system or not. From the response the sample customers are tabulated below:

Table 4.1. 8: Status of Traditional Banking System in Nepal

Responses	Respondent	Percent (%)
Yes	19	25.33
No	44	58.67
Not sure	12	16
Total	75	100

Sources: Field Survey,2013

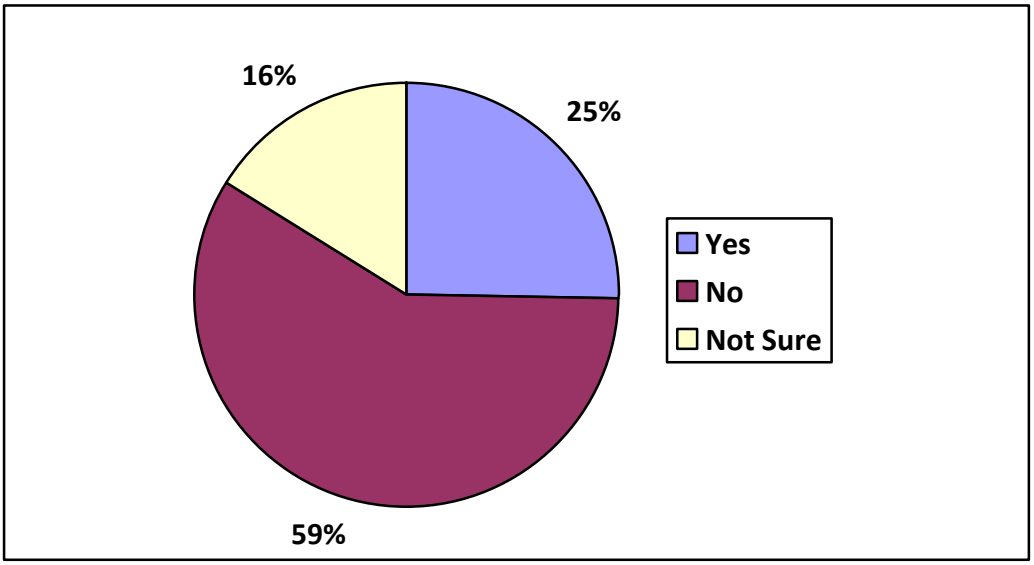
From above table the result which researcher has explored is that, only 25.33 percent of 75 respondent are found to be satisfied whereas 58.67 percent of them are disappointed and 16 percent of them are still in confusion that either to say they are satisfied or dissatisfied with the traditional banking system of Nepal.

Result of Chi-Square test

	Value
Chi-Square	22.640
d.f.	2
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 5: Status of Traditional Banking System in Nepal



Sources: Table 4.1.9

From table and figure 4.1.9 the result which researcher has explored is that, only 25.33 percent of 75 respondent are found to be satisfied with traditional banking system of Nepal where as huge 58.67 percent of them are disappointed with this system and 16 percent of them are still in confusion that either to say they are satisfied or dissatisfied with the traditional banking system of Nepal.

4.1.10 Effectiveness of IB Services in Nepal

Though we have limited number of IB facilities and it's users. So, it would be much more difficult to predict the accuracy of effectiveness of IB services. However, researcher has tried to explore how properly IB is working in Nepal.

Table 4.1. 9: Effectiveness of IB Services in Nepal

Effectiveness of IB in Nepal	Respondent	Percent (%)
Yes	22	29.33
No	39	52
Not sure	14	18.67
Total	75	100

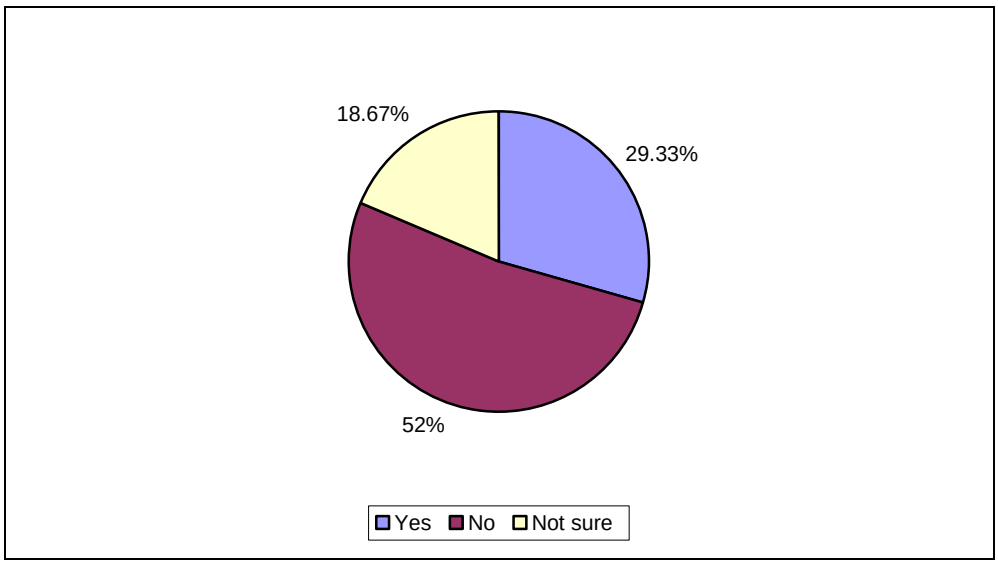
Sources: Field Survey,2013

Result of Chi-Square test

	Value
Chi-Square	22.640
d.f.	2
α	0.05
P-value	0.000

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 6: Effectiveness of IB Services in Nepal



Sources: Table 4.1.10

Table 4.1.10 and figure 4.1.10 suggests that 29.33 percent of customer claims that IB is properly working in Nepal, likewise 52 percent of them strongly denied it, that means IB is not properly working in Nepal. Remaining 18.67 percent are not sure about it.

