

CHAPTER 1

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 \$320 (US dollar), economic growth rate is around 2.5 percent. Likewise the adult literacy rate above age of 15 is around 40.6 percent. As we know this 21st century is the period of information technology. According to the FNCCI report 2008 the persons using communication facilities per 1000 people who uses telephone is 15, whereas cellular subscribers and internet users are 7 and 7 respectively.

For the overall development of any country its economic development plays a vital role. No any change can 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 sectors 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 2008/2009-2009/10 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 800 approximately. Some of banks have aimed to expand their branches up to 50. Those banks which have been closed due to safety reason are also re-launching their branches.

In Last year only, five new development banks had been added while the increment in number of commercial banks was only one and that was “KIST Bank”. Besides three more micro finances have been added. Recently, “Century Commercial Bank” has been launched and number of commercial banks reached 32.

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 “RastriyaBaniija 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 nodes: 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 to 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 et al.,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 et al., 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 mean 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 (Mattilaetal., 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.

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).

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 Statement of the Problems

Though all the banking sectors are doing well, these days except few. They are increasing in the midst of Competition. Manually their activities are appreciable but due to lack of online or net base working activities. It is perceived that the banks are not performing well.

Today Nepalese commercial banks are generally find to have been adopting the services of internet banking as competitive tools. 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 quite ambiguity for the application of internet banking.

The internet banking customers such as internet shoppers and electronic commerce business that 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.

-) 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 in this present context and future perspective is necessary?
-) What methods of tools and techniques are adopted for implementation of internet banking?
-) What are the problems faced by Nepalese banks while adopting internet banking services?

1.3 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 and 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 aimed to be achieved in this research work are as follows:

-) To explore how internet banking is evolved in Nepal to find out the reasons for

adopting it.

-) To examine the facilities provided by banks to their customers.
-) To evaluate the cost involved in IB services in association with the banks and customers.
-) To examine the opportunities and threats of adopting E-banking system in the present context.

1.4 Significance and focus of the Study

It is obvious that in future days no banks can survive without application of internet banking. Hence, banks need to be prepared to exploit the opportunities that globalization and financial liberalization provide. 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 of 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 suggests about the further improvements which should be made in banking system. 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 to promote internet banking in Nepalese Banking system. It also suggest for further improvements which should be made in banking system. Such type of study will be baseline for the future researchers too.

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 inquiry, statement of transactions , fund transfer 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 some 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 important the IB and what could be its problems and prospects of operating internet banking in today's Nepalese Banking system?

1.5 Limitation of the Study

The time available for this study was limited, due to the multi 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 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 were not aware of or did 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 selected 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 various information's regarding the subject matter. Interview conducted within the concerned department officials and the survey was done among the internet banking users has been the main sources of primary data.

However, some other limitations are:

- 1) This study has been prepared as a part of partial fulfillment of MBS degree and

adequacy of the study might have weakened due to time resource, constraint.

- 2) This research is only a descriptive study on internet banking in Nepalese Banking system.
- 3) 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.
- 4) This study has been done with limited volume of population sample, and findings of the study cannot be fully generalize as more rigorous study is needed with initial reference from this study.

1.6 Organization of the Study

The study has been divided into 5 chapters. In first chapter, it includes a part of introduction which contains general background, statement of the problems, objectives of the study, significance and focus of the study, limitations of the study and organization of the study. Likewise, in second chapter, it presents literature of review. In this chapter it deals with the review of available literature and concludes conceptual/theoretical review, review of books, article and previous thesis etc. In third chapter, research methodology part has been covered on the study of organization. It deals with research design, sample and sources of data and methods of analysis. In the same way, chapter forth implies of data presentation and analysis. In this chapter mainly concerns to analyze and evaluate data with the help of analytical tools, procedures and interprets the results obtains. Lastly fifth chapter, concludes a summary, conclusions and recommendation. It sums of the results obtained through analysis and recommends some suggestions. This chapter will highlight the major findings of the study.

CHAPTER-2

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 reviews the relevant dissertations and concerned reports.

2.1 Theoretical Review

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

2.1.1 Concept Bank and its History

Bank is a financial institution that accepts deposits and channels the money into lending activities. Bank is also a mediator between supply and demand of fund. Bank is a commercial or state institution that provides financial services, including issuing money in form of coins, banknotes or debit cards, receiving deposits of money, lending money and processing banking transactions. A commercial bank accepts deposits from customer and in turn makes loans based on those deposits. Some banks (called bank of issue) issue banknotes as legal tenders. Bank also offers ancillary financial services to make additional profits. Most banks also rent safe deposit boxes in their branches. The essential functions of a bank are to provide services related to the storing of deposits and the extending of credit. The word **Bank** first originated from Italian word **banco**"desk/bench", used during the renaissance by Florentines bankers, who used to make their transaction above the desk. The first modern bank was founded in Italy at Genoa in 1406;its name was "**Banco di San George**" (Bank of St. George).

Bank act as payment agents by conducting checking or current accounts for customers, paying cheques drawn by customers on the bank, and collecting cheques deposited to customers' current accounts. Banks also enable customer payments via other payment methods such as telegraphic transfer, EFTPOS, and ATM. Activities of the bank can be divided into retail banking, dealing directly with individuals and small businesses; business banking, directed at large business entities; private banking, providing wealth management services to High Net Worth Individuals and families; and investment are profit-making private enterprises. However, some are owned by government, or are non-profits, central banks are normally government owned banks, often charged with quasi-regulatory responsibilities, e.g. supervising commercial banks, or controlling the cash interest rate. They generally provide liquidity to the banking system and act as Lender of last resort in event of a crisis.

