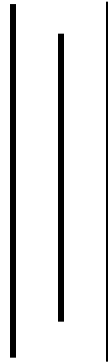


**NON-PERFORMING LOAN AND LOAN LOSS
PROVISION OF COMMERCIAL BANKS IN NEPAL**

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**St. Xavier's College
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**A Thesis Submitted to:
Office of the Dean
Faculty of Management
Tribhuvan University**



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

**Kathmandu, Nepal
November, 2011**

RECOMMENDATION

This is to certify that the Thesis

Submitted by:

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Entitled:

**A STUDY ON NON-PERFORMING LOAN AND LOAN
LOSS PROVISION OF COMMERCIAL BANKS IN
NEPAL**

*has been prepared as approved by this Department in the prescribed format of the
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NEPAL**

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 the Degree of Master's in Business Studies (M.B.S)

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DECLARATION

I hereby declare that the work reported in this thesis entitled “**A STUDY ON NON-PERFORMING LOAN AND LOAN LOSS PROVISION OF COMMERCIAL BANKS IN NEPAL**” submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Degree of Master's in Business Studies (M.B.S) under the supervision of **Prof. Shanker Thapa** of St. Xavier's Campus.

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Supreema Vaidya Shrestha

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ABBREVIATIONS

ARM :	Adjustable Rate Mortgage
BFI :	Banks and Financial Institutions
CDS :	Credit Defaults Swamps
e.g. :	Example
Fig. :	Figure
GDP :	Gross Domestic Product
HBL :	Himalayan Bank Limited
i.e :	That is
LBL :	Lumbini Bank Limited
NABIL :	Nepal Arab Bank International Limited
NBL :	Nepal Bank Limited
NGO :	Non Government Organization
NPA :	Non-Performing Assets
NPL :	Non-Performing Loan
NRB :	Nepal Rastriya Bank
PA :	Performing Assets
PRGF :	Poverty reduction and Growth Facility
RBB :	Rastriya Banijay Bank
T.A. :	Total Assets
T.L. :	Total Liabilities

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Draped along the greatest heights of the Himalayan, Nepal is a land of sublime scenery, time-worn temples and some of the best walking trails on earth. Nepal being listed among least developed country is trying to embark upon the path of economic development by economic growth rate and developing all sectors of economic. Nepal is a poor country but it is rich in scenic splendor and cultures. Nepal has faced many tragic incidents due to political instability. Twelve years of Maoist and government war, the economic condition of Nepal is more depressed. Economic freedom and limited government under the rule of law are important for peace and prosperity in the 21st century. Globalization has helped to spread market institution and foster political reform. Critics of globalization have good intentions to alleviate poverty and close the gap between rich and poor countries.

Nepal is a land locked country with agro based economy. It is rich in natural resources but these resources have not been utilized properly. The economic growth rate of Nepal is very low. The important components of economic dimensions of an economy are gross domestic product (GDP), Per Capita income, personal consumption expenditure, unit labor cost & private investment. GDP of Nepal is US \$ 15.7 billion. Per capita income of a country can be used as an indicator of the purchasing power of its people. Nepal's per capita income is US \$ 568, which is one of the lowest in the world (Pant, 2002: 27). This is also the lowest among the SAARC countries. In fact, Nepal is the ninth poorest country in the world. Total population of Nepal is above 29000000 now & its growth rate is 1.596%.

Financial institutions are the back bone of the economic development of any country. A small financial institution is a vital contributor to the financial health of the national economic. The financial institutions are often fragile and susceptible to failure because of poor management particularly financial management. National development of any

economic development is supported by financial infrastructure of that country. Financial infrastructure indicates the financial strength, position and environment of the institutions. The various branches of bank in towns and villages are offering various types of services. In past, they just used to accept deposits from the saver of money and give loan to the users of money. Savers of the money are those units whose expenditure on real assets and user of money are those units whose expenditure on real assets exceeds their earnings.

Financial institutions are currently viewed as catalyst in the process of economic growth of a country. A key factor in the development of an economy is the mobilization of the domestic resources. Intermediaries, the financial institution helps the process of resource mobilization. The importance of financial intermediaries has been stressed by these words “Economists and historians agree that the process of modern economic growth has been closely associated with the expansion and increasing diversification of financial intermediation”. A sound healthy, efficient and secured financial system helps accelerate the dynamics of an economy and thus plays a significant role as a growth facilitator. As such, banking sector is considered as the most important player of the financial system and is generally reckoned as a hub and barometer of the financial system. The Nepalese financial sector is composed of banking sector and non-banking sector. Banking sector comprises of Nepal Rastra Bank and commercial banks. The non-banking sector includes development banks, micro-credit development banks, finance companies, co-operative financial institutions, non-government organizations (NGOs) performing limited banking activities. Other financial institutions comprise of insurance companies, employee’s provident fund, citizen investment trust, postal saving offices and Nepal Stock exchange.

A small financial institution is a vital contributor to the financial health of the national economy. The financial institutions are often fragile and susceptible to failure because of poor management. Commercial banks hold a dominant position on financial system of Nepalese economy.

Banks are one component of the financial sector of an economy. They play a very important role in the overall development of the economy. They are sometimes likened to the veins through which the money and other forms of financial instruments are taken to different parts of the country. Thus we cannot imagine of a single moment of existence in a modern economic system without the smooth operation of the financial institution in general and the commercial banks in particular. Similarly the banks are also known as financial intermediaries because they intermediate between lenders and borrowers. In this way they generate the financial mechanism through which lending, borrowing and other forms of technical and financial activities are conducted very smoothly.

Banks are such types of institutions, which deals in money and substitute for money. They deal with credit and credit instruments. The most important thing for the bank is good circulation of credit. Fluctuate flow of credit and weak decision harms the whole economy and the bank as well. Thus to collect fund effectively and its utilization is the very challenging task for the bank. The decision of an investment of fund may be the question of life and death for the bank.

Banking plays a significant role in the development of national economic; it is a financial institution which primary classes in borrowing and lending. Modern bank prefers verities of function therefore it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word "Bank" in different ways. "A commercial bank is dealer of money and it substitutes for money such a check or bills of exchange, it also provides a variety of financial service".(The new Encyclopedia of Britannica, Vol. 4:1985; 600)

Early banking system served mainly as depositor for funds, while the modern system has considered the supply of credit for their purpose, a bank not accept money on deposits but it also lends , money and creates and lends its own credit. *Couther* has defined bond has a "dealer in debits his own and of other people." *Sayers* states "we can define a bank as an institution whose debts (bank deposit) are made accepted in settlement of other people's debt to each other".

Modern banking system has been characterized by frequent and widespread bank failure then advanced countries with sophisticated banking practices and supervision have periodically experienced large scale banking distress. In the United States for example, in a period of high interest rates in the early 1980s the collapse of oil and real estate prices brought another wave of bank failure. Virtually no country is immune to banking crisis. According to recent crisis, more than 130 countries have suffered major bank failure in the past two decades. In Argentina, Estonia and Poland more than half banks failed in recent banking turmoil. The amount of public money needed to resuscitate the failed banks often triggering.

Total assets of bank can be divided into two parts performing assets and non performing assets/loan. Performing assets are those assets which directly generate cash to organization or indirectly help to generate cash or it facilitates the set up for better productivity. Loan and advances is direct contributor to banks income whereas cash in vault balance in other bank, fixed assets and other assets are the facilitators which help the daily operation of bank. Performing assets add positive value to bank as well as to nation.

A commercial bank by its very name implies a financial institution, which engages itself in short term lending and borrowing in a money market. It accepts the demand, time and fixed deposits from businesses, private individuals and other groups of economic agents. In fact it borrows money, though indirectly, from these economic agents for lending purposes. It engages itself in both business and consumer lending. It uses the funds raised from the deposit in providing loans to agriculture, commerce and industries with the prime objective of making a profit if it was a public limited company. However there are commercial banks established in Nepal as public corporations and they are not expected to make a profit through their activities.

These banks also provide technical and administrative assistance to industries, trade and business. In this way they direct the financial affairs of the economy in various ways. The operations of commercial bank generate the economic pulses in the economy because it

acts like an economic heart. Thus the size and composition of their transactions mirror the direction and trend in economic activities taking place in the country. The Great Depression of the 1930s got generated due to the failure of commercial banks in the western economies, which triggered the global depression in the world. Thus commercial banks play a vital role in giving a direction in financing the requirements of trade and industry in the country.

Thus commercial banks induce the savers in the community to hold their savings in the form of socially useful assets of which bank deposits constitute one of the most important elements. Commercial banks draw the community saving into organized sector which is then allocated into different economic activities as per the profitability situation and also according to the priorities laid down by the CENTRAL BANK. In mixed economy commercial banks not only have to strike a balance between profitability and liquidity but also have to follow the guidelines of the government in directing the credit into priority areas. The smooth and efficient functioning of commercial banks is highly essential in a modern economic system as highlighted in the above sections. Thus without these intermediaries a modern economic system cannot function for a single moment also.

Commercial bank collects deposits from the public and the largest portion of deposited funds is utilized by disbursing loan and advances. Being a profit oriented financial service providing institution, certain percent interest rate is given to the depositor and the bank charges certain percent interest in the loan facility, which we call as the spread rate. They purchase and discount bills for the exchange promissory notes and exchange foreign currency. They discharge various functions on the behalf of customers provided that they are paid for their services. Banks are becoming much more of a multifaceted provider of financial services. Their activities have grown in multidirectional way as well as in multidimensional manner. Their activities are spreading all over the world. They are becoming human partner of the people of different walks of life. But, at the same time there are some of the areas where banks are bound to face challenges are:-

- Deposit war
- Continued need for profit making

- Era of fierce competition
- Customer satisfaction
- Technological revolution

The mushrooming growth of the banks and financial institutions has led them towards cut throat competition. On the one hand the economic condition of the country is not grooming rather remains stagnant; no any new avenue is being explored. The competition among the banks is just to share from the small sized of the cake. Margins on traditional businesses have been eaten away and banks have been forced to look to new markets and new products to sustain profitability. They should make continuous efforts to explore new competitive and high yielding investment opportunities to optimize its investment portfolio. The less opportunity for getting avenues for loan floatation has compelled the banks to finance without being choosy. Quality of the loans and advances could not be maintained to desirable level if there is no choice whether to finance or not. As a profit motive financial institution, bank need to focus on achieving profit. A loan is a profit determinant factor and also refers as a derivative that creates risk. The profit of the bank depends upon the spreads that it enjoys between the interests it receive from the borrowers and that to be paid to the depositors. An average bank generates about 70% of its revenue through its lending. If it is well managed, profit will be higher automatically.

Non-performing assets can be defined as those assets that cannot be used productively. Non-performing assets is the outdated loan, and bad and doubtful debts. Non-performing assets could wreak banks profitability both through a loss of interest income and write off the principal loan amount. It tackles the subject of in entire starting from the stage of their identification till the recovery of dues in such amount. Performing assets are those loans that repay principle and interest to the bank from the cash flow it generates. Loans are risky assets, though a bank interest most of it resources in granting loans and advances. If an individual bank has around 10% non-performing assets/loan. It should the death knell of that bank catteries paribus call other thing remaining constant. Nonperforming loans are made by a bank or a finance company, on which repayments or interest payments are not being made on time.

A loan is an asset for a bank as the interest payments and the repayment of the principal create a stream of cash flows. It is from the interest payments than a bank makes its profits. Banks usually treat assets as non-performing if they are not serviced for some time. If payments are late for shot time a loan is classified as past due. Once a payment becomes really late (usually more than 90 days) the loan classified as nonperforming.

Loan and advances dominates the assets side of balance sheet of any bank. Similarly, earning from such loans and advances occupy major space in income statement of the bank. Lending can be said to be raison de enter of the bank. However, it is very important to be reminded that most of the bank failures in the bank due to shrinkage in the value of the loan and advances. Hence loan is known as risky assets. Risk of non-payment of loan is known as credit risk or default risk.

1.2 Statement of the Problems

Commercial bank being the financial institution plays significant role by collecting scattered surplus funds and deploy these fund in the productive sectors as investment. The core banking business is mobilizing the deposits and utilizing it for lending to industry. Lending business is generally encouraged because it has the effect of funds being transferred from the system to productive purposes which results into economic growth.

It is said that the banking sector mirrors the larger economy and has a direct relationship with all the other sectors which makes it a substitute to understand the dynamics of the economy as a whole. Indeed, the Nepali banking sector today is at a boiling point. Having said that, the facts that all commercial banks are making profits is not a myth. Despite the country struggling to prosper and the industrial sector not doing well, banks show large profits. Thanks to the strict norms prescribed by the regulators, there is transparency in the banks.

Lending also carries credit risk, which arises from the failure of borrower to fulfill its contractual obligation during the course of transactions. It is well known fact that the bank and financial institution in Nepal face the problems of swelling non-performing assets and the issue is becoming more and more unmanageable.

The financial sector reform measure undertaking can be broadly grouped under three heads; re-engineering of NRB, restructuring of RBB and NBL, and capacity building of the financial sector. Management of the two ailing banks has been handed over to teams, consisting of experts from within and outside Nepal.

As the bank has to meet various challenges this study will be helpful to the bank to identify and solve some of its weakness and problems. In every organization, the resources are scarce and out of these scarce resources, the objective of the organizations is to be accomplished. Increase in revenue and control over expenditure significantly contributes to improve the profitability as well as the overall financial performance of an organization by the help of the best utilization of resources.

Currently the banking sector is facing various problems. One of them is the banking has been becoming a victim of huge non-performing assets. Non-performing assets are one of the serious problems faced by the commercial banks. Such above situation raise a question,

- Whether the Nepalese management team is competent enough?
- Whether or not Nepalese commercial banks is following NRBs regulation regarding their lending's, especially to maintain the provision for non-performing assets?
- What percentage of total assets and total lending is occupying by non-performing assets of Nepalese commercial banks?
- How does non-performing assets effect on return on shareholder's equity and return on total assets?

1.3 Focus of the Study

Increasing non-performing assets is one of the emerging problems of Nepalese commercial banks. This study mainly focused on non-performing loans or assets of selected commercial banks. It studies the ratios like loan and advances to total assets, loan and advances to total deposit, non-performing loans to loan and advances. Provision held to non-performing assets, which indicates the performances and provides comparable forum on non-performing assets. It also tries to show the effects on profitability of commercial banks and related NRB directives, which is concerned towards the rendering loan and loan loss provision. The total non-performing assets of Nepalese commercial banks are growing rapidly and it is the main cause to failure of bank. In this study, the non-performing of commercial banks are presented, analyzed, summarized and stated findings and recommendations.

1.4 Objectives of the Study

The main objective of this research was to examine and study of level of non-performing loans in total assets, total deposit and total lending of Nepalese commercial banks.

The specific objectives are;

- To analyze the guidelines and provisions pertaining to loan and loan loss provision.
- To examine the proportion of non-performing loan in the selected commercial banks.
- To analyze the level of non-performing loans in total assets, total deposit and total lending of Nepalese commercial banks.
- To examine the relationship between loan and loan loss provision in the commercial bank.
- To analyze the impact of loan loss provision on the profitability of the commercial banks.

1.5 Significance of the Study

The success and prosperity of the bank heavily depends upon the successful implementation and investment is collected resources, which develops the economy of

the country. Good investment policy of the bank has positive impact on economic development of the country and vice versa. Therefore success of any bank does not depend upon how much money a bank able to lend? But it depends upon the quality of loan. So success of any bank depends upon the amount of performing loan/assets. Performing assets are those loans that repay principal and interest to the bank from the cash flow it generates.

Increasing non-performance loan followed by increasing loans and loan loss provision is one of the challenges faced by commercial banks in the present context. Proper loan provision and loan loss provision helps to get financial strength of the bank. The research will be able to give the some of the present issued, latest information and data regarding non-performing loan and loan loss provision. Not only that, this study gives the real picture of the current non-performance assets to its shareholders.

This study mainly concerned with the analysis of level of non-performance assets, total deposit and total lending of different Nepalese commercial banks. Therefore, it has significant to find out the level of non-performing assets. It is also significant to find out whether the Nepalese commercial banks maintained loan loss provision in according to NRBs directives or not.

1.6 Research Methodology

Since the basic objective of this study is to analyze the non-performing loan of commercial banks. Therefore, suitable research methodology as demanded by the study is followed. It is intended to use simple and lucid methodology which is presented in third chapter in detail.

1.7 Limitations of the Study

This study is simply a partial study for the fulfillment of M.B.S. degree, which had to be finished within limited period. Hence this study is not far from several limitation of its own kind, which weakens the heart of the study. It has certain limitations.

- This study has employed secondary data published by and collected from selected banks.
- The study is focused on the Nepalese commercial banks only. Hence, the findings may not be applicable to other banks (development banks, agriculture banks, finance companies and other companies of Nepal.
- The study covers a period of 10 fiscal years which will be tabulated and processed for drawing conclusion.
- The accuracy of the research work will be dependent on data provided by concerned organization.
- Time factor is major limitation of this study.
- This study concentrates only on those factors, which are related with nonperforming assets of Nepalese commercial banks. It does not consider other aspects of the banks.

1.8 Organization of the Study

To make the study precise and attractive in presentation, this research work has been divided into five chapter namely Introduction, Review of literature, Research methodology, data presentation and analysis and finally summary, conclusion and recommendation.

Chapter I: Introduction

The first chapter includes narrow aspects of this study like General background of the study, Statement of the problem, Objective of the study, Focus of the study, Significance of the study along with limitation of the study.

Chapter II: Review of Literature

The second chapter incorporates that the conceptual thoughts and related study regarding the subject matter.

Chapter III: Research Methodology

The third chapter discussed the “Research Methodology” used in the study. It comprises research design, nature & source of data, data gathering method along with different statistical and financial tools used.

Chapter IV: Presentation and Analysis of Data

The fourth chapter deals with the “Data presentation and analysis” of data and scoring the empirical findings of the study through definite course of research methodology.

Chapter V: Summary, Conclusion & Recommendation

The last chapter named as “Summary, Conclusion & Recommendation” is followed by the basic conclusion of the study based in the fourth chapter. On the basis of the summary, conclusion is taken out and recommendation has also been presented for consideration.

CHAPTER – II

REVIEW OF LITERATURE

2.1 Background

Review of literature is an integral and mandatory process in any research work. It means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. This chapter includes the brief presentation of the origin and concept of the bank, concept of commercial bank, evolution of the banking sector in Nepal along with detail profile about the sample banks under study. This also covers the review of the theoretical background being implemented as for the management on NPA. The main reason for the full review of research in the past is to know the outcomes of those investigations in areas where similar concept and methodologies had been used successfully, and to avoid investigating problems. In this process effort has been made to examine and review some of the related books, articles published in different economic journals, bulletins, dissertation papers, magazines, newspapers and websites.

2.2 Conceptual Review

The concept and meaning of some of the terms used in this study will be cleared out under this heading.

2.2.1 Loans and Advances

Loan and advances are the amount that has been provided to the deficit group of society by bank. Banking business is to accept deposit from the surplus group of society (or from those who want less risk to their money with less return) and supply those fund to the deficit group of society or to those entrepreneurs who have skill and knowledge but less financial resources to implement those viable project. Almost all banks have the loan and advances as their prime assets and interest earning from loan and advances are the major source of income. This asset constitute primary source of income to banks. According to

Dr. Walter Leaf- “In the item of advance to customers”, we have reached the central portion of the activity of the bank”. In the words of Dr. Leaf, the bankers, has to timber liberality with caution. If he is too liberal, he may easily impair his profits by bad debts, if he is too timid, he may fails to obtain an adequate return on the fund which are confided to him for use. Therefore the management is always concerned about the quality of their loan and advances. A well known saying prevails in banking sector that “*A bad loan can wipe out the profit from hundred good loans*” therefore the management thinks hundred times before providing loan to customer. NRB has made it mandatory to all commercial banks to make their lending policy and all loans should be disbursed within that policy.

Loans and advances dominate the assets side of the balance sheet of any bank. Similarly, earning from such loans and advances occupy a major space in income statement of the bank. They are also the least liquid of the banks entire assets. Loans and advances may take different forms and are allowed against various types of securities. Loans, overdrafts, discounting of bills of exchange etc are some of the forms of bank lending. Granting loans and advances always carries a certain degree of risk. Loans and advances are regarded as the risky asses of the banks.

2.2.2 Non-Performing Assets/Loans (NPA/NPL)

Loan becomes non-performing when it cannot be recovered within certain stipulated time that is governed by some respective laws. So, non-performing loan is defined from the institutional point of view, generally from the lending institutions side. Loan may also be non-performing if it is used in different way than that for which it has been taken. This is the user’s point of view. But, here we will confine the definition to the institutional point of view. In this case, loan becomes non-performing when it is classified as bad and loss. Under Basel II, loans past due for more than 90 days are non-performing.

Non-performing loan (NPL) can be defined as the non-productive assets of the banks. An asset is known as non-performing assets (NPAs) if the borrower does not pay the dues in the form of principal and interest in time. However with effect from March 2004, default

status would be given to a borrower if dues are not paid for 90 days. If any advances or credit facilities granted by bank to a borrower becomes non-performing, then the bank will have to treat all the advances/ credit facilities granted to that borrower as nonperforming without having any regard to the fact that there may still exist certain advances/credit facilities having performing status.

Non-performing loan refers to those loans and advances which are not able to serve the interest and the installment within the given period of time. The term of non-performing loan is popularly known as NPL as well as NPA. There are little differences in the basis of measuring NPL in different countries, though the concept is same. Everywhere it is considered as one of the key economic indicator for financial stability and sustainable economic development.

The higher the non-performing assets/loans the lower the return to the organization, therefore management always focuses to utilize the deployed assets in maximum and reduce the level of non-performing assets. So, that a sustainable income is generated. Non-performing loans could destroy banks profitability both through a loss of interest income and write of the principal loan amount. It tackles the subject of an entire starting from the stage of their identification till the recovery of such account.

There are various causes to increase the NPAs/NPL. It can increase due to:

- Reduced attention to borrowers (Hawthorne effect)
- Moving along the risk curve (Petro ski effect)
- Increasing loan size increases risk (Inverted pyramid effect)
- Lenders lack plans to deal with risk (Pollyanna effect)
- Borrowers probe a credit operations weakness (Jurassic park effect)
- Rent-seekers capture the credit program.
- Lenders and project designers have low expectation.
- The lender is unwilling to collect.
- Lack of good models (High default culture effect)
- Loan sanctioned by corruption.

- Donors give loans to dominate.
- Weak follow up weaken the system.

2.2.3 Ways to recover timely to Turn Non-Performing Loan into a Performing One

Recovery is not a problem, just the end of one process that fed into the next process. This is our self-developed problem due to our lack of knowledge, negligence, inefficiency and lack of commitment. As this is the social devil we should avoid this. Some points are presented below as a ways to control recovery crisis.