4.1.11 Affect of IB towards Banking Job/Employment

In this study researcher has tried to propound one interesting future possibilities related to banking jobs and that is either IB facilities may create unemployment problem in banks or not. And, the result is tabulated below:

Table 4.1. 10: Affect of IB towards Banking Job/Employment

Creating unemployment problem	Respondent	Percent (%)
Yes	17	22.
No	23	30.67
Not sure	24	32
No response	11	14.66
Total	75	100

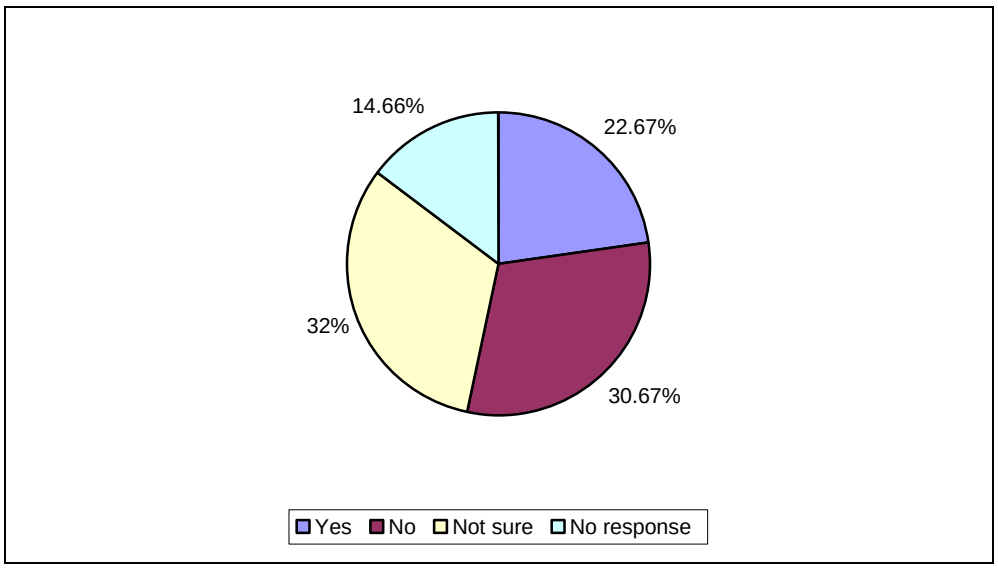
Sources: Field Survey, 2013

Result of Chi-Square test

	Value
Chi-Square	5.800
d.f.	3
α	0.05
P-value	0.122

Therefore P-value is greater than α (P-value < α), we can conclude that Ho is accepted i.e. There is no significant difference between the observed and expected frequencies.

Figure 4.1. 7: Affect of IB towards Banking Job/Employment



Sources: Table 4.1.11

From the above table and figure 4.1.11 it suggests that 22.67 percent of users think that IB may create unemployment in banks in future, 30.67 percent says it will not. Whereas 32 percent are not sure about it and remaining 14.66 percent did not response of this question. Whatever may be the result but it is sure that directly or indirectly IB services will affect the banking employment sector in near future.

4.1.12 Role and Rules of NRB towards E-Banking

In this today's globally competitive era IB services are the one which helps to upgrade the service of banking sectors. After some decades we people will going to have so busy schedule that we can't remain far away from the facilities of IB. It will be compulsory to every customer. So, here the researchers have tried to explore that either NRB should make E-banking mandatory or not. The results are tabulated as follows:

Table 4.1. 11: Role and Rules of NRB towards E-Banking

IS E-Banking Mandatory	Respondent	Percent (%)
Yes	41	54.67
No	4	5.33
Not sure	19	25.33
No response	11	14.67
Total	75	100

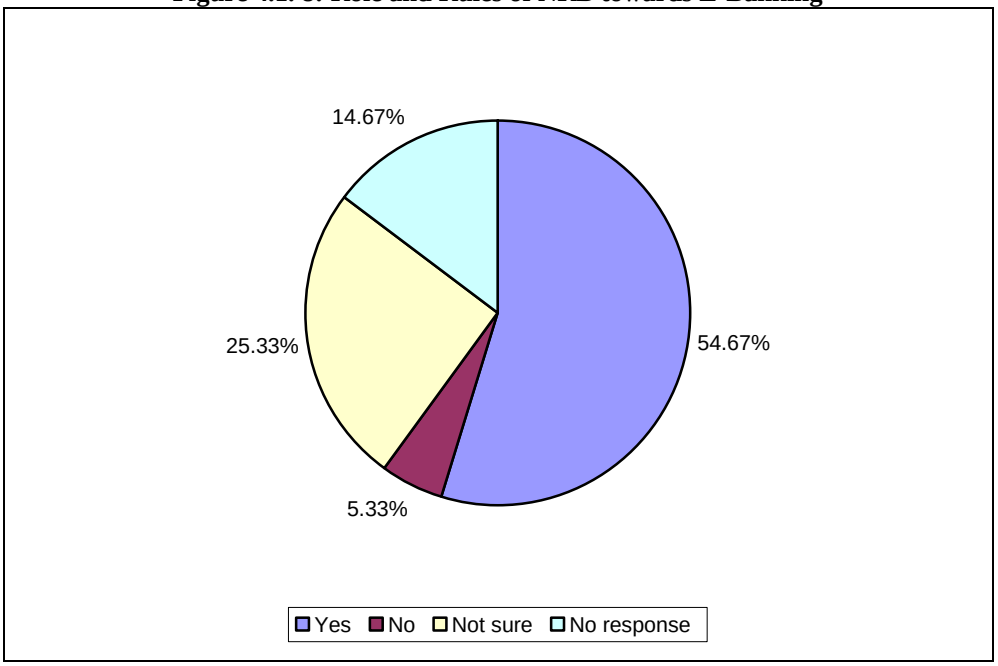
Sources: Field Survey, 2013

Result of Chi-Square test

	Value
Chi-Square	41.213
d.f.	3
α	0.05
P-value	0.000

Therefore P-value is less than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 8: Role and Rules of NRB towards E-Banking



Sources: Table 4.1.12

Above table and figure 4.1.12 suggests that 54.67 percent of IB customers support to make E-banking mandatory by NRB. Similarly, 5.33 percent think that it is not necessary, whereas 25.33 percent users are not sure either to make e-banking mandatory or not. And, remaining 14.67 percent did not pour their views.

