

E-BANKING AND NEPALESE BANKING SYSTEM

A THESIS

Submitted By:

PARBATI MAHARJAN

Patan Multiple College

Campus Roll No. 244/062

T.U. Regd. No. 7-2-256-287-2001

Submitted to:

Office of the Dean

Faculty of Management

Tribhuvan University

*In partial fulfillment of the requirement for the Degree of Master of Business
Studies (M.B.S)*

Lalitpur Nepal

March, 2013

RECOMMENDATION

This is to certify that the thesis

Submitted By:

PARBATI MAHARJAN

Entitled:

E-BANKING AND NEPALESE BANKING SYSTEM

has been prepared as approved by this Campus in the prescribed format of the Faculty of Management, Tribhuvan University. This thesis is forwarded for examination.

(Ass. Prof. Dr. Sovit Lal Bajracharya)
Thapa)

Thesis Supervisor

(Dinesh Man Malego)

Coordinator MBS Program

(Babu Ram Singh

Assistant Campus Chief

Date: _____

Viva -Voce Sheet

We have conducted the Viva-Voce examination of the Thesis

Submitted By:

PARBATI MAHARJAN

Entitled:

E-BANKING AND NEPALESE BANKING SYSTEM

and found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for

Master's Degree of Business Studies (MBS)

Viva-Voce Committee

Head of Research Department:

Member (Thesis Supervisor) :

Member (External Expert):

DECLARATION

I hereby declare that the work reported in this thesis entitled "**E-BANKING AND NEPALESE BANKING SYSTEM**" submitted to Office of dean, Faculty of Management, Tribhuvan University is my original work carried out for the partial fulfillment for the requirements of Master of Business Studies (MBS) under the supervision of respected Associate Professor Dr. Sovit Lal Bajracharya .

Parbati Maharjan

Researcher

Patan Multiple College

Campus Roll No. 244/062

T.U. Regd. No. 7-2-256-287-2001

ACKNOWLEDGEMENTS

Information Technology has gained much popularity in this competitive world to ease living and to sustain rapid developments in technology. To sustain in this competition, Banks must be flexible in adopting new technologies in order to deliver prompt, efficient and convenient services to its customers. Internet/E-banking needs to be made familiar in every part of the country, not limiting specific areas. This is my small attempt in finding out the prospects of e-banking in Nepal.

I had a great fortune to study under supervision of Associate Professor Dr. Sovit Lal Bajracharya and very grateful for his guidance and encouragement. It was a wonderful learning experience for me in conducting this study. This suggestions and feedbacks/comments provided by the teachers and well wishers helped me in widening my knowledge and visions. I wish to express my deepest appreciation and gratitude to all the people that have contributed to the completion of this thesis.

Special thanks to the bank officials for providing me necessary information to conduct this research work. Further, sincere appreciation goes to all the respondents for providing their valuable inputs. I thank all those people who are involved directly or indirectly in completing this work.

.....
PARBATI MAHARJAN
Patan, Lalitpur

TABLE OF CONTENTS

Recommendation

Viva-voce sheet

Declaration

Acknowledgement

Table of Contents

List of Tables

List of Figures

Abbreviations

	Page No
CHAPTER - I INTRODUCTION 1	1-19
1.1 Background of the Study	1
1.1.1 General Introduction	1
1.1.2 Internet/E-Banking	7
1.1.3 Advantages and disadvantages of Internet Banking	10
1.1.4 Comparison between Traditional and Internet/E-Banking	14
1.2 Statement of the Problems	15
1.3 Objectives of the Study	15
1.4 Significance of the Study	16
1.5 Limitations of the Study	17
1.6 Organization of the Study	18
CHAPTER-II REVIEW OF LITERATURE	20-47
2.1 Theoretical Review	20
2.1.1 History of Banking Services in Nepal	20
2.1.2 IT/ ICT in Nepal	21
2.1.3 Adoption of E- Banking	23
2.1.4 Electronic Banking	25
2.1.4.1 Channels of Electronic Banking	25
2.1.4.2 Basic Internet Banking Services	27
2.1.4.3 Instruments Used in Electronic Banking Credit Card	28

2.1.5	History of Electronic Banking in Nepal	29
2.1.6	Evolution of Banking	29
2.1.7	Internet Banking Versus Traditional Banking	30
2.1.8	Benefits of Internet Banking	32
2.1.9	Difficulties and Drawbacks in Internet Banking	33
2.1.10	Quality of Internet Banking Services	35
2.2	Empirical Review	37
2.2.1	Review of Articles	37
2.2.2	Review of Related Thesis	42
2.3	Conclusion and Remarks	47
CHAPTER-III RESEARCH METHODOLOGY		48-50
3.1	Research Design	48
3.2	Population and Sample	48
3.3	Tools and Data Collection	49
3.4	Techniques and Data Analysis	49
3.5	Used Methods	50
CHAPTER-IV PRESENTATION AND ANALYSIS OF DATA		51-71
4.1	Data Presentation	51
4.1.1	Information on Respondents	51
4.1.2	Internet Access	52
4.1.3	Knowledge on Internet Banking	53
4.1.4	Internet Banking Users	54
4.1.5	Use of Bank Services	55
4.1.6	Reason for Adopting E- banking	56
4.1.7	Most Demanded IB Facilities/Services in Nepal	58
4.1.8	Transaction through Internet Banking	59
4.1.9	Satisfaction on Bank Services	60
4.1.10	Planning on using Internet Banking Services	61
4.1.11	Grading on Internet banking services	62

4.1.12	Problems on Internet Banking	63
4.1.13	Factors on Choosing Internet Banking Services	64
4.1.14	Potential Customers of Internet Banking Services	65
4.1.15	Reasons of Offering E- Banking	66
4.1.16	Cost Structure of E- Banking Transaction	66
4.1.17	Security Measures	66
4.1.18	Opportunities and Challenges	67
4.2	SWOT Analysis	68
4.3	Major findings of the study	69
CHAPTER – V	SUMMARY, CONCLUSION AND RECOMMENDATIONS	72-75
5.1	Summary	72
5.2	Conclusion	73
5.3	Recommendations	75

Bibliography

Appendix

LIST OF TABLE

Table 1.1	Global Internet Diffusion Rate	6
Table 1.2	Traditional Vs. E-/Online Banking	14
Table 2.1	Information Technology Scenario of Nepal	22
Table 4.1	Information on Respondents	51
Table 4.2	Internet Access	52
Table 4.3	Knowledge on Internet Banking	53
Table 4.4	Internet Banking Users	54
Table 4.5	Use of Bank Services	55
Table 4.6	Reasons for adopting E-banking	57
Table 4.7	Most Demanded IB Facilities/Services in Nepal	58
Table 4.8	Transaction through Internet Banking	59
Table 4.9	Satisfaction on Bank Services	60
Table 4.10	Planning on using Internet Banking Services	61
Table 4.11	Grading on Internet banking services	62
Table 4.12	Problems on Internet Banking	63
Table 4.13	Factors on Choosing Internet Banking Services	64
Table 4.14	Potential Customers of Internet Banking	65
Table 4.15	SWOT Analysis	68

LIST OF FIGURE

Figure 4.1	Information on Respondents	52
Figure 4.2	Internet Access	53
Figure 4.3	Knowledge on Internet Banking	54
Figure 4.4	Internet banking users	55
Figure 4.5	Uses of bank services	56
Figure 4.6	Reasons for adopting E-banking	58
Figure 4.7	Most Demanded IB Facilities/Services in Nepal	59
Figure 4.8	Transaction through Internet Banking	60
Figure 4.9	Satisfaction on Bank Services	61
Figure 4.10	Planning on using Internet Banking Services	62
Figure 4.11	Grading on Internet banking services	63
Figure 4.12	Problems on Internet Banking	64
Figure 4.13	Factors on choosing Internet Banking Services	65
Figure 4.14	Potential Customers of Internet Banking	66

ABBREVIATIONS

ATM	Automated Teller Machine
ABBS	Any Branch Banking Service
E-Banking	Electronic Banking
E-Channel	Electronic Channel
Ed.	Edition
Eds	Editors
EFTPOS	Electronic Funds Transfer at Point-Of-Sale
GSM	Global System for Mobile
HBL	Himalayan Bank Limited
IB	Internet Banking
IFS	Interactive Financial Services
ISO	International Organization for Standards
ISP	Internet Service Providers
IT	Information Technology
ISP's	Internet Service Providers
KBL	Kumari Bank Limited
LBL	Laxmi Bank Limited
MIS	Management Information System
MOST	Ministry of Science and Technology
NBL	Nabil Bank Limited
NRB	Nepal Rastra Bank
NIBL	Nepal Investment Bank Limited
OCBC	Oversea-Chinese Banking Corp.
OUB	Oversea Union Bank
POS	Point Of Sales
PDF	Personal Identification Number
PIN	Personal Identification Number
RBI	Reserve Bank of India
SCT	Smart Choice Technology
SDB	State Development Bank
SWIFT	Society for Worldwide Interbank Financial Telecommunication

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Banks today are aware of both the threat and the opportunity that the Web represents. No traditional bank would dare face investment analysts without an Internet strategy. But even a detailed and thoughtful approach to the Web does not guarantee business success. Electronic banking or e-banking is the newest delivery channel for banking services. Internet or e-banking has made daily transactions much easier and convenient either be it through use of plastic cards (ATM/ Debit/Credit Card) or monetary transactions or even pay utility bills or shop online. The main purpose behind the launching of internet banking services is to provide the customers with an alternative, more responsive and with less expensive options.

The new information technology (IT) is turning into the most important factor in the future development of banking, influencing bank's marketing and business strategies. The driving forces behind the rapid transformation of banks are influential changes in the economic environment, innovations in information technology, innovations in financial products, liberalization and consolidation of financial markets and deregulation of financial inter- mediation etc.

1.1.1 General Introduction

A Bank is a financial institution established by law whose primary activity is to act as a payment agent for customers; accepting deposit from customers; and to borrow, lend and exchange and transferring money. In general, an institution involved in monetary transaction is called Bank. Today bank has become the integral part of people where they can easily do their everyday monetary transaction from any corner of the world. Banking transaction becomes more prominent and easier further with the advent of the internet or online banking.

The first modern Bank was found in Genoa of Italy in 1406 and was named Banco di San Giorgio, Bank of St. George. The name Bank also derives from the Italian word Banco "desk/bench", used during the Renaissance by Florentines Bankers, who used to make their transactions above a desk covered by a green table-cloth. However, there are traces of banking activity even in ancient times. In fact, the word traces its origin back to the Ancient Roman Empire, where moneylenders would set up their stalls in the middle of enclosed courtyards called Macella on a long bench called a Bancu, from which the words Banco and Bank are derived (Bhandari, 2003:5).

The definition of a Bank varies depending upon individuals, institutions and countries. Under English Common Law, a Banker is defined as a person who carries on the business of banking, which is specified as: "Conducting current accounts for his customers, paying cheques drawn on him, and collecting cheques for his customers".

Section 2(a) of the Nepal Rastra Bank Act 2058 (2002:1) defines Bank as, "Bank means the Nepal Rastra Bank established under section 3 of this Act". Like-wise according to section 2 (b), "Commercial Bank means a commercial bank established under the prevailing laws" (NRB, 2002:1). In addition to this, Section 2(a) of the Negotiable Instrument Act 2034 (1977) defines that a Bank, which is established under the existing law, shall be called Bank. Though the Banks established by both of these Acts are called "Bank", we do not find clear definition of it (Bhandari, 2003:2).

Oxford Online Dictionary defines Bank as "An establishment of the custody of money received from or on behalf of its customers. The essential duty of a Bank is to pay their draft on it, its profit arise from its use of the money left unemployed of them" (Bhandari, 2003:2-3). Likewise, Halsbury's law opinions that a Banker is an individual, partnership or corporation, whose sole or predominating business is banking, that is, the receipt of money on current or deposit account and the payment of cheques paid in by a customer (Bhandari, 2003:3).

Dr. Mali Ram says "Banking means the accepting for the purpose of lending or investing, the deposits of money from the public, repayable by cheques, drafts, order or otherwise".

In the word of Sayers "Ordinary banking business consists of changing cash for Bank deposits and Bank deposits from one person to corporation (one depositor to another) giving Bank deposits in exchange for bills or exchange: government bonds, secured and unsecured promises businessmen t repay"(Bhandari, 2003:22).

All those definitions indicate Bank as the institution of economic function, which includes issue of money, netting and settlement of payments, credit intermediation, credit quality improvement, maturity transformation.

Apparently, Banks have influenced economies and politics for centuries. The functions of Bank varied depending on the economic policies for the country. And many financial activities were added and modified over time depending on the contest. For example, Banks are important players in financial markets and offer financial services such as investment funds. In some countries such as Germany, Banks are the primary owners of industrial corporations while in other countries such as the United States Banks are prohibited from owning non-financial companies. In Japan, Banks usually the nexus of cross share holding entity known as zaibatsu (Japanese term for a business conglomerate). In France "Bancassurance" is highly present, as most Banks offer insurance services (and now real estate services) to their clients.

In 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 trend has become changed people are aware about money markets, financial transactions, banking activities etc. In 1937 with 51 percent government equity "Nepal Bank Limited" was established as the first formal banking institutions in Nepal. Having felt the need for development of the banking sector, Nepal Rastra Bank (NRB), the central bank of Nepal was established on April 26, 1956 A.D. with central banking responsibilities of guiding the development of domestic financial sector. The role and responsibilities of NRB have been recast by the new NRB Act of 2002, which entails monetary and foreign exchange policies, development of a secure, healthy and efficient system of payments; supervision of the banking and financial system; and enhancement of the public confidence in Nepal's entire banking and financial system. With the increased in banking economy; the second

commercial bank “RastriyaBanijya Bank” was established in 1966 A.D. with 100 percent government ownership (Bhandari, 2003:7-8).