- Law and order situation
- Risk assessment
- Motivation
- Recovery agency
- Less relaxation
- Collateral management
- Developing situation specific models
- Real time training
- Trade-offs
- Monitoring

2.2.4 Level of Nepalese Financial System

During the last two and a half decades, the Nepali financial system has grown rapidly. The banking environment has gone through a sea change. At the beginning of 1980, there were only two commercial banks and two development banks. After the adoption of the economic liberalization policy, particularly financial sector liberalization, new banks and non-banking financial institutions came into existence. Consequently, by the end of mid-July 2011, altogether 235 banks and non-banking financial institutions licensed by the NRB were in operation constituting 31 “A” class commercial banks, 58 “B” class development banks, 78 “C” class financial companies, 12 “d” class micro-credit development banks, 16 saving and credit co-operatives and 46 NGOs. Furthermore, seven

development banks and 12 finance companies are in the pipeline. But all these financial institutions are fighting a very unhealthy price war as a result of the 'pie' not growing due to the structural problems that existed for a long time in a conflict-driven economy.

The government on Nepal has been endeavoring a lot of efforts to make the Nepalese financial healthy and prudent through various reform program, the level of NPL in the Nepalese Banking System has not come down to an acceptable level. The efforts to date succeeded only to reduce the NPL to some extent but it is still not sufficient to maintain the sound health of the system to the desired level of NPL was around 30 percent in 2003 and is continuously decreasing thereafter with the implementation of FSRP. It has decreased to 18.04 percent in July 2005 and 14.22 percent in July 2006. On the other hand the level of NPL is still increasing in the Development Banks and finance companies. Therefore, we can see that the financial discipline and level of NPLS is improving in banks, whereas the problems in Development Bank and finance companies are deteriorating. The table provided below highlights the facts. In the healthy financial system the level of NPL should be contained within 5 percent. The financial sector reform program has focused its efforts at reducing the level of NPL. Therefore, it has still been a challenging task for Nepalese authorities to date.

2.2.5 Loan Loss Provision

Loan loss provision is the accumulated fund that is provided as a safeguard to cover possible losses upon classification of risk inherited by individual loans. There is a risk inherent in every loan. Hence provisioning is made as a cushion against possible losses and to reflect the true picture of bank's asset. There is risk associated in every loan. To minimize the risk from possible losses from loan banks have to allocate some fund as loan loss provision.

The NPAs has negative impacts on the profitability of the banks. Non-performing assets are the idle assets of the banks, which do not generate any return for the banks. The amount required for provisioning depends upon the level of NPAs and their quality. The high quality loan requires low loan loss provision; bad loan requires high loan loss

provision. One percent provision of total credit is minimum requirement as every pass/good loans have to be provisioned. However, the ratio of provision may differ from nation to nation. In Nepal, NRB has prescribed 1%, 25%, 50%, and 100% provision for pass, substandard, doubtful and loss loans respectively. Loan loss provision made for performing loan is also called “general loan loss provision” and loan loss provision made for non-performing loan is called “specific loan loss provisioning”.

Assets are the most critical factor in determining the strength of any bank. The primary factors that can be considered are the quality of the loan portfolio, mix of risk assets and the credit administration system. The lower NPL ratio indicates that better risk assessment and robust credit management systems are in place and vice-versa. At the same time, higher loan loss provisions indicate poor credit management; it also indicates adequate reserve for possible loan loss, protecting the balance sheets of respective banks.

2.2.6 Origin and Concept of the Bank

It has been speculated the earliest banks were actually religious temples in the ancient world, where deposits of grain and other goods were made. Considered sacred places, these temples were well protected from potential thieves. There are also historic records which point to loan activity extended by priests to merchants in ancient Babylon. Hammurabi’s Code, the oldest, best preserved law code in existence were created circa 1760 B.C. and include laws which were used to govern bank operations.

In England, banking had its origin with the London goldsmiths who in the 17th century began to accept deposits from merchants and other for safe keeping of money and other valuables, crude money lending and money changing were present during the reign of Elizabeth (1533-1603 AD), and the practice developed whereby merchants would deposit money (coins) in the tower of London, which serve as the British mint. The next stage in the banking arises when the goldsmith becomes a money lender (Paul, 1996). Fractional reserve banking must have developed shortly after the goldsmiths entered the banking business, because periodically they computed balance sheet, or as they called it “casting up ye shop” (Makinen, 1981).

As early as 2000 BC, the Babylonians had developed a banking system using their temples as banks. From those foundations Greek banking institutions had been emerged. When the Romans conquered the Greeks, the temple priests no longer acted as financial agents. But future growth in the industry was seen thereafter and it was only in the 12th century that some banks were established in Venice and Geneva. During the period there was boom in banking business in Florence (Khushbuchandani, 2000). The traces of rudimentary banking are found in Chaldean Egyptian and Phoenician history (Vaidya, 1999).

Interestingly, the world's oldest bank has been in existence since its founding in 1427. The Banca Monte dei Paschi di Siena SPA (MPS) was created in the city state of Siena, Italy. The bank today is comprised of nearly 1800 branches, 28000 employees and more than four million customers in Italy and abroad.

For centuries, banks have influenced the economies and politics of the world. Traditionally, banks originated as places where businesses could secure loans to purchase inventory, and thereafter collect the funds with interest once the goods were sold. The origin of the word bank is derived from the Italian word, banco or desk. During the Renaissance, Florentine bankers conducted their transactions above desks covered in a green tablecloth.

The concept of modern commercial bank came into existence by the emergence of the Bank of England in 1694 with a capital of 1.2 million pound by a group of wealthy London merchants and financiers. Since at that time, there was no concept of joint stock Company, it was necessary to obtain a special charter from the crown to pool their money in common venture. King William III was too pleased to grant a royal charter to Bank of England, because in return a capital subscribed of 1.2 million pound was lent to him to finance his war against France. The charter also gave the new bank the right to issue notes, payable on demand, up to the amount of loan to the King (Joshi, 2001).

2.2.7 Concept of Commercial Bank and Historical Review in Nepalese Perspective

The evolution of banking industry had started a long time back, during ancient times. Nepal has been ruled over by many rulers like Kirati, Lichhavi, Malla, Ranas and Shahs. Mostly Kirati, Lichhavi, and Malla regimes were concerned with the construction of temples, pati, pouwa, chautari etc. At that period neither the people nor the government were interested to think about the economic development of the country. According to ancient “vanshawali” in fourteenth century, the ruler of the Katmandu Jayasthiti Malla segregated the local domiciles into 64 different classes according to profession they had undertaken. Tankadhari was one of those classes who used to deal in coins and precious metals such as gold. These Tankadhari’s were said to have carried out the borrowings and lending on money (coins). Hence, Tankadhari’s can be regarded as the traditional bankers of Nepal (Singh and Khadka, 2056).

Like many other countries, goldsmiths, merchants and money lenders were the ancient bankers of Nepal. “**Tejarath Adda**” was established in 1880 during the period of Prime Minister Ranoddip Singh was the first step towards the institutional development of banking in Nepal. Some historians says that **Kaushi Tosha Khana** established during the time of king Prithivi Narayan Shah (1723-1755) is the first banking institution but there is very little known about it. Tejarath Adda did not collect deposits from the public but provided loans to public under the security of gold and silver to the public and to the government employees against the security of their salary. Since the interest rate of Tejarath Adda was just 5% beneficiaries were very much relieved of exorbitant interest rate being charged by the traditional bankers. The government established its various branches and sub-branches at different places of the country for the sake of benefits of people. In the overall development of the banking system in Nepal, the Tejarath Adda may be regarded as the father of modern banking institutions and for a quite long time it provide a good service to government employee as well as to the general public.

Banking in modern sense started with the inception of Nepal Bank Limited (NBL) on 15 November 1937 under Nepal Bank Act 1937 though in Europe modern banks were setup in the 12th century itself. NBL was set up with cooperation of Imperial Bank of India.

The bank was inaugurated by the then king Tribhuwan. It was established with the purpose of supplying loan to industries and commerce providing banking facilities to the people such as collecting deposits provide long term and short term loan against collateral and guarantee. The bank has dominance role in banking transactions all over the country. The shareholders of bank consists Nepal Government and general public.

Nepal Bank Limited, the first commercial bank of the country had a Herculean responsibility of attracting the people toward the banking sector from pre-dominant money lenders" net and expanding banking services to various parts of the country. It could not open the branches across the country due to various factors. It had only 12 branches till 1956.

Nepal bank limited was also serving as the central bank of the country before the establishment of Nepal Rastra Bank. However the stand of Nepal Bank Limited alone in total monetary and financial sector was not sufficient and satisfactory In 2013.01.14 Nepal Rastra Bank was set up to work as a central bank of the country under Nepal Rastra Bank acts 2012 B.S. The capital of this bank was fully subscribed by Nepal Government. Similarly on 2022.10.10 Rastriya Banijya Bank was established as a fully government owned commercial bank. With the emergence of RBB, banking service spread to both the urban and rural areas but customers failed to have taste of quality/competitive service because of excessive political and bureaucratic interference. For industrial development, industrial development centre was set up in 2013 B.S which was converted to Nepal Industrial Development Corporation (NIDC) in 2016 B.S. Similarly Agriculture Development Bank (ADB) was established in 2024.10.07 with an objective to promote agriculture products so that agricultural productivity could be enhanced through introduction of modern agricultural techniques.

The government introduced Commercial Bank act in Nepal in 2033 B.S to cover the vast field of financial sector. This act has helped to emerge number of commercial bank with a view to maintain the economic interest in comfort of the public in general facilitated to

provide loan for agriculture, industry and trade and make a available banking services to the country and people.

Along vacuum in the banking sector got some rays of hope only when the government forwarded the economic liberalization policy in 2039 B.S and decided to allow foreign banks to operate their activities in Nepal in “joint venture model”. “Joint venture banks can be defined as an association of two or more parties having common objectives and goals so as to get maximum satisfaction. Basically at that time, it was envisioned that joint venture banks would support the country in various ways”.

The NABIL Bank Ltd is the first joint venture bank established in 2041 B.S and started its operation with modern banking services. In the same way, Nepal Indosuez Bank (present Nepal Investment Bank), the second joint venture bank established in 2042 B.S with an objective to encourage efficient banking services and facilities. Likewise Standard Chartered Bank is operated under the direction of Indian management.

With the satisfactory result of joint venture banks, Nepalese promoters are highly encouraged and as a result, commercial banks are introduced with cent percent domestic investment. At present Nepal Industrial and Commercial Bank (NIC), Lumbini Bank Ltd, Machhapuchhre Bank Ltd, Kumari Bank Ltd, Laxmi Bank Ltd and Siddhartha Bank Ltd came into operation with cent percent domestic investment by Nepalese promoters which are the plus point of development of banking history of Nepal. Now, there is a strong competition between commercial banks for their existence so that the growing needs of the customers can easily be achieved.

Table 2.1
List of Licensed Commercial Banks in Nepal

S.No.	Names	Operation Date (A.D.)	Head Office	Paid up Capital (Rs. '000 Thousands)
1	Nepal Bank Ltd.	1937/11/15	Kathmandu	3804
2	Rastriya Banijya Bank Ltd.	1966/01/23	Kathmandu	3853
3	Agriculture Development Bank Ltd.	1968/01/02	Kathmandu	94375
4	Nabil Bank Ltd.	1984/07/16	Kathmandu	20298
5	Nepal Investment Bank Ltd.	1986/02/27	Kathmandu	24091
6	Standard Chartered Bank Nepal Ltd..	1987/01/30	Kathmandu	16102
7	Himalayan Bank Ltd.	1993/01/18	Kathmandu	20000
8	Nepal SBI Bank Ltd.	1993/07/07	Kathmandu	18693
9	Nepal Bangladesh Bank Ltd.	1994/06/05	Kathmandu	20103
10	Everest Bank Ltd.	1994/10/18	Kathmandu	11196
11	Bank of Kathmandu Ltd.	1995/03/12	Kathmandu	13595
12	Nepal Credit and Commerce Bank Ltd.	1996/10/14	Siddharthanagar, Rupandehi	13997
13	Lumbini Bank Ltd.	1998/07/17	Narayangadh, Chitawan	13000
14	Nepal Industrial & Commercial Bank Ltd.	1998/07/21	Biaratnagar, Morang	13116
15	Machhapuchhre Bank Ltd.	2000/10/03	Pokhara, Kaski	16272
16	Kumari Bank Ltd.	2001/04/03	Kathmandu	14850
17	Laxmi Bank Ltd.	2002/04/03	Birgunj, Parsa	16140
18	Siddhartha Bank Ltd.	2002/12/24	Kathmandu	15610
19	Global Bank Ltd.	2007/01/02	Birgunj, Parsa	15000
20	Citizens Bank International Ltd.	2007/06/21	Kathmandu	19223
21	Prime Commercial Bank Ltd	2007/09/24	Kathmandu	22457
22	Sunrise Bank Ltd.	2007/10/12	Kathmandu	18554
23	Bank of Asia Nepal Ltd.	2007/10/12	Kathmandu	15175
24	DCBL Bank Ltd.	2008/05/25	Kamaladi, Kathmandu	19209
25	NMB Bank Ltd.	2008/06/05	Babarmahal, Kathmandu	16517
26	Kist Bank Ltd.	2009/05/07	Anamnagar,	20000

			Kathmandu	
27	Janata Bank Nepal Ltd.	2010/04/05	New Baneshwor, Kathmandu	14000
28	Mega Bank Nepal Ltd.	2010/07/23	Kantipath, Kathmandu	16310
29	Commerz & Trust Bank Nepal Ltd.	2010/09/20	Kamaladi, Kathmandu	14000
30	Civil Bank Ltd.	2010/11/26	Kamaladi, Kathmandu	12000
31	Century Commercial Bank Ltd.	2011/03/10	Putalisadak , Kathmandu	10800

Source: - www.nrb.org.np(mid-july-2011)

2.2.8 Function of Commercial Banks

Nepal Bank Ltd. is the first commercial bank of Nepal. It was established in 1994 B.S. it is a semi-government bank. The second commercial bank of Nepal is Rastriya Banijya Bank. It was established in 2022 B.S. Both of these local commercial banks are undergoing reforms and managements takeover for restructuring to minimize the mounting non-performing loans losses as well as reduce the employees under voluntary retirement schemes. After reinstatement of multiparty democracy in the country, several private and joint venture banks were established such as Standard Chartered Bank, NABIL Bank, Nepal investment Bank, Himalayan Bank, Nepal Everest Bank, Nepal state Bank of India, Nepal Industrial and Commercial Bank, Kumari Bank, Machhapuchhre Bank, Bank of Kathmandu, Siddhartha Bank and Nepal Credit and Commerce Bank. The newly emerging commercial banks are Nepal Bank of Asia, Prime Bank, Global Bank, Sunrise Bank and so on.

2.2.8.1 Primary Functions of Commercial Banks

- **Acceptance of Deposits**

The bank accepts different types of deposits from public.

Currents Deposits

It is also known as demand deposits under which any amount may be deposited in this account. The amount deposit in this account can be withdrawn by drawing cheque without prior information and no interest is offered in this account.

Saving Deposits

Saving is one of the deposits collected from small depositors and low income depositors. The bank usually pays small interest to the depositors against their deposit.

Fixed Deposits

Fixed deposits are one in which a customer is required to keep a fixed amount with bank for a specific period, generally by those who doesn't need money for the stipulated period.

Recurring Deposit

The purpose of this account is to encourage regular savings by the public, particularly by the fixed income group. Generally money in the accounts is deposited in monthly installment for a fixed period and is repaid to the deposit along with interest on maturity.

Call Deposit

Call deposit incorporates the characteristics of current and saving deposit. Current in the sense, deposit is withdrawn at call and saving in a sense the deposit earns interest. Interest rate on call deposit is negotiable between the bank and the depositor and hence it is normally not announced in public.

Providing Loans

Commercial banks provide loans and advances from the money, which it receives by way of deposit. Direct loans and advances are given to all types of person against the security of the borrowers or against the security of movable and immovable properties; loans are granted by bank in four forms:

- i. Overdraft
- ii. Direct Loans
- iii. Cash Credit
- iv. Discounted bills of exchange
- v. Demand/Term Loan
- vi. Trust Receipt Loan

Investments

Commercial banks also extend credit when they purchase securities; and this category of assets may be especially attractive when loan demand is slack, as a way of employing loanable funds. A very high percentage of these securities represent the obligations of governmental units. The remainder is corporate notes and bonds.

2.2.8.2 Secondary Functions of Commercial Banks

- Bid Bond
- Work at trustee
- Agency Services
- Performance Bond
- Remittances of money
- Financial Bank Guarantee
- Safe Custody of Valuables
- Advance Payment Guarantee
- Underwriting of Capital Issue
- Issuance of Guarantee on behalf of customers
- Collection of Cheque, Bills and Other Instruments
- Sell and purchase of Foreign Currency (including Travel Cheque)

2.2.8.3 General Utility Services

- Underwriting of securities

- Providing trade information to customers
- Transfer of funds from one branch to another
- Accepting and discounting bills of exchange of export
- Providing reports on the credit worthiness of customers
- Issuing letter of credit and standing as surety for customers
- Accepting valuables, jewelry and securities for safe custody
- Providing foreign exchange to persons going abroad and to imports
- Advising customers with regard to investments and other financial matters.
- Automated Teller Machine (ATM)
- Anywhere Branch Banking Service (ABBS)
- Tele Banking, Credit/Debit card

2.2.9 Brief Profile of the Sample Banks Under Study

In this study, Himalayan Bank Ltd, Lumbini Bank Ltd and NABIL bank Ltd are chosen to show their performances with respect to Non-performing loan and loan loss provisioning. Here short glimpses of these commercial banks are given.

A. Himalayan Bank Limited *(A Joint Venture with Habib Bank Limited – Pakistan)*

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, HBL has been able to maintain a lead in the primary banking activities – Loans and Deposits. Products such as Premium Savings Account, HBL proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. HBL holds of a vision to become a Leading Bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the bank.

Table 2.2
Capital Structure of HBL

Authorized Capital	Rs. 2,000,000,000
Value Per Share	Rs. 100
Issued Capital	Rs. 2,000,000,000
Paid-up Capital	Rs. 2,000,000,000
Reserve	Rs. 1,439,205,000
Incorporation year	1993/01/18 A.D

Source: - www.himalayanbankltd.com

B. Lumbini Bank Limited

Lumbini Bank Limited is a national level commercial bank offering a wide range of banking solutions and services meticulously customized to the needs of the customers. Established in 1998, this is the first regional commercial bank in Nepal, which started its operation from Narayangarh spreading its wings to further four more places at Hetauda, Butwal, Durbarmarg and Biratnagar. The newly structured products by LBL cover personal loan, home loan, vehicle loan, mortgage loan, educational loan, time loan etc.

Table 2.3
Capital Structure of LBL

Authorized Capital	RS. 1.6 Billion
Value per share	Rs. 100
Issued capital	Rs. 1 Billion
Paid-up capital	Rs. 1,294,548,000
Reserve	Rs. 161,039,000
Incorporation year	1998/07/17 A.D

Source: - www.lumbinibankltd.com

C. NABIL Bank Limited

The NABIL Bank Ltd is the first joint venture bank established in 2041 B.S and started its operation with modern banking services. NABIL launched its operation with the

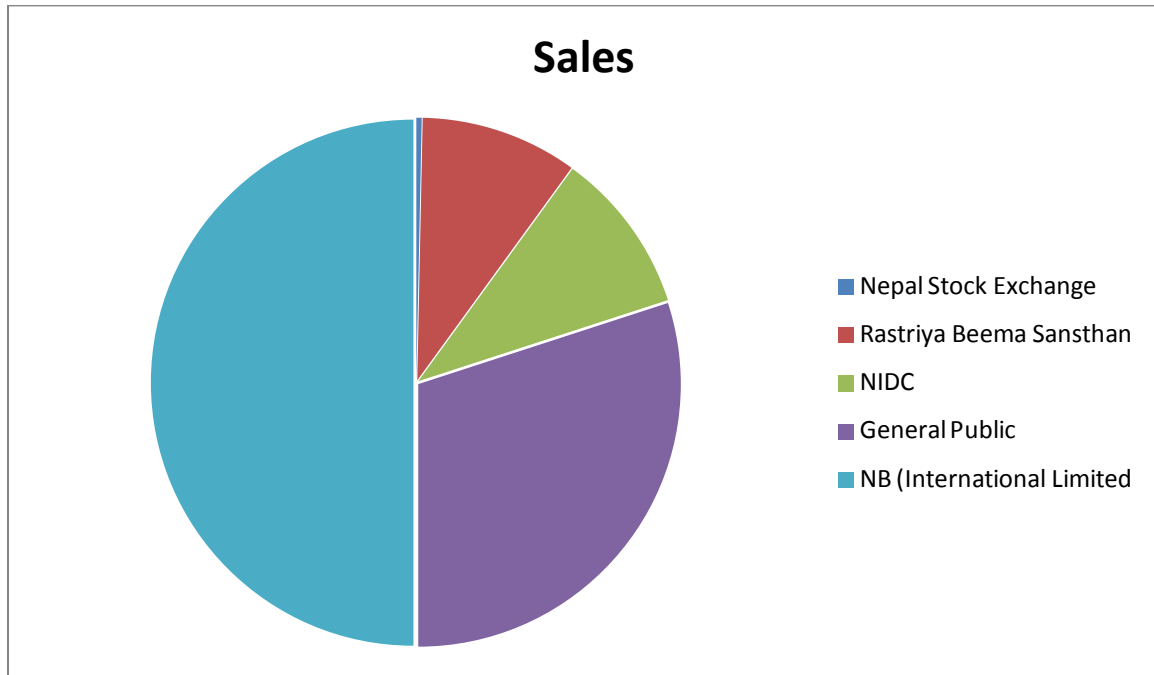
marketing concept, i.e. customers are living gods/goddesses please them and get immediate blessings/results. NABIL starts knocking the doors of customers breaking then the trend the door of a bank by customers. In banking sector, NABIL set the trend of following the definition of customer given by Mahatma Gandhi. “Customers are the most important visitor in our premises, they do not depend on us, we are dependent on them, they are not an interruption on our business, they are purpose of it, they are not an outsider on our business, and they are part of us. We are not doing them a favor by serving them but they are doing us a favor by giving us an opportunity to do so.”

Table 2.4
Capital Structure of NABIL Bank

Authorized Capital	Rs. 1,600,000,000
Value per share	Rs. 100
Issued capital	Rs. 965,750,000
Paid-up capital	Rs. 2,028,773,000
Incorporation year	1984/07/16 A.D

Source: - www.nabilbank.com

Figure 2.1
Ownership Structure of NABIL Bank



2.3 Review of Related Studies

This is the second phase when the topic is finalized the related available materials like published books, journals, thesis, government publications business reports and so on have to be reviewed. The objective of reviewing the literature is to develop certain expertise and knowledge in one's area.

2.3.1 Review of Relevant NRB Directives

Nepal Rastra Bank (NRB) has provided following directives for classification of loan and advances and its loss provisioning for the purpose of minimizing possible risk in banks lending by using the authority given by sub section 1 of section 23 of NRB act 2012 (revised) and section 19(ka) Of commercial bank act 2031 (Revised).