4.1.13 Effect in Flow of Remittance and Deposit

Due to e-banking services and facilities provided by the banks no doubt banking services are seems to be fast and reliable in near future. So, here researcher tried to explore the answer of the question that- Does IB services increases the flow of remittance and deposits? From the responses and feedback about this questionnaire researcher have propounded the following facts:

Table 4.1. 12: Effect in Flow of Remittance and Deposit

Effect in flow of remittance and deposit	Respondent	Percent (%)
Yes	35	46.67
No	4	5.33
Not sure	24	32
No response	12	16
Total	75	100

Sources: Field Survey, 2013

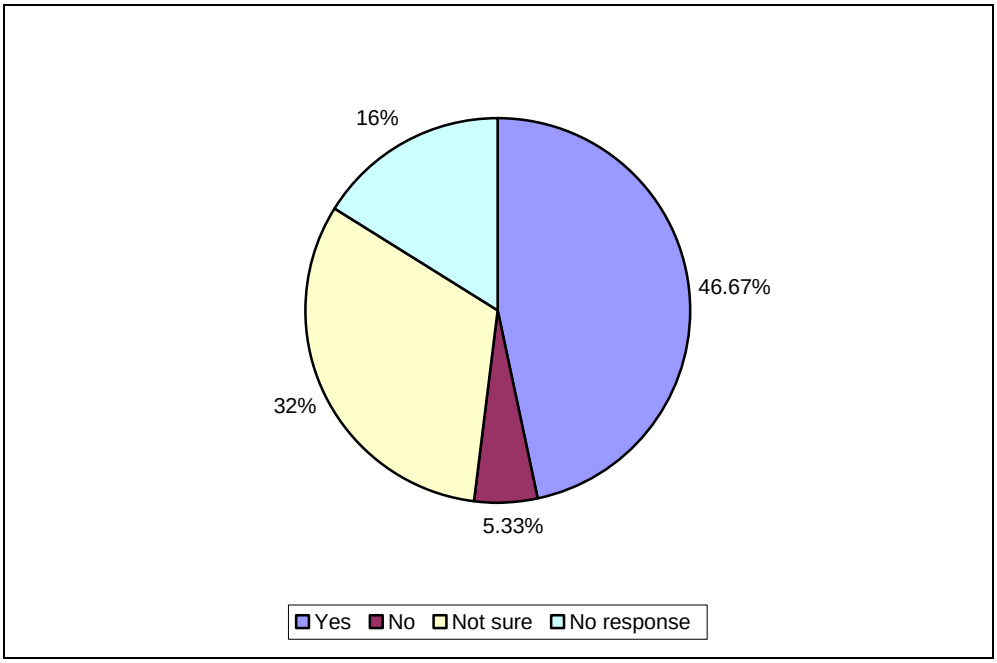
From above table 46.67 percent of users think that IB services will increases the flow of remittances where 5.33 percent think it will not. But remaining 16 percent did not response on it.

Result of Chi-Square test

	Value
Chi-Square	29.587
d.f.	3
α	0.05
P-value	0.000

Therefore P-value is less than α (P-value < α), we can conclude that Ho is rejected i.e. There is significant difference between the observed and expected frequencies.

Figure 4.1. 9: Effect in Flow of Remittance and Deposit



Sources: Table 4.1.13

From above table and figure 4.1.13 it suggests that 46.67 percent of users think that IB services will increases the flow of remittances where 5.33 percent think it will not. Whereas 32 percent of IB users are no sure about it and remaining 16 percent did not response on it.

4.1.14 Effect in Enhancement of Bank's Efficiency

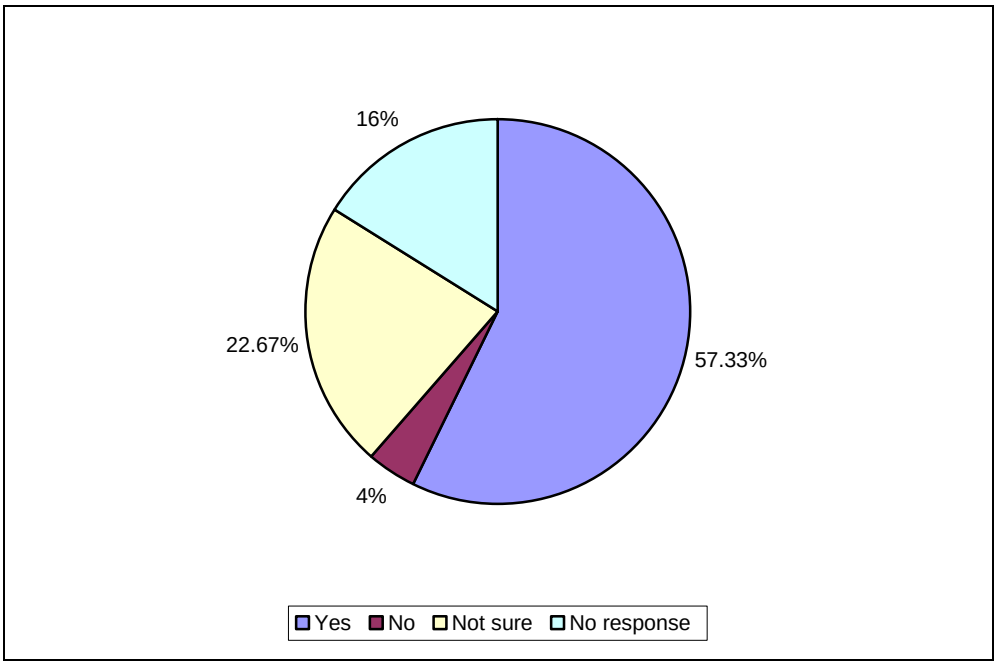
It is obvious that due to use of IB facilities provided by different commercial banks the standardization of banking services as well as their performance has been increased. From the questionnaire- Does IB enhance the overall efficiency of bank? Researcher has tried to explore the feedback from respondents. The result is as follows:

Table 4.1. 13: Effect in Enhancement of Bank's Efficiency

Creating unemployment problem	Respondent	Percent (%)
Yes	43	57.33
No	3	4
Not sure	17	22.67
No response	12	16
Total	75	100

Sources: Field Survey, 2013

Figure 4.1. 10: Effect in Enhancement of Bank's Efficiency



Sources: Table 4.1.14

From table 4.1.14 and figure it suggests that 57.33 percent of IB users think that it will enhance the efficiency of bank. 4 percent of them say's no it will not enhance the overall performance of bank. Whereas, 22.67 percent of users said that we can't say anything and remain 16 percent did not response this question.

4.1.15 IB Services/features Available to Customers

When researcher asked about the options available to the customers once they have accessed IB and the charged levied for the services they acquire. Following are the responses received from the IT officers of the banks.