Banks provide almost all payment services, and a Bank account is considered indispensable by most businesses, individuals and governments. Non-Banks that provide payment services such as remittance companies are not normally considered an adequate substitute for having a bank account. Banks borrow most funds from households and non-financial businesses, and lend most funds to households and non-financial businesses, but non-bank lenders provide a significant and in many cases adequate substitute for bank loans, and money market funds, cash management trusts and other non-bank financial institutions in many cases provide an adequate substitute to Banks for lending saving too.

To fulfill the growing credit requirement and also to collect more deposit for the development projects, Nepal Rastra Bank adopted liberal policy and provided many facilities to probable Bankers of Nepal and abroad through new commercial Bank Act. 1974 AD. Consequent to the permission given by Nepal Government to open new commercial bank with foreign joint venture in 1984, Nepal Arab Bank was established in the same as the first Joint Venture Bank in Nepal. In 1990 Credit Card was introduced first time in Nepal by NIBL Bank. Automated Teller Machine (ATM) was first introduced by Himalayan Bank Ltd. in 1995. Tele-banking facility was also introduced by Himalayan Bank Ltd. in 1997. Formulation of IT Policy in 2000. Kumari Bank was established in 2001. In 2002 Kumari Bank introduced Internet Banking first time in Nepal then SMS Banking (Mobile Banking) was launched in 2004. Electronic Transaction and Digital Signature Act (revised in 2005, yet to be brought in practice)(Bhandari, 2003:7-8).

In this fiscal year 2009/2010-2010/11 there has been tremendous increment in branches of commercial banks. In comparison of past year, this year around 636 more new branches has opened. At the end of year there were 1276 branches of commercial banks. 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 the year 2010, four commercial

banks and fourteen development banks had been added where as in 2011 only one commercial bank was established and that was “Century Commercial Bank Ltd.”. Besides two more micro finances have been added. Recently, “Century Commercial Bank” has been launched and number of commercial banks reached 32 (NRB, 2011).

At present, banking sector has not restricted itself only to just providing loans and accepting deposits of the customers but also understood the problems of its customers. New the banking sectors have adopted fast and more efficient technologies to provide better services to the customers and it offers many different channels to access their banking and other services: like Networking between branches, Internet/ online banking, Short Messaging Service(SMS), Automated Teller Machine(ATM), Mail, Telephone banking, etc. Likewise, Banks act as payment agents not only limiting on cheques collection and payment but also via other payment methods such telegraphic transfer, Electronic Funds Transfer at Point of sale (EFTPOS), and ATM etc.

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 Barbara and University of Utah. The network has wired together via 5Kbps circuits. 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” (Yadkin1995).

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 Et al, 2000).

Sexton 2002 has mentioned in Internet World Status, 2008 that entertainment, communication, information and commerce serve as the drivers of internet usage with an explosive growth rate of access (Adams & Lamptey, 2009:2). Table1.1 gives statistics on the diffusion of the internet across the globe by Internet World Stats in 2008.

Table 1.1
Global Internet Diffusion Rate

Region	Population	Percentage (%)	Usage (%)
Asia	3,776,181,949	15.3	39.5
Europe	800,401,065	48.1	26.3
North America	337,167,248	73.6	17
Latin America & Caribbean	576,091,673	24.1	9.5
Africa	955,206,348	5.3	3.5
Middle East	197,090,433	21.3	2.9
Oceania & Australia	33,981,562	59.5	1.4

Source: Internet World Status, 2008

Internet Banking was introduced in the early 80's and from the time it has been introduced; many people have started availing to its facilities. With the commercialization of internet in the early 1990s, there was a great impact on traditional banking. As the internet became more generally accessible, traditional banks began to realize its potential to deliver services to their customers while reducing long term operational costs and time. Upon realizing this, traditional banks began to offer limited services online. The initial success of internet banking services provided by traditional banks led to the development of internet-only banks or "virtual banks". These banks were designed without a traditional banking infrastructure, a cost-saving feature that allowed many of them to offer savings account with higher interest rates and loans with lower interest rates than most traditional banks.

The world's first fully functional direct bank was the Security First Network Bank based in Atlanta, Georgia, USA in 18 October 1995. In Asia first direct bank was FinatiQ, division of the Bank of Singapore. It opened on 30 April, 2000, heralding the arrival of virtual banking in Asia. However, Stanford Federal Credit Union of United States of America was the first financial institution to offer online internet banking services to all of its members in 1984

(Allfreelance, retrieved on 2007).

1.1.2 Internet/E-Banking

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). 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).

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

internet banking services (Mattila et al., 2003).

Internet Banking was introduced in the early 80's and from the time it has been introduced; many people have started availing to its facilities. With the commercialization of internet in the early 1990s, there was a great impact on traditional banking. As the internet became more generally accessible, traditional banks began to realize its potential to deliver services to their customers while reducing long term operational costs and time. Upon realizing this, traditional banks began to offer limited services online. The initial success of internet banking services provided by traditional banks led to the development of internet-only banks or "virtual banks". These banks were designed without a traditional banking infrastructure, a cost-saving feature that allowed many of them to offer savings account with higher interest rates and loans with lower interest rates than most traditional banks.

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).

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. Second, a bank may be established as a branch, 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 all 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).

The world's first fully functional direct bank was the Security First Network Bank based in Atlanta, Georgia, USA in 18 October 1995. In Asia first direct bank was Finati Q, division of the Bank of Singapore. It opened on 30th April, 2000, heralding the arrival of virtual banking in Asia. However, Stanford Federal Credit Union of United States of America was the first financial institution to offer online internet banking services to all of its members in 1984 (Allfreelance, retrieved on 2007).

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).

Nepal's journey into the world of information technology began some three decades back with the use of IBM 1401 for the population census, 1971. Royal Nepal Academy for Science and Technology (RONAST), for the first time, used the internet. Mercantile Private Limited started email services for commercial purpose in June 1994. In banking sectors, the trend in private banking has been the consumer movement from traditional branch banking to more stand-alone banking. In other words, a move towards using e-delivery channels such as the Internet, telephone and mobile phones. Many banks are beginning to deliver credit and deposit products electronically. As banks venture into the electronic arena, however, they are finding new opportunities with new operational and strategic risks (Yadav, 2004).

NIBL bank is the first Joint Venture Bank established in 1984. In 1990 Credit Card was introduced first time in Nepal by NIBL Bank. Automated Teller Machine (ATM) was first introduced by Himalayan Bank Ltd. in 1995. Tele-banking facility was also introduced by Himalayan Bank Ltd. in 1997. Formulation of IT Policy in 2000. Kumari Bank was established in 2001. In 2002 Kumari Bank introduced Internet Banking first time in Nepal then SMS Banking (Mobile Banking) was launched in 2004. Electronic Transaction and Digital Signature Act (revised in 2005, yet to be brought in practice).

Banking industry of Nepal has been taking rapid stride in the advancement of technology and aggressive infusion of information technology in the functioning of the banks. The 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. Bankers are using information technology to gain competitive advantage (Mahat, 2004).

1.1.3 Advantages and disadvantages of Internet Banking

Most of the people have heard about the E/ Internet Banking but more than a majority has not probably even tried it out yet. It could possibly be because people are more comfortable working with real people; paper and money instead of its virtual counterpart, as performing transactions over the Internet can be very impersonal. Whatever may be the reason there are a number of advantages and disadvantages to internet banking services.

A. Advantages of E-/Internet Banking

i) Benefit to the bank: With the rapid development of IT sector, banking around the clock is no longer a remote possibility. The Bank's do not have to keep their branches open 24 hours a day to provide service to their customers. This is one of the biggest advantages of the Internet banking. One does not have to go to the Bank's branch to request a financial statement. It can be downloaded from the online Bank account, which shows up to the minute updated figures.

Another advantage of Internet banking is that it is cost- effective. Thousands of customers can be dealt with at once. There is no need to have too many clerks and cashiers. The administrative work gets reduced drastically with Internet banking. Expenditures on paper slips, forms and even bank stationery would go down, which helps raise the profit margin of the bank by a surprisingly large number. This would enable the banks to offer acceptable interest rates on savings account and credit cards.

The customer service quality can be improved by providing 24/7 services from a wide range of locations and operational costs can be reduced through the introduction of electronic service channel. The range of products and services can be easily extended; the system enables the support of many related products and makes possible the enrichment of products and services.

ii) Benefit to customers: As far as customers are concerned, the greatest advantage of Internet Banking is that the customers are no longer required to wait in long queues of the

Banks to request a financial transaction or statement. Their account information is available round the clock, regardless of their location. The customers can reschedule their future payments from their Bank account while sitting thousands of miles away. They can electronically transfer money from their Bank accounts or receive money in their Bank accounts within second.

Another important advantage of internet banking is that it has made the opening of an account quite simple and easy and without much paperwork. The same flexibility can be observed even while closing an account.

Moreover, the customers can even apply for a loan without visiting the local Bank branch and get one easily. Even one can buy or sell stocks and securities by using the Bank accounts. Especially, with the increasing acceptability of digital signatures around the world, Internet banking has made life much easier for customers as well as Bankers.

Being able to monitor the account online can help alert the customer to suspicious charges on the account quickly. With the help of E- banking, one can access any information regarding bank account and transactions, any time of the day. This means that the customer no longer has to depend on the office hours of the Bank to obtain information. Therefore, one can regularly monitor the account as well as keep track of financial transaction. The customers can also make sure that cheque clear that have been sent to a creditor. The customers can assist the customer in the ability to be aware of any payments that might have lost in the mail.

With the E- Banking service, the customers can now order checks online instead of having to visit a physical bank location and Bank account statements can be printed out according to the desirability. It is also possible to order additional copies of previous months statements.

B. Disadvantages of E-/Internet Banking

As the saying goes every coin has two sides, having all these advantages, Internet Banking

is not free from disadvantages. The drawbacks that are seen in online banking have been pointed out below:

i) Security: The most important and serious drawback or disadvantage of having an E-account is the security. Protection through single password authentication is not considered secure enough for personal internet banking applications. Basically, there exist two different security methods for internet banking.

The Personal Identification Number/ Time Authentication Number (PIN/TAN) system where the PIN represents a password, used for the login and TAN represents one-time password to authenticate transactions. TANs can be distributed in different ways, the most popular one is to send a list of TANs to the online banking user by postal letter. The most secure way of using TANs is to generate them by need using a security token. These token generated TANs depend on the time and a unique secret, stored in the security token (this is called two- factor authentication or 2FA). Usually internet banking with PIN/TAN is done via a web browser using SSL secured connections, so that there is no additional encryption needed.

Signature based online banking where all transactions are signed and encrypted digitally. The Keys for the signature generation and encryption can be stored on smartcards or any memory medium, depending on the concrete implementation. So, while availing the facilities of E-Banking, one has to be very careful to ensure the security of the computer and personal information like password use name and pin number. Otherwise, there is a chance of becoming a victim of computer hacking, which can lead to unauthorized use of bank account by computer hackers. Though Banks have come up with several security measures, the customers are also required to be a bit careful to ensure security and safety of E- banking.

ii) Attacks: Most of the attacks on internet banking used today are based on deceiving the user to steal login data and valid TAN. A method to attack signature based internet banking methods is to manipulate the used software in a way, that correct transactions

are shown on the screen and fake transactions are signed in the background. A study in 2007 showed that banks filed 536 cases of computer intrusion with an average loss per incident of \$ 30,000.

iii) Trust: There are many people who do not trust the services of the Bank through the internet. Some prefer to trust other people rather than trusting a machine, especially in the matter of money. They may always have doubt whether their money is safe, while being processed through Internet banking. There are some fraudulent or proxy websites, which can hack information like username and password entered by a person for some transaction and later misuse it. In such cases, people lose their money without knowing and by the time they get the bill, huge losses may have been incurred. However, this uneasiness can be overcome by printing the transaction was successful.

iv) Illiterate: Some avoid the use of internet banking because of the difficulty to understand how it works. In case of Nepal, there are many such people who are computer illiterate. For those people the service provided by the internet Banking is of no use. One very common disadvantage of internet banking is when a person has some problem or query. In a normal Bank, if one faces some problem, one can go to some employee of the Bank to solve it.

v) Difficult processes to be followed: Online banking can be difficult to learn for a beginner and a site could take time to start up. However, most internet banking sites provide tutorials for internet banking. If one should forget the date of payment, the extra charge should be added with interest.

vi) Other problem: In the context of Nepal, one of the major disadvantages may be electricity. With never ending load shedding hours, it is difficult to have access to internet banking during load shedding hours or if the network is down.