In the history of human civilization it is found that banking invention preceded even that of coinage. Banking originated in Ancient Mesopotamia where the royal palaces and temples provided secure places for the safe keeping of grains and other commodities. Receipts came to be used for transfers not only to the original depositors but also third parties. Eventually, private houses in Mesopotamia also got involved in these banking operations and laws regulating them were included in the code of Hammurabi. The evolution of banking dates back to the earliest writing and continues in the present where a bank is a financial institution that provides banking and other financial services. Currently the term bank is generally understood as an institution that holds a banking license to provide banking services.

2.1.2 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 Radodipsingh a number of financial and economic reforms were introduced. The establishment of the “TejarathAdda” fully subscribed by government in the Kathmandu valley was one of them. “TejarathAdda” disbursed a credit to the people especially on the collateral of gold and silver. Thus, the establishment of the “TajarathAdda” could be regarded as the first pillar 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 RastriyaBanijya Bank was established in 1966 A.D. Besides Nepal Bank Limited and RastriyaBanijya 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 32 commercial banks, 83 development banks, 79 finance companies, 19 micro credit development banks, 16 cooperatives and 45 NGO's list of bank and non-bank with limited authority are providing a banking services in Nepal

2.1.3 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 (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking and phone banking, SMS 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. (Mahatn.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. 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 modems 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.

2.1.4 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 we can live single day without food but without the technology like mobile, computers no way. 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 CAN Info Tech reached around 5,00,000 in year 2011. 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

1	First computer	1972 A.D.	9	Cellular mobile subscribers	3,85,996
2	Personal computer	1980 A.D.	10	WLL Subscribers	45,032
3	Internet service	1994 A.D.	11	GMPCS	358
4	Internet service providers	36	12	VSAT service provider	10
5	Radio raging opera	8	13	VSAT users	90
6	Video conferencing	1	14	Code ISP	3
7	Fax mail services operators	6	15	No. of registered internet user	7,55,437
8	Fixed telephone subscribers	4,70,212			

Sources: (Annapurna Post 13thApril, 2010)

2.1.5 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).

2.1.6 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.

2.1.6.1 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. At present around 1.15 million user of SCT network in Nepal. Similarly, there are 870 ATM outlets all over the country 2067 (B.S.).

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 development 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) from 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.

2.1.6.2 Instruments Used in Electronic Banking

Credit Card

Credit card provides 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 Chattered 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.

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.

Advanta Computer Card

Business can apply for the Advanta Platinum Business MasterCard 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.

2.1.7 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.

2.1.7.1 Evolution of Banking

Banking started in Nepal in 1937 by "Nepal Bank Limited"(Government Sector)

2.1.7.2 Evolution of Joint Venture (JV) Banks and e-Banking

1. Establishment of first Joint Venture Bank, Nepal Arab Bank Limited (now NABIL Bank), in 1984.
2. Introduction of Credit Cards in Nepal in early 1990 (NABIL bank)
 -) Automated Teller Machine (ATM) was first introduced by another JV Bank, Himalayan Bank Ltd, in 1995
3. Himalayan Bank Ltd. was also the first bank to introduce Tele-banking (Telephone Banking) in Nepal.

2.1.7.3 Major milestones

-) Evolution of Joint Venture Bank in Nepal (NABIL Bank) in 1984.
-) Introduction of Credit Cards in 1980.
-) Establishment of first ISP I 1994 (Mercantile Office System)
-) First ATM lunched by Himalayan Bank Ltd, in 1995.
-) Himalayan Bank Ltd 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).

2.1.8 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 Sieviewright, 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.

2.1.9 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 believe 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 bear 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 RastriyaBankjya 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.

2.1.10 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 totality 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 andhas 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 sometime 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.

2.2 Empirical Review

2.2.1 Review of Articles

Troy J. Strader and Anthony R. Hendrickson has 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 off 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, and 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 explanation 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.

SurendraBhandari CEO of 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, anytime and anywhere via the internet.
-) Basically, it does not involve any physical exchange of money.
-) Internet banking services are of two types. They are Financial and 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.

Internet 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 are 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 internet users in Nepal.

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 become 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.

2.2.2 Review of Thesis Works

According to the research study by DevinderThapa 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 5 percent are satisfied with the traditional banking system.
-) Time was the main problem for 95 percent of the surveyed people.
-) Opinion of the 95 percent 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 PrabalKhanal 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 KathmanduValley 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 banks just 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-3

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 Necessity in Nepalese Banking System" some analytical process were also used as per the need and simple chart of research design.

3.3 Population and Sample

As this research aims at studying the “Internet Banking in Nepal and Necessity in Nepalese Banking System”, taking all commercial banks, as the population and Laxmi

banks as sample for the study.

3.4 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 primary data. However secondary data and primary data and information will be obtained through informal discussions' survey method, questionnaires etc. secondary data will be collected from the websites, annual publications, financial reports of related banks, NRB research and information and technology department, 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 experts will also be included in this research work as far as possible.

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 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 programmers like MS word and MS excel will also be used to record data and process them.

3.5.1 Used Methods

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

Quantitative methods

-) Percentage
-) Arithmetic mean
-) Historical diagram
-) Pie Charts

CHAPTER-4

PRESENTATION AND ANALYSIS OF DATA

Data presentation and analysis and interpretation always plays vital role in the research study as this part gives the most important information from the research study. In this chapter all the data collected from different sources are first recorded in a proper manner then they are analyzed and presented using various mathematical, graphic and analytical tools and outcomes are interpreted. This process leads towards the finding of the study according to the set objectives of the study, this chapter has very important role to play and bring the study to a meaningful outcome. During the preparation of this chapter all the information collected from survey and secondary sources recorded and processed using computer programs and then outcomes were analyzed, presented and interpreted.