Table 4.1. 14: IB Services/features Available to Customers

Internet Banking Services	Nabil	Kumari	Laxmi	HBL	NIBL
Inquiry about outstanding balance	A	A	A	A	A
Fund transfer between accounts	A	A	A	A	A
Transfer payment for public utilities	A	A	A	A	A
Print account statement	A	A	A	A	A
Inquiry about credit card ATM card	NA	NA	NA	NA	NA
Inquiry about currency and exchange rate	A	A	A	A	A
Inquiry about bank interest rate	A	A	A	A	A
Inquiry about news and business information	A	A	A	NA	NA
Inquiry about economic data and information	A	NA	NA	NA	NA
Web-shopping on internet	NA	A	A	NA	A
Change user ID and password	A	A	A	A	A
E-phone banking on internet	NA	NA	NA	A	NA
Cash card on internet/ e-sewa	NA	NA	A	NA	NA
Total No. of services available	9	9	10	8	8

Note: A=Available NA=Not Available

Sources: Field Survey, 2013

Table 4.1.15 shows that the number of services that are provided by the five commercial banks. It is clearly seen that Laxmi bank is ahead with 10 features availability. Nabil and Kumari banks stand in second position with the available of 9 features. Similarly, Himalayan and Nepal Investment Bank Limited is in third same level with 8 features available of internet banking. Greater the number of the services

provided to the customers, higher will be the chances of new customer and retaining them. Up to now IB services has been considered as a promotional scheme by the banks in attracting the users to acquire services from their home or work place or public place/cyber.

4.1.16 Fees and Charges for Internet Based Transactions

Here, all above five banks are providing internet banking services in Nepal. In return of facilities provided to general public they do not charges and fees, besides two or three transactions.

Table 4.1. 15: Fees and Charges for Internet Based Transactions

Internet Banking Services	Nabil	Kumari	Laxmi	HBL	NIBL
Inquiry about outstanding balance	N	N	N	N	N
Fund transfer between accounts	N	N	Y(Rs.15)	N	N
Transfer payment for public utilities	N	N	N	N	N
Print account statement	N	N	N	N	N
Inquiry about credit card ATM card	N	N	N	N	N
Inquiry about currency and exchange rate	N	N	N	N	N
Inquiry about bank interest rate	N	N	N	N	N
Inquiry about news and business information	N	N	N	N	N
Inquiry about economic data and information	N	N	N	N	N
Web-shopping on internet	N	N	N	N	N
Change user ID and password	Y	N	N	N	N
E-phone banking on internet	N	N	N	N	N
Cash card on internet/ e-sewa	N	N	N	N	N

Y=Yes charges N=No charges

Sources: Field Survey, 2013

Table 4.1.16 suggests the result for fees and charges for internet-based transaction on IB services. It visualize that internet based transaction fees on internet banking services is not charged to customers by the bank's in most of the transactions. Here, NABIL Bank charges some amount i.e. Rs.50 for changing user ID and password whereas Laxmi bank charges Rs.15 for every third party fund transfer and Rs.150 annually to those who uses internet banking services. Besides this, except

above facilities Laxmi bank provides four other facilities IB which are, stop cheque, request for demand draft, opening L.C facility, and opening term deposits respectively. However, customers pay for internet connection on fees and charges to their internet service providers (ISP).

4.1.17 Rating and Rank of Internet Banking Services in Nepal

Performances and the features affected by any banks are the key elements for rating them. Here, researcher have rated the sample banks and given them their proper rank on the basis of their history of service provide, services and facilities provided by them to general public, fees and charges in transactions made through internet banking etc. However, only these may not be the appropriate criteria, there may be other factors also.

Table 4.1. 16: Rating and Rank of Internet Banking Services in Nepal

Banks	Ranks	Performances
Laxmi	1st	Excellent
Kumari	2nd	Very Good
NABIL	3rd	Good
HBL	4th	Average
NIBL	5th	Fair

Sources: Field Survey,2013

The result from table 4.1.17 suggests that Laxmi Bank is the number one bank with excellent performance in IB service providing. Kumari is in second position with very Good performance. Similarly, NABIL, HBL and NIBL are in third, fourth and fifth ranks consecutively with good, average and fair performance. Here, all the banks are in their early stages of development and introduction of internet banking services to their customers. However, researchers genuinely feel that in their early stages of IB services they should be encourages and motivated to provide new and new services, provide training regarding IB instead of ranking them to show how fast and slow they are:

4.2 Major Findings of the Study

On the basis of analysis of primary data collected from survey, secondary resources and other materials, main findings of the research study on "A Study On Internet Banking in Nepal: Present Status and Future Prospective" are as outlined below.

As traditional banking system is getting replaced with modern and fast banking channels like outline banking and internet banking, 58.67 percent of the consumers surveyed find to be dissatisfied with the traditional banking system only 25.33 percent were satisfied. This means majority of the bank consumer are looking for fast and convenient banking process. According to the perception of consumers, most important difficulties with the traditional banking system found to be time and convenience. From demographic profile it states that gender wise there are 73.33 percent male users and remaining 26.67 percent are female IB users. If we analyze IB users from ages then there are 9.33 percent of IB users are less than 20 years, 56 percent the greater number of IB users are of between age twenty one to thirty where, 29.33 percent are between age of thirty one to forty-five and IB users above age of forty are only 5.34 percent.

Similarly, the majority of IB services users is of bachelor degree and a greater percentage of users hold a master degree i.e. 48 percent and 26.67 percent respectively. So, the user groups can be considered as appreciably educated. More of the IB users i.e. around 32 percent are form business sector and very little proportion i.e. 5.33 percent of users are from government employee. If we see from income point of view then majority of IB users have income less than fifteen thousand and i.e. 46.67 percent. In this research researcher found that among seventy five responses 48 percent have computer knowledge whereas among them also 52 percent are regular internet users whose internet access point is home, work places or public cyber. Among banking customers also 40 percent of them have knowledge about internet banking where 22.67 percent of them do not have any IB knowledge. Number of people visiting banks weekly and monthly found to be 32 percent and 33.33 percent respectively. For getting banking services majority of people prefer personally visiting the banks i.e. around 66.67 percent. Here we also found that most of the

people prefer internet banking in today's period because it is more convenient 36 percent and twenty-four hours facilities from any location (33.33 percent).