1.1.4 Comparison between Traditional and Internet/E-Banking

With the adoption of internet banking system traditional banking system has been changing such as payment mediums, physical transaction processes, delivery channels and security system. This transformation is shown in Table No. 1.2 with the comparison of

traditional and internet banking:

Table 1.2
Traditional Vs. E-/Online Banking

S.N	Factors	Traditional Banking	Internet/Online Banking
1	Service Delivery	<ul style="list-style-type: none"> - Located in different geographical area. - Transactional and highly administrative services. - Channel mainly telephone or branch counters. 	<ul style="list-style-type: none"> - Virtual Banking. - Online self-help services. - Transactional, administrative, financial portal. - Internal channel.
2	Customer Services	<ul style="list-style-type: none"> - Person-to-person interaction. - Passive customer services. - Articulated customer needs. - Standardization/standard procedures. 	<ul style="list-style-type: none"> Online interaction. Active customer services. Articulated and unarticulated customer needs. Customization.
3	Transaction mechanism	<ul style="list-style-type: none"> - Branch-based banking. - Over-the-counter. - Physical facilities, processes, payments. - Location and time critical. 	<ul style="list-style-type: none"> - On-line Banking. - Anywhere-anytime. - Virtual facilities, processes, payments. - Overcome geographic or time limitation.
4	Security Scheme	<ul style="list-style-type: none"> - Mainly cash or check. - Bank- self audit and database security system. - Paper-based and face to face Confirmation 	<ul style="list-style-type: none"> - Digital medium of exchange - Standardized security system - Paper free and no need face to face interaction
5.	Infrastructure		
i)	Network architecture	<ul style="list-style-type: none"> - Paper base and wired networking (in some cases) - Data oriented transmission - Desktop Computing 	<ul style="list-style-type: none"> - Wired and wireless networking. - Public network, internet - Multimedia data transmission - Internet computing. - Web based platform.
ii)	Application platform	<ul style="list-style-type: none"> - Platform dependency - Transaction process system - Inefficient user Interfaces 	<ul style="list-style-type: none"> - Multifunctional hypermedia system. - Rich user interface

1.2 Statement of the Problems

In the world of 21st century the competition is high and it is very hard to survive in any sector. As the same way Banks are always researching for better ways to provide services to their valuable customers efficiently and promptly so as to satisfy the customers. Now a days, Banks are investing a huge amount of money in IT sector for research programs in order to provide better services and attract more and more customers. Though all the banking sectors are doing well, these days accept few.

With the growing competition, one of the major responsibilities of the Bank has become to provide fast and efficient services, keeping in mind the time value of the customers. For the same, there still needs to be much more research carried out in this sector. With the development of new technologies every day, the fastest means of service providing is through Internet. There are many challenges and opportunities in adopting internet banking. However, in Nepal it is a big challenge for Banks to fully turn itself into online banking due to various reasons like technology, lack of trained employees, budget constraints, customer awareness etc.

Today Nepalese commercial banks are generally found 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 developing 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 internet banking services would be the best for them.

1. What types of facilities provided by banks?
2. How E-banking is evolved in Nepal? What may be the reason for adopting it?
3. Is there any relation with the demographic variables i.e. gender? What is the respondent's perception about internet banking?

1.3 Objectives of the Study

The main objective of this study is to scrutinize the E-banking and Nepalese banking system. So, the specific objectives which are aimed to be achieved in this research work are as follows:

1. To examine the facilities provided by banks to their customers.
2. To explore how E-banking banking is evolved in Nepal and reasons for adopting it.
3. To examine whether there is any relation with the demographic variable (e.g. gender) and respondent's perception about internet banking and whether the user and non-user perception differs.

1.4 Significance of the Study

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. The present study aims to explore the major factors responsible for internet banking based on respondent's perception on various internet applications and comparison of internet based banking services in Nepalese banks and to appraise the existing internet banking practice in Nepal.

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 system. It also suggests about the further improvements which should be made in banking system. 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, customers may be also to view their 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 Nepal. Therefore, this study is focused on virtual banking, case served by e-banking, major cost involved for both the user and the provider and more than this. The important the of IB and its problems and prospects of operating internet banking in today's Nepalese Banking system is mainly analyzed in this study.

1.5 Limitations of the Study

This research focuses only on internet banking in Nepal and its necessity in today's Era. However, the aim of this study is 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 or did not understand the nature of internet based banking services. However, this study has faced following limitations:

- 1) This study is done for partial fulfillment of MBS degree. Hence, time and budget limitation so it might not cover all possible aspects that affects on internet banking.
- 2) This study is based on mainly primary analysis. 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.
- 3) 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 all the information 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.
- 4) 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.
- 5) Prepared under Focused on only two banks and limited customers/ users (small sample) so generalization may not fit in all the Banks of the country.
- 6) Since limited studies are done in the context of Nepal. Most of the literatures are reviewed based on the international experience which might be not completely appropriate in our context.

1.6 Organization of the Study

The study has been divided into five chapters. They are as follows:

Chapter I – Introduction: The first chapter deals with introduction. This includes background, statement of problem, focus of study, objectives of the study, and limitation of the study and organization of the study.

Chapter II – Review of Literature: it presents the literature of review. In this chapter, it deals with the review of available literature and concludes conceptual/theoretical review, Different books, journal, periodicals etc. are reviewed during the study period and these are shown in this chapter.

Chapter III – Research Methodology: This chapter clarifies the nature of the whole research. It includes, research design, sources of data and collection procedure etc. similarly, data are analyzed using different tools and techniques and all of these techniques are briefly defined in this chapter.

Chapter IV – Presentation and Analysis of Data: The fourth chapter presents the data collected different sources. Based on the data analysis of stock market has been performed.

Chapter V – Summary, Conclusion and Recommendation: In the fifth chapter summaries the main conclusions and offers suggestions for further improvement.

After completion of these five chapters, a list of literature that reviewed earlier is included alphabetically in **bibliography**. Likewise, data, information, calculation sheet, questionnaire etc are incorporated in **appendix**.

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is an essential part of any research. It is a process of finding previously uncovered facts on research topic. Furthermore it is also a way to avoid investigating problems that have already been definitely answered. The purpose behind review of literature is to develop some expertise in the area, to see what contributions can be made and to review some ideas for developing a research design. The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study, and what remains to be done. The literature survey also minimizes the risk of pursuing the dead ends in research (Sekaran, 1992).

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 journal reports and dissertations.

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 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 "Tejarath Adda" fully subscribed by government in the Kathmandu

valley was one of them. “Tejarath Adda” disbursed a credit to the people especially on the collateral of gold and silver. Thus, the establishment of the “Tajarath Adda” could be regarded as the first 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 Rastriya Banijya Bank was established in 1966 A.D. Besides Nepal Bank Limited and Rastriya Banijya Bank other commercial banks did not come into existence until 1904 A.D. The commercial bank act 1974 was amended in 1904 A.D. to increase the competition between commercial banks. As per the provision made in this act, private sector (including foreign investment) was given freedom in opening new commercial banks. Consequently Nepal Arab Bank Limited (NABIL) was established in 1984 A.D. as a joint venture bank. Likewise Nepal Indo-Suez Bank Ltd and Nepal Grindlays Bank Ltd, (Renamed later as standard chartered Bank Ltd) were established under joint venture in 1986 and 1987 A.D. respectively (Shrestha, 2002:12).

After the initiation of democracy in 1990 A.D., NRB adopted more liberal policy in establishing the commercial banks. In the year 2001 Kumari Bank limited was established and introduced first Internet Banking system in Nepal in the year 2002. Laxmi Bank Limited was the first Bank to introduce SMS- Banking (Mobile Banking) in Nepal in the year 2004. Today, we have 32 Commercial Banks, 90 Development Banks, and 79 Finance companies are involved in the economic development of the Country. Also the 16 cooperatives and 38 INGOs are operating limited are licensed by NRB. Out of the 32 commercial Banks, 6 Banks are joint venture Banks and 2 are Government or semi government and others banks are under 100 percent Nepalese Equity (NRB Banking and financial statistic; 2012).

2.1.2 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.

Table 2.1
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 13th April, 2010)

2.1.3 Adoption of E- Banking

Internet banking is the term used for new age banking system. Internet banking is also called as online banking and it is an outgrowth of PC banking. Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits. Internet banking is a result of explored possibility to use internet application in one of the various domains of commerce. It is difficult to infer whether the internet tool has been applied for convenience of bankers or for the customers' convenience. But ultimately it contributes in increasing the efficiency of the banking operation as well providing more convenience to customers. Without even interacting with the bankers, customers transact from one corner of the country to another corner (Haque et al, 2009).

Electronic banking is the wave of the future. It provides enormous benefit to the bank & consumer in terms of ease and cost of transaction. Some of the Banks in Nepal have already initiated in this direction. 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 by 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). The internet is globally wider spread in use, becoming an integral part of IT in 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 invent innovative products to suit its needs. There are many advantages of online Banking. It is convenient, it isn't bound by operational timings, there are no geographical

barriers and the services can be offered at a minuscule cost (IAMAI's, 2006). Electronic banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez et al., 2008).

In developed countries, computer based banking was introduced in early 1970's A.D. Technological innovations in the banking industry have converted paper checks into electronic checks, flex advice into electronic advice, signature card album into magnetic spots on discs, telegraphic transfer into electronic transfer and so on (Mahat, 2004).

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 (Gold finger, 2002).

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

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 (Mahat, 2004).

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 enter in order to get access with the bank.

2.1.4 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.

2.1.4.1 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 developments of internet and World Wide Web pages have made it possible for the operation of virtual banks.

For using internet banking service, first of all, customer must have a checking account in his bank and a computer connected to internet service with a modem, plus web browsing software such as Microsoft's Internet Explorer or Netscape's Navigator. Next, customers need to pick up one-page application (usually available online) form the bank or have it mailed. The application tells the bank who can access the account and which accounts are involved. Four to five days later, customer will receive online software (if the bank doesn't offer web-based service) in the mail, personal identification number including password. Now we can do our banking right from our home with the help of our PC. On banking website, customers can find guides to walk with their through the steps of how to register the accounts we wish to pay from and payee account they wish to pay to. As per the international practice, for all kinds of e-commerce site where customers can make financial transaction, the website should be authorized by certification authority as a secure website to e-commerce activities. In Nepal, customers can find VeriSign logo to certify the website as secure for e-transaction provided by an international certification authority.

2.1.4.2 Basic Internet Banking Services

Basic internet banking services refer to services and financial transactions commonly requested by customers via internet (Mathew et.al, 1999).

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).

2.1.4.3 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 Chartered Bank Ltd. NABIL Bank, Nepal Investment Bank Ltd. to name few.

Wired Plastic Cards

It lets you set your own limits by pre-funding the amount you 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. introduced this card in Nepal. It is different from Credit Card, to use this card customers have to open an account with the bank and they can use the card up to their 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.

2.1.5 History of Electronic Banking in Nepal

Internet banking is becoming increasingly becoming popular because of convenience and flexibility. Internet banking uses the internet as channel by which to conduct banking activity, for example transferring funds, Paying bills, viewing checking and saving account balances, paying mortgages and purchasing financial instruments and certificates of deposits. Internet banking is a result of explored possibility to use internet application in one of the various domains of commerce. It is difficult to infer whether the internet tool has been applied for convenience of bankers or for the customers' convenience. But ultimately it contributes in increasing the efficiency of the banking operation as well

providing more convenience to customers. Without even interacting with the bankers, customers transact from one corner of the country to another corner. The history of electronic banking in Nepal is not much long and the short history of the service has been outlined as following (Haque et al, 2009).

2.1.6 Evolution of Banking

Banking industry of Nepal has been taking rapid strides in the advancement of technology and aggressive infusion of information technology in the functioning of the banks. The 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. Banking started in Nepal in 1937 by "Nepal Bank Limited" as the first formal banking institution in Nepal. Then after "Nepal Rastra Bank" was established in 1956 as the central bank. Likewise second commercial bank "Rastriy Bankjya Bank" was established in 1966.

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)
3. Automated Teller Machine (ATM) was first introduced by another JV Bank, Himalayan Bank Ltd, in 1995.
4. Himalayan Bank Ltd. was also the first bank to introduce Tele-banking (Telephone Banking) in Nepal.

Major milestones

-) Evolution of Joint Venture Bank in Nepal (NABIL Bank) in 1984.
-) Introduction of Credit Cards in 1990.
-) Establishment of first ISP in 1994 (Mercantile Office 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).

2.1.7 Internet 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. 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 through service centers, kiosks, and automated teller machines (ATM) networks in an effort to combat the anti-virtual bank sentiment among the general on-line consumer base (Mark Sievewright, Credit Union Magazine, 2002).

Despite the slowly growing popularity of on-line banking, statistics have shown that a mere five out of twenty-five virtual bank will survive over the next three years or so. More evidence suggests that Internet-only banks as well as banks that operate on the net are doing a poor job, so bad; in fact, they're sending customers fleeing for the cyber exits (Who's Afraid of Online Banking?, Business Week, 1999).

In an attempt to overcome the failure of on-line banking, virtual banks have observed and adopted the successful principles of traditional forms of banking; it has been deemed 'Restoration of the store'. ('Resurgence of the physical channel', Bank Marketing, March 2002) Interestingly, a study by Gomez.Inc (an Internet quality measurement firm) entitled 'Customer satisfaction in on-line banking: An exercise in Relationship Management' ('On-line privacy concerns continue to linger', Community banker, 2001') revealed that the more on-line bankers use the internet to meet their banking needs, the more satisfied they are with the financial institution-customers who use the internet as their primary means of primary report the highest levels of satisfaction.

These articles were valuable by providing a theoretical foundation for this assignment and dealing with the factors that have deemed most likely to affect the use of internet banking namely age and gender. These articles have given 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.

2.1.8 Benefits of Internet Banking

A. Benefits from the Banker's Point of View

According to a survey by Booz, Allen and Hamilton, an estimated cost providing the routine business of a full service branch in USA is \$1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automatic Teller Machine) banking and 1.5 cents for Internet banking (Nathan 1999; Pyun et al., 2002). In Nordea Bank, Finland, one online transaction costs the bank an average of just 11 cents, compared to \$1 for a transaction in the branch (Echikson, 2001). Average payment in Internet bank or via direct debit cost 4 times less, than payment in branch. On actual cost side (or cost side

from the bank point of view), average direct debit payment cost 16 times less and payment in Internet bank 7 times less, than payment in branch.

B. Benefits from the Customer's Point of View

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of E-banking for corporate customers are as: Reduced costs in accessing and using the banking services, increased comfort and timesaving - transactions can be made 24 hours a day without requiring the physical interaction with the bank, quick and continuous access to information and corporations will have easier access to information as, they can check on multiple accounts at the click of a button, better cash management, low error rates. Transactions take place in the best security conditions as customers use a user name, a password, and an encrypted channel (Bstola, 2007:97).