1. Classification of Loan and Advances on the basis of Overdue Aging Schedule

Banks should classify outstanding loan and advances on the basis of aging of principle amount into the following four categories.

a) Pass

Loans and advances whose principal amount are not past due and past due for a period *up to 3 months* should be included in this category. These are classified and defined as performing loan.

b) Substandard

All loans and advances that are past due for a period of *3 months to 6 months* should be included in this category.

c) Doubtful

All loans and advances which are past due for a period of *6 months to 1 year* should be included in this category.

d) Loss

All loans and advances which are as due for a period of *more than 1 year* as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future should be included in this category.

Loans and advances falling in the category of Sub-standard, Doubtful and loss are classified and defined as Non-Performing Loan.

Note:

- a. If it is appropriate in the views of the bank management there is not restriction in classifying the loan and advances from low risk category to high risk category. For instance, loans falling under substandard may be classified into doubtful or loss and loans and loans falling under doubtful may be classified into loss category.
- b. The term loan and advances also includes Bill purchased and Discounted

2. Additional arrangement in respect of Pass Loan

Loans and advances fully secured by gold, silver, fixed deposit receipts and HMG Securities shall be included under 'pass' category. However, where collateral of fixed deposit receipt or HMG securities or NRB Bonds is placed as security against loans for other purposes, such loan has to be classified on the basis of ageing.

3. Additional Arrangement in respect of "Loss Loan"

Even if the loan is not pass due, loans having any or all of the following discrepancies shall be classified as "Loss"

- i. Insufficient security/collateral.
- ii. The borrower has been declared bankrupt.
- iii. The borrower is absconding or cannot be found.
- iv. Purchased or discounted bills are not realized within 90 days from the due date.
- v. Misuse of loan, i.e. credit not been used for the purpose originally intended.
- vi. Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.
- vii. Loans provided to the borrowers included in the blacklist and where the Credit Information Bureau blacklists the borrower.
- viii. If project/business is in non-operative condition or closed.
- ix. Credit card loan not write off within 90 days from its expiry date.

4. Additional arrangement in respect of Term Loan

In respect of term loan, the classification shall be made against the entire outstanding loan on the basis of the past due period of overdue installment.

5. Principle and interest should not be recovered by overdrawing in excess of the Overdraft Limit

6. Letter of Credit and Guarantee

If non funded facilities such as letter of credit, guarantee and other liabilities turn into funded liabilities and becomes the responsibility of the financial institution, those kind of credits have to categorized under “pass” loan up to 90 days and if overdue for more than 90 days then to be categorized as “loss” loan.

7. Rescheduling and Restructuring of Loan

a) In respect of loans and advances falling under the category of substandard, doubtful or loss, banks may reschedule or restructure such loans only upon receipt of a written plan of action from the borrower citing the following reason:

- i. Evidence for adequate collateral and documentation regarding loans.
- ii. Financial institutions have confidence that loans can be recovered after rescheduling.

Now,

Rescheduling means to extend the duration of loan payment period where, Restructuring means to change the loan type and terms and condition including change in loan payment period.

b) To reschedule or restructure the loan, it is mandatory that at least 25% of past due interest up to rescheduled or restructuring date should be paid by the borrower. If all interests have been recovered before renewal of loans, it can be categorized into “pass” loan.

8. Loan Loss Provisioning

a. The loan loss provisioning, on the basis of the outstanding loans and advances and bills purchases classified as per this directives, should be provided as follows:

Classification of Loan	Loan Loss Provision
Pass	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Loss	100 Percent

Loan loss provision set aside for performing loan is defined as “general Loan Loss provision” and loan loss provision set aside for non-performing loan is defined as “specific Loan Loss Provision”.

Where the banks provide for loan loss provisioning in excess of the proportion as required under the directives of NRB, the whole amount of such additional provisioning may be included in General Loan Loss Provision under the supplementary capital.

b. Loan loss provisioning to reschedule or restructured loans should be as follows:

- i. For rescheduled/restructured loan, loan loss provision should be at least 12 percent.
- ii. If priority sector or deprived sector loan which is insured or guaranteed, priority sector credit has been rescheduled or restructured, provision should be only 25 percent of above point (a) for such loans i.e. 25 percent of 12.50 percent.
- iii. If interest and principal of rescheduled/restructured loans have been served regularly since last two years, such loans can be converted into “pass” loan.

c. Priority sector or deprived sector loans which are not insured should be provisioned as per clause no “a”.

d. Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other should be obtained. Such loan should be classified as per above and where the loans fall under the category of pass, substandard and doubtful. In addition to the normal loan loss provision applicable for the category, an additional provision by 20 percent should be provided. Classifications of such loans and advances should be prepared separately. Hence the loan

loss provision required against the personal guarantee loan will be 21%, 41% and 70% for Pass, Substandard, and Doubtful category respectively.

Table 2.5
Time table of loan classification

Classification	For Fiscal year 2058/59 (2001/02)	For Fiscal Year 2059/60 (2002/03)	For Fiscal Year 2060/61 (2003/04)	For Fiscal Year 2061/62 (2004/05)
Pass	Loans not past due and past due up to 3 months.	Loans not past due and past due up to 3 months	Loans not past due and past due up to 3 months	Loans not past due and past due up to 3 months
Sub-Standard	Loans and advances past due for a period of over 3 months to 1 year.	Loans and advances past due for a period of over 3 months to 1 year.	Loans and Advances past due for a period of over 3 months to 9 months.	Loans and advances past due for a period of over 3 months to 6 months.
Doubtful	loans and advances past due for a period of over 1 year to 3 years.	loans and advances past due for a period of over 1 year to 3 years	loans and advances past due for a period of over 9 months to 2 years.	loans and advances past due for a period of over 6 months to 1 year.
Loss	loans and advances past due for a period of over 3 years.	loans and advances past due for a period of over 3 years.	loans and advances past due for a period of over 2 years.	loans and advances past due for a period of over 1 year.

Source: - www.nrb.org.np

The respective overdue periods of Pass, Sub-standard and Doubtful loans should be considered as higher classification from the next day of date of expiry of the overdue period for each class. (Source: Directive No.2 of circular no.79/058, August 2005)

2.3.2 Review of Related Articles, Journals and Books

On the way to prepare this research work some books, journals and publications have been studied to formulate ideas about the subject matter. Although, the specific books reading the NPA could not be found, however some banking related books have been consulted.

H.D. Cross (1963), says in this regard “lending is the essence of commercial banking, consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending policies and careful lending practices are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit.

High Non-Performing Loan (NPL) and many Problematic Financial Institutions (Numanath Poudel, Nepal Rastra Bank 54th anniversary special issue)

The best indicator of the health of the banking industry in a country is its level of NPL. Given this fact, Nepalese banks and financial institutions seem to be placed in a vulnerable to the high credit risk than they were in the past. Credit forms major source of income and its share of gross credit in total earning asset of all commercial bank are above 54 percent (2008 July). However, average NPL level of banking industry was at 6.08 percent (2008), which is higher as compared to internationally accepted form of 5 percent. Such higher level of NPL required banks to provide for such provisions which consumed earnings and deteriorated the capital in cases of few commercial banks.

If we analyze further, we can find that poor corporate governance and poor risk management practices as the major reason for high NPL and cause of negative capital in

problematic banks. Other external causes of high NPL are economic slowdown, legal hurdles for recovery, defaulting attitude of borrower and deficiency in enforcement of supervisory authority by central bank. Management practices in banks with higher NPL are still very weak in areas of credit analysis, credit administration, risk management and internal control system. Other reasons for increase in NPL are multiple banking, none existing of system for registration of hypothecated current assets, poor credit information and lack of disclosure by borrowers.

High level of NPL ultimately caused reform program for government owned banks and financial institutions and similar caused force NRB to take control over management of couple of banks. And ever growing NPL in private sector banks is subject of major concern for central bank as well as other stakeholders.

Rapid credit growth and loan losses have caused banking crisis in many countries and recent banking crisis in USA is an instance for this. As the competition for credit growth is high in Nepalese banking industry, it is possible that banking crisis may creep into Nepal also. This is the stage, where comprehensive credit risk management guideline should be issued by Nepal Rastra Bank to improve credit risk management practices in banking industry and to prevent deterioration in quality of credit.

Creation of asset management companies may play an important role in reducing the NPL in the banking systems. However, a centralized, government-owned asset management company in Nepal is not likely to solve the NPL problem if it will merely transfer the NPL from one institution to another.

Global Financial Crisis and “Doing Something about It” (*Timila Shrestha, 54th Anniversary Special Issue Nepal Rastra Bank*)

The current global financial crisis is among the greatest challenges to the world economy. Unlike past financial crisis, which were confined to particular regions, the current financial contagion is quickly spreading across continents. Many countries around the world have experienced impact of global financial crisis. The global financial crisis has

led policy makers to focus increased attention on the crucial role of banking supervision. Ongoing changes in the structure and nature of banking, as well as banking crisis, across the globe have focused the attention of the policy makers on the appropriate structure, scope and degree of independence of banking supervision. Independence for bank and financial institutions (BFI) supervisory authorities enhances their ability to enforce actions. The issue regarding the independence of supervisory authorities is the degree to which BFI supervisors should be subject to political and economic policy pressure and influence. How these are issued is important because policies that fail to provide for an appropriate BFI supervisory framework may undermine BFI performance and even lead to full-scale BFI crisis.

On September 2008, bank of America acquired Merrill lynch a US based reputed securities firm. Next day, Lehman brothers, an investment bank is US filed for bankruptcy after it failed to obtain federal support. Both of these firms are with strong capital base, offices over many cities and employees numbering tens of thousands. Further, Lehman was the specialized investment bank and a primary dealer in the US treasury security markets. There failures were not ever thought.

The demise of these two esteemed banking institutions hook the US financial market very badly. New York state exchange went immediately by 504 points. This crisis not only affected US financial market but, with the high degree of global linkage, the shocks also transmitted into the financial markets around the world at the speed of the light. And the result was the consecutive failures of other financial institutions around the globe.

Taken their fame and financial strength, both Merrill Lynch and Lehman brothers were not thought to undergo such failures. However, the failures materialized. The reason that caused failures of these two and consecutively other financial institutions is the financial crisis popularly known as sub-prime mortgage crisis.

As banks reduced lending to decrease their asset level, reduction of credit in the market caused asset prices to fall further due to decreased in investor capacity and demand. This

process of deliberating again caused the cyclical effect in the reverse order creating the financial crisis. The pro-cyclical effect is still seen to continue till date as the world's largest economies are further plummeting into downturn. It has been reported that Frankfurt-based Commerzbank posted a third quarter net loss of €285 million in 2008, compared with year earlier profits of €339 million and wrote down €952 million in investments becoming first commercial bank in Germany to accept government bailout.

Data source: CNBC European Business, December 2008, Euro Bank Watch.

According to **“The Economic Outlook Understanding the local effects of the Global Financial Crisis”** It all started in midsized US cities such as Phoenix and Las Vegas. The banks which financed the housing booms of those towns then pooled their loans, trashed and resold them to willing investors via securitization. This opportunity to immediately sell the loan incentives these banks have been innovating new methods to increase their lending. In particular, banks started to issue adjustable rate mortgage (ARM) to even those people with credit rating lower than 600 called “sub prime” borrowers who had defaulted or delayed in their credit payment in the past. It was a classic moral hazard problem: since the banks could “sell” the loans to other investors, they were careless in screening the borrowers. A bubble started to form in the housing market, abetted also in part due to a 1997 law that allowed capital gain in houses to be deductible, making speculation very attractive.

During the last decade, several banks of Nepal deposited their money in India, due to lack of investment opportunity at home, which had depressed the interest rate in Nepal. Around the same time, the interest rate was also low in the US economy because many Indian, Chinese and other banks had bought US securities to hedge against currency depreciation against the dollar. Several Asian governments also bought US securities to peg the exchange rates at the level their export oriented industries find favorable. Those who purchased risky securities could also purchase credit default swaps (CDS) – an insurance against default. For a brief time, these layers of financial instruments made

almost everybody feel they were safe, and that they were getting their share of the housing market boom.

The availability of cheap loans to buy houses increased their demand, which led to the increase in the price of houses. However, several of these buyers were speculators, who didn't intend to live in the houses they bought. It was inevitable that once demand for houses started dropping, they would try to sell the houses quickly and if they couldn't do that, they would default on the payment. In February 2007, the first sign of default in mortgage arrived: mortgage related index, ABX, dropped. Then, in May, UBS closed Dillon Read, its hedge fund, after incurring a loss of 125 million dollars. In July, the major US home loan provider, Countrywide Financial Corp, reported a drop in earnings, and National Association of Home Builders reported a year-on-year home sale drop of 6.6%. In Europe, a German Bank, IKB, had to be rescued, because its home related roll over asset-backed papers couldn't be sold in the short term liquidity market and it lacked enough liquidity to operate. After this incident, banks became cautious, and became reluctant to extend loans to other financial institutions. Meanwhile, this slowly resulted in the liquidity crunch for firms.

To mitigate this situation, the Fed lowered the discount rates by half a percentage point. The measure worked temporarily, as funds operated by foreign governments (sovereign funds) responded by investing 38 billion in the November 2007-January 2008 period. In January, Fitch downgraded Ambac, a normally reliable giant that insures municipal bonds against default, which sent a shock wave throughout the world.

In India, where the stock market exchange SENSEX had risen from 13,000 in March 2007 to its all time high 20,873 in January, decline in the stock market started at this period. Some major Indian firms which were able to raise money abroad to finance their projects suddenly faced a very risk-averse international financial market. Later, in a talk at the International Monetary Fund (IMF), Dr Rakesh Mohan, deputy governor of the reserve Bank of India, said that if the situation persisted, these firms would be forced to

seek loans domestically, driving interest rates up. This probably of Nepali banks deposition their money in India.

Around that time, a Saudi-backed investment firm, Carlyle Capital, couldn't meet its margin calls, and a fraction of its assets was liquidated. Bear Stearns was a major creditor for Carlyle, and this action affected Bear Stearns. The hedge fund clients of Bear Stearns felt uneasy about this, and there was a run on the firm the next day. The New York Fed then arranged an overnight deal for JPM organ Chase to acquire Bear Stearns. During the July-August period, Indy Mac, three large mortgage firms, were put in conservator ship by the Federal Deposit Insurance Corporation (FDIC) and the US government respectively. In September, Lehman Brothers declared bankruptcy and Merrill Lynch was acquired by Bank of America. In India, this alarmed authorities, and they asked the banks to furnish their exposure to Lehman Brothers. Out of 77 banks, 14 banks reported their exposure to Lehman Brothers (The concern for Nepal lies here: in particular, it is crucial to find out whether our banks have any ties with These Indian banks and the extent of such ties in order to estimate the exact impact on Nepal.) On Sept.16, 2008, AIG, a big insurance firm, saw its share price plunge by 90 percentages. Meanwhile, though more than 20 banks failed in the United States during this period, Asian banks remained largely immune from the crisis. The attitude in Asia can be summarized by the result of a study done by Reserve Bank of India in September 2007 which concluded that there had been no direct exposure of Indian banks to the sub prime disaster of the United States. However, as it turned out later, some banks had purchased collateral debt obligation of American banks, and would suffer a bit.

Back in states, the way these firms fell had a significant effect on the trust among firms and banks. Firms stopped trusting other firms, and the mechanism that was greasing the wheels of the giant financial machine almost stopped functioning. Panic spread, and in the chaos, Washington Mutual, a 158 year old bank, became victim of an electronic bank run, and was sold to JPM organ Chase by FDIC. Another big bank Wachovia was sold to wells Fargo in September. During this panic, firms, state and local governments too reported difficulty in getting credit. To restore normalcy, The US government passed an

800-billion-dollars bailout package. The market however though it was too small, given that 8 trillion dollars had been lost in one previous year in the stock market and reached negatively to it. The Fed meanwhile kept on buying asset backed securities and reduced the interest rate to almost zero in December, just to facilitate the credit access of the firms.

Around this time, the global fiscal crisis alerted Nepali businessman and Binod Chaudhary emphasized that the first order effect – in which Nepali firms were directly affected – would be significant, whereas the finance minister and others seemed to think first order effect would be insignificant while allowing for second order or higher order effect. In India, the equity market suffered because of reversal of portfolio equity flows. It caused negative effects on the Forex market and liquidity conditions. Besides that, India as a country was deemed to be unaffected. Assuming Nepali financial institution only foreign exposures is to Indian banks, the Nepali financial ministers and other who claimed Nepal to be quasi-immune from international financial system, were right. Furthermore, the Nepali equity market is not financed with foreign money; the corporate world is not big enough to raise money for the international sector, so, it is unlikely to feel any heat due to the liquidity crunch. However, policymaker perhaps underestimated the effect by ignoring a channel through which Nepal could be hit badly: foreign employment of Nepali youth.

Nepal's exposure to the foreign world has always been limited. Nepal's major export has been its low-skilled youth, which are normally employed in recession proof sectors such as military or household defense. Lately, the Nepali youth has responded to the labor demand surge in Arab countries. The surge was due to extra money Arabs reaped during oil price hike. Some of the extravagant projects initiated in the Arabian countries are likely to suffer now, and their labors demand will decrease. To what extend will it affect Nepal is difficult to predict. Given Nepal's labor market situation, in which year roughly 250,000 people enter the labor market, and given an overall hostile attitude towards industrialists in current Nepal, mainly because of powerful labor unions, new job creation

by the industrial sector has come to a standstill. In this context, how those unemployed and returned youth will behave will determine the true effect of the financial crisis.

Chris Giles and William Tett in their article published in Financial times on 1st may 2008 illustrate that some banks have had to write down the AAA-rated super senior tranches of collateralized debt obligations by as much as 30% due to fall in their market prices. This would be justified only if three quarters of households with sub-prime securitized mortgages would default and price falls would continue. However, that does not seem to be plausible given that none of the AAA- rated sub-prime mortgage- backed securities, even with a continued decline in US house prices.

This just exemplifies that markets are imperfect and prices do not always reflect fundamentals. Some authors argue that during times of financial crisis, market price does not reflect future payoffs but rather reflect the amount of cash or liquidity available to the investors. In such cases, mark-to-market accounting will cause banks assets to be devalued and force banks to insolvency even they would have been fully able to cover their commitments if they were allowed to continue until the assets mature. In this manner, mark-to-market can artificially transform liquidity problem into a solvency one.

Thus various authors have suggested regulators to practice “forbearance” in the crisis situation allowing banks not to write down the value of their assets in order avoid artificial volatility and its consequent insolvency this would help to eliminate the procyclical problem caused by mark-to-market accounting and avoid liquidity problem to artificially transform itself to a solvency one.

When markets are not being driven by fundamentals and market prices do not reflect assets future earning power, it just seems plausible to let the assets be valued at discounted future cash flows. Therefore again in an effort to “do something”, authorities are intending to suspend mark-to-market accounting and allow companies to value assets at estimated future cash values. Especially during the crisis situation, it seems not only possible but also necessary to provide information regarding every possible value of the

assets be it mark to the market, discounted cash flow, amortized cost or historic one. However there needs to be additional information for users to fully understand the implications of each valuation.

For example, while disclosing mark-to-market value, additional information needs to be provided as much as possible to identify the extent to which fall in asset prices are due to market conditions such as liquidity factors and the extent to which they are due to changes in discounted estimated future cash flows. And while disclosing discounted cash flow value, complete information needs to be provided ranging from underlying assumptions for amount of estimated cash flows and discount factors as well as the extent to which such value is differing from the market price and possible reasons for such difference.

Non-Performing Assets Management

Regmi (2062), titled "*Non-Performing Assets Management*", he stated about the management of NPAs in the commercial banks. He writes, the NPAs include the nonperforming loan, non-banking assets, remaining non-performing loan, suspended interest and unutilized assets. The increasing NPAs are the emerging problem in commercial banks, which is the main factor of failure of banks.

He said, NPAs caused by investment of assets in non-productive sectors, lack of future prediction, lack of proper supervision, monitor, control, lack of information and failure of recovery of loan and their interest on time. He also added the low quality of collateral of loans, failure of projects and lack of appropriate rules and regulations to punish the bad loan takers.

He added that increasing NPAs directly affects to the banks, investors and human resources. Not only that but it also affects the customer, economy of country and business activities. Increasing NPAs have two types of impact on banks: internal impact and external impact. In internal, it affects directly on profitability and human resources and in external, it affects to customers, investors, management and country's economy.

He concludes that it is like a cancer of banks. Thus, it is necessary to control this cancer on time otherwise it becomes a big issue for bankruptcy. NPAs have to be micro analyzed to protect the banks, investors, customers, human resources and country's economy. For that a clear road map is required. To success the laws and policies, all the stakeholders should take responsibilities.

Manandhar (2006) *the chief editor the banker magazine*, in his article of September 2006 issue. "*It should be justifiable*" has argued in favor of businessman. He says businessmen are not only helpful for the country but also the major tax payer to the government. Recently Nepal government has introduced the policy to seize the passport of the intentional defaulter but it is difficulty to identify the intentional defaulter. Due to the years of crisis in the country they are the most affected groups and if the salutation is not considered capital may flight to neighboring country which is ultimately loss for the nation.

Shrestha *ex-governor of Nepal Rastra Bank* in his article published in The Boss magazine says the management of bad loan is a high prioritized exercise in the country for past 10 years. But the remarkable achievements have not been sighted yet. Handover of management of two big government banks is an example of financial sector reform action in the country. It has been almost 4 years of handover of management of two big government banks to the foreign expert but the achievement is not satisfactory. He identifies not only government banks but private sector banks are also slowly affected by the non-performing loan. Therefore a strong focus should made by management to reduce the level of NPL. He believes in co-ordination between the borrower and the lender. He further says if a viable project is not being completed in time and not being able to pay its interest in time the bank and the project owner should sit together and find out the way to complete it rather than blacklisting and running towards the legal action.

Vaidya in his article agrees the significant progress made by the Nepalese financial institutions. He is quite dissatisfied with the tendency of Nepalese commercial bank to focus on collateral based project rather than cash flow and viability of the project. This

ultimately leads the bank to non receipt of interest on time and increment in NPL level. Finally he concluded that to safeguard the banks from the financial crisis likely to be arising from the project failure and sick units that is non-performing loan. The government needs to do a number of things and fast. It must bring a broad rule for poor financial institutions, transferring bad loans to bridge bank or loan recovery agency, removes many non-performing loans from even healthier bank's balance sheets, beef up regulation, supervision and disclosure, improve ability to banks to sell the collateral that backs sourced loans and recapitalize the banking system.

“Competition in the Banking Industry in Nepal”

KC in this article titled a “*Competition in the Banking Industry in Nepal*” bank which was published in Arunodaya, Baishakh 2064 stated that –Banking industry plays a dominant role in the financial system of the country. In July 2005 the total assets of the financial sector of the country was Rs.474 billion and total assets of commercial accounted for about 87percent of this. In the same way in July 2005 the shares of commercial banks were 89 percent of the total amount of deposit, 78 percent of the total credit, 90 percent of the total investment and 84 percent of the total liquid funds between 1998 and 2006 loans and advances in the banking industry increased at the rate of 12.62 percent per annum. In mid –July 2006, loans and advances in the banking industry was Rs. 173383 million. Out of the total loans and advances in mid-July 2006, lending to the private sector accounted for more then 95 percent. Interest accrued also increased from Rs.10618.6 million to Rs. 36718 million between mid- July 1998 to mid- July 2006 growing, on an average, at the rate of 21.68% annually.