Maximum number of IB users are 54.67 percent thinks that IB is reliable in Nepal whereas few number of users i.e.13.33 percent think IB is not reliable in Nepal. This research states that 52 percent of people say that IB is not properly working in Nepal whereas 29.33 percent believe that IB is working properly in Nepal. Due to the security reasons and lack of trust in internet services people are unwilling to use internet banking services. This study also shows that 22.67 percent of IB users predict that it will create unemployment problem in banks in near future whereas 30.67 percent says it will not and huge number of respondent i.e. around 32 percent of IB users are not sure about it. Another interesting test result was that 54.67 percent of customers told that NRB should make E-banking mandatory. This research also predict that, by the use of IB services and facilities it will help to increase in flow of remittance and deposits as well as it will enhance the overall efficiency of banks. Except fund transfer to every third party (Rs 15) charges and in time of changing user ID and password (Rs 50) charges banks do not charges any other fees in IB services. Finally on the basis of performance, and features offered to general public and survey it is found that LAXMI Bank is in number one position of IB service provider where KUMARI, NABIL, HBL and NIBL are in consecutive order and providing good services to the customers.

From the questionnaire survey of five sample banks IT officers or representative researcher found that Laxmi and Kumari Bank had started its IB services since 2002 A.D., NABIL started in, 2003 A.D., similarly, NIBL started its services since 2004 A.D. and HBL from the year 2005 A.D. respectively. The main reasons behind offering internet banking services was to set new global trend in banking area, attracting new customers, convenience, retaining old customers, to meet global competition, etc according to the IT officers/ representative of sample banks. Before launching IB services Laxmi Bank did testing of 4months, where NIBL did testing of 4-5 months, Kumari did 2 months, where NABIL and HBL said only yes but did not specify the testing period. Those who had once accessed IB they have facilities of viewing account balances, Bill payment, customer services by phone or e-mail, viewing account history, transfer of funds between accounts, viewing of loan

status, issuing stop payment orders online, online application for checking and saving account. E-corporate has been specially launch for corporate customers plus online LC request, trade finance, LC Bank guarantee are more other facilities by NABIL bank, where instruction cheque, stop instructions, examination of loan repayment schedule are offered by Kumari banks. The application forms available in website of these sample banks can be submitted either online or person should show his physical appearance in banks as per the bank rule. For the legitimacy of customers he/she should submit a copy of citizenship or passport, one passport size photograph and filled application form. With signature once registered customer have access to their accounts from any corner of world using internet. IB site operate in real time basis in all five sample banks. No, any employees of bank have access to the customer passwords. IT department of every bank is responsible for the safeguarding and presenting duplicate transactions and for that they have used control measures like hardware based firework software is installable, according to Laxmi bank IT officer. These all activities are review and monitor by IT department as per host bank rules.

HBL had encountered computer related crime i.e. relate with ATM, whereas other banks have not encountered such situation yet. In case of money lost also if correct user ID or password is login by anybody else. Then bank do not provide any warranty or guarantee. All five banks have disaster recovery site to encounter with an interruption of services of IB. To make IB services effective various trainings have been given to the IT professionals of banks. For this IB services banks are conducting cost analysis time to time and bearing those costs also by bank itself. In answer of the question can Nepalese internet banking services be compared with the internet banking services provided by other developed countries researcher get both answer Yes and No. Yes in terms of security measures, quality of services provided and No in terms of interbank and cross country transaction which is not possible under current regulatory provision and limited offers to the public. Regarding future plans about IB Laxmi bank has planned to provide same services and features over WAP. Similarly, NIBL is going to have corporate module, likewise. KUMARI, and HBL kept this information confidential whereas NABIL bank did not provide any information regarding their future plans.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the whole research study and it is divided into three sections. They are summary, conclusion and recommendations first section sum up the search study where second section draws a certain conclusion about the study and finally third one presents the suggestions and recommendations which may be fruitful for future implementations in Internet Banking in Nepal.

5.2 Summary

Due to competition among commercial banks and with the objectives of finding new market segments, Nepalese commercial banks are also recognizing the importance of electronic banking and adopting it as new channel of banking. Banks are providing new technology based banking services. Today our commercial banks are also offering new internet banking facilities which is very popular in west. IB is also called virtual banking which offers banking services through the worldwide web, and internet. For financial transaction customers do not need to go to the bank after opening an active bank account and once registered for IB. when application submitted by consumer is approved after analyzing the legitimacy about account holders name, address, profession, citizenship etc an IB account ID, user-name and password is given. By logging correct user name and password one can get as facilities like balance inquiry, fund transfer, loan processing bill payment, cheque book order, payment stay order, web shopping and many more services as offered by the host bank. S/he can access the banking services form any corner of the world at any time where internet services, computer and the website of host bank is available.

Among the five sample banks study, IB facilities provided by them are praiseworthy in today's era. Though they offer limited functionality their services can be comparable with developed countries facilities in terms of quality of services and security measures because these banks are also providing same software/hardware like Optus, Infosys, Globus, etc. It is found that main difficulties of IB in Nepal are

security; do not trust in internet services, lack of computer knowledge mostly. IB service is helping in expansion of market. It enables the organizations to interact with new and different suppliers and customers. Small and medium enterprises have endless opportunities to enter into the export market, which cannot only be supported by the local or national markets.

Nepal entered in the global market as member of WTO. Because of this the transactions system will be more voluminous. The trade and commerce sector and remittance is growing up in Nepal. Since, the banking transaction increases every year. The remittance system has also increased which force to provide more facilities to the business customers in a reliable and timely manner.

5.3 Conclusion

From this research study on "Internet Banking in Nepal and its necessity in today's Era" researcher had drawn certain conclusions regarding it. Only 25.33 percent of surveyed consumers were satisfied with the traditional banking system and 58.67 percent of them were looking for next alternative which would be more time saving, continent fast and reliable. Long processing, time consuming and in convenience of service delivery were found to be the main difficulties of traditional banking system. Similarly, 52 percent of the respondent in the survey were found to be using internet, whose internet access point are home, workplace and public cyber. 40 percent of them were already using IB and known about all IB facilities. Whereas 22.67 percent of the non-users of IB facilities, found to have been showing their keen interest to use Internet Banking in the future. Therefore, from this statistics also we can conclude that there are lots of opportunities and bright future of IB in Nepal.

In this study researcher had made discussion regarding background information on evolution of IB in Nepal, IB services available in Nepal. IB versus traditional banking, fees and charges regarding it, future vision and plans about IB, security and privacy issues, major difficulties in providing IB services, and its effect in flow of remittance and deposits, influence of IB in overall efficiency of banks and so on. Under it "A Study on Internet Banking in Nepal: Present Status and Future Prospective" was studied in detail. Here, IB was studied both from the perspective of customers as well as from the view point of IB service providers.