C. Strategic management in adoption new technology

Every bank has its own strategy to maximise profit and retain its valuable customers in the competitive market. Strategic management entails specifying the organization's mission, vision and objectives, developing policies and plans, often in terms of projects and programs, which are designed to achieve these objectives, and then allocating resources to implement the policies and plan, projects and programs.

According to Lamb in 1984, Strategic management is an ongoing process that evaluates and controls the business and the industries in which the company is involved; assesses its competitors and sets goals and strategies to meet all existing and potential competitors; and then re-evaluate each strategy annually or quarterly to determine how it has been implemented and whether it has succeed or needs replacement by a new strategy to meet changed circumstances, new technology, new competitors, a new economic environment, , or a new social, financial, or political environment (Wikipedia, retrieved on 2012).

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 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 would not like to 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:

i) 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.

ii) Reputation Risk

If the system doesn't work in accordance with the customers' perception, then the reputation risk arises. Likewise, 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.

iii) 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 Nepal Government and Rastriya Bankjya 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.

iv) 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.

v) 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 totally of features and characteristics of a products or services that bear upon its ability to satisfy stated or implied needs (ISO 8402). However, the eight dimensions of quality presented by Garvin (1987) are simple and can be applied for measuring internet-based banking services.

The eight dimensions of quality include:

- a) Performance: It refers to product's primary operating characteristic which is based functional requirements, not taste which is circumstantial preferences.
- b) Feature: It refers to the "bells and whistles" which supplement the basic functioning and features objective and measurable attributes.
- c) Reliability: It refers to probability of product malfunctioning or failing within a

- specified period;
- d) Conformance: It refers to degree to which product design and operating characteristics meet established standards.
 - e) Durability: It refers to the amount of use one gets from a product before it deteriorates and has both economic and technical dimension and as such is redefined as the amount of use gets from a product before it breaks down and replacement is preferable to continued repair.
 - f) Serviceability: It refers to speed, courtesy, competence and ease of repair.
 - g) 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.
 - h) Durability: It refers to customer ability to have complete information about a product or service attributes; indirect measures like reputation.

Therefore, in this study, quality model presented by Garvin (1987) is reviewed and used as an underlying research model in the next section. Banking is no longer confined to the traditional brick and mortar branches. Customers are being provided with multiple modes of accessing banking transactions, including mobile banking. ATM and points of sales terminals and now internet banking. Internet banking has been there for quite some time in the international banking sector. However, this concept has only recently been implemented in Nepal by a few commercial banks. Though internet banking has now been fully implemented in Nepal, a vast majority of people are not aware of the details. Authentic research studies are also not available on the subject.

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

2.2 Empirical Review

2.2.1 Review of Articles

Troy J. Strader and Anthony R. Hendrickson (2000) "Marketing and Consumer Behavior in Electronic Markets mini-track" published in Americas Conference on Information Systems 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. 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. 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, et al (2001) has mentioned "Banks regarding the strategic and operational value of web-based". The purpose of this research was to determine perceptions of banks regarding the strategic and operational value of web-based banking, its benefits to customers and banks, and the key technology considerations. The results show that internet banking is in its nascent stage-only a small number of banks offer web-based banking to customers and the full benefits of internet banking are still to be realized by many banks. On the other hand, a significant number of the banks believe that providing these services to customers in the new economy is essential for survival and thus, mandatory. Respondents felt that banks not providing e-transaction capabilities would lose customers to competitors who offer such services. This perception is supported by the fact that a large percentage of the banks who currently do not offer web-based banking plan to do so in the near future. Another benefit of internet banking was the impression it gave to the public of a cutting- edge bank, thereby enhancing its reputation.

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

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. According to Surendra Bhandari 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

Among 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, and 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 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

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

Despite limitations Nepalese Financial Sector is now ready to provide world class products and services to its customers. There are multiple delivery channels including net payment system and credit cards. Now you can bank upon with Nepalese banks wherever you are and can get world class services with a simple click through your net.

Vivek S. Rana, (2004) Chief of IT/MIS at Nepal Bank “Banking and E-payment Practice in Nepal” also has presented the different aspects of E- banking in Nepal. In his study specifying the need of E-Payment, 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 Related Thesis

Thapa Devinder (2003) conducted on, “Future Prospective on Online Banking”, the researcher 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. 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.

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

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

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

Goi Lee Chai (2006) conducted on in his study “Banking platforms need to cope with continuously changing business environments” states the 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 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) conducted on “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) conducted on “Bank managements should build a strong system security to attract customers” 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.

Kharel Madhira (2012) conducted on “Credit Card Business in Nepal (with reference to NABIL, SCBNL and HBL)” has made the objectives: to analyze the problems related to various transactions of credit card and to examine the aggregate market trend for credit cards. The findings of the study carried out many of the credit card holders have decided to hold a credit card due to increasing trend, convenience and security be it customer or merchant. But credit card is not a safe business. Many frauds have taken place in the foreign country and we cannot say it is safe in Nepal. Cyber crimes are taking place in Nepal also and the recent fraud of magnetic stripe at ATMs and POS by international group at least do not suggest that the credit card business in Nepal is very safe. Banks

have a number of countermeasures at the network level, including sophisticated real-time analysis that can estimate the probability of fraud based on a number of factors. To Risk is the major element of any kind of business. Likewise, Card business is also a risky business.

2.3 Conclusion and Remarks

This study 'E-banking and Nepalese banking system' is most crucial in modern life. E-banking is most popular form of banking system in Nepal. Banks will likely lose their competitiveness if they delay their actions in offering transactions based services on the E-banking because customers are very comfortable in using computers as well as remote banking services. There are not many researchers conducted on this topic and the study which is related to this topic is also unable to brief on the detail meaning and importance of E-banking in modern life. The above research is mainly based on the secondary data. Hence this research is distinct in the sense of presenting and analyzing data i.e. mostly primary data which shows the concise figure of E-banking business in Nepalese market and how it affects modern life and customer's willingness. An approach toward finding market scenario, E-banking players, customer behavior, attitude toward effective service delivery, cost efficient, quick service, customer oriented, secure transaction, easy access, and technology adopted in E-banking are how far secure, attracting future customers and retaining present customers, marketing need for E-banking, possible improvements and role to be played by Nepalese banking involved in the business has been taken in this thesis.

CHAPTER-III

RESEARCH METHODOLOGY

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. 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. Research is the pursuit of truth with the help of study, observation, comparison and experiment. In short, research is the search for knowledge through objectives and systematic method of finding solution to raise problems.

3.1 Research Design

According to the research purpose of the study researcher has followed descriptive research methodology as well as exploratory nature of research. 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.

3.2 Population and Sample

As this research aims at studying the “E-banking and Nepalese Banking System” taking all commercial banks as the population and Laxmi Bank and Kumari Bank as sample for the

study. Banks customers also treated as the sample in this study.

3.3 Tools and Data Collection

The questionnaires (Questionnaires I) are developed to collect data. There are two types of questionnaires – for customer and banks. As the nature of the study objectives, most of the questions related to customer are objectives and some of them are open ended. However, the bank questionnaire is purely subjective. Therefore, the data produced from those questionnaires are both quantitative and qualitative type of data/information.

The data were collected from general customers by means of questionnaire sent through email and also via self administration. Out of total circulated 100 questionnaires, 78% were collected.

There are both primary and secondary data. Primary data are directly collected from the sample Banks and customers questionnaire I whereas secondary data like annual/financial reports and status report of the Banks are collected directly from the Banks and websites. Other secondary data supportive to this study are collected from different websites, various publications and literatures.

3.4 Techniques and Data Analysis

Data collected from different sources are in raw form and in the initial stage as judging independently does not help much. The MS Excel application is used to enter, tabulate, categorize, process, calculate and analyze using different methods and statistical tools. Percent, mean and correlation are calculated as per necessity. Besides these, qualitative information is analyzed. Moreover, data are presented in tables and figures and analyze and interpret them accordingly.

The statistical tools mean calculated in this study is described as follows:

a. Mean

Arithmetic mean is often used to report central tendencies (statistical averages). Arithmetic mean is central tendencies of a collection of numbers taken as the sum of the

numbers divided by the size of the collection. The term "arithmetic mean" is preferred in mathematics and statistics because mean (Kothari, 2004:132). The formula used to calculate arithmetic means as follows:

Arithmetic Mean: Arithmetic mean is the average return over periods. It is calculated by,

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$

Or, $\bar{X} = \frac{X}{n}$

Where,

\bar{X} = Arithmetic mean return

$X_1, X_2, X_3, \dots, X_n$ = Set of observations

n = total no. of observations

X = Sum of given observation

The mean is calculated to obtain the correlation coefficient.

3.5 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-IV

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

4.1. Data Presentation

4.1.1. Information on Respondents

Table 4.1
Information on Respondents

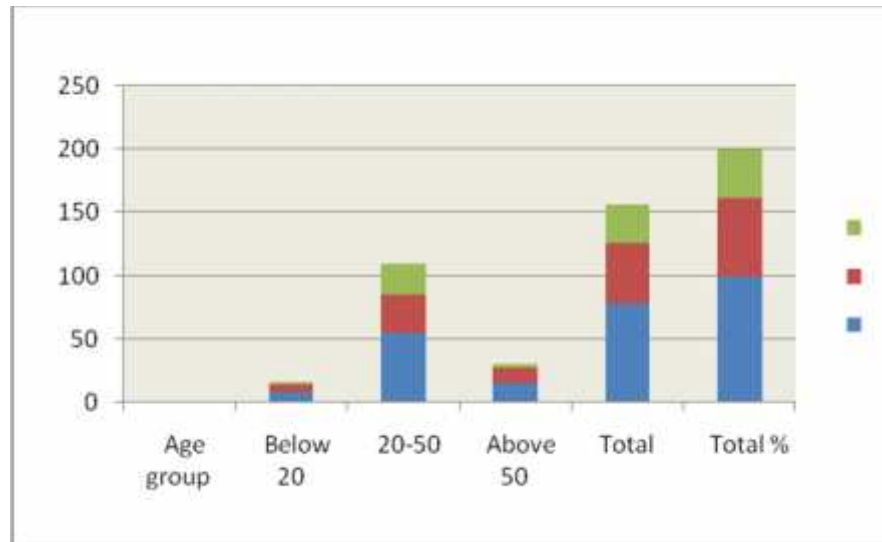
Gender and Age Group-wise Status of Respondents				
Age group	Total	Male	Female	In percentage (%)
Below 20	8	6	2	10.25
20-50	55	30	25	70.5
Above 50	15	12	3	19.23
Total	78	48	30	100
Total %	100	61.5	38.5	

Sources: Field survey 2012

Table 4.1 shows the distribution of total respondents according to their gender and age-group. Among the 78% respondents, 48 are male respondents and 30 are the female respondents. The respondents are categorized into three age groups- i) below 25 years, ii) 25-50 years and iii) above 50 years. The logic behind this categorization is that, in Nepal, generally the age group below 20 years is involve in academic activities (students) and are mostly dependent on their families. From or after 20 years of age people start

working for their earnings. Since this study is focused only in Kathmandu valley, the researcher found it rational to categorize 20 to 50 as the most active age group for this study. The rational to categorize above 50 is less active as most of the people get retired (after 60) from their jobs/ professions.

Figure 4.1
Information on Respondents



4.1.2. Internet Access

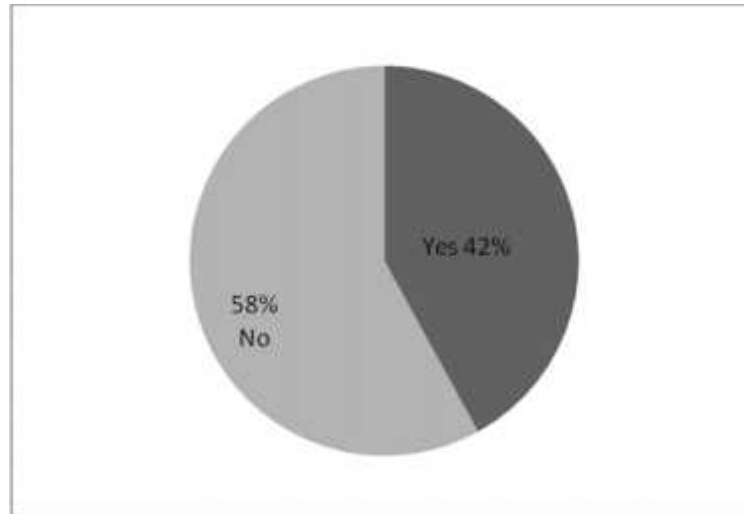
Table 4.2
Internet Access

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

Sources: Field survey 2012

Table 4.1.2 shows that 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 4.2
Internet Access



4.1.3. Knowledge on Internet Banking

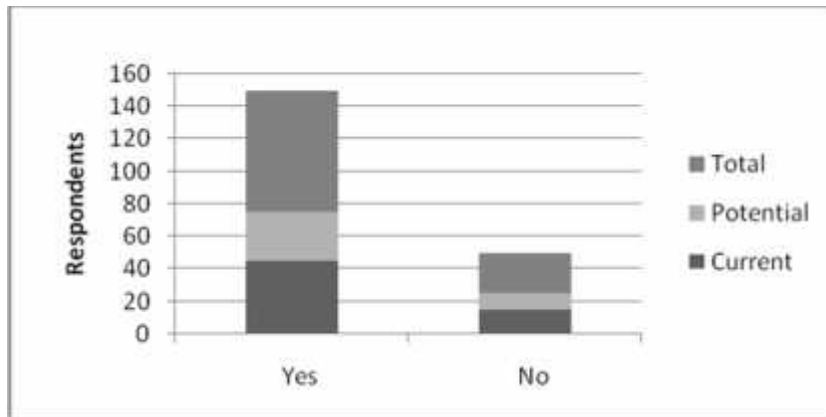
Table 4.3
Knowledge on Internet Banking

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

Sources: Field survey 2012

Table 4.3 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 4.3
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.