4.1. Data Presentation

4.1.1. Age Distribution among Respondents

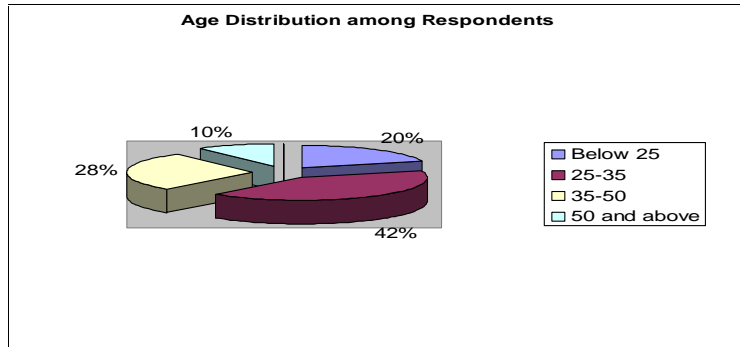
Table No : 1

Age Distribution among Respondents		
Age group	Frequency	Percentage
Below 25	20	20%
25-35	42	42%
35-50	28	28%
Above 50	10	10%
Total	100	100%

Sources: Field survey 2012

The respondents are categorized in four different groups. And 42% of the respondents lies in the age group of 25-35, 28% lies in the age group of 35-50. It shows that the highest percentage of the respondents lies in the age group of 25-50 i.e. 70% (combination of the age group of 25-35 and 35-50).

Figure No : 1 Age Distribution among Respondents



4.1.2. Internet Access

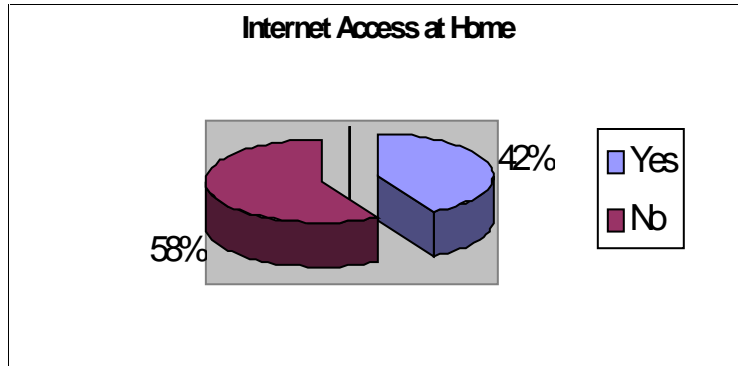
Table No : 2

Internet Access		
Internet Access	Frequency	Percentage
Yes	42	42%
No	58	58%

Sources: Field survey 2012

Most of the respondents do not have Internet access at their home. This shows that customers use Internet from the outside i.e. cyber cafe and office. Therefore the proper Internet access to different part of the valley may be hindrance on using Internet services.

Figure No : 2 Internet Access



4.1.3. Knowledge on Internet Banking

Table No : 3

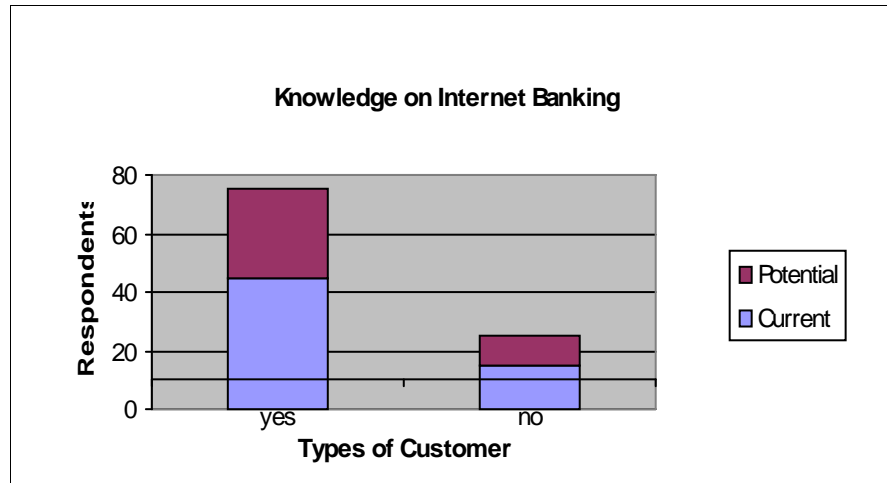
Knowledge on Internet Banking			
Internet Banking	Current	Potential	Total
Yes	45	30	75
No	15	10	25

Sources: Field survey 2011

Most of the banks customers know about the Internet banking. The knowledge means that they know the banks have been providing online/Internet banking services. They know about Internet banking services but don't have the exactly knowledge on how the whole system works of Internet banking.

Few of the customers i.e. 25 out of 100 respondents don't have any idea of Internet banking services. They are the traditional banking services users and uneducated people who use bank services mostly for deposits and withdrawals.

Figure No : 3 Knowledge on Internet Banking



4.1.4. Internet Banking Users

According to the analysis of consumers' perceptions regarding traditional banking, the research has found that consumers are not satisfied with the traditional banking and they were looking for fast and convenient banking services. On the other hand, in the developed world Internet banking is gaining popularity as fast, time saving and very convenient channel of banking. But for the adoption of such techno-savvy banking, consumers' need to be familiar with the modern online and Internet culture. According to objectives of studying present scenario of IB and future prospective of IB in Nepal, the research study also tried to find out online culture in Nepal and use of Internet banking in Nepal. And, research study findings on these aspects are presented in the following tables and figures.