Internet banking is a means by which customers can manage their bank accounts and conduct real time banking transaction electronically over the internet. Under IB services customers can check their balances, see check status, transfer money from one account to another, view transaction history, as plus in addition, customers can also pay their bills of public utilities like water, telephone etc. and also shopping online. From the findings of this survey researcher knew that majority of IB customers have knowledge skills and ability to use the computers as well as internet. However, the awareness level is not so satisfactory. The study also depicted that the higher the need of acquiring banking services, greater the chances of using E-banking facilities. Most of the IB users still prefer to personally visit the bank premises than adopting the newer and advanced version of IB services. Another important conclusion of the study is that convenience is the key factor that has been encouraging the customers towards IB. The research also shows that the customers do not fully trust the internet services because of lack of strong cyber law. Without adequate security and protection people do not want any kind of risk by transacting via internet.

Both Laxmi and Kumari bank care considered as the pioneers of IB services in Nepal. However, sample banks NABIL, HBL, NIBL are coming up with innovative ideas and promotion in providing online services. Laxmi and Kumari bank are among the top IB service providers in Nepal so, one of the objective of this study was to determine the best IB service provider in Nepal also. Lastly, this research also concludes that due to use of IB services in Nepalese commercial banks it enhances the overall efficiency of banks.

5.4 Recommendations:

As this study was executed with in the short span of time period and with limited sample data from the population, generalization of the findings is hard to make but this study can be a stepping stone towards more rigorous study on this topic. However on the basis of analysis of surveyed data, literature review and findings of the study, following are some recommendations which will be fruitful for proper implementation of IB, setting future plans and for new researchers for:

Since, IB in Nepal is in its initial phase and lots of aspects of IB in Nepal are yet to be evolved. So, consumer should consider these facts and should be aware with the

computer and internet knowledge, and ITC at some level to understand the technological aspects of IB and use it properly.

Consumer always should be always concerned and aware about the security of IB information. They should follow precautions while using IB and security password. The security products of both hardware and software application based system should be adopted.

Banks should put domo in internet about how to use IB services and published manual book, leaflets, browsers regarding IB services and facilities.

For the greater awareness of IB, Ministry of education and sports, T.U. and others universities of Nepal, institutes giving education related to information and communication should incorporate the IB in the educational curriculum as well and they should educate consumers about the IB, because in near future it is sure that IB will not be only service provided by banks but also the compulsory and necessary body of banking activities.

Different government bodies like Ministry of information and communication Ministry of science and technology, national planning commission, technology and other organizations like PNCCI, Bankers association of Nepal, NRB, CAN, ISPS, ITC companies, vendors of computer hardware and software should work in coordinated way to make internet banking services a secure, reliable and effective.

New laws, rules and regulations, cyber law relating to IB should be enacted. Legislative body should consider for this with detail consultation with all the key stakeholders of IB like NRB, management of commercial banks, IT professionals, concern government authorities, ITC services providers, bankers association, consumer representatives, ITC services providers, bankers association, consumer representatives and consumer right protection activists and organizations.

A regulating and directing body as central vigilance commission (CRV) for minimizing frauds, and this body should direct all the banks to compulsorily offer electronic clearance services (ECS) to their consumers. Further more these should be a government organization, which should provide communication backbone for ECS service.

At any time banks should be ready to exploit the opportunities that globalization and financial liberalization provides

IB facilities and services should be decentralized in every branches of banks of Nepal, it should not be capital centered.

Various training programmes, and workshops related with use of current IB system should be organized and implement in an effective way.

IT sectors should be closely collaborating with the banking sector in providing IB services and other facilities at cost effective price.

All the banks should provide power back up and data recovery systems for their IB services in case of power failure, incomplete transactions etc. Also a constantly monitory system should be used to ensure accuracy of transaction processed or recovered.

As customer's complaint is very crucial to be handled as a first priority by the banks. Otherwise bank can also lose the confidence and trust of the customer if they do not give a reply immediately. For new users, the bank should furnish defiled instructions for performing transactions on the internet.

5.4.1 Recommendations for Further Research

In today's era internet banking is a new business, which is adopting by most of the commercial banks of Nepal. This study has focuses on customer perception it is necessary to identify the many other aspects of IB. Having the information regarding ATM facilities, its customers which is a part of IB services researcher has not much focus on ATM users and services.

Regarding this study also a big sample size is attractive to accurately evaluate the perception of customer's services in the IB. As it is clearly stated above, there is still many issues can be studied and explained, so due to research experience, the researcher has suggested further researcher to functionalize further aspects:

- Select larger number of respondents on the same study to get more accurate results.
- Future studies on understanding the attitudes towards IB and its services.
- Comparative study and analysis of IB among sample banks by analyzing their historic data.
- Comparison of Nepalese banks IB services with the banks of other developed countries like UK, USA and Australia.

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ANNEXES

Annex 1: Questionnaire for Bankers

Dear respondents,

This questionnaire is designed in partial fulfillment of …… My research is regarding **Internet banking in Nepal and its necessity in today's Era**. The information you will provide will help me better understand the Overall internet banking services in Nepalese context. I therefore request you to respond to the questions frankly and honestly. Your contribution and valuable response will be highly appreciable and would be kept confidential.

Name of the bank under examination:

Bank's website address:

1) Demographics

a) Your designation

b) Contact number

2) When did u start offering internet banking?

…….

3) What was your reasoning for offering internet banking services?

a) Profit b) Convenience c) Retain customers

d) Competition e) New customer's f) Customer's request

g) New global trend in banking arena h)Other, explain

4) Was testing done with employees before offering internet banking to customers?

a) Yes b) No c) If yes, what date did testing with employees start?

5) What options are available to the customers once they have accessed internet banking?

	Viewing of account balances		Transfer of funds between accounts
	Bill payment		Online application for checking and saving account
	Customer service by phone or email		Viewing of loan status and credit card information
	Viewing of account history		Issuing stop payment orders online
	Ordering checks online		Others

6) Are loan and deposit rates posted to the bank's website?

a) Yes b) No

If yes, how often are they updated and who is responsible for updating?

7) Are any application forms available on the website?

a) Yes b) No

8) If applications are available on the websites, how does the customer submit them?

a) Fax b) Online c) Mail d) in person e) other, please

9) Does the bank verify the legitimacy of the customer who has submitted the application?

a) Yes b) No c) if yes, how is it verified?