He concludes that, “as often cited one of the reasons for non- performing loans is also collusion between the borrower and staff of financial institutions in loan approval. It is very much necessary to improve the governance of financial institutions and make the staff involved in such collusion liable for the loss. Improvements are necessary not only at the middle level but also at the top level because the problem of non- performing loan is acute due to large borrowers” (KC, 2064: 285- 289).

“Statement by the International Monetary Fund”

Progress since NDF (Nepal Development Forum) 2002 (Hisanobu Shishido, 2004)

Nepal has made progress in a number of areas since the last NDF in 2002. Reform implementation was particularly strong in the financial sector, where a new Nepal Rastra Bank Act was adopted, new prudential regulations were promulgated, and external management teams were installed at the two large, financially troubled commercial banks. These teams embarked on intensive efforts to recover non-performing loans and reduce operating costs. Since the approval of the Poverty Reduction and Growth Facility (PRGF) arrangement, significant progress has been made in financial and public sector reforms. In the financial sector, steps were taken on three fronts:-

Improved loan recovery and banking environment (establishing the Debt Recovery Tribunal, issuing strengthened directives for blacklisting defaulters, and promulgating the banking and financial institutions ordinance) Strengthening of the NRB (improving its organizational structure and reducing overstaffing) Restructuring of commercial and development banks (reducing non-performing loans and overstaffing at commercial banks and designing restructuring plans for the major development banks).

Regmi (2062) entitled “*Non-Performing Assets Management*”, the writer stated about the management of NPAs in the commercial banks. He writes, the NPAs includes the non-performing loan, non-banking assets, remaining non-performing loan, suspend interest and unutilized assets. The increasing NPA are the emerging problems in commercial banks, which is the main factor of failure of banks.

He said, NPAs caused by investment of assets in n-performing sectors, lack of future prediction, lack of proper supervision, monitor, control lack of information and failure of recovery of loan and their interest on time. He also added the low quality of collateral of loans, failure of projects and lack of appropriate rules and regulations to punished the bad loan takers. He shows the following NPAs in commercial banks.

Table 2.6
NPAs in Commercial Banks

Fiscal Year	Percentage of NPAs
2058 Ashad	30.78
2059 Asadh	30.41
2060 Asadh	28.80
2061 Asadh	29.00

Source: Banking and Financial statistics of NRB

He added that increasing NPAs directly affects to the banks, investors and human resources. Not only that but also it affects the customer, economy of country and business activities.

Pradhan (2058) in his article “*NPA: Some Suggestions to Tackle Them*” found saying that unless the growth in NPA is kept in control, it has the potential to cause systematic crisis. He has mentioned that a dream of globalization led to huge investment which unfortunately could not be utilized properly due to hesitant liberalization policies. Large corporate misused the credits and delayed payments and contributed indirectly for enhancing NPA ratio. He further argues the lack of vision in appraisal of proposal while loan sanctioning, reviewing or enhancing credit limits, absence of risk management policy of financing, concentration of credit in few group of parties and sector. Lack of initiatives to take timely action against willful defaulters, indecision on existing out of bad loans for fear of investigating agencies like special police, CIAA, Public Accounts committee of the parliament have also contributed in whatsoever measures to the worsening situation of NPA front. He further pointed out that most crucial reason for the increase in the NPA is the shabby and defaulter friendly legal system. Suggesting the remedy of NPA he adds that administrative system should be strengthened, Legal reforms should be made and Assets Reconstruction Company should be formed, Henderson (2003), CEO of RBB turnaround is restructuring and collection of NPA.

Though these studies are found to be quite useful in their own side but the question of NPA and its cause as well as effect on various aspects in commercial banks is yet to be reviewed. In view of these, this study has been based on the various contributing factors that increase NPA level in commercial banks in Nepalese perspective and its effect on profitability position of the banks.

2.3.3 Review of Related Thesis

Shrestha (2004), has conducted a research on “*A Study on Non-Performing Loan and Loan Loss Provisioning of Commercial Banks*” with reference to NBL, NABIL and SCBNL. Main objectives of her study are to find out the proportions of non-performing loan, relationship between loan loss provision and profitability, factors that affects to accumulate the non-performing loans in selected banks.

She has pointed out the problems of commercial banks as commercial banks/financial institutions in Nepal have been facing several problems like lack of smooth functioning of economy, different policies and guidelines of NRB, political instability, security problem, poor information, over liquidity caused by lack of good lending opportunities, increasing non-performing assets etc. In the present context, where Nepalese banks are facing the problem of increasing NPAs, more amounts have to be allocated for loan loss provision.

She has concluded ineffective credit policy, political pressure to lend to uncreditworthy borrowers, over valuation of collateral are the major causes of mounting non-performing assets in government owned banks like NBL. Other factors leading to accumulation of NPAs are weak loan sanctioning process. Ineffective credit control review and classification of loans enables banks to monitor quality of their loan portfolios and to take remedial action counter deterioration in credit quality. In addition to these, establishing recovery cell, hiring asset Management Company are also measure to resolve the problem on NPL. She has been found the NBL has very high portion of nonperforming loan resulting to higher provision in comparison to NABIL and SCBNL. Even the NBL has highest investment in the most income generation assets i.e. loans and advances, it is

in loss. Even the private sector bank, NABIL, has also higher nonperforming loan and provision which is higher than acceptable during the study period.

She recommended that the factor which leads to non-performing loan are improper credit appraisal system, ineffective credit monitoring and supervision system etc. Beside that negligence in taking information from Credit Information Bureau may also lead to bad debts. Hence all the three banks are recommended to be more caution and realistic while granting loans and advances. After advancing loan there should be regular supervision and follow up for proper utilization of loan. She also recommended the banks to initiate training and development program for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management. The regulation regarding loan classification and provisioning is stringent and tighter than the previous. Hence, NRB should not only impose directives but also create supportive environment for the commercial banks. NRB is recommended to strength Credit Information Bureau so that banks can get required credit information about the borrowers on time. This help in reducing NPL.

Pandey (2003), has carried out study on “*Nepal Rastra Bank – Directives their Implementation and Impact on the Commercial Bank – A Case study of HBL*” with the objectives to find out the impact of changes in NRB directives on the performance of the commercial Banks and to find out whether the directives were implemented or not.

The directives if not properly addressed have potential to wreck the financial system of the country as they are the only tool of the NRB to supervise and monitor the financial institutions. The directives in themselves are not that the commercial Banks. In case commercial banks are making such huge profit with full compliance of NRB directives, then the commercial banks would deserve votes of praise because they would then be instrumental in the economic development of the country. All the changes in NRB directives made impacts on the bank and the result are the followings:

- Increase in operational procedures of the bank will increase the operational cost of the bank.

- Short term decreases in profitability which result to lesser dividends to shareholders are lesser bonus to the employees.
- Reduction in the loan exposure of the bank, which decreases the interest income but increase the protection of the depositor's money.
- Increase demand for shareholder's contribution in the banks by foregoing dividends for loan loss provisions and various other reserves to increase the core capital.

All the aforesaid result leads to one direction; the bank will financially healthy and stronger in the future. HBL will be able to withstand tougher economic situations in the future with adequate capital and provision for losses. The tough time through which the bank is undergoing at present will prevail only for a couple of years but in the long run, it will be strong enough to attract more deposits and expose itself to more risk with capital cushion behind it. The quality of the assets of the banks will become better as banks will be careful before creating credit. Ultimately, it changes in the depositors, the employees and the economy of the country as a whole.

Shilpakar (2003), in her thesis entitled "*A Study on Lending Practices of Finance Companies of Nepal*" aimed to analyze performance of finance company regarding lending quantity and quality and its contribution in profitability. She concluded that loans and advances is one of the main sources of income of finance companies. This is also what is shown by the high degree positive correlation between total income and loan and advances. "Loan Loss Provision is like a by-product of loans and advances, thus with loans and advances, loan loss provision does increase in synchronize". She recommended that loans and advances of finance companies are increasing and so are the nonperforming loans and loan loss provision. Hence extra effort should be enforced to control over NPL.

Bhattarai (2004), has stated in her research "*Implementation of Directives Issued by Nepal Rastra Bank: A Comparative Study of Nepal SBI Bank Limited and Nepal Bangladesh Bank Limited*". The main objective of the research study is to examine the

norms and standard laid down by Nepal Rastra bank relating to capital adequacy, loan classification and loan provisioning. As per her view the process of continual review and classification of loans and advances enables banks to monitor the quality of loan portfolios and to take remedial action to counter deterioration of credit quality of their portfolios.

In her study it was found that both (Nepal SBI Bank and Nepal Bangladesh Bank) the bank would fall short in supplementary capital but can maintain its total capital according to the new directives relating to capital adequacy norms. All the changes in NRB directives made impacts in the bank and the results are the following:

- Reduction in the loan exposure of the bank, which decrease in interest income but increase the protection to the money of the depositor's money.
- Increase in the operational procedures of the bank, which increases the operational cost of the bank.
- Increase demand for shareholder's contribution in the banks by foregoing dividends for loan loss provisions and various other reserves to increase the core capital.
- Reduction in the loan exposure of the bank, which decrease in interest income but increase the protection to the money of the depositor's money.
- Increase protection to the money of the depositors through increased capital adequacy ratios and more stringent loan related directives.

She concluded that with the new provisions the banks will have its provision amount increasing in coming years and subsequently profitability of the banks will also come down. However, the true picture of the quality of the assets will be painted in the coming years. She recommends, "The bank should be very careful while analyzing the paying capacity of its credit clients. With longer period of past due, the bank will end up increasing its provisions which will keep the bottom line low if the banks are not careful".

Kumar (2006), has conducted thesis titled “*A Study of Non-Performing Assets of Commercial Banks of Nepal*” with reference to Nepal Bank Limited, Rastriya Banijya Bank, Nepal Bangladesh Bank, Everest Bank and Standard Chartered Bank Nepal Limited. The main objectives of his study are to find out the proportion of nonperforming loan and the level of NPAs in total assets total deposit and total lending, evaluate the relationship between loan and loan loss provision , present the trend line of the NPA, loan and advances, loan loss provision of selected commercial bank.

Pradhan (2006) concludes, “Improper credit policy and credit appraisal system, lack of Supervision and monitoring, economic slowdown, overvaluation of collateral, borrower’s Misconduct, political pressure to lend for un-creditworthy parties, etc are the major causes of occurring NPAs.

He has concluded that that “Nepalese banks have to remain focused in their efforts to recover their spiraling bad loans, or non-performing assets, to sustain the positive trend of improving asset quality. Better risk management techniques, compliance with the core principles for effective banking supervision, skill building and training and transparency in transaction could be the solution remove of non-performing loans from the banking system even through government or quasi government funds at times, is essential. But official assistance should be so structures as to avoid moral hazard. To conclude with, till recent past, corporate borrowers even after defaulting continuously never had any real fear of bank taking any action to recover their due despite the fact that their entire assets were hypothecated to the banks. This is because there was no legal Act framed to safeguard the real interest of banks. While NPA cannot be eliminated, but can only be contained, it has to be done not a heavy cost of provisioning and increasing the portfolio of credit. Along with recovery fresh inflow of NPA should be bought down at a level much less than the quantum of its exit. IF this specific goal is reached, there is an eventual solution for this problem. Good conveyance is essential for the success in NPA management.

2.4 Research Gap

From the review of previous research and study it has been found that increasing nonperforming loan is one of the most challenging problems faced by existing commercial banks in the current scenario. Some researchers have studied on implementation aspects of NRB directives by commercial banks while some other studied non-performing loan and loan loss provisioning of commercial banks. No research has been found on the impact of the non-performing loan and loan loss provision on the performance of commercial banks, required profitability and capital adequacy of commercial banks as per NRB directives. Therefore, this research is made to fulfill the research gap by taking the reference of NABIL Bank Limited, Lumbini Bank Limited and Himalayan Bank Limited.

This research will be able to deliver some of the present issues, latest information and data regarding loan classification, non-performing loan and loan loss provisioning and their ratios, data and real pictures of loan advances of Nepalese Commercial Banks with reference to NABIL Bank Limited, Lumbini Bank Limited and Himalayan Bank Limited.

CHAPTER - III

RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problem. It refers to the various sequential steps adopted by a researcher in studying the problem with certain objectives. It describes the method and process applied in the entire aspect of the study. In this chapter, the research design, data collection procedure and procedures concerning analysis of data are described thoroughly. Analysis is conducted by using appropriate financial and statistical tools and the findings are presented in a systematic way.

3.2 Research Design

This research is based on secondary data. It is simply an analytical and descriptive research. It covers the data of ten years from annual report of concern bank. The collected data are analyzed by using financial as well as statistical tools such as arithmetic mean, standard deviation, etc.

3.3 Population and Sample

The term population for research means all the members or any well defined class of people, event or object. It means that the entire group of people, events or things of interest that a researcher wishes to investigate. A sample is a collection of items or elements from population or universe. Hence, a sample is only a portion or subset of the universe or population. It comprises some observations selected from the population.

Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which judgment or inference about the aggregate or totality is made. As this study is about non-performing loans and loan loss provisioning of commercial banks, all

31 commercial banks of Nepal is taken into account as population and out of the total population three following commercial banks are selected as sample for this study.

1. NABIL Bank Limited (NABIL)
2. Himalayan Bank Limited (HBL)
3. Lumbini Bank Limited (LBL)

3.4 Nature and Sources of Data

Required data for this study is equally based on secondary sources of information.

Following are the secondary sources of data used in the study.

Annual reports published by Nepal Rastra Bank.

Annual reports, newsletters, brochures etc of the concerned banks.

Quarterly Economic Bulletin, Nepal Rastra Bank.

Statistical Pocket Book, Central Bureau of Statistics.

Laws, guidelines and directives regarding the subject matter.

Articles published in newspapers, journals, magazines and other publications.

Text books regarding the subject matter.

Unpublished thesis and dissertations.

Various related websites

Daily newspapers etc.

All other related sources, such as interviews, remarks/opinion by the experts that provides valuable data and conclusion regarding the subject matter.

3.5 Data Collection Technique

Data are collected from various sources were in raw form, which are included the annual financial report of concerned banks, the related publications of NRB and relevant websites of concerned banks. Data are collected using both primary and secondary data.

Primary data have been obtained through field visit and telephone inquiries. While secondary data are collected through the annual reports of concerned banks which were collected from concerned banks and other reports were downloaded from websites.

Various publications of NRB were collected from concerned department of NRB, various

reports, textbooks; journals and unpublished dissertation have been obtained by visiting TU Central Library, Nepal Commerce Campus, NRB Library and Shanker Dev Campus.

3.6 Data Analysis Tools

The data collected from different sources are recorded systematically and identified after collection of research data, an analysis of data and interpretation result are necessary.

Applying different financial and statistical tool made data analysis. Further to represent the data in simple form bar diagram and graphs have also been used.

3.6.1 Financial Tools

Ratio Analysis

Ratio analysis is a tool for scanning the financial statement of the firm. A ratio analysis is the widely used tool of financial analysis. A ratio is simply one number expressed in terms of another and as such it expresses the numerical or quantitative relationship between two variables. Ratio analysis reflects the relative strengths and weakness of any organization and also indicates the operating and financial growth of the organization. Even though there are many ratio, only these ratios have been calculated which are related to the subject matter. Following ratios have been computed and analyzed in this study.

Loan and Advances to Total assets Ratio

Loan and advances of any commercial banks represents the major portion in volume of total assets. The loan and advances to total assets ratio measures the amount of loan and advances in the total assets. It means that it shows the proportion of loan and advances to total assets. The high degree of ratio indicates the good performance of the banks in mobilizing its fund. However in its reverse side, the low degree is representing low liquidity ratio or fund are not been mobilized properly. Granting loans and advances always carries a certain degree of risk. Thus this asset of banking business is regarded as risky assets. Thus the ratio clears out the management attitude towards mobilization of the risky assets. Higher the risk higher the profit and lower the risk lower the profit. The

low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa. Thus, the loan and advances may or may not be recovered with its interest. This ratio is calculated as follows:

$$\text{Loan and Advances to Total Assets Ratio} = \frac{\text{Loan \& Advances}}{\text{Total Assets}}$$

Loan and Advances to Total Deposit Ratio (CD Ratio)

The core banking function is to mobilize the funds obtained from the depositors to borrowers and earn profit and loan and advances to total deposit ratio (CD Ratio) is the fundamental parameters to ascertain fund deployment efficiency of commercial bank. In other word this ratio is calculated to find out how successfully the banks are utilizing their total deposits on loans and advances for profit generating purpose. Loans and advances yield high rate of return but liquidity requirements also needs due consideration. Greater CD ratio implies the better utilization of total deposits and better earning. Hence 70-80% CD ratio is considered as appropriate. This ratio is calculated as follows:

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Loan \& Advances}}{\text{Total Deposit}}$$

Non-Performing Assets to Total Loans and Advances Ratio

This ratio determines the proportion of non-performing loans in the total loan portfolio. Higher ratio implies the bad quality of assets of banks in the form of loans and advances. Hence lower non-performing assets to total loans and advances are preferred. A per standard only 5% NPA is allowed but in the context of Nepal 10% NPA is acceptable. It is calculated as follows:

$$\text{Non - Performing Loans to Total Loans and Advanced} = \frac{\text{Non - Performing Loans}}{\text{Total Loans \& Advances}}$$

Provision Held to Non-Performing Loans Ratio

This ratio determines the proportion of provision held to non-performing loan of the bank. This ratio measures up to what extent of risk inherent in NPA is covered by the total loan provision. Higher ratio signifies that the banks are safeguarded against future contingencies that may create due to non-performing assets. So, higher the ratio better will be the financial strength of the bank. This ratio is calculated as follows:

$$\text{Provision Held to Non - Performing Loans Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Non - Performing Loans}}$$

Non-Performing Loans to Total Assets

This ratio indicates the ratio between the non-performing assets and total assets. Higher NPA to total assets ratio implies the bad effects in banks performance and it decreases the profitability of the banks and lower ratio implies the better performance of the bank and it increase the profitability of the banks. This ratio can be calculated as follows:

$$\text{Non - Performing Loans to Total Assests} = \frac{\text{Non - Performing Loans}}{\text{Total Assets}}$$

Return on Loans and Advances

This ratio indicates the proportion of the return over total loans and advances. It describes how efficiency the bank has employed its resources in the form of loans and advances of the bank. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Higher the ratio better is the performance of the bank and vice versa. This ratio can be calculated as follows:

$$\text{Return on Loan and Advances} = \frac{\text{Net Profit}}{\text{Total Loans \& Advances}}$$

3.6.2 Statistical Tools

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of numerical data. “Statistical analysis is one particular language, which describes the data and makes possible to talk about the relations and the difference of the variables”. Following statistical tools have been used in this study.

Arithmetic Mean

The arithmetic mean or simple mean of a set of observation is the sum of all the observation divided by the number of observation. It is the best possible value of a group of variables that singly represents to whole group. In the statistical analysis the central value falls within the approximately middle value of the whole data. Mean is the arithmetic average of a variable. Arithmetic mean of a series is given by:

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N}$$

Standard Deviation

Standard Deviation (S.D) is the most popular and the most useful measure of dispersion. It indicates the range and size of deviance from the middle or mean. It measures the absolute dispersion. Higher the value of standard deviation higher is the variability and vice-versa. It is the positive square root of average sum of square of deviations of observations from the mean of the distribution. It can be calculated as follows:

$$\text{Standard deviation}(\sigma) = \sqrt{\frac{\sum (X - \bar{X})^2}{N - 1}} .$$

Coefficient of Variation

The percentage measure of coefficient of standard deviation is called coefficient of variation. The less is the C.V the more is the uniformity and consistency and vice-versa. Standard deviation gives an absolute measure of dispersion. Hence, where the mean value of the variable is not equal it is not appropriate to compare two pairs of variables based in S.D. only. The coefficient of variation measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability, which is computed as follows:

$$\text{Coefficient of Variation (CV)} = \frac{\sigma}{\bar{X}} \times 100$$

Correlation Coefficient (r)

Correlation coefficient refers to the degree of relationship between two variables. Correlation coefficient determines the association between the dependent variable and independent variable. If between the variables, increase or decrease in one cause increase or decrease in another, then such variables are correlated variables. "Correlation may be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated when the change in the value of one is accompanied by the change of another variable". There are different techniques of calculating correlation coefficient. Among various techniques we have used Karl Pearson coefficient of correlation. It is calculated as follows:

$$\text{Correlation Coefficient } (r) = \frac{\sum XY}{N\sigma_x\sigma_y}$$

Where,

$$x = X - \bar{X} \text{ and } y = Y - \bar{Y}$$

σ_x = Standard Deviation of Series X

σ_y = Standard Deviation of Series Y

N = No. of pairs of observation

On simplification of the equation of r, we obtain the following formula for computing Correlation Coefficient (r).

$$\text{Correlation Coefficient } (r) = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

The Karl Pearson Coefficient always falls between -1 to +1. The value of correlation in negative signifies, the negative correlation and in plus signifies the positive correlation.

If,

$r = 0$, there is no relationship between the variables.

$r < 0$, there is negative relationship between the variables.

$r > 0$, there is positive relationship between the variables.

$r = +1$, the relation is perfectly positive.

$r = -1$, the relation is perfectly negative.

The reliability of the correlation coefficient is judged with the help of probable error (P.E). It is calculated as follows:

$$\text{Probable Error(P.E.)} = \frac{0.6754(1 - r^2)}{\sqrt{N}}$$

Where,

r = correlation coefficient

N = No. of pairs of observation

Decision:

If $r > 6 \text{ P.E.}$, then the correlation coefficient is significant and reliable.

If $r < 6 \text{ P.E.}$, then the correlation coefficient is insignificant and there is no evidence of correlation.

Regression Analysis

Regression Analysis only the simple has been used to study the influence of independent variables on dependent variables in this study. The simple regression analysis has helped in studying the effect and magnitude of the effect of simple independent variable on the dependent variable. Regression analysis has been developed to study and measures the statistical relationship between two variables only then the process is known as the simple regression analysis. The general form of simple regression can be presented as follows:

$$Y = a + bx$$

Where,

y = dependent variable,

a = intercept of the line,

b = coefficient of independent variables or it measures the rate of relationship and

x = independent variables

The above symbols indicate for this study purpose as:

y = dependent variable like Net Profit

a = intercept

b = coefficient of independent variables

x = Net Profit

The simple regression analysis has been done by using above specified variables relationship to get the expected result.

Trend Analysis

Trend analysis is one of the statistical tools, which is used to determine the improvement or deterioration of its financial situation. Trend analysis informs about the expected future values of various variables. The least square root method has been adopted to measure the trend behaviors of the selected banks. This method is widely used in practices. The formula of least square method for the straight line is represented by the following formula.

$$Y_c = a + bX$$

Where,

Y_c = Trend values

a = Y intercept or the computed trend figure of the Y variable, when X = 0

b = Slope of the trend line of the amount of change in Y variable that is associated with change in 1 unit in X variable.