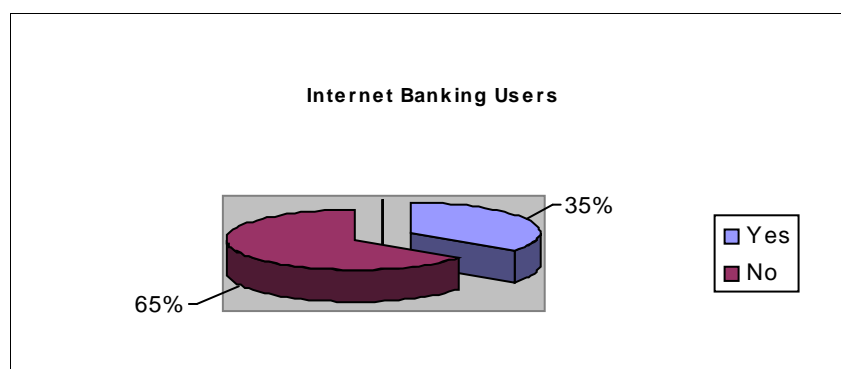
Table No : 4

Internet Banking Users		
Users	Frequency	Percentage
Yes	35	35%
No	65	65%

Sources: Field survey 2012

As found above that only 42% of the respondents use Internet and only 35 out of 100 use Internet banking. It shows percentage of Internet banking users is very less. It may be due to the lack of computer or lack of knowledge on Internet.

Figure No : 4 Internet Banking Users



4.1.5. Use of Bank Services

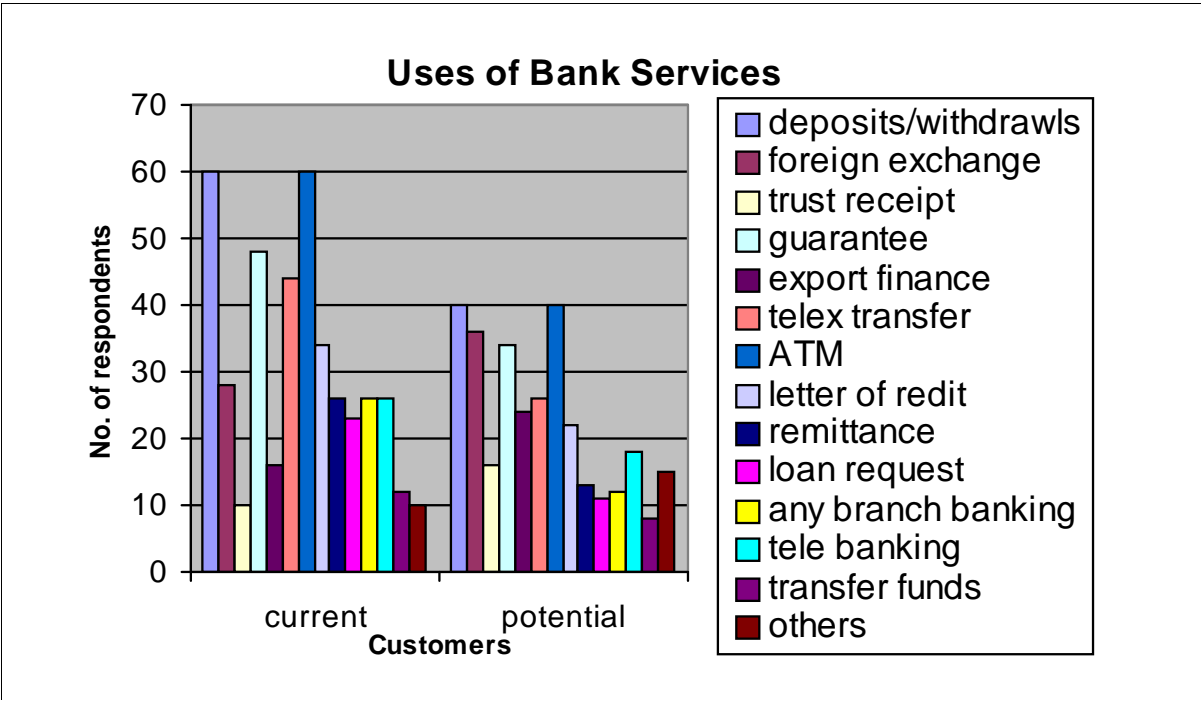
Table No : 5

Use of Bank Services					
Services	Current	Potential	Total	Percentage	
				Current	Potential
Deposits/Withdrawals	60	40	100	100%	100%
Foreign Exchange	28	36	64	47%	90%
Trust Receipt	10	16	26	17%	40%
Guarantee	48	34	82	80%	85%
Export Finance	16	24	40	27%	60%
Telex/ Wire Transfer	44	26	70	73%	65%
ATM	60	40	100	100%	100%
Letter of Credit	34	22	56	57%	55%
Remittance	26	13	39	43%	33%
Loan Request	23	11	34	38%	28%
Any Branch Banking	26	12	38	43%	30%
Tele Banking	26	18	44	43%	45%
Transfer funds	12	8	20	20%	20%
Others	10	15	25	17%	38%

Sources: Field survey 2012

Mostly the bank customers use the services of Deposits and Withdrawals. With today modern technology customer are using ATM, Tele-banking, etc. ATM users' rate is more in banks as per collected information. Trust receipt, Export Finance, transfer between accounts, any branch banking etc. is the least services that the customers are using. Beside the various services provided by the banks, customers use the general services of the Bank. Average use of all the services is not found on this marketing research study.