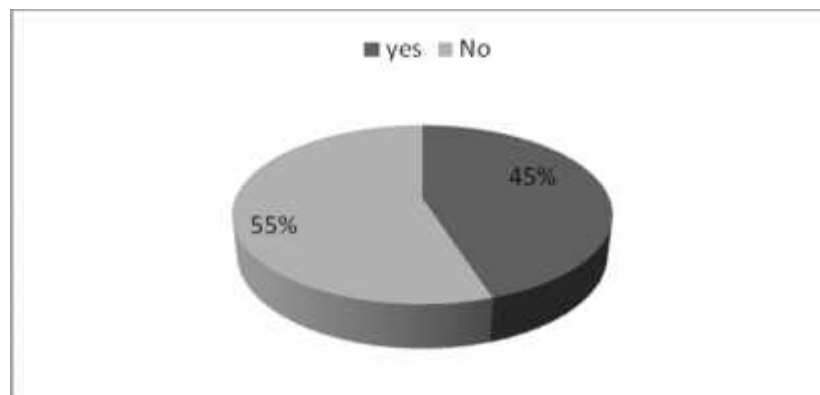
Table 4.4
Internet Banking Users

Users	Frequency	Percentage
Yes	35	45%
No	65	55%
Total	100	100%

Sources: Field survey 2012

Table 4.4 shows 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 4.4
Internet banking users



4.1.5 Use of Bank Services

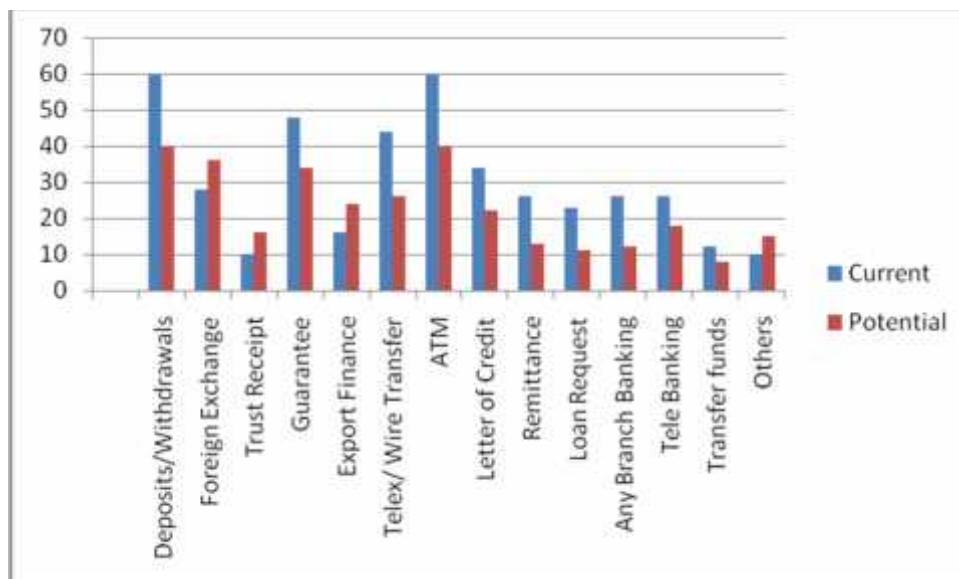
Table 4.5
Use of Bank Services

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

Table 4.5 shows that 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 4.5
Uses of bank services



4.1.6 Reason for Adopting E- banking

According to the study, the respondent use e- banking facility for various features provided by their respective banks like- fund transfer, balance inquiry, check statement, payment of utility bills, mobile charging, online purchasing and withdrawal of money from the bank account.

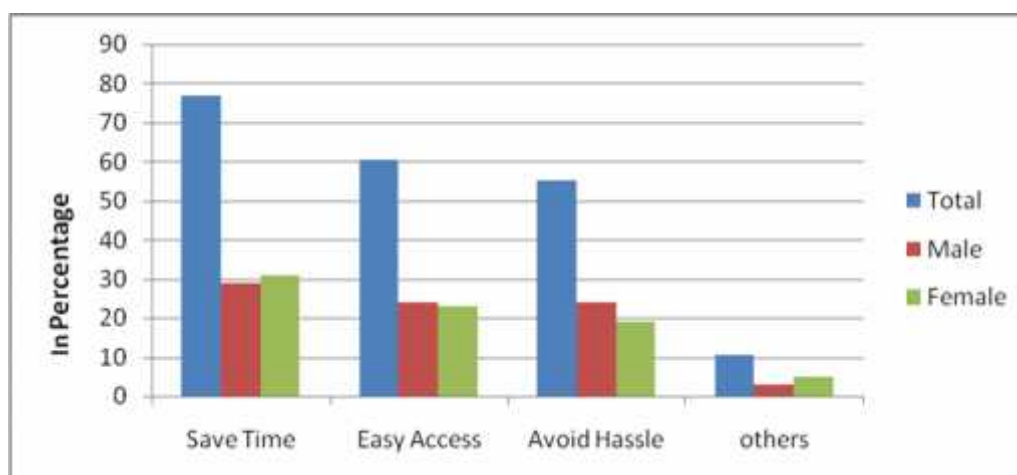
Table 4.6
Reasons for adopting E-banking

	Save Time	Easy Access	Avoid Hassle	Other
Total	60	47	42	9
Total%	76.9	60.3	55.1	10.4
Female	31	23	19	5
In%	51.7	48.9	44.2	62.5
Male	29	24	24	3
In %	48.3	51.1	55.8	37.5

Source: Field survey 2012

Table 4.6 shows the reasons of adopting E-banking facilities by the respondents. Four options were given to respondents to answer this question. They are save time, easy access, avoid hassles and other. Respondents were free to provide their opinions in other column if they were not satisfied with the provided answers. According to the data 76.9% respondent use E-banking facility to save time among them 51.7% are female and 48.9% are male respondents. Similarly, a total of 60.3% respondents said they use E-banking for easy access. 48.9% female and 51.1% male said they use E-banking for easy access. Again 55.1% respondents, 44.2% female and 55.8% male, said they use the service to avoid hassles and a total of 10.4% respondents said they use E- banking facility for various other reasons. Among them 62.5% are female and 37.5% respondents are male.

Figure 4.6
Reasons for adopting E-banking



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.

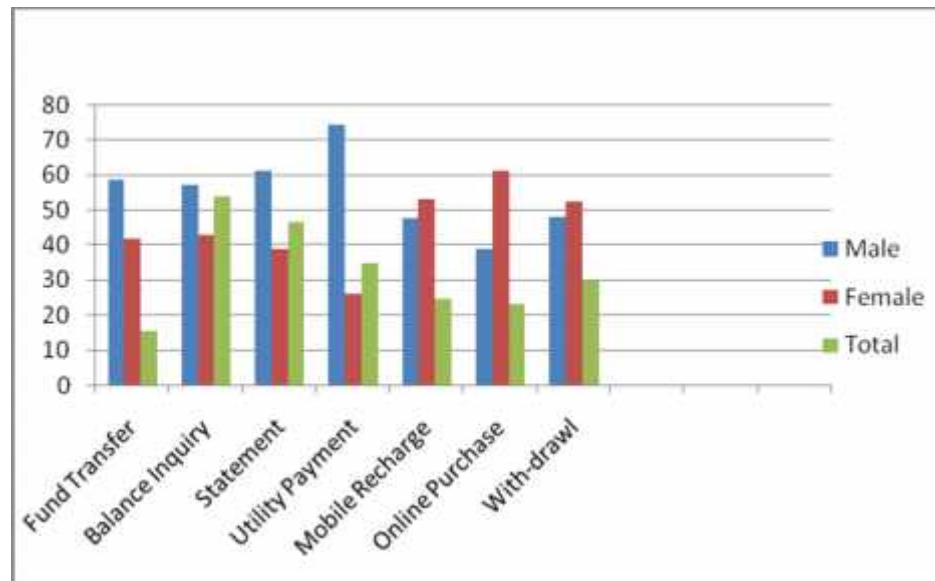
Table 4.7
Most Demanded IB Facilities/Services in Nepal

	Fund Transfer	Balance Inquiry	Statement	Utility Payment	Mobile Recharge	Online Purchase	Withdrawal
Male	7	24	22	20	9	7	11
Male %	58.3	57.1	61.1	74.1	47.4	38.9	47.8
Female	5	18	14	7	10	11	12
Female%	41.7	42.9	38.9	25.9	52.6	61.1	52.2
Total	12	42	36	27	119	18	23
Total%	15.4	53.8	46.2	34.6	24.4	23.1	29.5

Sources: Field survey 2012

Table 4.7 shows that most of the consumers surveyed want all IB services. From the above table we can see 15.4% of total respondents use E-banking facility to fund transfer, 53.8% use E-banking facility to balance inquiry, 46.2% use to receive their bank statement, 34.6% use utility bill payment, 24.4% use for mobile recharge, 23.1% use for online purchasing and 29.5% use for with-draw money respectively.

Figure 4.7
Most Demanded IB Facilities/Services in Nepal



4.1.8 Transaction through Internet Banking

Table 4.8
Transaction through Internet Banking

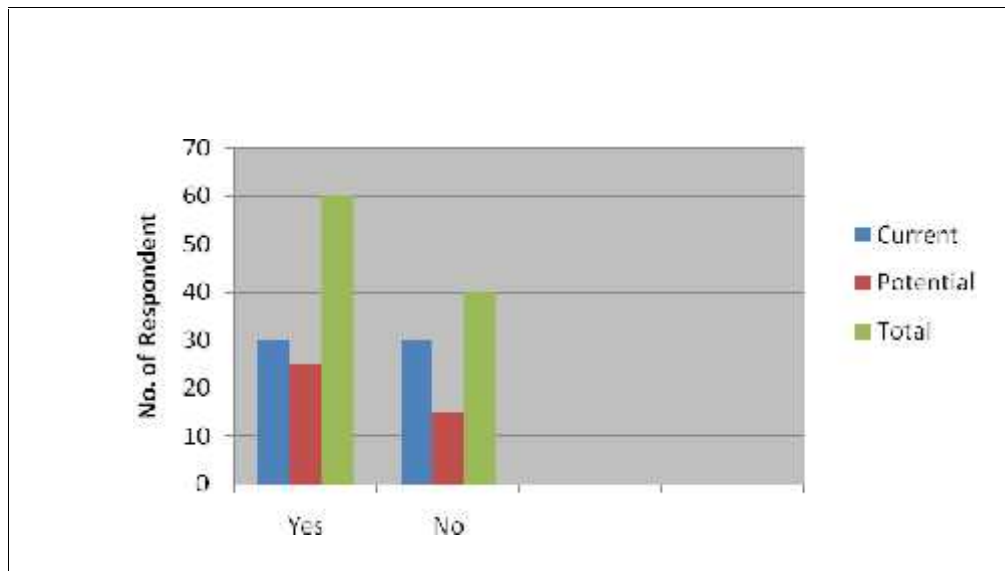
Online Banking Services	Yes	No	Total
Current	30	30	60
Potential	25	15	40

Sources: Field survey 2012

Table 4.8 shows that 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 4.8
Transaction through Internet Banking**



4.1.9 Satisfaction on Bank Services

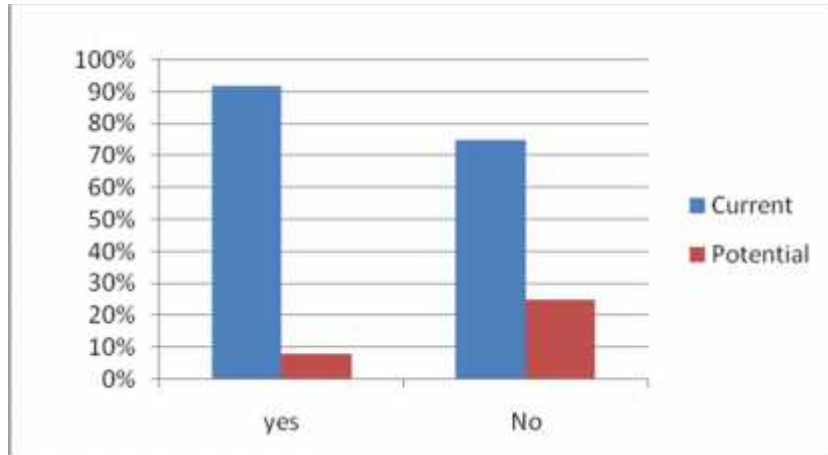
The current customers of the banks are satisfied with the services provided by the bank. It is found that 92% of the current customers are satisfied with the services provided by their respective banks and 75% of the potential customers are also satisfied with the services provided by their current banks.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

**Table 4.9
Satisfaction on Bank Services**

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

Sources: Field survey 2012

Figure 4.9
Satisfaction on Bank Services



4.1.10 Planning on using Internet Banking Services

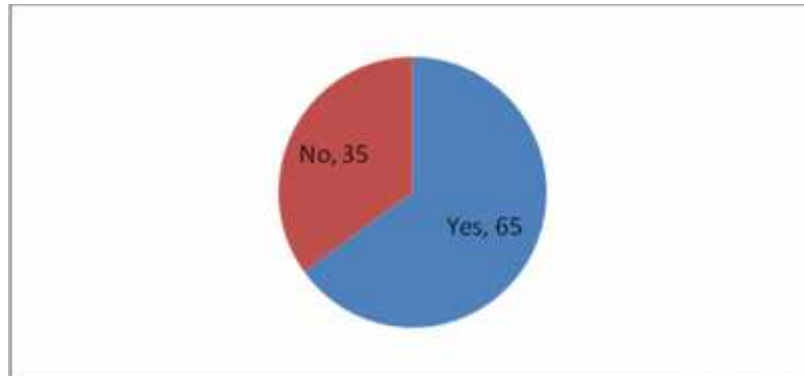
Table 4.10
Planning on using Internet Banking Services