X = Variable that represent time i.e. time variable

The value of the constants a and b can be determined by solving the following two normal equations.

$$\sum Y = Na + b \sum X$$

$$\sum XY = a \sum X + b \sum X^2$$

Where,

N = Number of years

But for simplification, if the time variable is measured as a deviation from its mean i.e. mid point is taken as the origin, the negative value in the first half of the series balance

out the positive values in the second half so that ($\sum X = 0$). The values of constant “a” and “b” can easily be determined by using following formula.

$$a = \frac{\sum Y}{N}$$

and,

$$b = \frac{\sum XY}{\sum X^2}$$

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

In this segment we analyze the data available and interpret them in the meaningful manner. Data collected from various sources are classified and tabulated as requirement of the study and in accordance to the nature of the data. Different arithmetical and statistical tools are used to analyze the data collected under the study. To make easier and clearer to the understanding of the study, data are presented in the tables and diagrams.

This segment is taken as the heart of the whole study as all findings; conclusions and recommendation are going to be derived from the calculation and analysis done in this section.

Simple percentage is used to analyze the data as arithmetic tools. Karl's Pearson's correlation coefficient is used to analyze the data as statistical tool. Nowadays Non-Performing Assets/Loan (NPA/L) has been occupying major space in the total assets and total lending of the bank. It stands around 15% in the Nepalese banking system while it is even worse in case of two large commercial banks Rastriya Banijya Bank (RBB) and Nepal Bank Limited (NBL). The NPA of RBB is found 45.3% while that of NBL is 25.1% of the total lending. In this way it shows that commercial banks have been suffering by high level of NPA and the efforts of the banks have been diverted to reduce it.

Keeping this fact into consideration, a provision has set up by Nepal Rastra Bank in fiscal year 2057/58 to control the level of NPA of Nepalese commercial banks. According to that provision, every bank has to classify its total loan and advances including purchased and discount bills as pass loan, substandard loan, doubtful loan and loss loan, on the basis of overdue against schedule. Commercial banks are also directed to maintain loan loss provisions stated in section 11 of directives no. 2 of NRBs directives for commercial banks 2059. Main purpose of this is to find out the level of NPA in Nepalese commercial banks and to take necessary steps to control the level of NPA in future.

Here in this study, data of ten fiscal years starting from F/Y 2000/01 to 2009/10 have been presented to study and analyze the level of NPA in total assets, total lending and total deposits of the commercial banks. Data are also presented to examine or analyze the efforts to NPA on the banks under study.

4.2 Ratio Analysis

Ratio analysis is a tool of scanning the financial statement of the firm. It ratio is simply one number expressed in terms of another and as such it express the numerical or quantitative relationship between two variables. Through this one comes to know that in which areas operation the organization is strong and in which areas it is weak. Ratio analysis is the widely used tool of financial analysis. In financial analysis, a ratio is used as the benchmark for evaluating the financial position of the firm. Ratio analysis reflects the relative's strengths and weakness of any organization and also indicates the operating and financial growth of the organization. "Ratio helps to summarize large quantities of financial data and to make quantitative judgment about the firm's financial performance. The relationship between two accounting figures expressed mathematically is known as financial ratios". Even though there are many ratios, only those ratios have been calculated in our study period which is related to the subject matter. Following ratios have been computed and analyzed in this study.

4.2.1 Loans and Advances to Total Assets Ratio

Loan and advances is the major portion of the assets of any balance sheet of commercial banks. Loan and advances directly generates income to the bank therefore it is essential to analyze the ratio of loan and advances to total assets. The more the portion of loan and advances in total assets the more the effective utilization of assets of the bank.

Granting loan is the risky decision because each loan carries certain level of risk therefore loan and advances are also known as risky assets. Therefore if loan and advances to total assets ratio is low it indicates low risk to management and low profitability and vice-versa. Total loan and advances and total assets of selected banks under study are presented in the table below.

Table 4.1**Loans and Advances to Total Assets Ratio**

Year	NABIL			HBL			LBL		
	Loan & Advances	Total Assests	Ratio	Loan & Advances	Total Assests	Ratio	Loan & Advances	Total Assests	Ratio
00-01	7,732,637	17,770,651	44	8,537,666	18,870,804	45	1,735,951	2,449,204	71
01-02	7,437,895	17,692,253	42	8,913,724	20,672,434	43	2,085,332	3,061,650	68
02-03	7,755,950	16,562,625	47	10,001,850	23,355,223	43	2,441,639	3,440,168	71
03-04	8,189,993	16,745,486	49	11,951,869	24,762,025	48	2,980,398	4,364,204	68
04-05	10,586,170	17,186,330	62	12,442,710	27,862,884	45	3,167,724	4,494,901	70
05-06	12,922,543	22,329,971	58	14,642,559	29,460,389	50	2,983,895	4,259,343	70
06-07	15,545,779	27,253,393	57	16,997,997	33,519,141	51	3,840,687	5,705,025	67
07-08	21,365,053	37,132,759	58	19,497,520	36,175,531	54	4,489,494	6,151,478	73
08-09	27,589,933	43,867,398	63	24,793,155	39,320,322	63	4,983,388	7,547,870	66
09-10	32,268,873	52,079,725	62	27,980,629	42,717,124	66	5,107,264	7,410,425	69
Total	151,394,826	268,620,591		155,759,679	296,715,877		33,815,772	48,884,268	
Mean			54			51			69
S.D			8			8			2
C.V			14			15			3

(Source: Annual Reports & Websites of Concerned Banks)

The table 4.1 presented above shows the loan and advances to total assets of three banks for ten consecutive years. The ratio shows increasing trend in HBL and fluctuating trend in NABIL and LBL. The overall ratio of three banks has been ranged from 42% of Nabil in fiscal year 2001/02 to 73% of LBL in fiscal year 2007/08 respectively. The mean ratio of NABIL, HBL and LBL is 54%, 51%, 69% respectively.

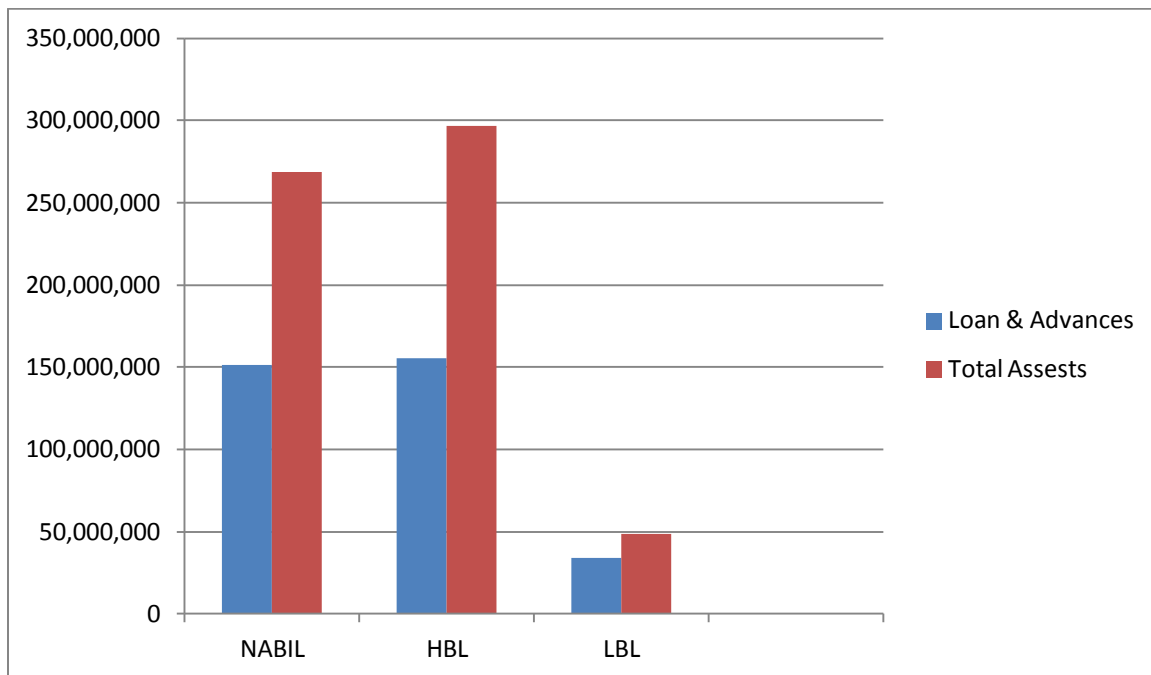
Hence among the three banks, HBL has the highest proportion of loans and advances in the total assets structure followed by NABIL and LBL. This refers that LBL has the low degree of investment in risky assets. The management of the LBL is risk averse as they seems to be investing higher proportion of their assets in risk free or nominally risky assets like treasury bills, debentures, National Saving Bonds (NSBs) etc.

The decreasing trend of loan and advances in proportion to total assets in HBL seems to be due to the restructuring and rescheduling process. The aggressiveness of HBL management in overcoming the willful defaulters to the repayment of their nonperforming loans has resulted in the low proportion of flow of loans and advances.

The standard deviations of NABIL, HBL and LBL are 8%, 8% & 2% and C.V. is 14%, 15%, and 3% respectively. Thus it can be interpreted that NABIL and LBL has low percentage of deviation though the variation is high. HBL has high percentage of deviation of ratio during the study period. The proportion of loan and advances to total assets being high has resulted in high percentage of deviation of HBL. Similarly the moderate trend in ratio of LBL has resulted in high degree of variation.

Figure 4.1

Loan and Advances to Total Assets



From the above figure 4.1 it can be interpreted that among the three sample banks taken HBL has highest proportion of loan and advances and total assets in comparison to other two banks NABIL and LBL. LBL seems to be with least proportion of loan and advances

where NABIL bank maintains their proportion of providing their loan and advances with the value of their total assets.

4.2.2 Loan and Advances to Total Deposit Ratio

Loan and advances to total deposit ratio indicates the portion of deposit utilized as lending. This ratio is also called as **CD** ratio. CD ratio is most important to analysis the banks utilization of their deposit and to know the liquidity position of the bank. The core banking function is to take deposit and provides that money in the form of loan. For every deposit banks has to pay interest and if the deposit is not fully utilized in productive area, it will create loss for the bank. Therefore higher CD ratio implies higher utilization of the deposit and low fund available to service the depositor when they come for withdraw and vice-versa. 75% of CD ratio is assumed to be optimal in banking sector but there is an example of more than 100% CD ratio operated by Nepal Bangladesh Bank.

Table 4.2

Loan and Advances to Total Deposit

Year	NABIL			HBL			LBL		
	Loan & Advances	Total Deposit	Ratio	Loan & Advances	Total Deposit	Ratio	Loan & Advances	Total Deposit	Ratio
00-01	7,732,637	15,839,008	49	8,537,666	17,636,848	48	1,735,951	2,097,492	83
01-02	7,437,895	15,506,428	48	8,913,724	18,619,375	48	2,085,332	2,646,106	79
02-03	7,755,950	13,447,661	58	10,001,850	21,007,379	48	2,441,639	2,959,745	82
03-04	8,189,993	14,119,033	58	11,951,869	22,010,333	54	2,980,398	3,777,605	79
04-05	10,586,170	14,586,609	73	12,442,710	24,814,012	50	3,167,724	4,031,221	79
05-06	12,922,543	19,347,399	67	14,642,559	26,490,851	55	2,983,895	4,786,440	62
06-07	15,545,779	23,342,285	67	16,997,997	30,048,418	57	3,840,687	6,024,598	64
07-08	21,365,053	31,915,047	67	19,497,520	31,842,789	61	4,489,494	5,703,734	79
08-09	27,589,933	37,348,256	74	24,793,155	34,681,345	71	4,983,388	6,444,904	77
09-10	32,268,873	46,340,701	70	27,980,629	37,611,202	74	5,107,264	5,767,973	89
Total	151,394,826	231,792,427		155,759,679	264,762,552		33,815,772	44,239,818	
Mean			63			57			77
S.D			9			9			8
C.V			14			16			10

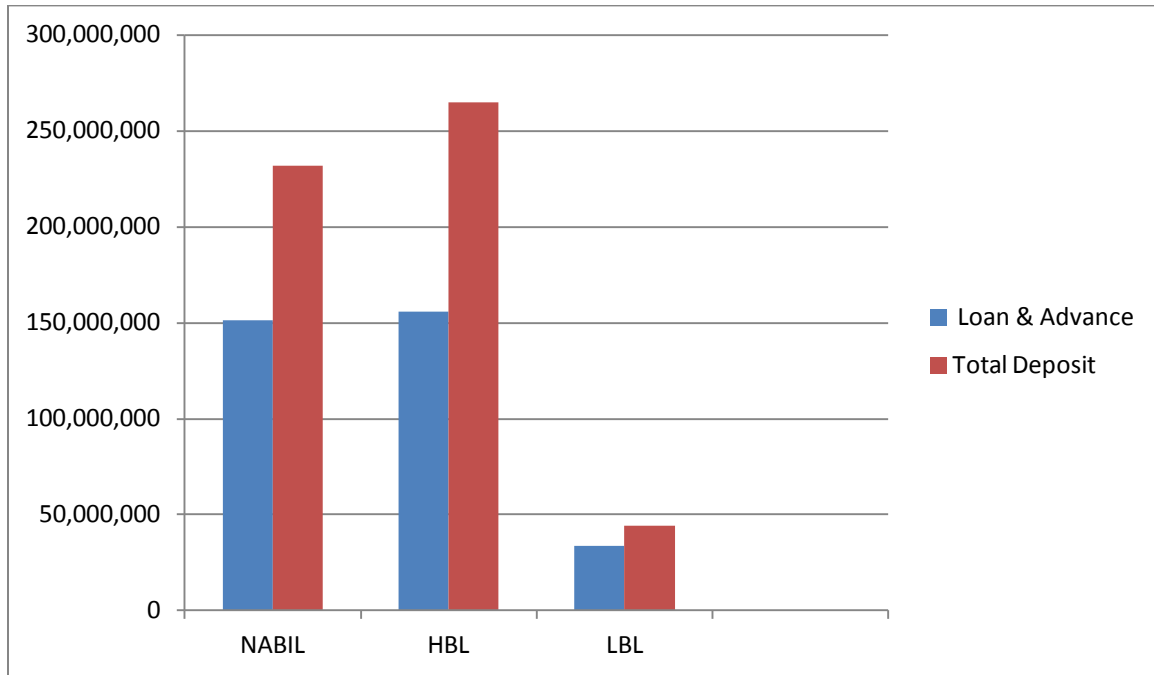
(Source: Annual Reports & Websites of Concerned Banks)

The table 4.2 presented above shows the loan and advances to total deposit of three banks for ten consecutive years. The ratio shows increasing trend in HBL and NABIL and moderate trend in LBL. The overall ratio of three banks has been ranged from 48 of HBL in F/Y 2002/03 to 89 of LBL in fiscal year 2009/10 respectively. The mean ratio of NABIL, HBL and LBL is 63, 57 and 77 respectively. Hence among the three banks LBL has the highest proportion of loan and advances in the total deposit followed by NABIL and HBL. It signifies that NABIL and LBL are utilizing the depositor's money on loan and advances with the objective to earn profit along with customer's satisfaction. It refers that HBL has low investment in the form of loan and advances in comparisons to NABIL and LBL. The management of NABIL and LBL seems to be aggressive as they have higher portion of loans and advances to total deposit.

The standard deviations of NABIL, HBL and LBL are 9, 9 and 8 and C.V. is 14, 16 and 10 respectively. Thus it can be interpreted that HBL has high percentage of deviation with higher degree of variation in ratio. LBL is moderate in terms of deviation of ratio during the study period. The deviation of HBL is high and the percentage of variation in ratio is also high. The proportion of loan and advances to total assets being high has resulted in high percentage of deviation of HBL. Similarly the increasing trend in ratio of NABIL has resulted in high degree of variation.

Figure 4.2

Loan and Advances to Total Deposit



From the above figure 4.2, it can be interpreted that the HBL has collected the highest deposit followed by NABIL and LBL. In providing loans NABIL and HBL are ahead of LBL, if we compare among the three banks HBL is marginally in front of NABIL bank. LBL seems to be poor in their management for collecting deposit and providing loans and advances which may cause them to be difficult to stick in the competitive market.

4.2.3 Loan Loss Provision to Loan and Advances

Loan loss provision to loan and advances shows percentage of loan covered against the possible future loss due to non-payment of loan. Since there is risk inherent in loan and advances, NRB has directed commercial banks to classify its loan and advances into different categories and accordingly to make provision for possible losses. Loan loss provision signifies the cushion against the future contingencies created by the default of the borrower in payment of loan and ensures the continuous solvency of the bank. Since high provision has to be made for non-performing loan.

Higher provision for loan loss reflects increasing non-performing loan in volume of total loan. The low ratio signifies the good quality of assets in the volume of total loan. It indicates how efficiently it manages loan and advances and make efforts to cope with probable loan loss. Higher ratio implies higher portion of NPL in the total loan portfolio. The ratio is calculated as follows:

Table 4.3

Year Mid- July	NABIL			HBL			LBL		
	LLP	Loan & Advances	Ratio	LLP	Loan & Advances	Ratio	LLP	Loan & Advances	Ratio
00-01	165,767	7,732,637	2	134,320	8,537,666	2	41,407	1,735,951	2
01-02	-	7,437,895	0	166,506	8,913,724	2	150,781	2,085,332	7
02-03	-	7,755,950	0	202,873	10,001,850	2	-20,239	2,441,639	-0.83
03-04	1,052	8,189,993	0.01	186,226	11,951,869	2	61,630	2,980,398	2
04-05	4,207	10,586,170	0.04	55,709	12,442,710	0.45	303,412	3,167,724	10
05-06	3,770	12,922,543	0.03	145,154	14,642,559	0.99	855,593	2,983,895	29
06-07	14,206	15,545,779	0.09	90,689	16,997,997	0.53	217,859	3,840,687	6
07-08	64,055	21,365,053	0.30	58,431	19,497,520	0.30	164,628	4,489,494	4
08-09	45,722	27,589,933	0.17	68,806	24,793,155	0.28	66,182	4,983,388	1
09-10	355,829	32,268,873	1	692,640	27,980,629	2	66,230	5,107,264	1
Total	654,608	151,394,826		1,801,354	155,759,679		1,907,483	33,815,772	
Mean			0.39			1			6
S.D			0.66			0.76			8
C.V			170			63			132

Loan Loss Provision to Loan and Advances

(Source: Annual Reports & Websites of Concerned Banks)

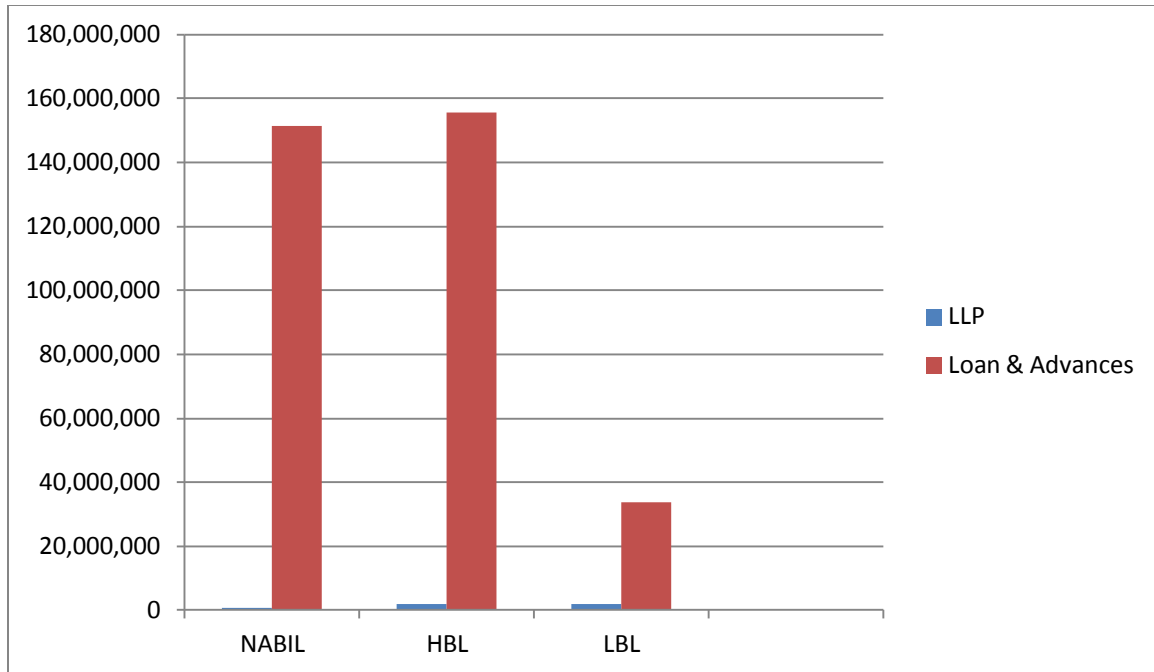
The above table 4.3 shows the ratio of loan loss provision to loan and advances of NABIL Bank, HBL and LBL for ten consecutive years. The above table shows that LBL has almost highest ratio among three banks through out the study period and shows decreasing trend. The ratio of NABIL bank shows the moderate trend. The ratio of HBL shows the decreasing trend.

The mean ratio of NABIL, HBL and LBL are 0.39, 1 and 6 respectively. The overall ratio has been ranged from -0.83% of LBL in F/Y2002-03 to 29% of LBL in F/Y 2005-06. Higher loan loss provision is the indication of poor and ineffective credit policy, higher proportion of non-performing asset and poor performance of the economy. Hence among the three banks the greater ratio of LBL suggests that there is high proportion of NPL in the total loans and advances and NABIL has the least ratio, and still in decreasing trend. Decreasing trend of loan loss provision of NABIL and HBL explains that both of these banks have been successfully reducing their non-performing loan resulting to decrease loan loss provision.

The standard deviation of NABIL, HBL and LBL are 0.66, 0.76 and 8 and coefficients of variations are 170, 63 and 132 respectively. Thus it signifies that LBL has higher deviation. And NABIL has higher degree of variation in this ratio due to increase in the NPL. Among the three banks NABIL is moderate in terms of variability and HBL has the least variability of ratio during this study period. LBL has the highest degree of risk in comparisons to other sample banks. Since LLP has direct effect in the profit of banks, all the sample banks should give serious attention to decrease the level of NPL.

Figure 4.3

Loan loss Provision to Loan and Advances



From the above figure, it can be interpreted that in total HBL has the highest loan loss provision to total loan and advances though it differs in ratio. NABIL bank seems to be with least loan loss provision to total loan and advances which proves the bank's healthy and effective credit management policy. HBL also seems to be in good position in terms of credit management.

4.2.4 Non Performing Loan to Total Loan and Advances

NRB has directed the commercial banks to classify their total loan portfolio into two categories i.e. performing loan and non-performing loan. Non-performing loan to total loan ratio determines the proportion of non-performing loan in the total loan portfolio.