Figure No : 5 Use of Bank Services



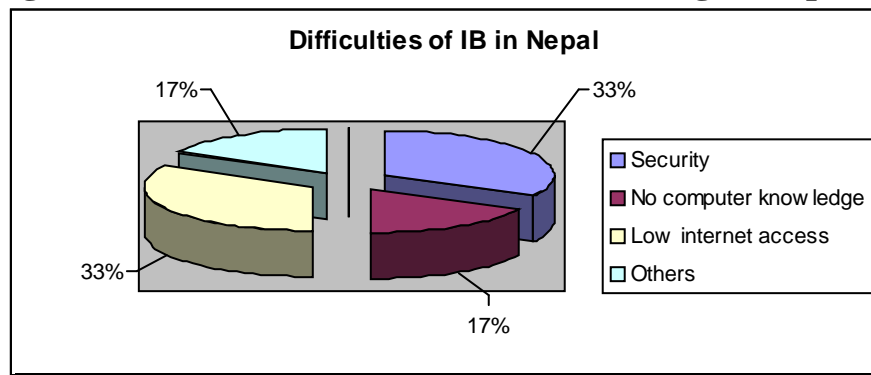
4.1.6. Feasibility and difficulties of Internet Banking

During the research activities, bankers and IB professionals of sample banks of the survey were asked to give their opinion about the feasibility of Internet banking in Nepal and its difficulties and their responses were found to be as following.

The users of Internet banking agreed unanimously that Internet banking is feasible in

Nepal. They were further asked to give their opinion about the factor of feasibility for IB in Nepal. Time was the most important factor of feasibility for 50% of them and it was easy accessibility of banking services for others. According to their opinion fast and time saving banking and easily accessible Internet banking will make it feasible in Nepal. The research study tried to find out the difficulties of IB in Nepal from the Banker's point of view and they were asked that whether IB is working properly in Nepal. Then, 50% of the respondent said that it was working properly but other 50% didn't agree with it. When they were asked to point out the most important difficulties with the Internet banking in Nepal, the researcher found the responses as depicted in the following figure.

Figure No : 6 Difficulties of internet Banking in Nepal



As per the data above, security and low internet access were main difficulties of IB in Nepal. As data hacking, misuse and unauthorized access of information are some of important problems in online world it is oblivious that security is one of the dominant problems in the IB of Nepal also.

4.1.7. Most demanded IB facilities/services in Nepal

One of the objectives of this research study was to study the future prospective of IB in Nepal. Therefore, the study tried to find out most demanded IB services among consumers who were using IB and intended to use IB. They were asked to choose one or multiple options. Sample consumers in the survey selected different Internet banking services given in the questionnaire as options as per their preference.

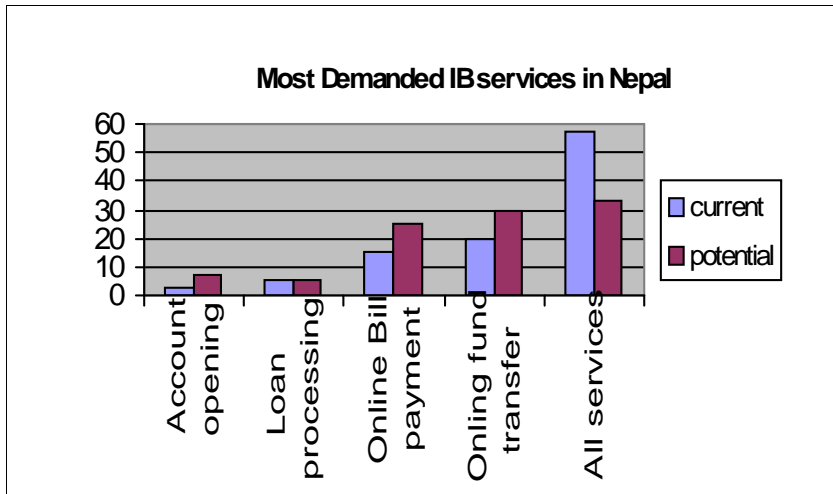
Table No : 6

Most demanded IB services/facilities in Nepal			
Facilities	Current	Potential	Total
Account opening	3	7	10
Loan Processing	5	5	10
Online bill payment	15	25	40
Online fund transfer	20	30	50
All services	57	33	90

Sources: Field survey 2012

According to the Table above, it was found that most of the consumers surveyed want all IB services. From the above table we can see that 10%(3+7) of the customers use only account opening service, 10%(5+5) of the customers use Loan processing, 40%(15+25) of the customers use online bill payment, 50% of the customers use online fund transfer and among them 90% of the surveyed customers use all services of Internet Banking.

Figure No : 7 Most demanded IB services/facilities in Nepal



From the figure no 6 above, it is clear that consumers are demanding all kind of IB services as 3% consumers of the survey said that they want all types of IB services. Similarly, consumers who were already using IB were asked that which type of IB service they frequently use and around 85% of them said that they were using Bank statement

inquiry service and some of them were found to have been using bill payment services as well.

4.1.8. Transaction through Internet Banking

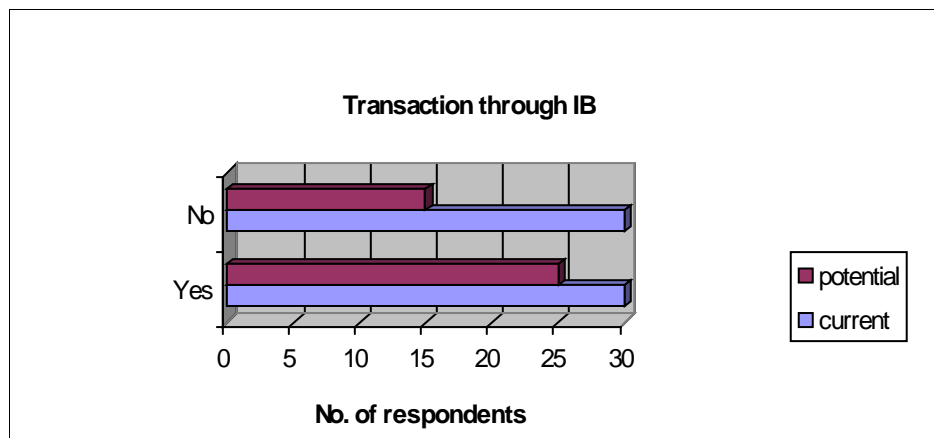
Table No : 7

Transaction through Internet Banking			
Online Banking Services	Yes	No	Total
Current	30	30	60
Potential	25	15	40