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 4.10
Planning on using Internet Banking Services



4.1.11 Grading on Internet banking services

Table 4.11
Grading on Internet banking services

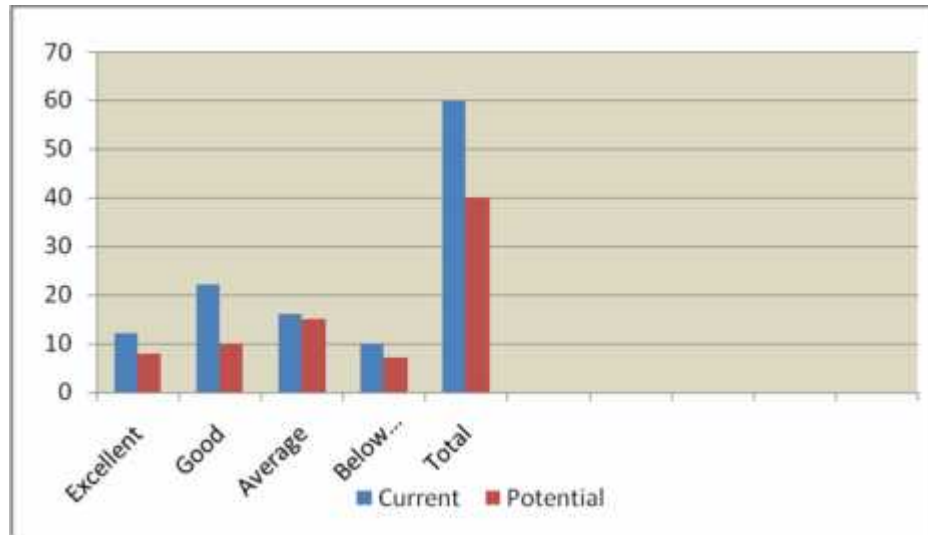
Grade	Current	Potential
Excellent	12	8
Good	22	10
Average	16	15
Below Average	10	7
Total	60	40

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 4.11
Grading on Internet banking services



4.1.12 Problems on Internet Banking

Table 4.12
Problems on Internet Banking

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

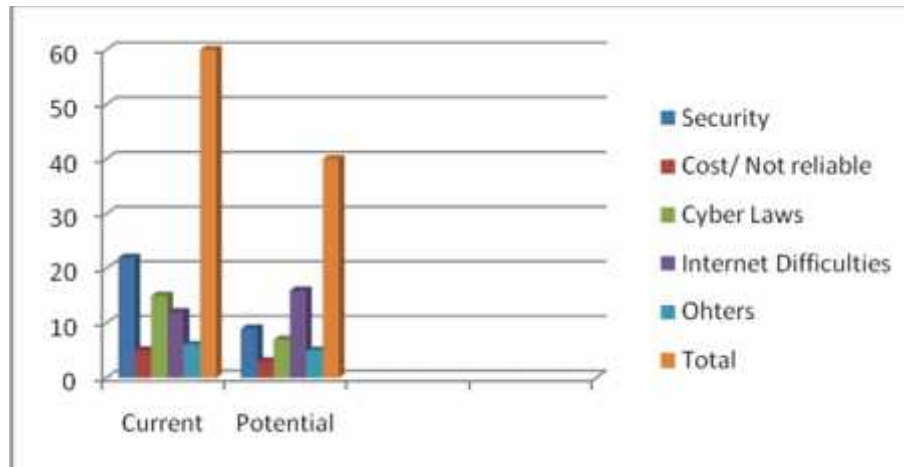
Sources: Field survey 2012

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 4.12

Problems on Internet Banking



4.1.13 Factors on Choosing Internet Banking Services

Table 4.13

Factors on Choosing Internet Banking Services

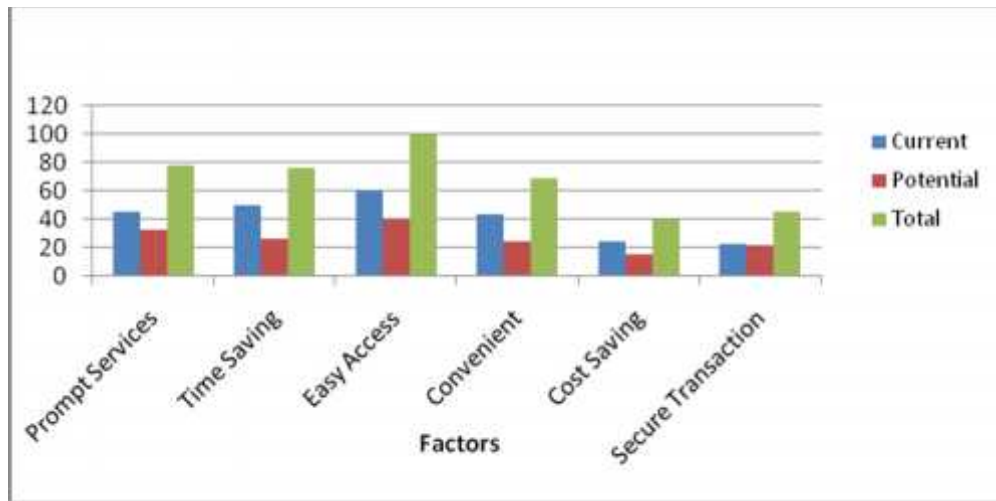
Factors	Current	Potential	Total
Prompt Services	45	33	78
Time Saving	50	26	76
Easy Access	60	40	100
Convenient	44	25	69
Cost Saving	25	15	40
Secure Transaction	23	22	45

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 4.13

Factors on choosing Internet Banking Services



4.1.14 Potential Customers of Internet Banking Services

Table 4.14

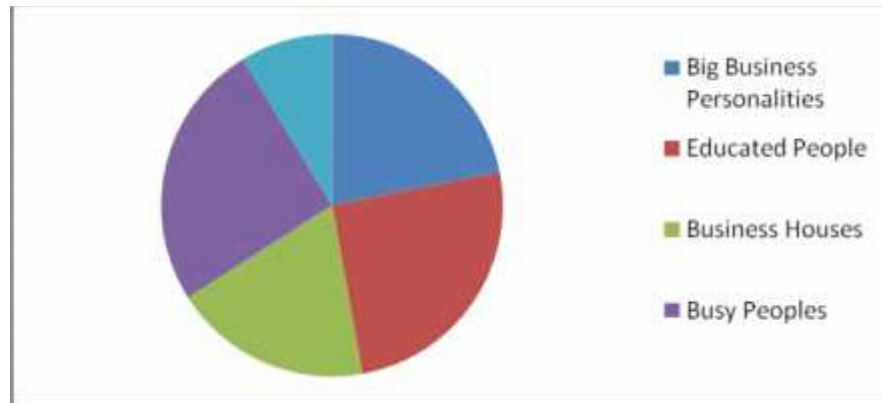
Potential Customers of Internet Banking

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 sighted 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 4.14
Potential Customers of Internet Banking



4.1.15 Reasons of Offering E- Banking

E-banking is a new concept in Nepal. A number of city centered banks are using this facility within their own limitations and conditions. Although E-banking is extremely popular among the nations of globe and have been used for varied purposes by both the banks and the consumers the nature of this in Nepal seems to be specific and limited to its own situation. Research shows that banks are using this service only because of their own convenience and retaining their existing customers.

4.1.16 Cost Structure of E- Banking Transaction

Cost analysis of different distribution channels plays dominant role in banking transactions. Lack of cost analysis may result in pushing the bank into the deep abyss of financial loss. Surprisingly, the cost analysis of most of the banks in Nepal is seems to be either inadequate or not applied due to their narrow space of business transaction or lack of sufficient tools. Unit cost for transaction through full service branch is Rs. 2 (average), through ATM (SCT Network) is Rs. 25 for users, through SMS banking Rs 2 and through fax is Rs.125. There is no cost analysis on the part of online banking. However, it cost less than one rupee for per minute internet surfing in Nepal.

4.1.17 Security Measures

Security measurement is the top priority of the studied Banks. Both Banks have placed similar types of security systems to ensure the customers' account information and online activities. The online banking system uses digital certificate from VeriSign for encryption of the Secure Sockets Layer session protecting data transmission from unauthorized viewing or tapping. Infrastructure comprising of firewall, antivirus, intrusion detection systems etc. provides high degree of security.

Despite of security systems, it is also the responsibility of customers to keep their online banking safe and secure. Banks makes aware its customers about the security by providing the security guidelines at the time of service subscription, through email and bank's website. The online banking service has dual password protection system, one for login and another for carrying out transaction. The system also recommends the user to change the password in every 60 days. Since both Banks are trying to gain more customers in the competitive market, they also emphasized on a strong and effective policy from the government side.

4.1.18 Opportunities and Challenges

Banks reported that security is the major concern in e-/online banking. Through Banks have security systems in place; it is a great deal of challenges to the Banks to keep their security systems updated to protect the system from attacks and fraudulent activities.

Responding quickly to the change in technologies and regulatory requirements is the challenge in e-/online banking. Due to the lack of competent solution providers, keeping up with the trend of e-/online banking system is yet another challenge. As the concept of online payment is new to our market, payment ecosystem has not been conceptualized resulting in difficulty in interoperating the payment system with the merchants as they own their proprietary system.

Expanding customers and covering the maximum localities/ areas are also challenging in the competitive market. Every time Banks need to do research to fulfill customers' need and launch the features that other existing banks not yet endorsed/ introduced.

According to Banks, e-/online banking is more of service product rather than revenue generating product. E-/online banking is still in elementary stage, majority of customers are still unaware of the online banking and are still reluctant to bank online. Time has not come yet to consider online banking as revenue generating product. Rather bank should focus on educating and familiarizing its customers of online banking.

Online banking is one of the most sensitive products as it deals with customer information and transactions. Employees responsible to handle and manage the system should be well versed of the technologies involved in the system. Employees should have deep understanding of application and database securities, network securities and system designing skill. However, one studied Bank is trying to self sustain through capacity building of its staff. And another Bank is ore focusing on market strategy and business promotion that is why it has been out sourcing almost all the technical parts.

4.2 SWOT Analysis

On the basis of the respondents' responses the following SWOT analysis has been done for this study, which also demands from the research questions of this study.

Table 4.15
SWOT Analysis

Strength	Weakness	Opportunities	Threat
<p><u>Customers:</u></p> <ul style="list-style-type: none"> - Access from anywhere - Easy access - 24/7 access - Save time - Hassel free 	<ul style="list-style-type: none"> - Not fully aware about internet - Not internet access/connection to internet is expensive - Not able to trust 	<ul style="list-style-type: none"> - Easy bills payment - Online purchases and bills payment - Can be integrated with remittance 	<ul style="list-style-type: none"> - Hacking of password - Some other accounts can be debited in case of

<ul style="list-style-type: none"> - banking - No need to be physically present at the bank - Cost Saving 	<ul style="list-style-type: none"> - internet banking fully - Long load shedding hours - No intimacy with customers - E-Banking service has not been able to reach every part of the country 	<ul style="list-style-type: none"> - Services: card/mobile banking - Shopping can be done with use o cards 	<ul style="list-style-type: none"> - mistake in typing account number
<p>Bank:</p> <ul style="list-style-type: none"> - Cost Saving (operational & HR) - Attract customer - Provide service to a large number of customers at a time - Revenue generating (fees) - Prompt services 	<ul style="list-style-type: none"> - Not able to provide full services due to load shedding - Service providers not competent - Cannot quickly respond to market requirements - Not able to keep up with international trends - Could not quickly respond to stringent requirement of regulatory. - Lack of competent employees 	<ul style="list-style-type: none"> - Satisfied customers draw more customers - Cost saved can be utilized in other sectors 	<ul style="list-style-type: none"> - Hacking of system - Fraudulent activities - Tarnish bank's image due to fraud

Source: Field survey 2012

4.3 Major Findings of the Study

The major findings drawn from the study, collection and analysis of primary and secondary data, are outlined below:

- J E-banking was much popular among the age group 20-50. This age group is considered more active in Nepal as people start earning for the living and they are not only able to afford e-banking facilities, they become more knowledgeable about the usage. While calculating correlation between age of the respondents and usage of e-banking facility, it was found to be perfect positive correlation, which shows the usage of e-banking is directly dependent on the age of the respondents.
- J Access to internet is another variable affecting adoption of e-banking facility. As this study was based only in Kathmandu valley, most of the respondents said they have access to internet banking either at home or in the office. The access to internet seems to increase the use of e-banking facility.
- J Male respondents were ahead in using the e-banking service than female respondents. Among the e-banking users, the most popular service was found to be ATM. Another most used service was found to be e-statement. The respondents said with the use of checking facility provided through e-banking, they do not have to go to the bank just to check their bank balance and hence they were drawn towards the facility. However, the customers were less drawn towards utility bills payment facility and transfer of money.
- J While most of the respondents said the use of e-banking is useful, only a negligible respondent said it is not useful. However some of the respondents were confused said it is not useful. However some of the respondents were confused about the usefulness of e-banking.
- J Most respondents were found to be using e-banking facility to save time and for the easy access. In this busy world, people want prompt services and have no time to go bank all the time and do their transaction or get statements or even pay utility bills. As banks now-a-days provide these services, the customers are more attracted to the service.
- J The highest number of respondents said they used the facility for balance inquiry and e-statement. However only a few respondents said they use the facility to transfer funds and purchase online products. The respondents seem to be in safe side and use only riskless facilities like inquiry of balance e-statements. However they are yet to gain full trust over matters involving money and hence use less.