Higher ratio implies the bad quality of assets of banks in the form of loan and lower return from the loan portfolio and lower ratio implies good quality of loan. Hence lower NPL to total credit ratio is preferred. The ratio is calculated as follows

Table 4.4**Non-Performing Loan to Loan and Advances**

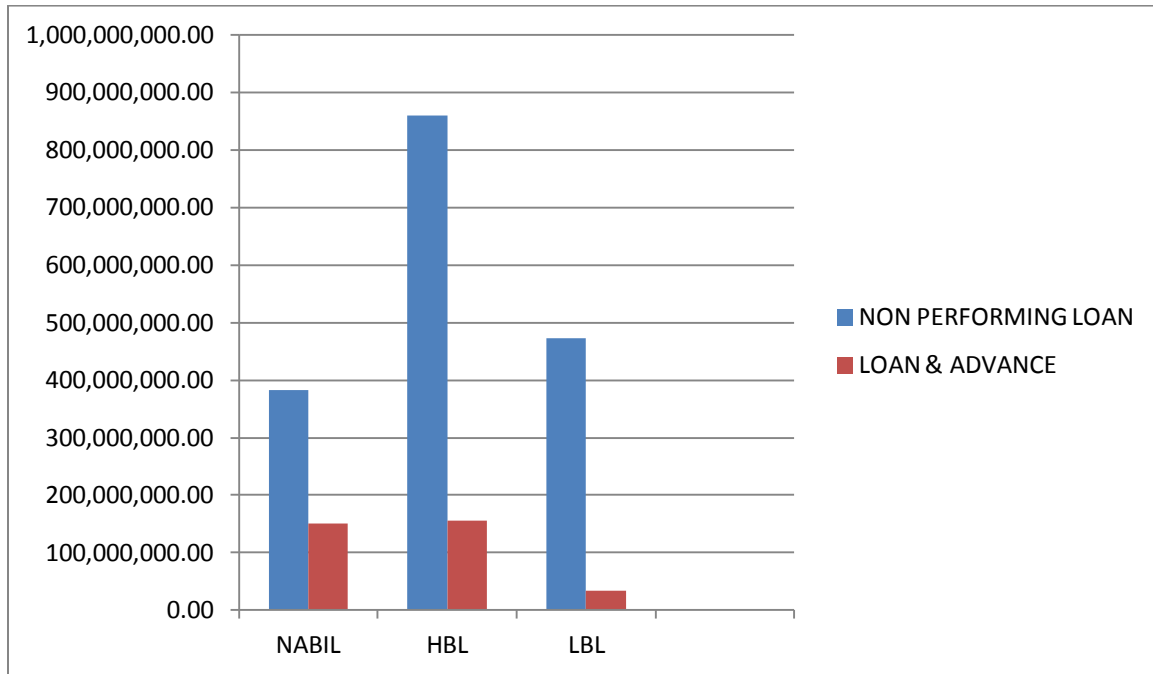
Year	NABIL			HBL			LBL		
	NPL	Loan & Advances	Ratio	NPL	Loan & Advances	Ratio	NPL	Loan & Advances	Ratio
00-01	123,799,518	7,732,637	1,601	129,516,393	8,537,666	1,517	26,976,679	1,735,951	1,554
01-02	53,106,570	7,437,895	714	74,429,595	8,913,724	835	40,288,614	2,085,332	1,932
02-03	42,967,963	7,755,950	554	100,818,648	10,001,850	1,008	28,567,176	2,441,639	1,170
03-04	27,436,477	8,189,993	335	106,132,597	11,951,869	888	21,935,729	2,980,398	736
04-05	13,973,744	10,586,170	132	92,573,762	12,442,710	744	48,244,437	3,167,724	1,523
05-06	17,833,109	12,922,543	138	96,640,889	14,642,559	660	92,470,906	2,983,895	3,099
06-07	17,411,272	15,545,779	112	61,362,769	16,997,997	361	78,234,794	3,840,687	2,037
07-08	15,810,139	21,365,053	74	46,014,147	19,497,520	236	66,983,250	4,489,494	1,492
08-09	22,071,946	27,589,933	80	53,553,215	24,793,155	216	45,149,495	4,983,388	906
09-10	47,435,243	32,268,873	147	98,491,814	27,980,629	352	23,135,906	5,107,264	453
Total	381,845,983	151,394,826	3,887	859,533,830	155,759,679	6,817	471,986,987	33,815,772	14,902
Mean			389			682			1,490
S.D			454			388			719
C.V			117			57			48

(Source: Annual Reports & Websites of Concerned Banks)

The above table no. 4.4 shows the ratio of non-performing loans to loans and advances of NABIL bank, HBL and LBL for ten consecutive years. The figure present in the above table shows that LBL has the highest ratio most of the years of the study. The decreasing trend of NPL is the result of effective credit management of bank and its efforts of recovering bad debts through establishment of recovery cell. The overall ratio has been ranged from 74% of NABIL bank in F/Y 2007-08 to 3,099% of LBL in F/Y 2005-06. The mean ratio of NABIL bank, HBL and LBL are 389%, 682% and 1490% respectively. The mean ratio of LBL is significantly higher than in comparison to other banks. The standard deviation of NABIL, HBL and LBL are 454%, 388% and 719% and coefficients of variation are 117%, 57% and 48% respectively. Thus it signifies that HBL has the least deviation during the study period. Among the three banks HBL bank is moderate in terms of deviation but NABIL has the highest variability of ratio. Since NPL is one of the causes of banking crisis for the banks they should give serious attention to this matter and always try to reduce the ratio at least.

Figure 4.4

Non-performing Loan and Loan and Advances



By taking the help of above figure 4.4 it can be interpret that the HBL has the highest amount of NPLs and total loan and advances in comparison to NABIL bank and LBL.

The total amount of loan and advances in ten F/Y from 2000-01 to 2009-10 of NABIL bank, HBL and LBL are Rs.381,845,983; Rs.859,533,830 and Rs.471,986,987 respectively. Similarly total NPL of three banks are Rs.151,394,826; Rs.155,759,679 and Rs.33,815,772 respectively.

4.2.5 Total Provision held to Non-Performing Loan

This ratio determines provision held to non-performing loan. NRB had directed all commercial banks to provide provision for all types of loan and advances. This ratio measures up to what extend of risk inherent in NPL is covered by the total loan loss provision. More than 100% ratio signifies that the bank is safeguard against future contingencies that may create due to bad loans, where as lower than 100% may create huge provision in coming future due to requirement of high provision to substandard loan and advances.

Table 4.5**Total Provision to Non-Performing Loan**

Year Mid- July	NABIL			HBL			LBL		
	LLP	NPL	Ratio	LLP	NPL	Ratio	LLP	NPL	Ratio
00-01	165,767	123,799,518	0.13	134,320	129,516,393	0.10	41,407	26,976,679	0.15
01-02	-	53,106,570	0.00	166,506	74,429,595	0.22	150,781	40,288,614	0.37
02-03	-	42,967,963	0.00	202,873	100,818,648	0.20	-20,239	28,567,176	-0.07
03-04	1,052	27,436,477	0.00	186,226	106,132,597	0.18	61,630	21,935,729	0.28
04-05	4,207	13,973,744	0.03	55,709	92,573,762	0.06	303,412	48,244,437	0.63
05-06	3,770	17,833,109	0.02	145,154	96,640,889	0.15	855,593	92,470,906	0.93
06-07	14,206	17,411,272	0.08	90,689	61,362,769	0.15	217,859	78,234,794	0.28
07-08	64,055	15,810,139	0.41	58,431	46,014,147	0.13	164,628	66,983,250	0.25
08-09	45,722	22,071,946	0.21	68,806	53,553,215	0.13	66,182	45,149,495	0.15
09-10	355,829	47,435,243	0.75	692,640	98,491,814	0.70	66,230	23,135,906	0.29
Total	654,608	381,845,983		1,801,354	859,533,830		1,907,483	471,986,987	
Mean			0.16			0.202			0.325
S.D			0.23			0.173			0.26
C.V			141			86			80

(Source: Annual Reports & Websites of Concerned Banks)

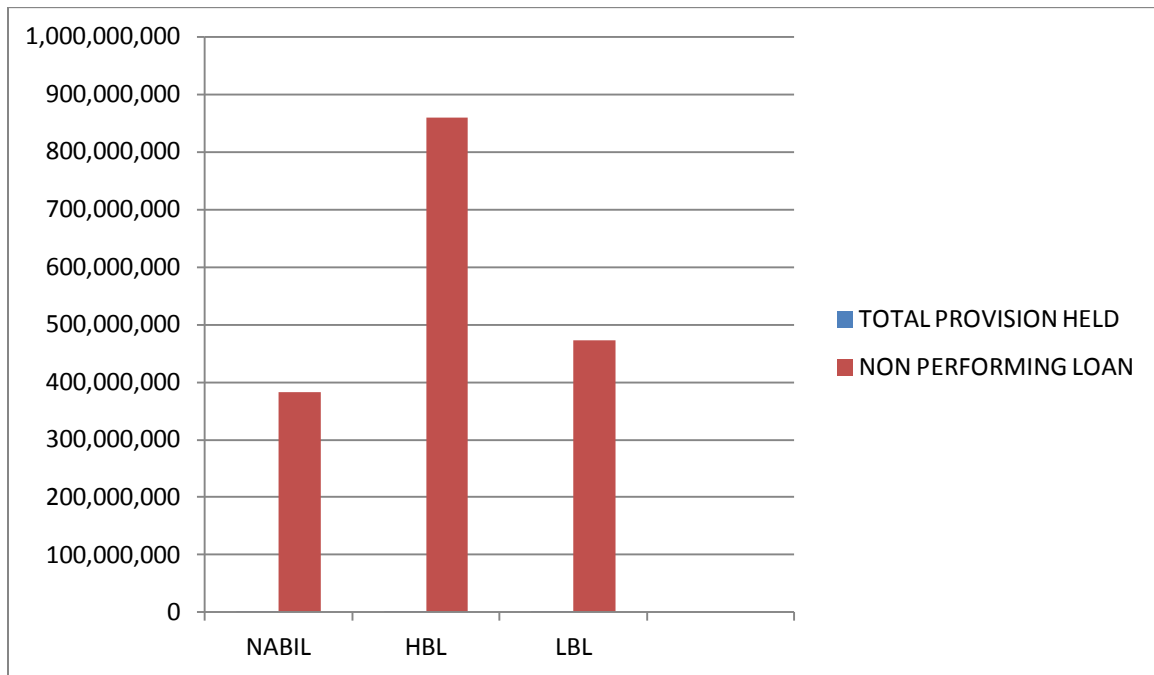
The above table 4.5 exhibits the ratio of provision held to non-performing loan of NABIL bank, HBL and LBL for ten consecutive years. The figure above represent that the NABIL bank has the least ratio during the study period and also shows increasing trend. HBL shows the moderate ratio during the study period but it also seems to be in moderate trend where the ratio of LBL is highest in comparison to the other sample banks. The overall ratio has been ranged from -0,07% of LBL in F/Y 2002-03 to 0.93% of LBL bank in F/Y 2005-06. The mean ratio of NABIL, HBL and LBL are 0.16%, 0.202% and 0.325% respectively. The ratio of LBL bank is significantly high in comparison to two banks and portrays that the bank has adequate provision against NPL but this ratio of NABIL is comparatively lower.

The standard deviation of NABIL, HBL and LBL are 0.23% 0.173% and 0.26% and C.V is 141%, 86% and 80% respectively. Thus it signifies that HBL bank has highest

deviation along an NABIL has the highest degree of variation in this ratio. Among the three banks, LBL is least in terms of variability and HBL has the least deviation along with the least degree of variation during the study period.

Figure 4.5

Total Provision Held to Non-Performing Loan



The above figure 4.5 interpret that although C.V of NABIL bank is high, provision for loan loss and non-performing loan in sense of total amount is low. The loan loss provision and total amount of non-performing loan of HBL is higher in comparison to other sample banks. Similarly LBL is also ahead of NABIL bank in separating loan loss provision in behalf of non-performing loan.

4.2.6 Return on Loans and Advances

Return on loan and advances ratio indicates how efficiently the bank has employed its resources in the forms of loan and advances. Net profit of a bank largely depends upon interest earn from loan and advances and there is positive correlation between effective utilization of loan and advances and net profit. This ratio measures the bank's

profitability with respect to loan and advances. Higher the ratios better the performance of the bank and vice-versa.

Table 4.6
Return on Loans and Advances

Year Mid- July	NABIL			HBL			LBL		
	Net Profit	Loan & Advances	Ratio	Net Profit	Loan & Advances	Ratio	Net Profit	Loan & Advances	Ratio
00-01	291,376	7,732,637	4	277,039	8,537,666	3	-36,135	1,735,951	-2
01-02	271,638	7,437,895	4	235,023	8,913,724	3	-97,973	2,085,332	-5
02-03	416,236	7,755,950	5	212,130	10,001,850	2	89,139	2,441,639	4
03-04	455,311	8,189,993	6	263,054	11,951,869	2	18,640	2,980,398	1
04-05	518,637	10,586,170	5	325,219	12,442,710	3	-196,773	3,167,724	-6
05-06	635,264	12,922,543	5	457,458	14,642,559	3	-806,062	2,983,895	-27
06-07	673,959	15,545,779	4	491,823	16,997,997	3	192,405	3,840,687	5
07-08	746,468	21,365,053	3	635,869	19,497,520	3	327,649	4,489,494	7
08-09	1,031,053	27,589,933	4	752,835	24,793,155	3	332,206	4,983,388	7
09-10	1,138,571	32,268,873	4	508,798	27,980,629	2	304,065	5,107,264	6
Total	6,178,513	151,394,826		4,159,248	155,759,679		127,161	33,815,772	
Mean			4			3			1
S.D			0.756			0.48			10
C.V			17			18			927

(Source: Annual Reports & Websites of Concerned Banks)

The above table 4.6 presented above shows the ratio of return on loans and advances of NABIL bank, HBL and LBL for ten consecutive years. The above table represents that the NABIL bank has the highest ratio during the study period. NABIL bank shows the decreasing trend in last six year. The ratio of LBL seems to be negative and volatile; thereafter it shows the increasing trend. Reason for the declining of profit is increment in ratio of NPL because significant portion of operating profit is sacrificed for maintaining required loan loss provisioning for NPL. HBL has satisfactory ratio.

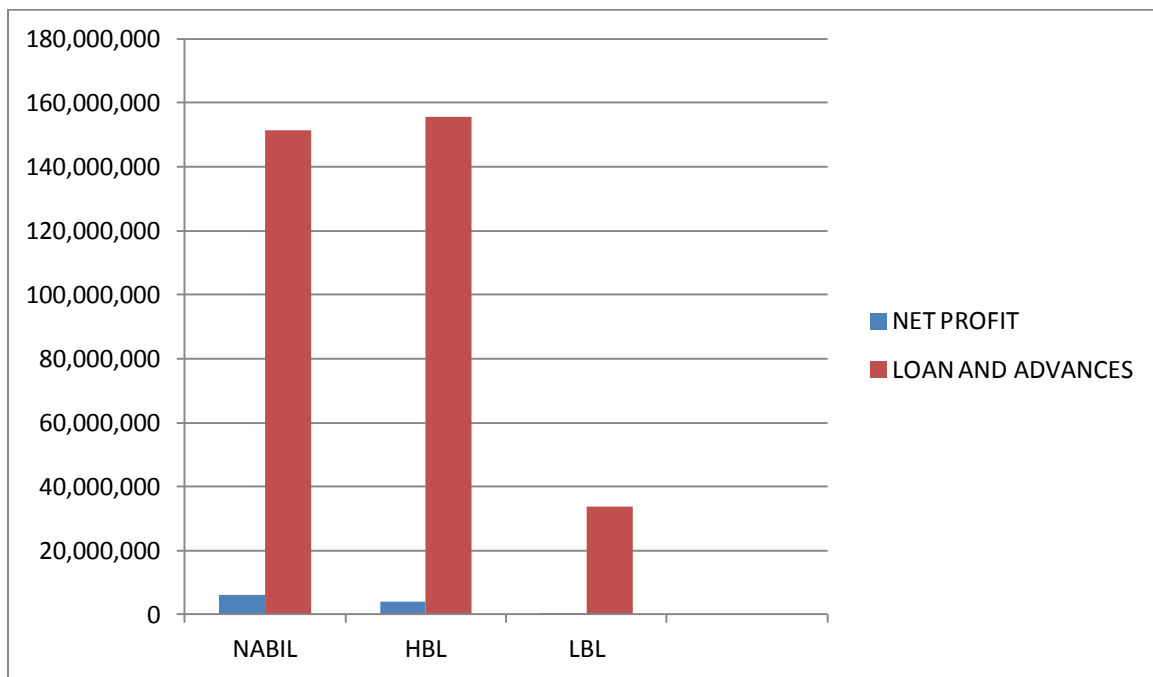
The mean ratio of NABIL bank, HBL and LBL are 4%, 3% and 1% respectively. It clears that the ratio of NABIL bank has the highest ratio and LBL has the least ratio. The

standard deviations of three banks are 0.756%, 0.48% and 10% and coefficient of variations are 17%, 18% and 927% respectively.

Thus it can be interpreted that LBL has high percentage of deviation and variation. Similarly, HBL has least movement in the ratio resulting in the low variability with minimum risk in comparison to other sampled banks.

Figure 4.6

Return on Loans and Advances



From the above figure it is interpreted that the NABIL bank has the highest profit among the three sample banks during the study period, where LBL has the least and seems to be in loss during the study period. HBL is ahead of NABIL bank and LBL in sense of providing loans and advances. Among the three sample banks LBL has to do more better exercise to be in good position to compete with other banks.

4.2.7 Major Findings of Ratio Analysis

In this segment we analyze various ratios and analyzing loan and advances to total assets of NABIL, HBL and LBL. We found that more than sixty percent of total assets of all

banks are in the form of loan and advances and they have less deviation throughout the period and lesser CV in that ratio. During the study period average loans and advances to total assets of NABIL, HBL and LBL are 54%, 51% and 69% respectively.

Likewise in our analysis of ratio of loan and advances to total deposit it has been cleared that LBL is in the top to utilize depositor's money. Though the LBL have the highest CD ratio of 77%, it is less than the recommended CD of 75% by Nepal Rastra bank. It shows that the all three sample banks have enough liquidity available with them.

Similarly in other analysis of loan loss provision in total loan and advances clears that NABIL has the least proportion of its loan loss provision of just 0.29% in total loan and advances. Where, HBL and LBL are with 1.21% and 1.11% respectively. The low ratio signifies the good quality of assets in the volume of total loan. It indicates how efficiently it manages loan and advances and make efforts to cope with probable loan loss. Higher ratio implies higher portion of NPL in the total loan portfolio.

Ratio of Non-performing loan to total Loan and advances of NABIL and HBL are moderate during the study period where ratio of LBL is in decreasing trend. But the mean average of NABIL, HBL and LBL are 388; 681 and 1,490 respectively. Higher ratio implies the bad quality of assets of banks in the form of loan and lower return from the loan portfolio and lower ratio implies good quality of loan. Hence lower NPL to total credit ratio is preferred.

Ratio of provision to Non-Performing loan of bank shows that the level of provision of all banks are increasing and almost all commercial banks have created provision greater than the amount of non performing loan which shows that all banks are safe against the future contingencies that may created due to non-payment of loan.

Return on loan and advances of bank shows that NABIL and HBL have most consistent return through out the period with average return of 4% and 3% respectively throughout the study period. Similarly LBL has very poor return of 1% but it is also trying to carry

out their best result among its customers and the competitive market. Net profit of a bank largely depends upon interest earned from loan and advances and there is positive correlation between effective utilization of loan and advances and net profit

4.3 Correlation Analysis

Correlation is a statistical tool that can be used to describe the degree of linear relationship of one variable to other variables. Correlation analysis is another important tool of statistic. It describes the relationship between variables and shows the degree of dependency of one variable with another variable. Two variables are said to be correlated when the change in one variable results in change in other variables. There are five types of correlation coefficient which are Positive correlation, negative correlation, linear correlation, non-linear or partial correlation and multiple correlations. The coefficient of correlation measures the linear association between variables. Different models for correlation analysis have been formulated and we have used Karl Pearson's coefficient of correlation to determine the relationship between variables studied.

Probable error of correlation coefficient is an old measure for testing the reliability of an observed correlation coefficient. If $r < P.E.$, there is no evidence of correlation i.e. correlation is not significant. If $r > P.E.$, there is evidence of significant i.e. correlation is significant (Three Writer 2007).

4.3.1 Correlation between Loan Loss Provision and Loan and Advances

This relationship shows us the likely pattern of loan loss provision if loan changes. In other correlation of loan loss provision and loan and advances indicates the degree of linear relationship between these two variables which helps us to take decision regarding loan and advances. The correlation between LLP and NPL describes how much unit of LLP is affected in increase of one unit of NPL. Here NPL is independent variable and LLP is dependent variable. The table no. 4.7 presented below shows the value of 'r', P.E., and 6P.E. between total Loan Loss Provision and Loan and Advances.

Table 4.7

Correlation between Loan Loss Provision and Loan and Advances

Banks	Correlation Coefficient (r)	Probable Error (P.E)	6x P.E
NABIL	0.6265	0.1296	0.7776
HBL	0.4774	0.1647	0.9882
LBL	0.128	0.21	1.26

Source: Appendix: 1, 2 and 3

Above table 4.7 shows that the relationship between loan loss provision and loan and advances for selected commercial banks. Here the correlation coefficient of NABIL is 0.6265 which is greater than six times the value of P.E. Hence there is positive correlation between LLP and Loans and Advances of NABIL and its correlation coefficient is significant and reliable. The correlation coefficients of HBL and LBL are 0.4774, and 0.128 and their P.E are 0.1649 and 0.21 respectively. The six times the value of P.E of HBL and LBL are 0.9894 and 1.26 which is higher than their correlation coefficient and it is said to be insignificant.

4.3.2 Correlation between Loan Loss Provision and Non-Performing Loan

The correlation between LLP and NPL describes how unit increase in NPL affects the LLP. Here NPL is independent variable and LLP is dependent variable. As earlier mentioned NPL is the loan falling on the category of substandard, doubtful and loss loan and the respective provisioning requirement is 25%, 50% and 100%. Higher the NPL higher will be the provisioning amount. The table no. 4.8 presented below shows the value of 'r', P.E., and 6P.E. between total Loan Loss Provision and Non-performing Loan.

Table 4.8

Correlation between Loan Loss Provision and Non-Performing Loan

Banks	Correlation Coefficient (r)	Probable Error (P.E)	6x P.E
NABIL	0.433	0.1735	1.041
HBL	0.3266	0.1908	1.1448
LBL	0.794	0.0789	0.4734

Source: Appendix – 4,5 and 6

Above table 4.8 explains the relationship between LLP and NPL (Appendix). Here we can see that all three banks have positive correlation between LLP and NPL. That means increment in NPL leads to increment in LLP. The correlation coefficient of NABIL, HBL and LBL are 0.433, 0.3266 and 0.794 respectively which is, since correlation coefficient (r) is greater than the value of six times of P.E. the correlation coefficient is significant and reliable. Similarly the P.E. and 6P.E. of LBL is 0.0789 and 0.4734 respectively.