Sources: Field survey 2012

Internet banking services user are not satisfactory as per the information collected. Out of 100 respondents only 55 have used Internet banking services of the banks. This shows that Internet banking facility user rate is not very high. Banks providing the Internet Banking services are not been used completely by the customers.

Figure 8 Transaction through Internet Banking



Of the different Internet banking services offered by the Bank, statement download, Account details, standing order request, Fx-rate enquiry Cheque book replenishment request are the mostly online services used by the customers. Beside that the information collection like the Banks financial position, current period profit and loss, Loan interest information etc are collected online by the customers.

4.1.9. Satisfaction on Bank Services

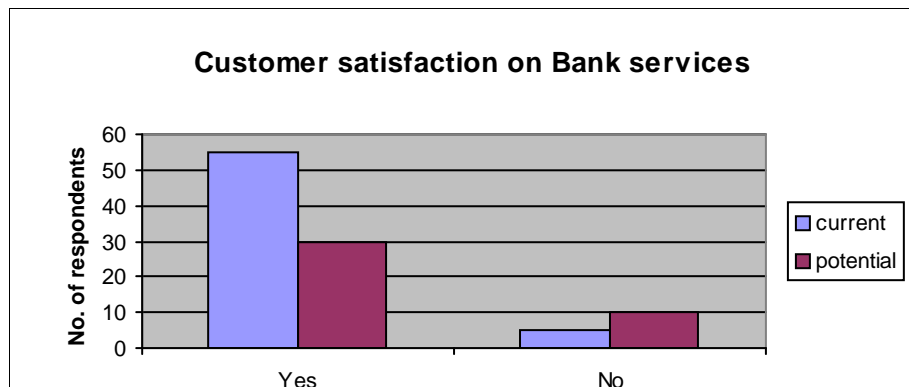
The current customers of the banks are satisfied with the services provided by the bank. It is found that 92% of the current customers are satisfied with the services provided by their respective banks and 75% of the potential customers are also satisfied with the services provided by their current banks. Thus banks can further expand their services through various plans to make their customer satisfaction percentage high.

Table No : 8

Satisfaction on Bank Services					
Customers	Yes	No	Total	Percentage	
				Yes	No
Current	55	5	60	92%	8%
Potential	30	10	40	75%	25%

Sources: Field survey 2012

Figure No : 9 Satisfaction on Bank Services



4.1.10. Planning on using Internet Banking Services

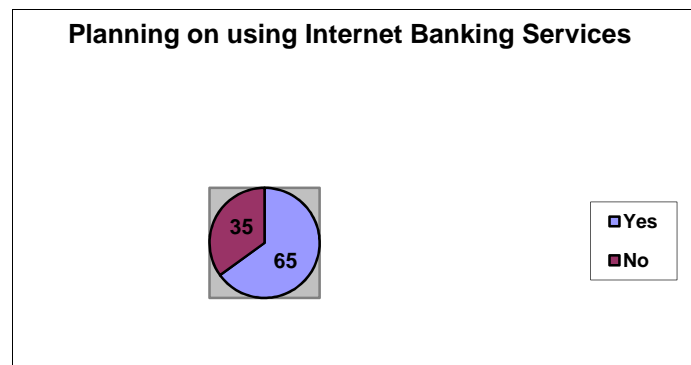
Table No : 9

Planning on using Internet Banking Services	
Online Banking Services	Frequency
Yes	65
No	35

Sources: Field survey 2012

Most of the customers are planning to use the Internet banking services due to the different services provided by the Bank through Internet banking services. With proper communication and infrastructure to the customers the banks can attract the pool of customers in using banking services of the banks. This shows the interest on using the Internet banking services is increasing in customers mind.

Figure No : 10 Planning on using Internet Banking Services



4.1.11. Grading on Internet banking services

Table No : 10

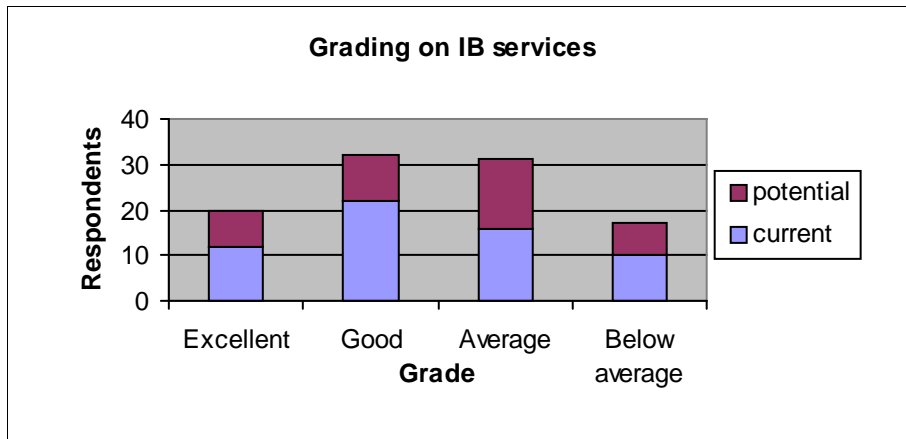
Grading on Internet banking services		
Grade	Current	Potential
Excellent	12	8
Good	22	10
Average	16	15
Below Average	10	7
Total	60	40

Sources: Field survey 2012

It is found that the Bank services are satisfactory to their respective customers. Few customers grade their banks services below average. And again we have tried to explore how the respondents grade the Internet banking services. And it is found that they are quite happy with the online banking services. 32 of the total respondent have grade the online banking services as good and only 17 out of 100 respondents have grade the Internet banking services below average.