10) What services (if any) are customers being charged for and how much?

11) Do they have access to their accounts form any part of the world using internet?

a) Yes b) No

12) What type of environment does the internet banking site operate in?

a) Real time b) Batch processing

13) Do employees have access to customer passwords?

a) Yes b) No

14) Are safeguards in place to detect and prevent duplicate transactions?

a) Yes b) No

15) Is an intrusion detection system in place?

a) Yes b) No c) if yes, how frequently is it tested?

Who is responsible for testing it?

Who is responsible for reviewing it and monitoring the activity?

16) Are controls or procedures in place for any of the following?

Yes No Prevention of hackers from accessing the system

Yes No Prevention of line tapping

Yes No Discovered intrusion attacks

Yes No Attacks after hours

if any are yes, please explain …….

17) Does management keep up-to-date on addressing newly disclosed security threats to the computer operating system and application software?

a) Yes b) No

18) Has the bank encountered any computer related crime?

a) Yes b) No

c) If yes, what was the nature of the crime and was a suspicious activity report filed?

19) Are there procedures for verifying the legitimacy of customer requests for changes to their accounts or customer information?

a) Yes b) No c) If yes, describe the procedures

20) How many customers are signed up for internet banking and/or bill payment?

……

21) Does the bank provide guarantee or warranty when a payment is not properly made through bill payment system?

Yes No If yes, what is the guarantee or warrantee?

Yes No NA

Has it been reviewed by the legal counsel?

22) Does the bank have procedures in place for when there is an interruption of service of internet banking for the customer? (Contingency plan)

a) Yes b) No

c) Due to disaster (natural, human, technological) at the bank level

Yes No Due to disaster (natural, human, technological) at the vendor level

23) Do IT professionals participate in training programs?

a) Yes b) No c) If yes, what type of programs?

24) Is electronic banking training provided to other officers and employees of the bank?

a) Yes b) No

25) Did the bank do a cost analysis specifically on electronic banking?

a) Yes b) No

26) What sort of problems are banks facing in providing internet banking services?

……

27) Are customers satisfied with the present internet banking services of the bank?

a) Yes b) No

28) Do customers complain regarding the system?

a) Yes b) No

c) If yes, what are the major types of complaints made by the users till date?

29) Has management established program and/or procedure for the following?

Yes No customer service, support and education-if yes, describe

Yes No customer demands, problems and complaints-if yes, describe

30) How do you think is the bank benefiting by providing internet banking services?

……

31) Can Nepalese internet banking service be compared with the internet banking services provided by other developed countries?

a) Yes b) No c) if yes, on what grounds?

32) What are the internet banking services provided by the bank, and what are the charges levied by bank for allowing the customers to use the services?

33) What are the internet banking services provided by the bank, and what are the charges levied by bank for allowing the customers to use the services?

1.	Inquiry about outstanding balance			
2.	Fund transfer between accounts			
3.	Transfer payment for public utilities (telephone, electricity)			
4.	Print account statement			
5.	Inquiry about credit card ATM card			
6.	Inquiry about currency and exchange rate			
7.	Inquiry about bank interest rate			
8.	Inquiry about news and business information			
9.	Inquiry about economic data and information			
10.	Web-shopping on internet			
11.	Change user ID and password			
12.	E-phone banking on the internet			
13.	E-cash card on the internet			

Other facilities provided by the bank not included in the table, please specify

Comments:-

Thank you for your valuable contribution!

Annex 2: Questionnaire for Users

Dear respondents,

This questionnaire is a designed in partial fulfillment of MBS program of ……. My research is regarding **Internet banking in Nepal and its necessity in today's Era**. The information you will provide will help me to better understand the Overall internet banking services in Nepalese context. I therefore request you to respond to the questions frankly and honestly. Your contribution and valuable response will be highly appreciable and would be kept confidential.

Please mark with (√) for option you have selected as answer for the question asked.

Name:

Education:

Contact:

1) Customer Profile:

- Gender: a) Male b) Female
- Age: a) Less than 20 b) 20-30 c) 31-45 d)Master Degree
- Education: a) Under Graduate b) Bachelor Degree c) Master Degree d) Doctor Degree
- Job related:
  a) Education b) Industry c) Government d)Business e) Others
- Income Per month:
  a) Less than 15,000 b) 15001-40,000 c) more than 40,000
- Level of computer literacy:
  a) Don't know anything at all about computer
  b) Have some knowledge about it, but not enough to use computer

c) Have more knowledge about computer and be able to use them
d) Skilled in computer

- Knowledge about internet:
  a) Don't know anything b) Little knowledge just to check mails
  c) Regular user (entertainment) d) Working through web/e-business

- What do you know about the term "Internet Banking"?
  a) Just for money transfer from one account to other (payment for public utilities)
  b) Just to do inquiry to banks about its banking facilities through internet.
  c) Just to do web shopping on the internet
  d) Providing banking services and financial transfer through internet
  e) All of the above f) None of the above

2) How often do you have to visit your bank?
a) Daily b) Weekly c) Monthly d) Quarterly
e) Semi annually f) Annually

3) How do you prefer to get the banking service?
a) You personally go to the bank premises b) You bank through internet
c) You bank through mobile d) All of the above e) None of the above

4) Why do you think people prefer internet banking today?
a) Because you don't have to personally visit the bank
b) Because you can bank 24 hours form any location
c) Because you find it more convenient
d) Because it saves lots of cost

5) Do you know about the internet banking (IB) facility provided by these commercial banks in Nepal?

Banks Name	Aware		Not Aware	
	Provide IB	Not provide IB	Don't Know	No Answer
Kumari Bank				

Nepal Inv.Bank Ltd.				
Laxmi Bank				
Nabil Bank				
Himalayan Bank Ltd.				

6) Do you internet banking in Nepal is good enough to rely on?

a) Yes b) No c) Not Sure

7) In your opinion, why are people unwilling to use internet banking in Nepal?

- Concerned about security
- Do not trust internet services
- Do not see benefits of internet banking services
- Never heard about internet banking services
- Too difficult to use
- Do not want to use it
- Take too muck time to learn how to use it
- Not available through my bank
- No access to computer at work and home
- Too expensive to use
- Not qualified to open an account
- No computer skill

8) Which internet banking services have you used provided by the following banks?