It shows that the total LLP of LBL is highly correlated with the NPL during the study period and the increase in LLP of LBL is due to increase in NPL of the bank. The P.E. and 6P.E. of HBL is 0.1908 and 1.1448 respectively, which is said to be significant and reliable correlation coefficient between LLP and NPL.

4.3.3 Correlation between Total Deposit to Loan and Advances

Accepting deposit and granting loan are the major function of commercial banks. The relationship of deposit and loan and advances should always be perfect positive. It measures the intensity, magnitudes or degree of relationship between the two variables. In the analysis, deposit is independent variable (y) and loan and advances is dependent variable (x). The main objectives of computing coefficient correlation between two variables are to justify whether deposit is significantly used as loan and advances or not.

Hence how a unit increase in deposit impact in the volume of loan and advances is exhibited by this correlation coefficient. Following table no 4.9 exhibits the correlation between Deposit and Loan and Advances.

Table 4.9
Correlation between Deposit to Loan and Advances

Banks	Correlation Coefficient (r)	Probable Error (P.E)	6x P.E
NABIL	0.9902	0.4166	2.4996
HBL	0.9788	0.896	5.376
LBL	0.9358	0.0265	0.159

Source: Appendix - 7,8 and 9

The table given above shows the value of “r”, “P.E.” and “6P.E.” between total deposit and loan and advances of NABIL, HBL and LBL. We found that coefficient of correlation (r) between total deposit and loan and advance of NABIL, HBL and LBL is 0.9902, 0.9788 and 0.9358 respectively. It shows the high degree of positive correlation between loans and advances and total deposit. Similarly, considering the value of ‘r’ of NABIL, HBL and LBL and comparing it with 6P.E. i.e. 0.4166, 0.896 and 0.0265 respectively. We can find it is greater than the value of 6P.E. which reveals the value or “r” is significant.

After analyzing, the conclusion can be draw that NABIL, HBL, and LBL are successful to grant loan and advances to mobilize their collected deposit in a proper way.

4.3.4 Major finding of Statistical Analysis

In this segment we have used Karl Person correlation to analyze the data and interpret the result. Two variables are said to be correlated when the change in one variable result in change in other variables. Relationship between LLP and Loan and advances has cleared that except NABIL bank HBL and LLB have negative correlation between loan loss provision and loan and advances. If loan and advances increase the LLP also tends to

increase. Correlation between LLP and NPL shows that almost all banks have perfect positive correlation between loan loss provision and non-performing loan. Coefficient of correlation (r) between total deposit and loan and advance of NABIL, HBL and LBL is 0.9902, 0.9788 and 0.9358 respectively. It shows the high degree of positive correlation between loans and advances and total deposit. We can find it the value of $6P.E$ is greater than the value of ' r ' which is significant. After analyzing, it can be said that NABIL, HBL, and LBL are successful to grant loan and advances to mobilize their collected deposit in a proper way. Correlation between Total Deposit and Total Loan Advances indicates perfect positive correlation between Deposit and Loan Advance for review period. Perfect positive correlation between Deposit and Loan indicates that loan and advance largely depends on deposit volume of these banks.

4.4 Trend Analysis

Trend analysis is an analysis of financial ratio over time used to determine the pattern of growth. Trend Analysis informs about the future expected values of studied variables. It gives a glimpse of future expected value if the same growth level is achieved. This information is crucial for management to make decision regarding future. This method is widely used in practice. The least square method has been used to measure the trend behavior of these selected banks. However trend analysis is based on the assumption that past tendencies continue in the future. Under this heading the effort has been made to calculate trend values of following variables from mid July 2010/11 to 2014/15.

4.4.1 Trend Analysis of Loan and Advances

Trend analysis of loan and advances shows the pattern of loan growth. It may be positive or negative. Trend helps the management to estimate its future volume of their loan and if required volume of loan is high then the trend management can increase their marketing effort to achieve the required loan volume or review their target. Therefore this is most commonly used statistical tools of management. Following table no. 4.10 shows the pattern of loan and advances of listed commercial banks.

Table 4.10**Trend of Loan and Advances**

Banks	a	b	Forecasted Loans and Advances (Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	15,139,483	3,563,144	36,518,346	40,081,490	43,644,634	47,207,778	50,770,922
HBL	15,575,968	2,980,700	33,460,166	36,440,866	39,421,565	42,402,265	45,382,965
LBL	3,381,577	571,061	6,807,940	7,379,001	7,950,062	8,521,122	9,092,183

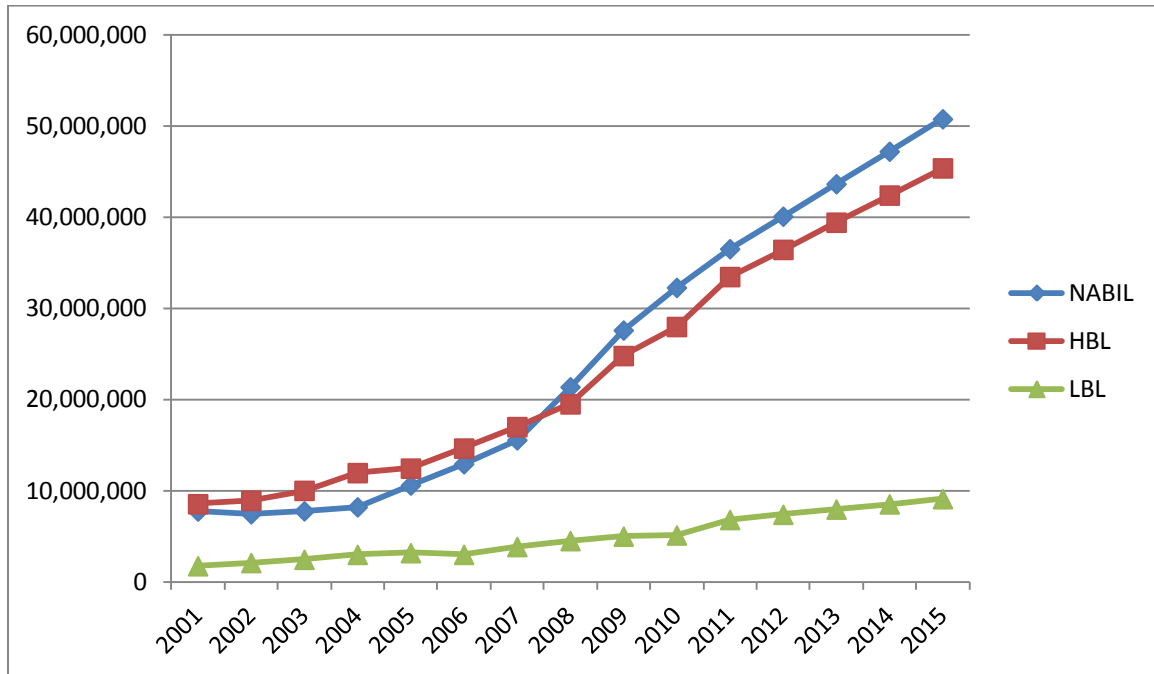
Source: Appendix - 10

The above table no. 4.10 shows that all three banks NABIL, HBL and LBL have increasing trend of loan and advances. The average loans and advances of NABIL is Rs. 15,139,483 which is increasing at the rate of Rs. 3,563,144 each year thereafter. Loans and advances are expected to increase from Rs. 36,518,346 in 2011 to Rs. 50,770,922 in 2015. HBL's average loans and advances of HBL is Rs. 15,575,968 which is increasing at the rate of Rs. 2,980,700 each year thereafter. Loans and advances are expected to increase from Rs. 33,460,166 in 2011 to Rs. 45,382,965 in 2015. Similarly average loans and advances of LBL is Rs. 3,381,577 which is increasing at the rate of Rs. 571,061 each year thereafter. Hence the expected loans and advances of LBL are supposed to increase from Rs. 6,807,941 to Rs. 9,092,183.

The below presented figure no. 4.7 explains about the trend of flow of loans and advances of the sampled banks.

Figure 4.7

Trend values of Loan and advances of NABIL, HBL and LBL



The above figure 4.7 shows the increasing trend line of all three banks i.e. NABIL, HBL and LBL, which directs the increase in the flow of loans and advances during the projection period also. The rate of increase of loans and advances of LBL is low in comparison to NABIL and HBL. It clears that NABIL is investing higher amount of deposit to loans and advances.

4.4.2 Trend Analysis of Loan Loss Provision

Trend analysis of loan loss provision helps the management to estimate the future volume of loan loss provision. Following table no. 4.11 illustrate the pattern of loan and advances of listed commercial banks from F/Y 2010/11 to 2014/15.

Table 4.11**Trend of Loan Loss Provision**

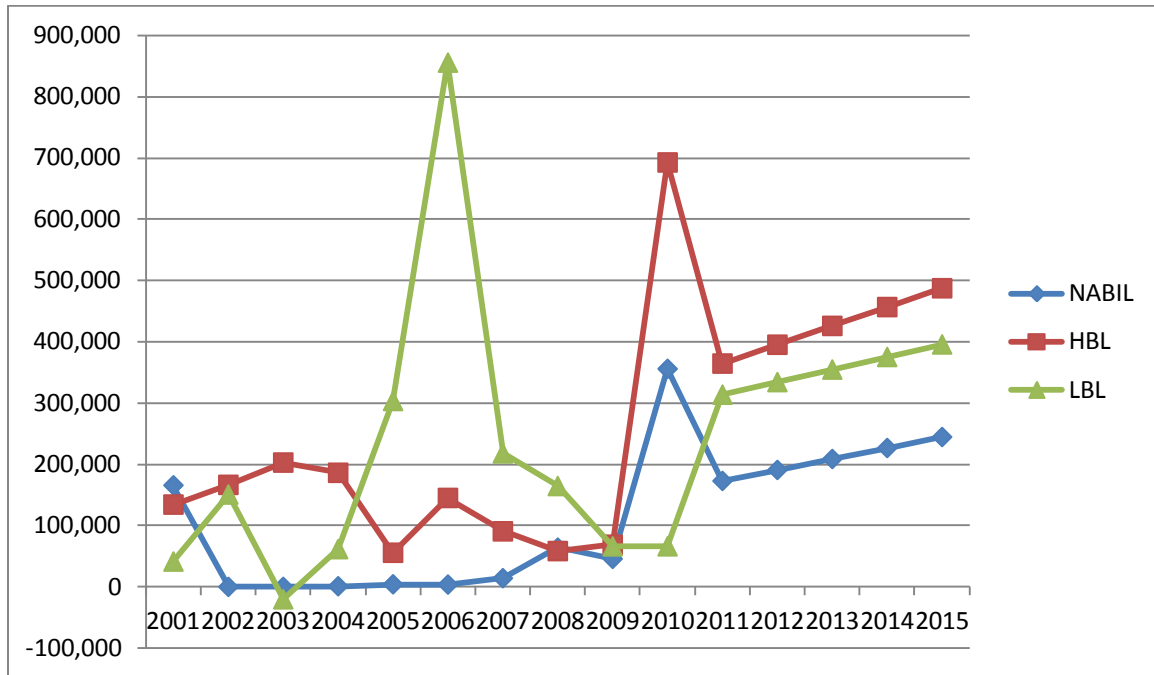
Banks	a	b	Forecasted Loan Loss Provision (Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	65,461	17,909	172,914	190,823	208,732	226,641	244,550
HBL	180,135	30,723	364,475	395,198	425,922	456,645	487,368
LBL	190,748	20,494	313,710	334,203	354,697	375,190	395,684

Source: Appendix- 11

The above table 4.11 shows that NABIL, HBL and LBL have increasing trend of Loan Loss Provisioning. The average LLP of NABIL and HBL is Rs. 65,461 and Rs. 180,135 which is increasing at the rate of Rs. 17,909 and Rs. 30,723 each year respectively. LLP is expected to increase from Rs. 172,914 in 2011 to Rs. 244,550 in 2015 of NABIL. LLP is expected to increase from Rs. 364,475 of 2011 to Rs. 487,368 in 2015 of HBL. The average LLP of LBL is Rs. 190,748 and increasing at the rate of Rs. 20,494 LLP is expected to increase from Rs. 313,710 of 2011 to Rs. 395,684 in 2015 of LBL. The below presented figure no. 4.8 explains about the trend of increase in flow of Loan Loss Provision of NABIL, HBL and LBL.

Figure 4.8

Trend values of Loan Loss Provision of NABIL, HBL and LBL



Here we can see the decreasing trend line of Loan Loss Provision of LBL. This is because of the decrease in the Non-Performing Loan of LBL. As we know that higher the LLP higher will be the NPL. Similarly there is rise in the LLP of NABIL and HBL which is quite acceptable with the increase in the level of NPL.

4.4.3 Trend Analysis of Non-Performing Loan

Trend analysis of Non-Performing loan helps the management to control the level of non-performing loan in their portfolio. Trend values of Non-Performing Loan of NABIL, HBL and LBL have been calculated. The calculated values of average Non-Performing Loan (a), rate of change of Non-Performing Loan (b) and the pattern of Non-Performing loan of listed commercial banks from F/Y 20010/11 to 2014/15 has been listed in the following table 4.12.

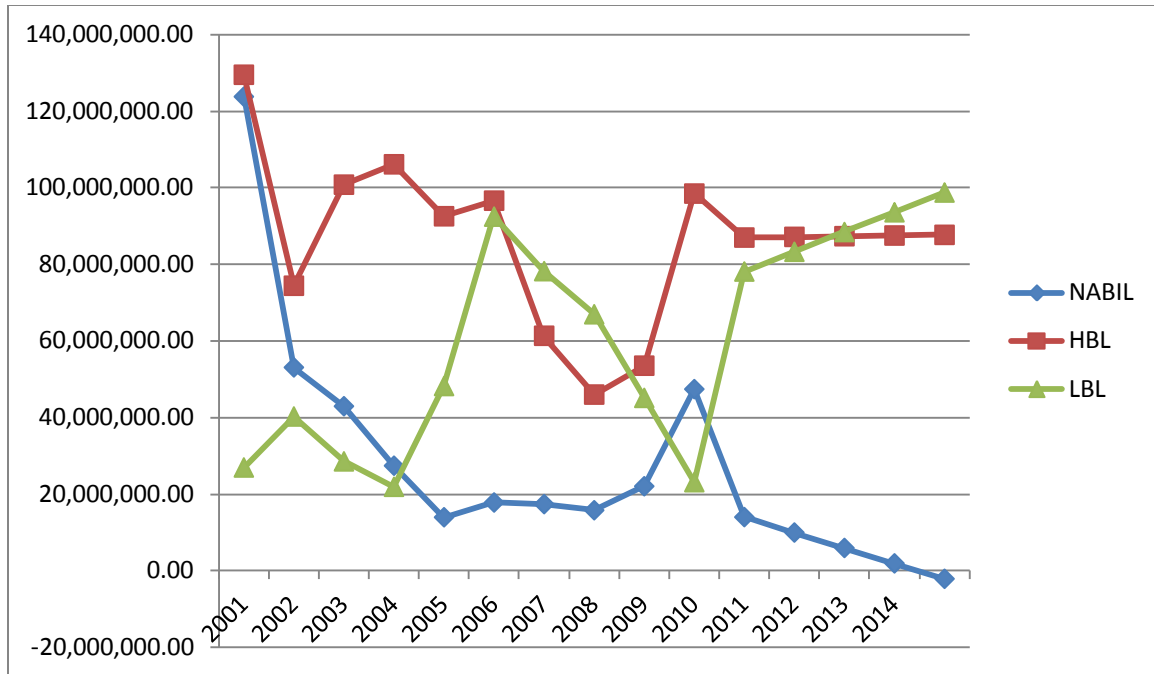
Table 4.12**Trend of Non-Performing Loan**

Banks	a	b	Forecasted Non Performing loan				
			(Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	38,184,598	-4,027,531	14,019,414	9,991,883	5,964,352	1,936,822	-2,090,709
HBL	85,953,383	175,959	87,009,139	87,185,099	87,361,058	87,537,017	87,712,977
LBL	47,198,699	5,156,766	78,139,295	83,296,061	88,452,827	93,609,594	98,766,360

Source: Appendix - 12

The above table 4.12 shows that NABIL has decreasing trend with their rate of Rs. - 4,027,531 HBL and LBL have increasing trend with their rate of Rs. 175,959 and Rs. 5,156,766 respectively. The average non performing loan of NABIL, HBL and LBL are Rs. 38,184,598; Rs.85, 953,383 and Rs. 47,198,698 respectively per year during the study period.

Figure 4.9**Trend values of Non-Performing Loan of NABIL, HBL and LBL**



Above figure 4.9 shows the trend line for the last ten years and coming four years of Non-performing loan of the selected commercial banks. It is clear to see that nonperforming loan of LBL is increasing and that of NABIL and HBL is decreasing. HBL is doing well in respect of quality loan. We can see that the bank has been very conservative regarding flowing loan which in the one hand blocked their loan growth but in the other hand it has enabled them to maintain a better portfolio and made them able to decrease the level of provision. LBL has increasing trend and they have reported their higher growth in loan and advances and due to positive correlation between loan and advances and NPL these banks NPL also increasing. The trend of Nonperforming loans has been presented to have eagle eye on future trend.

4.4.4 Trend Analysis of Net Profit

Trend values of net profit of NABIL, HBL and LBL have been calculated. The calculated values of average net profit (a), rate of change of net profit (b) and trend values of net profit for five years from mid July 2010/11 to 2014/15 of the three banks are as follows:

Table 4.13

Trend of Net Profit

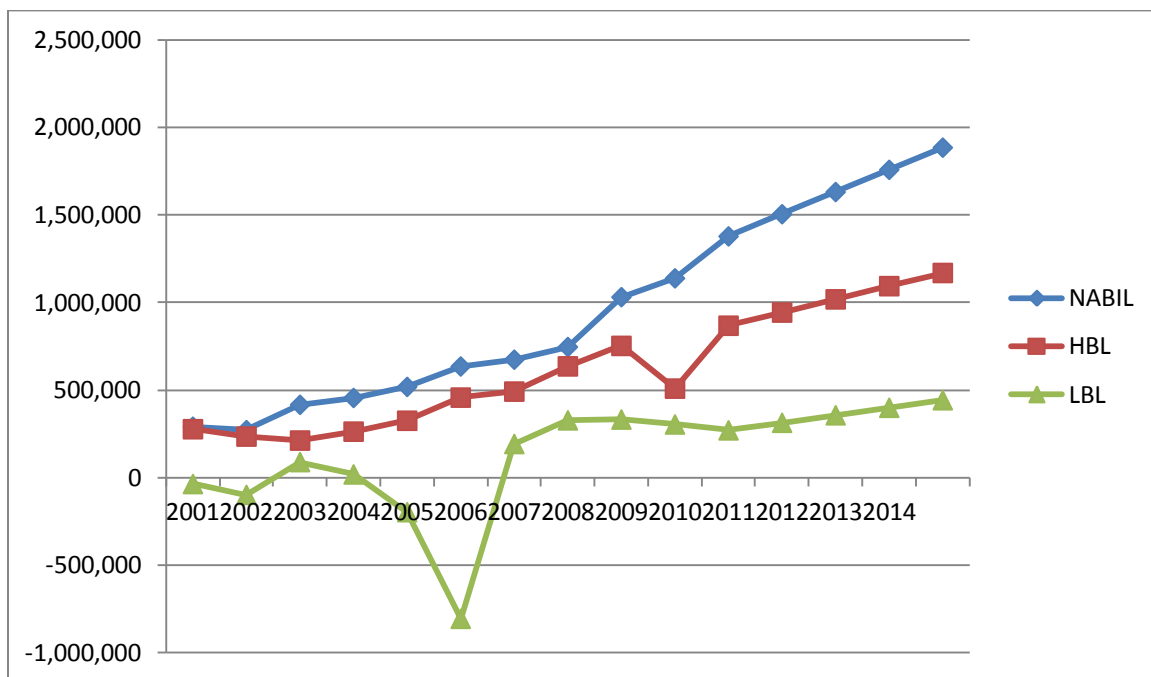
Banks	a	b	Forecasted Net Profit				
			2011	2012	2013	2014	2015
			(Y=a+bx)				
NABIL	617,851	126,723	1,378,189	150,4912	1,631,635	1,758,358	1,885,081
HBL	415,925	75,335	867,936	943,272	1,018,607	1,093,943	1,169,278
LBL	12,716	42,969	270,532	313,501	35,6470	399,439	442,408

Source: Appendix - 13

The above table 4.13 shows the increasing trend of net profit of NABIL, HBL and LBL. The average net profit of NABIL, HBL and LBL is Rs. 617,851; Rs. 415,925 and Rs. 12,716 respectively which is increasing at the rate of Rs. 126,723; Rs. 75,335 and Rs. 42,969 each year thereafter.

Figure 4.10

Trend values of Net Profit of NABIL, HBL and LBL



The above figure 4.9 states that NABIL is ahead in generating net profit and its rate of increment of net profit is higher than HBL and LBL. Even though the net profit of LBL is negative at the starting year but is positive at the end of study period. Similarly the growth rate of the net profit of NABIL and HBL is acceptable and noteworthy.

4.4.5 Major Findings of Trend Analysis

In this segment we have used least square method to find the growth pattern and predict the future expected value. All banks have increasing trend of loan and advances. NABIL and HBL show the highest growth rate of loan and advances. Similarly LBL shows the lowest growth rate of loan and advances in comparison to other banks. NABIL has increasing trend of growth rate where HBL have moderate growth in their loan and advances and they continue the same trend their loan portfolio will become slightly more than the double of current average loan.

Among the three banks Loan Loss Provision of NABIL and HBL is in increasing trend with growth rate of Rs. 17,909 and 30,723 respectively per year, where LBL are in increasing trend. The rate of increment rate of LBL is Rs. 20,494 per year.

Nabil is ahead in generating net profit and its rate of increment of net profit is higher than HBL and LBL. Even though the net profit of LBL is negative at the starting year but is positive at the end of study period. Similarly the growth rate of the net profit of NABIL and HBL is acceptable and noteworthy.

4.5 Analysis of Loan Classification and Loan Loss Provisioning Directives

Nepal Rastra Bank, central bank of Nepal issues and amends various directives regarding banking regulation from time to time in order to streamline the financial activities and rescue the banks from financial crisis. In 2001, NRB amended several old directives and issued many new circulars regarding banking regulation and operation. In this course the directive regarding loan classification and provisioning was also changed. As per old provision, which remained in force for about 10 years, the loan was categorized into two groups, namely large loans and small loans. The entire loan below Rs 100,000 was

categorized under small loan and rest as large loans. The classification of large loans were to be made in six categories on the basis of some clearly defined and some not so clearly defined parameters while some loans were categorized on the basis of period of past due. The directives were not clear where the borrower had wide fluctuation with respect to some financial indicators. In such case the borrower would qualify for different ratings under each indicator. Due to these difficulties the new loan classification and provisioning came in effect from July 16, 2001. The table no. 14 presents the major changes brought by the new directives issued in 2001.