Thus it could be conclude that online banking services are one of the satisfied services to the customers that could be offered to the customers of the banks.

Figure No : 11 Grading on Internet banking services



4.1.12. Problems on Internet Banking

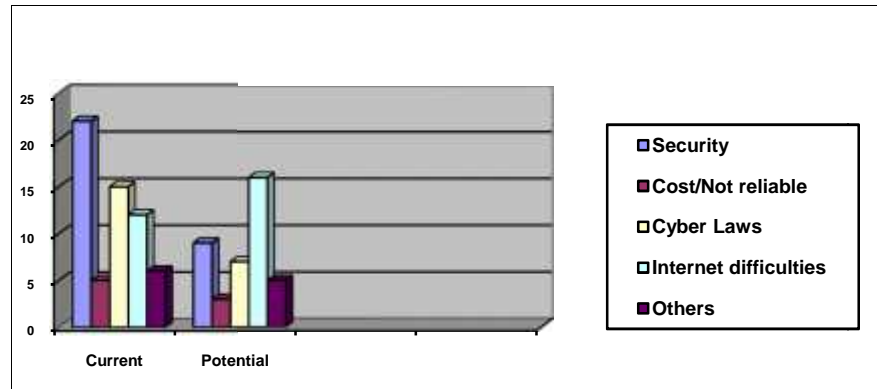
Table No : 11

Problems on Internet Banking services		
Problems	Current	Potential
Security	22	9
Cost/Not reliable	5	3
Cyber Laws	15	7
Internet Difficulties	12	16
Others	6	5
Total	60	40

Sources: Field survey 2012

The mainly sited problems in the IB are listed in the table above. 22 and 9 of the current and potential customers sited the problem arising to the security while doing the transaction over the Internet. Beside that not aware of the cyber laws and not aware of the formulation of the cyber laws by the concerned authority also is one of the big problems in the Internet banking. Least number of the respondents has given the problems of Internet Difficulties.

Figure No : 12 Problems on Internet Banking



4.1.13. Factors on choosing Internet Banking Services

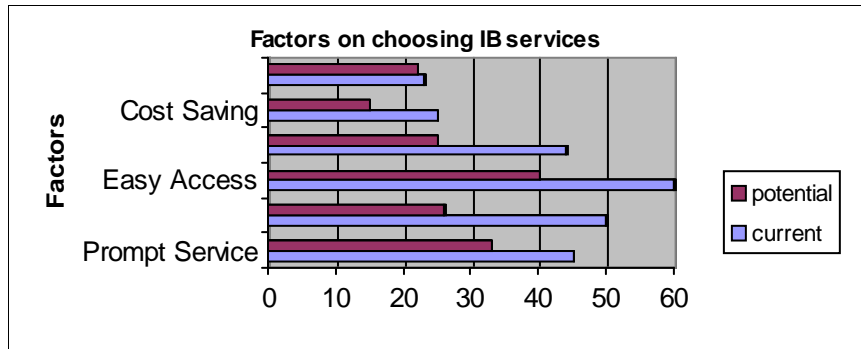
Table No : 12

Factors on Choosing Internet Banking			
Factors	Current	Potential	Total
Prompt Services	45	33	78
Time Saving	50	26	76
Easy Access	60	40	100
Convenient	44	25	69
Cost Saving	25	15	40
Secure Transaction	23	22	45

Sources: Field survey 2012

While finding out the factors behind using the Internet Banking services it is found that Prompt service, Easy access, Convenient and Time Saving are the mostly sited factors on behind using Internet Banking services.

Figure No : 13 Factors on choosing Internet Banking Services



4.1.14. Potential Customers of Internet Banking Services

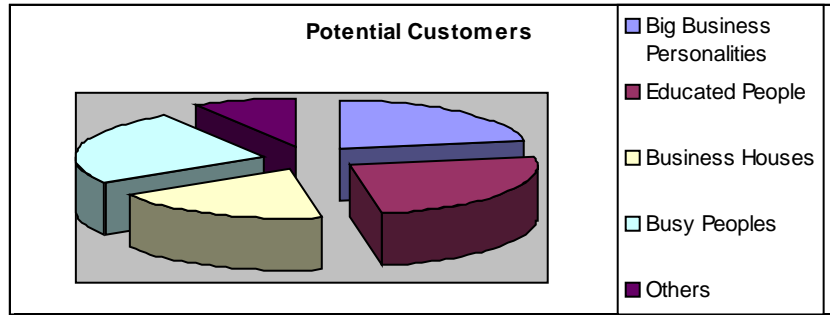
Table No : 13

Potential Customers of Internet Banking		
Types	Frequency	Percentage
Big Business Personalities	65	65%
Educated People	75	75%
Business Houses	56	56%
Busy Peoples	75	75%
Others	26	26%

Sources: Field survey 2012

While filling out the questionnaires by the respondent we found that the potential customers that the respondents sited are the educated people and busy people are the most sited customer. Due to not able to come to the bank premises for doing the banking transaction busy people are more likely to be the potential customers of the banks. Beside that big business personalities and business houses are also the mostly favorable customer in using Internet Banking services of the banks.