-) Respondents said they seek features like mobile recharging, quick service, attractive outlook, secured services, access from anywhere, friendliness and e-statement while using e-banking. Among these, the highest number of respondents seeks access from anywhere and quick service facilities, while they give lowest importance to attractive outlook webpage.
-) When asked whether the respondents were satisfied with their banks whether traditional or internet, a whopping number of 84% respondents said yes to the query and only a minimum said they were not satisfied. There are various reasons behind people not being fully satisfied with their banks. A few reasoned that the security system of the online banking facilities must be improve while some pointed out the need of strong law to discourage cyber crimes. Some respondents said banks need to be customer oriented and train the staffs in handling customers and the products they sell and some responded that they expect free e-banking and SMS services and easily accessible ATM centers.
-) There is a great future prospect for e-banking in Nepal. Major inhibiting factor for customers adopting e-banking is found to be security. Most respondents were concerned about securing their bank account as they do not fully trust the technology due to possible fraud and privacy violation problems.
-) According to the bank experts, they are moving ahead adopting different strategies in expanding services and features related to e-banking to strive in the competitive market. The ultimate goal of the banks is the profit maximization and banks seem to be doing their best to understand the market, customer's need and grab every possible opportunity to turn it into profit making factor and every year they seem to be expanding new features in a competitive way.
-) Banks are adopting new technologies and through electronic channels, the banks have been able to provide service from anywhere and anytime.
-) Security measures remain the top priority of the studied banks. The banks have given top priority to ensure security measures. However, despite all the security measures taken up by the banks, the banks feel that the customers need to keep their online banking safe and secure and follow the security guidelines provided by the banks at the time of subscription.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

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.

5.1 Summary

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. 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. 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. 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.

5.2 Conclusion

The major results of the study of Internet Banking services in Nepal are growing stage. The communication infrastructure of our country is unable to support the full-fledged implementation of Internet Banking Services. The major obstruction for the implementation has been the absence of proper cyber laws and regulations. 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. The reason for customer not utilizing Internet Banking services are identified as Absence of cyber laws and regulations, Security/ Safety, Unaware/ Uneducated customers, Understanding of technologies associated with the services, Internet difficulties, Satisfied with the traditional Banking services, mostly, big trading firm customers using Internet Banking services, customer having smaller accounts don't see the need for using those services, although the numbers of customers using Internet Banking services are very low, the number of new customer willing to use these services increased gradually. Likewise, 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. Though, Nepal is also as member of WTO and in the era of globalization it is essential for most of the large trading firms and multinational enterprises to utilize Internet Banking services in the international competitive market.

The banks need to bring in new improved and advanced technologies to catch up with the growing demand of the customers in providing effective and efficient services. People in urban areas are ready to accept technological advancement in the country however new technologies including e-banking facilities need to reach the rural areas. The banks need to provide more secured system while the customers need to follow the precautions described by the bank in making their e-banking more safe and convenient. One of the major obstructions found in the implementation of e-banking has been the absence of proper laws and regulations governing e-commerce along with the lack of customer awareness.

5.3 Recommendations

Following recommendations have been made on the basis of major findings of the study:

- J Consumer 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.
- J 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, internet knowledge and ITC at some level to understand the technological aspects of IB and use it properly.
- J Banks should put domo in internet about how to use IB services and published manual book, leaflets, browsers regarding IB services and facilities.
- J 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.
- J 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 in secure, reliable and effective manner.

-) New cyber law relating to IB should be enacted. For this, 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.
-) IB facilities and services should be decentralized in every branch of banks of Nepal; it should not be centralized in urban city only.
-) Various training programmers, and workshops related with use of current IB system should be organized and implement in an effective way.
-) IT sectors should be closely collaborating with the banking sector in providing IB services and other facilities at cost effective price.
-) All the banks should provide power back up and data recovery systems for their IB services in case of power failure, incomplete transactions etc.
-) 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.

BIBLIOGRAPHY

Books,

- Adams, A.N & Lamtey, A.O (2009). *Customer perceived Value in Internet Banking in Sweden* New Delhi: Mac Millan India Pvt. Ltd.
- Beckett, J. (2002) *Managerial Finance*. New York: The Dryden Press Pvt.
- Bhandari, D.R (2003) *Banking And Insurance Principle and Practice* Kathmandu: Ayoush Publication.
- Gonzalez, M. et.all. (2008) *Fundamentals of Financial Management*. USA: Brentice Hall Inc. 9th Ed.
- Grolier, R. (2005) *Banking Theory and Practice* New Delhi: V ikas Publishing House Pvt.
- Khan, S. (2007) *Financial Management*. New Delhi: Tata McGraw Hill Publishing Company Limited.
- Liao, H. Cheng, P. (2002). *First Edition Practice and Law of Banking*, New Delhi: Mac Millan India Pvt. Ltd.
- Shrestha, M.S. (2002), *Fundamental of Banking* Kathmandu: Buddha Academic Enterprises Pvt. Ltd.

Journals and Periodicals

- Allfrenclance. P. et.all. (2007). *Trading Online, some day we will all trade this way*. London Wiley.
- Bastola, A. (2007). *Prospects and Challenges of E-; banking in Nepal*. The Journal of Nepalese Business Studies, Vol.IV(1): 96-104
- Chank, P., Paul, H. (2000). *Technology Infusion in Service Encounters*. Journal of the Academy of Marketing Science. Vol. 28 (1), pp.138-49.
- Echikson, W. (April, 2001). *The Dynamo of E-Banking*. BusinessWeek Online.
- Eric Barnes (2002). *E-finance, The Electronic Revolution*, Journal 6(3), 2-14
- Guru, B.K., et.all (2003). *An Evaluation of Internet Banking sites on Islamic Countries*. Journal of Internet Banking and Commerce, November 2003, 8(2).
- Guru, C. (2002) *E-banking in Transition Economies: the Case of Romania,"* Journal of Financial Services Marketing, 2002, Vol, (6) pp. 362 -379.

- Haque, D.L. et.all (2009). *Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations*. Journal of marketing, 60(3), pp. 50-68.
- Kadaras, P. et.all (2001). *Banking Theory and Practice*, New Delhi: 18th ed. Vikas Publishing House Pvt. Ltd.
- Mahat, L. D., (2004, October 13). *Cyber law to support e-banking*, The Kathmandu post .
- Mattila, M. et.all. (2003). *Internet banking adoption*. Journal of services marketing/ Internet banking adoption , 156.
- Monica, P., Paul S. & Ravi N. (2001), *Banks regarding the strategic and operational value of web based* The Business Week Vol. XIII (3)
- Nepal Rastra Bank (2006). *Nepal Rastra Bank Strategic Plan 2002-2012*. Kathmandu
- Nepal Rastra Bank(2002). *Nepal Rastra Bank Act 2058(2002)*. Kathmandu: HMG/ Nepal
- Shostack, .L.N. (1985). *Understanding of Bank operations*, New York: ABS.
- Troy J. Strader & Anthony R. (2000) *Marketing and Consumer Behavior in Electronic market mini-track* Americas Conference on Information Systems (AMCIS),Long Beach, California.
- Yadav, R. (2004, May). *IT revolution in Nepal* Kathmandu: The Business Age May 2004 p. 27

Unpublished Thesis

- Khanal, P. (2005) *Online Banking in Nepal* Kathmandu: An Unpublished Master's Thesis Shanker Dev Campus, T.U.
- Kharel, M. (2012) *Credit Card Business in Nepal (with reference to NABIL, SCBNL and HBL)* Kathmandu: An Unpublished Master's Thesis, Shanker Dev Campus, T.U.
- Thapa, D. (2003), *Future Prospects of Online Banking in Nepal* Kathmandu: An Unpublished Master's thesis Nepal Commerce Campus, T.U.

Websites

- www.allfreelance.com/
- www.org.uk/internet-Bank/
- www.arraydev.com/commerce/jibc/
- www.merriam-webster.com/
- www.nepalisp.com/

www.news.digitaltrends.com/

www.laxmibank.com/

www.kumaribank.com/

www.your-community-bank.com/

ANNEX I

Questionnaires

A. Questionnaire for the Respondents

Questionnaire on Online Internet Banking

General Information (Use √ in the correct option)

1. Age (Please check mark in appropriate box) Below 20 21-50 Above 50
2. Sex Male Female

Specific Information:

1. Do you have internet access at home? yes No
2. What kind of account do you have?
 Saving Fixed others please
3. Are you aware about online internet banking? Yes No
4. Does your Bank provide online/internet banking? Yes No

5. Does your Bank provide these services?

<u>Services</u>	Y	N	<u>Services</u>	Y	N
Internet Banking/e-statement	<input type="checkbox"/>	<input type="checkbox"/>	Bill Payments	<input type="checkbox"/>	<input type="checkbox"/>
SMS Banking	<input type="checkbox"/>	<input type="checkbox"/>	Money Transfers	<input type="checkbox"/>	<input type="checkbox"/>
ATM (STC/VISA/Debit/Credit Card)	<input type="checkbox"/>	<input type="checkbox"/>	Check Balance	<input type="checkbox"/>	<input type="checkbox"/>

6. Does use of Online/Internet Banking make work easy for you? Is it useful for you?

Yes No Others

7. Why do you think Internet Banking should be used?

Save time Easy Access Avoid hassles Others

8. Which is the feature you mostly use while using Internet Banking?

- Fund transfer Balance Inquiry Statement Inquiry
Payment of utility bills Recharge mobile
Online purchase other

9. Which Banking System do you think better?

- Traditional Internet Banking

10. How do you grade your Internet Banking Services?

- Excellent Good Average below Average

11. Which is the most problem have you faced on Internet Banking?

- Security Cost/not reliable Cyber Laws
Interest difficulties other

12. What may be the factors that you choose on Internet Banking?

- Prompt Service Time Saving Easy Access
Convenient Cost Saving Secure Transaction

13. Who do you think the potential Customers of Internet Banking services?

- Big Business Personalities Educated People
Business Houses Busy Peoples
Others

14. Are you satisfied with the available service of the bank?
Yes No

B. Questionnaire for the Bank

1. What are the online products/ technologies offered by your bank?
2. What are the features available?
3. What is the target of your service through online banking?
4. What are the security measures adopted by your bank to provide securities against fraud cases?
5. How do you ensure your customers that your online service is safe?
6. What are your plans/ strategies to expand online banking?
7. What should be done to aware the customers about internet banking not only from the bank's perspective but also from the higher level (government policy level) ?
8. What are the challenges faced by your bank in adopting online banking services?
9. What are the advantages and disadvantages in adopting internet banking Services?
10. How much should the employees be technologically sound in adopting this service?
11. Does your bank charge subscription charges from the customers or providing internet banking services? If yes, Dou you think such charges are necessary?

ANNX II

Profile of Laxmi Bank Limited

Laxmi Bank was incorporated in April 2002 as the 16th commercial bank in Nepal. In 2004 Laxmi Bank merged with HISEF Finance Limited, a first generation financial company which was the first and ever merger in the Nepali corporate history.

Laxmi Bank is a Category 'A' Financial Institution and re-registered in 2006 under the "Banks and Financial Institutions Act" of Nepal. The Bank's shares are listed and actively traded in the Nepal Stock Exchange (NEPSE).

Financial position of the bank as of 17 October, 2011 is as follows:

Details	NRB (in million)
Share Capital	1,694
Deposit	18,239
Loan and Advances	15,199
Investment	2,971
Operating Profit	591
Net Profit	376

Source: Laxmi Bank Limited

Product and Services

Laxmi Bank Limited is built around high standards of good corporate governance culture provides following products and services.

- A. Deposits
 - 1) Dhanalaxmi Savings
 - 2) Green Savings
 - 3) Super Women Savings
 - 4) Orange Savings
 - 5) My money market
 - 6) Mili Juli Bachat Khata

B. Loans

- 1) Home Loan
- 2) Auto Loan
- 3) Personal Loan

C. Card Services

- 1) Dhanalaxmi Debit Card
- 2) Credit Card
- 3) Visa Debit Card
- 4) Dollar Travel Card

D. Electronic Banking

- 1) Mobile Money
- 2) Laxmi iBank
- 3) Mobile Khata

E. Marchants

- 1) Mobile Money Merchants
- 2) iBank Marchants
- 3) Discount Merchants

F. Auxillaries

- 1) Safe Deposit Lockers
- 2) Bancassurance
- 3) BBSM Club Card

G. Remittance

ANNEX III

Profile of Kumari Bank Limited

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1,603,800,000 of which 70% is contributed from promoters and remaining from public.

Kumari Bank Ltd has been providing wide - range of modern banking services through 29 points of representations located in various urban and semi urban part of the country, 20 outside and 9 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS Banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value.

The adoption of modern Globus Software, developed by Temenos NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, Utility Bill Payment Services, Inward and Outward Remittance services, Online remit Services and various other banking services.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 35 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers.

Capital Structure

Authorized Capital: Rs. 2000 million

Paid-up Capital: Rs. 1603.8 million

Products and services provided by Kumari Bank Limited are classified into three groups. They are as follows.