No.	Internet banking services	Banks				
		Kumari Bank	NIBL	Nabil Bank	Laxmi Bank	Himalayan Bank
1	Inquiry about outstanding balance					
2	Funds transfer between accounts					
3	Transfer payment for public utilities (telephone, electricity)					
4	Print account statement					

5	Inquiry about credit card and ATM card					
6	Inquiry about currency and exchange rate					
7	Inquiry about bank interest rate					
8	Inquiry about news and business information					
9	Inquiry about economic data and information					
10	Web shopping on the internet					
11	Change user ID and Password					
12	e-phone banking on the internet					
13	e-cash card on the internet					

9) Rate these banks form 1 to 5 according to their services regarding internet banking; rate 1 for best, 2 for good, 3 for average, 4 for below average and 5 for poor performance.

Bank Name	1	2	3	4	5
Kumari Bank					
NIBL					
Laxmi Bank					
Nabil Bank					
Himalayan Bank					

10) Fees and charges for internet based transaction on internet banking services available:

No.	Internet banking services	Kumari Bank	NIBL	Nabil Bank	Laxmi Bank	Himalayan Bank
1	Inquiry about outstanding balance					
2	Funds transfer between					

	accounts					
3	Transfer payment for public utilities					
	(telephone, electricity)					
4	Print account statement					
5	Inquiry about credit card and ATM card					
6	Inquiry about currency and exchange rate					
7	Inquiry about Bank interest rate					
8	Inquiry about news and business information					
9	Inquiry about economic data and information					
10	Web shopping on the internet					
11	Change user ID and Password					
12	e-phone banking on the internet					
13	e-cash card on the internet					

11) What is your internet access point?

(a) Home (b) Work place (c) Public internet access point

12) Are you satisfy with traditional banking system?

(a) Yes (b) No

13) Do you think internet banking is working properly in Nepal?

(a) Yes (b) No

14) Do you think Nepal Rastra Bank should make electronic banking mandatory?

(a) Yes (b) No (c) Don't know

15) Does internet banking create unemployment problem?

(a) Yes (b) No (c) Not Sure

16) Does it increase the flow of remittance and deposits?

(a) Yes (b) No (c) Not Sure

17) Does it enhance the overall efficiency of bank?

(a) Yes (b) No (c) Can't Say

18) Comments:

……

…

Thank you for your valuable contribution!!

Annex 3: Chi-Square test

Table 1

Chi-Square

Frequencies

Bank_Visit

	Observed N	Expected N	Residual
Daily	15	10.7	4.3
Weekly	24	10.7	13.3
Monthly	25	10.7	14.3
Quarterly	5	10.7	-5.7
Semi-Annually	3	10.7	-7.7
Annually	2	10.7	-8.7
No Response	1	10.7	-9.7
Total	75		

Test Statistics

	Bank_Visit
Chi-Square	61.733[a]
df	6
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.7.

Table 2

Chi-Square

Frequencies

Preference_in_getting_banking_services

	Observed N	Expected N	Residual
Personally visit bank premises	50	15.0	35.0
Yo prefer service through mobile	2	15.0	-13.0
You prefer service through internet	6	15.0	-9.0
All of above	14	15.0	-1.0
No response	3	15.0	-12.0
Total	75		

Test Statistics

	Preference_in_getting_banking_services
Chi-Square	108.000[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.0.

Table 3

Chi-Square

Frequencies

Responses

	Observed N	Expected N	Residual
Yes	41	18.8	22.2
No	10	18.8	-8.8
Not Sure	20	18.8	1.2
Not Response	4	18.8	-14.8
Total	75		

Test Statistics

	Responses
Chi-Square	42.173[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.8.

Table 4

Chi-Square

Frequencies

Responses

	Observed N	Expected N	Residual
Yes	19	25.0	-6.0
No	44	25.0	19.0
Not Sure	12	25.0	-13.0
Total	75		

Test Statistics

	Responses
Chi-Square	22.640[a]
df	2
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

Table 5

Chi-Square

Frequencies

Effectiveness_of_IB_in_Nepal

	Observed N	Expected N	Residual
Yes	22	25.0	-3.0
No	39	25.0	14.0
Not Sure	14	25.0	-11.0
Total	75		

Test Statistics

	Effectiveness_of_IB_in_Nepal
Chi-Square	13.040[a]
df	2
Asymp. Sig.	.001

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

Table 6

Chi-Square

Frequencies

Creating_Unemployment_Problem

	Observed N	Expected N	Residual
Yes	17	18.8	-1.8
No	23	18.8	4.2
Not Sure	24	18.8	5.2
No Response	11	18.8	-7.8
Total	75		

Test Statistics

	Creating_ Unemployme nt_Problem
Chi-Square	5.800[a]
df	3
Asymp. Sig.	.122

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.8.

Table 7

Chi-Square

Frequencies

Is_e_banking_Mandatory

	Observed N	Expected N	Residual
Yes	41	18.8	22.2
No	4	18.8	-14.8
Not Sure	19	18.8	.2
No Response	11	18.8	-7.8
Total	75		

Test Statistics

	Is_e_ banking_ Mandatory
Chi-Square	41.213[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.8.

Table 8

Chi-Square

Frequencies

Effect_inflow_of_Remittance_and_Deposit

	Observed N	Expected N	Residual
Yes	35	18.8	16.2
No	4	18.8	-14.8
Not Sure	24	18.8	5.2
No Response	12	18.8	-6.8
Total	75		

Test Statistics

	Effect_inflow_of_Remittance_and_Deposit
Chi-Square	29.587[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.8.

Table 9

Chi-Square

Frequencies

Creating_Unemployment_Problem

	Observed N	Expected N	Residual
Yes	43	18.8	24.2
No	3	18.8	-15.8
Not Sure	17	18.8	-1.8
No Response	12	18.8	-6.8
Total	75		

Test Statistics

	Creating_Unemployment_Problem
Chi-Square	47.187[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 18.8.

Table 10

Chi-Square

Frequencies

Reasons_for_preferring_IB

	Observed N	Expected N	Residual
You dont have to personally visit the bank	8	15.0	-7.0
24 hrs facilities from any location	25	15.0	10.0
Because fo more convenient	27	15.0	12.0
Because it saves lot of costs	8	15.0	-7.0
No response	7	15.0	-8.0
Total	75		

Test Statistics

	Reasons_ for_ preferring_IB
Chi-Square	27.067[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.0.