Figure No : 14 Potential Customers of Internet Banking Services



4.2 Findings

Based on the analysis of the data and their interpretation, the study major findings in relation of the objectives set could be summarized the follows:

4.2.1 Findings from Interview

1. Many banks are expanding their services through Internet banking in Nepal.
2. Among the customers, many of them are not aware of Internet Banking services provided by their respective banks.
3. Because of the customer using traditional banking services, the customers are unaware of the benefits provided by using Internet Bank Services.
4. The customers who are aware of the Internet Banking services are afraid of using those services because there are no prevalent affective cyber laws so the customer are exposed to the cybercrimes.
5. Lack of proper infrastructure of communication in the country also makes the bank not able to give the complete solution of internet banking services to the customers
6. Kumari bank has provided locked password encryption so that a part from the concerned no one else could enter into the account.

7. The major chunk of Internet Banking services users, are the big trading firms, business personalities and educated people.
8. Firms undertaking international business prefer to use Internet Banking services.
9. The most important difficulties of IB in Nepal according to the expert bankers and personals working in the Nepalese commercial bank are found to be security from hacking of vital banking information, lack of computer knowledge and very low internet access in Nepal.

4.2.2 Findings from Questionnaires

4.2.2.1 Descriptive of the Sampling Plan

A sample size of 100 consisted of 60 customers of Laxmi Bank and 40 Potential Customers (other than Laxmi Bank's customers) are described earlier. Most of the customers using Internet Banking services are big trading firms.

4.2.2.2 Identification of key attributes

The key attributes that a customer's looks for in the bank while utilizing IB services are derived from the exploratory research conducted before the questionnaires survey. The key attributes thus identified are as following:

- Benefits of the IB to Customers:

Benefits that the customers will get from the bank after using the IB services are:

-) Access to bank account (24 hours continuous services)
-) High interest and lower service charges

- Long-term (Future) business perspective of bank:

Making customer satisfaction is the major objective of the bank. With this objective of the bank, they can retain and attract more customers. Thus, for the long-term business perspective of bank, the following components of customer' services are needed and required:

-) Reliability and safety of customer's assets
-) Timely transactions of the customers' receipts
-) Delivering on the promises made by the bank
-) Providing attractive and innovative services
-) Low charges in the bank transaction

Beside these above components of customer services of the banks, Advertisement and Promotion Activities of the bank have to be performed. The different components of business services are:

-) Customers related advertisements through Newspapers, FM. Television etc.
-) Making aware of the benefits and advantages of IB services
-) Customers related promotions through newsletters, meetings etc.

4.2.3 Security Problems on Internet Banking

Security is always a concern by many consumers. Typical IB services available are protected with a PIN that members use to authenticate each banking transaction. Security measures also features 1024-bit master RSA key encryption for session key exchange and 128-bit triple DES encryption for data encryption.

Using 128-bit encryption means that it is virtually impossible for anyone using current technology to steal information. Simply put, it is like sending our mails inside a steel safe. Probably the biggest single obstacle on Net-banking path to success is consumer skepticism about the security of the internet. Interestingly, the major risks in Internet Banking are probably not in the area which potential users focus on interception of financial data transmissions. Banks and other entities conducting business over the internet deal with the interception issue by encrypting sensitive information sent over the Net. Even versions of Netscape and Internet Explorer include encryption technology that makes it technically not feasible for a hacker to read the intercepted information.

A greater security threat is a hacker attack on the bank's main computer system through the point where the bank's computer is connected to the Internet. Lax security could permit a hacker to plant computer viruses, and corrupt or fraudulently create data on the

bank's inter computer system.

Fortunately this risk is relatively simple to address by the aggressive use of "Firewalls" that only allow specified types of information to pass from the internet through to the bank's central computer and consistent security monitoring program.

As with ATM PIN protection, the best weapon is safeguarding Internet Banking access will be education customers. They need to be taught to avoid public access Internet terminals, select appropriate passwords, and stop transaction when presented with an unexpected internet screen or an unusual request for confidential information.

CHAPTER 5

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 username 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. He/She can access the banking services from any corner of the world at any time where internet services, computer and the website of host bank are available.

In the sample bank study, IB facilities provided by the banks 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 Conclusions

The major results of the study of Internet Banking services in Nepal are summarized as under:

- 1.** The communication infrastructure of our country is unable to support the full-fledged implementation of Internet Banking Services.
- 2.** The major obstruction for the implementation has been the absence of proper cyber laws and regulations.
- 3.** Although Laxmi bank and other banks have been providing Internet Banking Services; but the banks customers are not very keen interested in the utilizing the Internet Banking Services.
- 4.** The reason for customer not utilizing Internet Banking services are identified as follows:
 - a) Absence of cyber laws and regulations
 - b) Security/ Safety
 - c) Unaware/ Uneducated customers
 - d) Understanding of technologies associated with the services

- e) Internet Difficulties
 - f) Satisfied with the traditional Banking services
5. Most of the customers using Internet Banking services are big trading firm, as most of the other customer having smaller accounts don't see the need for using those services.
 6. Although the numbers of customers using Internet Banking services are very low, the number of new customer willing to use these services and increasing at a rapid rate.
 7. IB has good scope in Nepal as many new firms are contributing to GDP by indulging in international business and thus requiring Internet Banking services to facilitate their various operations.
 8. As we are in the era of globalization it is essential for most of the large trading firms and multinational enterprises to utilize Internet Banking services to become more competitive in the international market.

And the survey study has found that most of the commercial banks were found to be attracted towards IB by the motivational factors like fast banking processing, cost effectiveness, modern consumers' demand and easy accessibility to mass consumers through IB.

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:

- 1) 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 FNCCI, 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. Furthermore, there 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 collaborate 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 are 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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