A. Personal Banking

- 1) Deposit
- 2) Loans
- 3) Lockers
- 4) Remittance

B. Business Banking

- 1) Correspondent Banks
- 2) Deposits
- 3) Loans
- 4) Foreign Trade
- 5) Salary Management
- 6) Remittance
- 7) Bulk Cash Management

C. E-Banking

- 1) Internet Banking
- 2) Utility Bill Payment
- 3) SMS Banking
- 4) Kumari Mobile Cash
- 5) ATMs

ANNEX IV

List of Registered ISP, VSAT, and Rural Internet Service Provider In Nepal

A. ISP Providers in Nepal

1. Mercantile Communications Private Limited
2. Net Max Technologies Pvt Ltd
3. Worldlink Communications Private Limited
4. Global Internet Services Private Limited
5. Eastern Networks Pvt Ltd
6. Himalayan Online Services Private Limited
7. Logic Information Business Pvt Ltd
8. I Plus Pvt Ltd
9. Everest Net Private Limited
10. Infocom Private Limited
11. Nepal Doorsanchar Company Limited
12. Via Net Communications Private Limited
13. Access Net Communication Pvt. Ltd.
14. Websurfer Nepal Communications Private Limited
15. Himal Technologies Private Limited
16. Subisu Cablenet Private Limited
17. Japan Nepal Information ommunication Technology Private Limited
18. Netplus Technology Private Limited
19. Health Net Nepal Private Limited
20. Buddha Net Private Limited
21. Namche Networks Private Limited
22. Spice Nepal Private Limited
23. Broadlink Network and Communications Private Limited
24. Radius Communications Private Limited
25. Nepal Net Sanchar Private Limited
26. Mitra Network Private Limited
27. Sustainable Network Private Limited
28. Hotlink Nepal Private Limited

29. Classic Tech Pvt. Ltd.
30. Integrated Business Solution (IBSYS) Nepal Pvt Ltd
31. STM Telecom Sanchar Pvt Ltd
32. Allied Netlink Technologies Pvt. Ltd.
33. United Telecom Limited
34. Satelink Nepal Pvt Ltd
35. Zentech Pvt Ltd
36. Namaste Asia Link P. Ltd
37. Fiber Online P. Ltd
38. Surf In P. Ltd
39. Pokhara Inernet P.Ltd
40. Telenet Pvt. Ltd.
41. Cherry World Communication Pvt. Ltd.
42. Betal Networks Pvt. Ltd.
43. Aastha Network Pvt. Ltd.

B. Registered VSAT Network Services Providers

1. Communications and Communicate Nepal Pvt. Ltd.
2. I MAX Pvt. Ltd.
3. Infocom Pvt. Ltd.
4. Mercantile Communications Pvt. Ltd.
5. Namche Networks Pvt. Ltd.
6. Square Network Pvt. Ltd.
7. Unlimited Numedia Pvt. Ltd.
8. Websurfer Nepal Communication System Pvt. Ltd.
9. WorldLink Communications Pvt. Ltd .

C. Rural Internet Service Providers

1. Pratidhwani Media Pvt. Ltd.
2. Samajik Nyayaka Lagi Sanchar Abhiyan
3. Mandavi Bahu-Udhyesiya Samaj Bikas Kendra
4. RTC Technology Nepal Pvt. Ltd.
5. Nepal Wireless
6. CIS Net Sanchar Pvt. Ltd.

ANNEX V

Central Bank

) Nepal Rastra Bank

Commercial Banks (Class A)

1. Nepal Bank Ltd.
2. Rastriya Banijya Bank Ltd.
3. Agriculture Development Bank Ltd.
4. Nabil Bank Ltd.
5. Nepal Investment Bank Ltd.
6. Standard Chartered Bank Nepal Ltd..
7. Himalayan Bank Ltd.
8. Nepal SBI Bank Ltd.
9. Nepal Bangladesh Bank Ltd.
10. Everest Bank Ltd.
11. Bank of Kathmandu Ltd.
12. Nepal Credit and Commerce Bank Ltd.
13. Lumbini Bank Ltd.
14. Nepal Industrial & Commercial Bank Ltd.
15. Machhapuchhre Bank Ltd.
16. Kumari Bank Ltd.
17. Laxmi Bank Ltd.
18. Siddhartha Bank Ltd.
19. Global Bank Ltd.
20. Citizens Bank International Ltd.
21. Prime Commercial Bank Ltd
22. Sunrise Bank Ltd.
23. Bank of Asia Nepal Ltd.

24. DCBL Bank Ltd.
25. NMB Bank Ltd.
26. Kist Bank Ltd.
27. Janata Bank Nepal Ltd.
28. Mega Bank Nepal Ltd.
29. Commerz & Trust Bank Nepal Ltd.
30. Civil Bank Ltd.
31. Century Commercial Bank Ltd.
32. Samina Bank Limited

Development Banks (Class B)

- 1 Nepal Industrial Development Corporation
- 2 Uddyam Development Bank Ltd.
- 3 Malika Development Bank Ltd.
- 4 Siddhartha Development Bank Ltd.
- 5 United Development Bank Ltd.
- 6 Manakamana Development Bank Ltd.
- 7 Narayani Development Bank Ltd.
- 8 Pashimanchal Development Bank Ltd.
- 9 Sahayogi Bikas Bank Ltd.
- 10 Pashupati Development Bank Ltd.
- 11 Karnali Bikash Bank Ltd.
- 12 Triveni Development Bank Ltd.
- 13 Annapurna Development Bank Ltd.
- 14 Bhrikuti Bikas Bank Ltd.
- 15 Shubhechchha Bikas Bank Ltd.
- 16 Bageshowri Development Bank Ltd.
- 17 Sanima Bikas Bank Ltd.
- 18 Gaurishankar Development Bank Ltd.
- 19 Gorkha Bikas Bank Ltd.
- 20 Gandaki Bikas Bank Ltd.

- 21 Infrastructure Development Bank Ltd.
- 22 Business Development Bank Ltd.
- 23 Biratlaxmi Bikas Bank Ltd.
- 24 Excel Development Bank Ltd.
- 25 Western Development Bank Ltd.
- 26 H. & B. Development Bank Ltd.**
- 27 Arniko Development Bank Ltd.
- 28 NDEP Development Bank Ltd.
- 29 Clean Energy Development Bank Ltd.
- 30 Miteri Development Bank Ltd.
- 31 Tinau Bikas Bank Ltd.
- 32 Rising Development Bank Ltd.
- 33 Muktinath Bikas Bank Ltd.
- 34 Sewa Bikas Bank Ltd.
- 35 Kankai Bikas Bank Ltd.
- 36 Public Development Bank Ltd.
- 37 Ace Development Bank Ltd.
- 38 Mahakali Bikas Bank Ltd.
- 39 Sangrila Bikas Bank Ltd.
- 40 Bhargab Bikas Bank Ltd.
- 41 Vibor Bikas Bank Ltd.
- 42 Resunga Bikas Bank Ltd.
- 43 Rara Bikas Bank Ltd.
- 44 Diyalo Bikas Bank Ltd.
- 45 Country Development Bank Ltd.
- 46 Kasthamandap Development Bank Ltd.
- 47 Alpine Development Bank Ltd.
- 48 Nilgiri Bikas Bank Ltd.
- 49 Corporate Development Bank Ltd.
- 50 Kamana Bikas Bank Ltd.
- 51 City Development Bank Ltd.

- 52 Garima Bikas Bank Ltd.
- 53 Biswo Bikas Bank Ltd.
- 54 Pathibhara Bikas Bank Ltd.
- 55 Professional Bikas Bank Ltd.
- 56 Kabeli Bikas Bank Ltd.
- 57 Purnima Bikas Bank Ltd.
- 58 Jyoti Development Bank Ltd.
- 59 Shine Development Bank Ltd.
- 60 Bagmati Development Bank Ltd.
- 61 Hamro Bikas Bank Ltd.
- 62 Kakre Bihar Bikas Bank Ltd.
- 63 Pacific Development Bank Ltd.
- 64 Civic Development Bank Ltd.
- 65 International Development Bank Ltd.
- 66 Kanchan Development Bank Ltd.
- 67 Gulmi Bikas Bank Ltd.
- 68 Bright Development Bank Ltd.
- 69 Matribhumi Bikas Bank Ltd.
- 70 Innovative Development Bank Ltd.
- 71 Jhimruk Bikas Bank Ltd.
- 72 Metro Development Bank Ltd.
- 73 Raptibheri Bikas Bank Ltd.
- 74 Gaumukhi Bikas Bank Ltd.
- 75 Nepal Consumer Development Bank Ltd
- 76 Khandbari Development Bank Ltd.
- 77 Tourism Development Bank Ltd.
- 78 Mission Development Bank Ltd.
- 79 Surya Development Bank Ltd.
- 80 Mount Makalu Development Bank Ltd.
- 81 Sindhu Bikas Bank Ltd.
- 82 Social Development Bank Ltd.

- 83 Sahara Development Bank Ltd.
- 84 Nepal Community Development Bank Ltd.
- 85 Cosmos Development Bank Ltd.
- 86 Manasalu Development Bank Ltd.
- 87 Samabridhhi Development Bank Ltd.

Finance Companies (Class C)

- 1 Nepal Housing Development Finance Co.Ltd.
- 2 Nepal Finance Ltd.
- 3 NIDC Capital Markets Ltd.
- 4 Narayani National Finance Ltd.
- 5 Annapurna Finance Co.Ltd.
- 6 Nepal Share Markets and Finance Ltd.
- 7 Peoples Finance Ltd.
- 8 Mercantile Finance Co. Ltd.
- 9 Kathmandu Finance Ltd.
- 10 Himalaya Finance Ltd.
- 11 Union Finance Ltd.
- 12 Gorkha Finance Ltd.
- 13 Paschhimanchal Finance Co.Ltd.
- 14 Nepal Housing & Merchant Finance Ltd.
- 15 Universal Finance Ltd.
- 16 Samjhana Finance Co. Ltd.
- 17 Goodwill Finance Ltd.
- 18 Siddhartha Finance Ltd.
- 19 Shree Investment & Finance Co. Ltd.
- 20 Lumbini Finance & Leasing Co. Ltd.
- 21 Inbesta Finance Ltd.
- 22 Yeti Finance Ltd.
- 23 Standard Finance Ltd.
- 24 International Leasing & Finance Co. Ltd.

- 25 Mahalaxmi Finance Ltd.
- 26 Lalitpur Finance Co. Ltd.
- 27 Bhajuratna Finance & Saving Co. Ltd.
- 28 United Finance Co. Ltd.
- 29 General Finance Ltd.
- 30 Merchant Finance Co. Ltd.
- 31 Alpic Everest Finance Ltd.
- 32 Nava Durga Finance Co.Ltd.
- 33 Janaki Finance Co. Ltd.
- 34 Pokhara Finance Ltd.
- 35 Central Finance Ltd.
- 36 Premier Finance Co. Ltd.
- 37 Arun Finance Ltd.
- 38 Multipurpose Finance Co. Ltd
- 39 Butwal Finance Ltd.
- 40 Shrijana Finance Ltd.
- 41 Om Finance Ltd.
- 42 CMB Finance Ltd.
- 43 World Merchant Banking & Finance Ltd.
- 44 Capital Merchant Banking & Finance Co. Ltd.
- 45 Crystal Finance Ltd.
- 46 Royal Merchant Banking & Finance Ltd.
- 47 Guheshworil Merchant Banking & Finance Ltd.
- 48 Patan Finance Co. Ltd.
- 49 Fewa Finance Ltd.
- 50 Everest Finance Ltd.
- 51 Prudential Finance Company Ltd
- 52 ICFC Finance Ltd.
- 53 IME Financial Institution Ltd.
- 54 Sagarmatha Merchant Banking and Finance Ltd
- 55 Shikhar Finance Ltd.

- 56 Civil Merchant Bittiya Sanstha Ltd.
- 57 Prabhu Finance Co. Ltd.
- 58 Imperial Finance Ltd.
- 59 Kuber Merchant Finance Ltd.
- 60 Nepal Express Finance Ltd.
- 61 Valley Finance Ltd.
- 62 Seti Bittiya Sanstha Ltd.
- 63 Hama Merchant & Finance Ltd.
- 64 Reliable Finance Ltd.
- 65 Loard Buddha Finance Ltd.
- 66 Api Finance Ltd.
- 67 Nameste Bitiya Sanstha Ltd..
- 68 Kaski Finance Ltd.
- 69 Suryadarshan Finance Co. Ltd.
- 70 Zenith Finance Ltd.
- 71 Unique Financial Institution Ltd.
- 72 Manjushree Financial Institution Ltd.
- 73 Swostik Merchant Finance Company Ltd.
- 74 Subhalaxmi Finance Ltd.
- 75 Jebil`s Finance Ltd.
- 76 Reliance Finance Ltd.
- 77 Lotus Investment Finance Ltd.
- 78 Baibhab Finance Ltd.
- 79 Bhaktapur Finance Ltd.

Micro Credit Development Banks (Class D)

- 1 Purbanchal Grameen Bikas Bank Ltd.
- 2 Sudur Pashimanchoal Grameen Bikas Bank Ltd.
- 3 Pashimanchoal Grameen Bikas Bank Ltd.
- 4 Madhya Pashimanchoal Grameen Bikas Bank Ltd.
- 5 Madhymanchoal Grameen Bikas Bank Ltd.

- 6 Nirdhan Utthan Bank Ltd.
- 7 Rural Microfinance Development Centre Ltd.
- 8 Deprosc Microfinance Development Bank Ltd.
- 9 Chhimek Microfinance Development Banks Ltd.
- 10 Shawalamban Laghu Bitta Bikas Banks Ltd.
- 11 Sana Kisan Vikas Bank Ltd.
- 12 Nerude Laghu Bitta Bikas Bank Ltd.
- 13 Naya Nepal Laghu Bitta Bikas Bank Ltd.
- 14 Mithila Laghu Bitta Bikas Banks Ltd
- 15 Summit Microfinance Development Bank Ltd
- 16 Sworojagar Laghu Bitta Bika Bank Ltd
- 17 Frist Microfinance Development Bank Ltd
- 18 Nagbeli Microfinance Development Bank Ltd
- 19 Kalika Microcredit Development Bank Ltd.
- 20 Mirmire Microfinance Development Bank Ltd.
- 21 Janautthan Samudayik Microfinance Dev. Bank Ltd.