Table 4.14

Comparative Table of Loan Classification and Provisioning

Area of Changes	Old Directive (Effective from March 22, 1991 to July 15, 2001)	New Directive (Effective from July 16, 2001 onwards)																								
Basis of classification	Classification to be made on the basis of ageing of past dues for small loans and on the basis of certain financial relations for large loans.	Classification to be made on the basis of ageing of past dues for all loans.																								
Loan Categorization and Provisioning	Loans are to be classified into six Categories with following percent of Provision. <table border="1" data-bbox="656 1348 1091 1705"> <thead> <tr> <th>Loan Category</th> <th>Provision</th> </tr> </thead> <tbody> <tr> <td>Good</td> <td>1%</td> </tr> <tr> <td>Acceptable</td> <td>1%</td> </tr> <tr> <td>Evidence of Sub-standard</td> <td>5%</td> </tr> <tr> <td>Sub-standard</td> <td>25%</td> </tr> <tr> <td>Doubtful</td> <td>50%</td> </tr> <tr> <td>Bad</td> <td>100%</td> </tr> </tbody> </table>	Loan Category	Provision	Good	1%	Acceptable	1%	Evidence of Sub-standard	5%	Sub-standard	25%	Doubtful	50%	Bad	100%	Loans are to be classified into four Categories with following percent Provision. <table border="1" data-bbox="1110 1348 1546 1705"> <thead> <tr> <th>Loan Category</th> <th>Provision</th> </tr> </thead> <tbody> <tr> <td>Pass</td> <td>1%</td> </tr> <tr> <td>Sub-standard</td> <td>25%</td> </tr> <tr> <td>Doubtful</td> <td>50%</td> </tr> <tr> <td>Loss</td> <td>100%</td> </tr> </tbody> </table>	Loan Category	Provision	Pass	1%	Sub-standard	25%	Doubtful	50%	Loss	100%
Loan Category	Provision																									
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Over due period	<table border="1" data-bbox="656 1717 1091 1892"> <thead> <tr> <th>Loan category</th> <th>Overdue period</th> </tr> </thead> <tbody> <tr> <td>Good</td> <td>Not Overdue</td> </tr> <tr> <td>Acceptable</td> <td>upto 1 month</td> </tr> <tr> <td>Evidence of</td> <td>1 to 6 months</td> </tr> </tbody> </table>	Loan category	Overdue period	Good	Not Overdue	Acceptable	upto 1 month	Evidence of	1 to 6 months	<table border="1" data-bbox="1110 1717 1546 1892"> <thead> <tr> <th>Loan category</th> <th>Overdue period</th> </tr> </thead> <tbody> <tr> <td>Pass</td> <td>not overdue and</td> </tr> <tr> <td>Due upto 3 mths</td> <td></td> </tr> <tr> <td>Sub-standard</td> <td>3 to 6 months</td> </tr> </tbody> </table>	Loan category	Overdue period	Pass	not overdue and	Due upto 3 mths		Sub-standard	3 to 6 months								
Loan category	Overdue period																									
Good	Not Overdue																									
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Pass	not overdue and																									
Due upto 3 mths																										
Sub-standard	3 to 6 months																									

	Sub-standard		Doubtful	6 months to 1
	Sub-standard	6 months to	1 year	
	1 year		Loss	more than 5
	Doubtful	1 year to 5	years	
	year		The period of overdue of	
	Bad	more than 5	each category of loan is longer.	
	Years			
	The period of overdue of			
	each category of loan is longer.			

Source: NRB Directives

The above table 4.14 exhibits that the present directives of loan classification and provisioning is tighter than previous one. Hence this leads to increment in loan loss provision requirement. However in the present context where Nepalese banking sector is severely affected by increasing non-performing loan, tightening loan loss provisioning requirements on loans and advances is essential to safeguards banks from crisis and to ensure that the banks remain liquid even during economic downturns.

4.6 Analysis of Classification of Loans and Provisioning as per new Directive

As per the new directive, loans and advances are to be classified into four categories, namely pass, substandard, doubtful and loss on the basis of ageing past dues with provisioning of 1%, 25%, 50% and 100% respectively. Beside this in case of insured priority sector and deprived sector loan, the provisioning requirement is one-fourth of that of normal loan loss provisioning requirement. Hence the respective provisioning requirement for pass, substandard, doubtful and loss loan are 0.25%, 6.25%, 12.50% and 25% respectively of the loan outstanding. In case of rescheduled and restructured or swapped loan, if such loan falls under pass category, the minimum provisioning requirement is 12.50% and if this is in the priority sector loan 3.125% should be provided for the probable loss. Further if the loan is granted only against personal guarantee, where the loan falls under the category of pass, substandard and doubtful in addition to the normal loan loss provision applicable for the category, an additional 20% must be provided. Hence in this case the provisioning required for pass, substandard and doubtful

is 21%, 45% and 70% respectively. Hence it can be concluded that loan loss provision required for different category of loan ranges as follows:

Loan Category	Loan Loss Provision (range)
Pass	0.25% to 21.00%
Substandard	6.25% to 45.00%
Doubtful	2.50% to 70.00%
Loss	25.00% to 100.00%

In addition loans and advances have to be classified on the basis of other factors too like CIB blacklisting, collateral value, misuse of fund, bankruptcy of the borrowers etc. The loan falling under pass category is termed as performing loan and the loan falling under remaining categories is termed as Non-Performing loans. The Loan Loss Provision (LLP) set aside for performing loan is defined as General Loan Loss Provision (GLLP) and LLP set aside for Non Performing Loan is defined as Specific Loan Loss Provision (SLLP). Beside this if a bank provides any provision in excess of the proportion required under the directives NRB, the whole amount of such additional provision may be included in GLLP. If it is appropriate in the views of the bank management, there is not restriction in the classifying of loan and advances from low risk category to high risk category. For instance, loans falling under substandard may be classified into doubtful or loss and loans falling under doubtful may be classified into loss category. The term loan and advances also include bills purchased and discounted. The new directive issued in 2001, regarding loan classification and provisioning was effective from fiscal year 2001/02.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Finally an attempt is made in this chapter to summarize the whole study and findings, make general conclusions based on the finding presented in previous chapter and also to suggest some recommendations based on the result of the analysis of data.

5.1 Summary

This research is aimed at studying about the non-performing loan and loan loss provision of commercial banks. In first chapter the study dealt about basic assumption of the study. Basically it highlights the concept and importance or significance of the study. It also presents research issues, research problems, and basic objectives of the study, rationality of the study, limitation of the study and organizational structure of the study.

Second chapter helped to provide knowledge about the development and progress made by the earlier researcher on the concerned field or topic of the study. It also tried to know the some concept used in this study. Moreover, it reviewed and summarized the finding of the previous findings of the study to provide knowledge about the background of the work done by them and to stop the duplicate of previous work.

Third chapter of the study discussed about the various research methodologies used for the study. Basically, research methodology here signifies the research design, sources of data, population and sample of data, data collection technique, data collection methods and tools and techniques employed etc. for this purpose descriptive cum analytical research design was adopted. Out of total population of 31 commercial banks, three banks were taken as sample using judgmental sampling method. Three major commercial banks, Nabil Bank, Himalayan Bank and Lumbini Bank were selected from private sector banks. Secondary data have been used in the study, annual reports and other publications from the basis of secondary data. Beside this newspaper, relevant thesis, journals, articles, related websites etc are also taken for this research. The data collected from

various sources are recorded systematically and presented in appropriate forms of tables and charts and appropriate mathematical, statistical, financial, graphical tools have been applied to analyze the data. The data of ten consecutive years of three selected banks have been analyzed to meet the objectives of the study.

Fourth chapter of the study dealt about data presentation and analysis. It first presents the generated data in tabular form of and analyzed them in systematically as per the objectives. The researcher tried to analyze the comparative position of bank in term of non-performing loan and its impact on relative variables. Detail of the findings can be presented as follows.

Financial sector have major role to play in the development of the country. Banks are the financial regulator, which collects funds and invest them in productive sectors. There is not so long history of commercial banks in Nepal. Nepal bank limited is the first bank in Nepal, established in 30th Kartik, 1994. But now there are 31 commercial bank as per Nepal Rastra bank, banking and financial statistics, and mid-July 2009 extending their services in different part of the country.

The successful working of the banks depends on ability of the management to distribute the fund among the various kind of investment known as loans and advance. Loan and advance are the most profitable assets of a bank. These assets constitute primary sources of income to the bank. As being a business institution a banks aims at making huge profit since loans and advances are more profitable than any other assets of the banks, it is willing to lend as much as its funds as possible. But bank has to be careful about the repayment of loan and interest before giving loan.

This research is aimed at studying the non-performing loan and loan loss provisioning of commercial banks. For this purpose, descriptive cum analytical research design was adopted. Out of the total population of Thirty one commercial banks, only three banks were taken as sample using judgmental sampling method NABIL and HBL are taken as joint venture banks where LBL is from public sector. Secondary data have been used in study. Secondary data were collected from annual reports and other publication. The data

collected from various sources are recorded systematically and presented in appropriate mathematical, statistical, financial, graphical tools have been applied to analyze the data.

The data of ten consecutive years of the three selected banks have been analyzed to meet the objective of the study. Nepal Rastra bank has set up a directive regarding loan loss provisioning of Nepalese commercial bank. According to this provision a bank has to maintain 1%, 25%, 50%, 100% loan loss provision for its pass, substandard, doubtful and bad loan respectively. It is found that sampled banks maintained higher than requirement for one type of loan where as lower for another class of loan category. They should make provision perfectly as per requirement, neither more nor less. The reason may be over provision create inadequacy of capital, reduce profit and less provision create legal hassle to the bank.

The loan loss provision made by NABIL, Himalayan and Lumbini bank seems satisfactory, not a serious matter, only little attention is needed to manage LLP of each loan category. Likewise role of NRB is essential, regular supervision and control over the Nepalese commercial bank by NRB, whether they are implementing NRB's directive perfectly or not is very important.

Finally, summary and conclusion and various suggestions were described in this chapter.

It drew the conclusion from the findings of the study and explained the summary of research paper. Besides, it also provides various suggestions to give further improvement.

5.2 Conclusion

Banking sector in Nepal has expanded substantially in the last one and a half decade, following the financial liberalization policy. People now have several choices in pursuing their banking activities. This sector has gradually embraced modern technologies to deliver value added product and services to its clientele. However, the expansion and adoption of new technologies has brought new types of risk to the fore, the management of which is crucial for the bank and the banking industry in the long run. At the beginning of the 1980s when financial sector has not liberalized, there were only two commercial

banks and development banks performing banking activities in Nepal. After the induction of economic liberalization policy, particularly the financial sector liberalization that impetus in the establishment of new bank and non bank financial institutions. Consequently by the end of mid-July 2009 altogether 208 bank and nonbank financial institutions licensed by NRB are in operation. Out of them 31 are “A” class commercial banks, 38 “B” class development banks, 74 “C” class finance companies, 12 “D” class micro-credit development banks, 17 saving and co-operatives and 47 NGOs.

Nepalese banking industry is faced with variety of serious challenges, the prominent being the management of large volume of non-performing loans and the development of corporate values and ethics among the stake holders in the banking industry. There is already a stiff competition between the market players and the possibility of entry of new players is going to further add to the pressure. So in such a scenario, stakeholders including NRB have to be vigilant that banks do not compromise on the prudent risk management practices in order to survive the competition, which might ultimately lead to the bank failure. At the same time, NRB has to keep tight vigil in the banking industry so as to be take corrective measures in creating and maintaining a stable and a sound banking industry.

It has been found that effective credit management and its efforts of recovering bad debts through establishment of recovery cell. NABIL has resulted to decrease in the level of NPL during the study period resulting in less provision. It is successful to increase loan and advances and total deposit. The net profit of NABIL is increasing each year. The result is due to the recovery of the bad debt, reduction in operating cost and better management.

We can see that the net profit of LBL in first two of study period is negative. This is because of the high level of NPL resulting in the high amount of LLP which have the direct effect in the net profit of the bank. But we can also see that the level of loan and advances, total assets and deposit is increasing year by year.

Similarly the total loan and advances, total assets, total deposits and net profit of HBL is increasing year by year where as the level of NPL is not increasing as much to the ratio of increment in the other balance sheet and off balance sheet items. The increase in the LLP shows the sound position of HBL to recover from the loss created by the defaulters.

There is positive correlation between LLP and loans and advances of NABIL, HBL and LBL. The provisioning amount depends upon the non-performing loan and its quality. Higher provision has to be provided for NPL. Hence even though loans and advances do not increase, if in the same loan portfolio NPL increases, LLP will also increase. In case of all three banks taken in this study the level of NPL is decreasing with the increase in the loans and advances which is a good example of proper loan disbursement and follow up system. The same indication can be found from the study of correlation between LLP and NPL of all the three banks. All three banks have shown positive correlation between loan and advances and deposit, it means that all banks are concentrating on investment of deposit in the form of loans and advances.

The trend analysis of loans and advances shows increasing trend of all three banks. The rate of increase of loans and advances of LBL is low in comparison to NABIL and HBL. It clears that NABIL is investing higher amount of deposit to loans and advances.

Similarly the trend analysis of NPL shows us that the level of NPL of NABIL and LBL is increasing year by year with the increase in the level of loan and advances. The trend of LLP is different, here only the trend of NABIL was increasing where HBL and LBL has decreasing trend. The past trend of net profit of NABIL and HBL had positive and it also remain same through out the study period. LBL has negative profit in first two years of the study period and still it make good recovery till the end and shows the highest profit which is hardly believable.

Nepal Rastra Bank has set up a directive regarding loan loss provisioning of Nepalese commercial bank. According to this provision a bank has to maintain 1%, 25%, 50% and 100% loan loss provision for its pass, substandard, doubtful and bad loan respectively. It is found that sampled banks maintained higher than requirement for one type of loan

where as lower for another class of loan category. They should make provision perfectly as per requirement, neither more nor less. The reason may be over provision create inadequacy of capital, reduce profit and less provision create legal hassle to the bank.

The loan loss provision made by NABIL, HBL ad LBL seems satisfactory, not a serious matter, only little attention is needed to manage LLP of each loan category. Likewise role of NRB is essential. Regular supervision and control over the Nepalese commercial bank by NRB, whether they are implementing NRB's directive perfectly or not is very important.

The quality of loan has a direct bearing on the bank's financial health. The banks are required to develop reserves and provision in accordance to the quality of loans. A rapidly deteriorating loan portfolio is a huge drain on the bank's profitability and subsequently on the capital adequacy. This has the potential to erode the bank's capital in no time. Thus, the capital of loan is arguably the key determinant of bank's financial health. Among other factors, it was the quality of loan portfolio of two of the largest Nepalese banks which required the supervisory intervention. Poor corporate governance and risk management practices are the key reasons for high level of NPL in our banking system. Other causes are economic slowdown, legal hurdles in recovery and poor quality of credit information. Management practices in many banks are still very weak, particularly in the areas of credit analysis, credit administration and risk management and internal control system. Hence, the management of NPL is a great challenge for the Nepalese banking sector. It is high time that we start strengthening and reshaping the reform process. It is a must not only to capitalize on the achieved robustness of the banking industry, but also to integrate it with the global economy deep into the 21st century.

World is getting worst just to make people more smart and divergent to turn the worse into better. This phenomenon is common in every phases of life. So, it cannot be avoided rather should be handled in a wise able way. The time may come when people will have lots of funds with no opportunity to invest. Then, we have to face a new problem to search for new and dynamic areas to invest. But, till now our concern should be the

successful recurrence of the loop as early and fast as possible. That will be the present day objective of coming out of the status either least developed or developing country. In this case, government should have proper patronization to ensure a good climate for investment.

5.3 Recommendations

Recommendation refers to the suggestive measures derived from the findings of the study. Higher level of non-performing assets not only decreases the profitability of the bank but also affect the entire financial as well as operational health of the organization.

If the NPL does not control immediately, it will be proved it as a curse for the banks in future. On the basis of the core analysis and findings the following recommendations can be useful to overcome the weakness and inefficiency of the sample banks NABIL, HBL and LBL which will help to reduce the level of NPA of Nepalese commercial banks.

1. It is recommended to HBL to make serious action to recover the bad loan and also should make curative action for new loans from turning them into NPL from now. Hiring assets management company (AMC) is recommended to HBL to reduce the current non-performing assets.
2. The average CD ratio of NABIL, HBL and LBL during the study period is found as 63%, 57% and 77% respectively. The average ratio of NABIL and LBL is around the appropriate consideration ratio but the CD ratio of HBL is relatively low. The average CD ratio around 70-80% is considered as appropriate. Hence it is recommended to all three banks to explore new areas of investments as customers need and trend. Also try to sustain their valued customer by maintaining an appropriate spread between the cost of interest on deposit and interest from loans and advances.
3. As per international standard only 5% NPA is allowed but in the context of Nepal 10% is acceptable. The average percentage of NPL to total loan of LBL is higher than the acceptable standard of 10%. Since NPL is one of the causes of banking crisis, LBL should make proper homework before lending to the new customer as well as while increasing the limit of the old customer too. Proper credit appraisal, site visit, financial

analysis etc should be done to decrease the credit risk which will certainly play a vital role in decreasing the level of NPL as well as to maintain a balance in the level of NPL to total loan.

4. The main factors which leads to non-performing loans are improper credit appraisal system, ineffective credit monitoring and supervision system etc. beside that negligence in taking information from Credit Information Bureau may also lead to bad debts. Hence all the three banks are recommended to be more cautious and realistic while granting loans and advances. After advancing loans there should be regular supervision and follow up for proper utilization of loan. Banks are the business partner of its credit customer. Bank should be advisor of their credit customer.

5. While disbursing loans to the client there should be the strong practice in commercial bank to float loans on the basis of the business position, scope of viability and business need. At the same time the commercial banks are required to give proper attention on the personal integrity of the borrower too. Further the offered security should be assessed properly as on the distress situation if the retained security is good then the loan can be recovered.

6. No work can be success without proper management. It is recommended to initiate training and development program for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management.

7. Following the updated directives of NRB and acting upon it also reduce many of the credit risk. Beside there are penalty implication and non-compliance of the directives. Hence all the three banks are recommended to follow the directives and they are also suggested to come up with stronger internal audit department to ensure that the directives are properly implemented.

8. The regulation regarding loan classification and provisioning is stringent and tighter than the previous. Hence NRB should not only impose directives but also create supportive environment for the commercial banks. NRB is recommended to strengthen credit information bureau so that banks can get required credit information about the borrowers on time. This would held in reducing NPL.

9. It is often said “prevention is better than cure”. Hence it is recommended for all the three banks to take preventive measures before the loan goes to default. All the banks are

recommended to have an information system to gather all the possible information about its borrowers so that necessary precautions can be taken in time.

10. It is also recommended that banks and financial institution should demand support from government to recover from the bad loans specially created because of willful defaulters.

11. The amount involved in non-performing loans may rise considerably as a result of less predictable incidents, such as when the costs of fuel, prices of key export products, foreign exchange rates or interest rates change abruptly. For example fall in the prices of loan collaterals (often real estate) may cause more loans to become classified as doubtful. So banks should be a watch dog of its economy as well as the effect of changes in the international market to its credit customers.

12. The chances for the financial sector to derail are usually considered to be much higher under conditions of deficient bank management, poor supervision, over optimistic assessments of credit worthiness and moral hazard that results from generous government guarantees or the expectation of assured bailouts.

13. Proper management auditing system should be implemented to monitor the overall performance of the bank. Regular monitoring by both the internal and external (NRB auditors and private Co. auditors) auditors is most.

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APPENDICES

Appendix – 1

Coefficient of Correlation between Loan Loss Provision and Loan and Advances of NABIL

F/Y	LLP (X)	Loan & Advances (Y)	X=x-x̄	Y=y-ȳ	XY	X ²	Y ²
00-01	165,767	7,732,637	100,306.20	-7,406,845.60	-742,952,536,122.72	10,061,333,758.44	54,861,361,742,239.40
01-02	-	7,437,895	-65,460.80	-7,701,587.60	504,152,085,566.08	4,285,116,336.64	59,314,451,560,473.80
02-03	-	7,755,950	-65,460.80	-7,383,532.60	483,331,950,822.08	4,285,116,336.64	54,516,553,655,262.80
03-04	1,052	8,189,993	-64,408.80	-6,949,489.60	447,608,285,748.48	4,148,493,517.44	48,295,405,700,508.20
04-05	4,207	10,586,170	-61,253.80	-4,553,312.60	278,907,699,337.88	3,752,028,014.44	20,732,655,633,318.80
05-06	3,770	12,922,543	-61,690.80	-2,216,939.60	136,764,777,475.68	3,805,754,804.64	4,914,821,190,048.16
06-07	14,206	15,545,779	-51,254.80	406,296.40	-20,824,640,722.72	2,627,054,523.04	165,076,764,652.96
07-08	64,055	21,365,053	-1,405.80	6,225,570.40	-8,751,906,868.32	1,976,273.64	38,757,726,805,356.20
08-09	45,722	27,589,933	-19,738.80	12,450,450.40	-245,756,950,355.52	389,620,225.44	155,013,715,162,860.00
09-10	355,829	32,268,873	290,368.20	17,129,390.40	4973,830,257,545.28	8,431,369,1571.24	293,416,015,475,612.00
Total	654,608	151,394,826			5,806,309,022,426.20	117,670,185,361.60	729,987,783,690,332.00

Calculation of Mean of Loan Loss Provision (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{654608}{10} = 65460.8$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{151394826}{10} = 15139482.6$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{5806309022426.20}{\sqrt{117670185361.60} \sqrt{729987783690332.00}}$$

$$r = \frac{5806309022426.20}{343030.881 * 27018286.1}$$

$$r = 0.6265$$

$$\text{Coefficient of Determination } (r^2) = 0.6265 * 0.6265 = 0.3925$$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.3925}{\sqrt{10}} = 0.1296$$

$$6(\text{P.E.}) = 0.7776$$

Appendix – 2

Coefficient of Correlation between Loan Loss Provision and Loan and Advances of HBL

F/Y	LLP (x)	Loan & Advances (y)	X	Y	XY	X ²	Y ²
00-01	134,320	8,537,666	-45,815.40	-7,038,301.90	322,462,616,869.26	2099,050,877.16	49,537,693,635,543.60
01-02	166,506	8,913,724	-13,629.40	-6,662,243.90	90,802,387,010.66	185,760,544.36	44,385,493,783,087.20
02-03	202,873	10,001,850	22,737.60	-5,574,117.90	-126,742,063,163.04	516,998,453.76	31,070,790,363,100.40
03-04	186,226	11,951,869	6,090.60	-3,624,098.90	-22,072,936,760.34	37,095,408.36	13,134,092,836,981.20
04-05	55,709	12,442,710	-124,426.40	-3,133,257.90	389,860,000,768.56	1,548,192,9016.96	9,817,305,067,912.41
05-06	145,154	14,642,559	-34,981.40	-933,408.90	32,651,950,094.46	1,223,698,345.96	871,252,174,599.21
06-07	90,689	16,997,997	-89,446.40	1422,029.10	-127,195,383,690.24	8,000,658,472.96	2,022,166,761,246.81
07-08	58,431	19,497,520	-121,704.40	3,921,552.10	-477,270,145,399.24	14,811,960,979.36	15,378,570,873,014.40
08-09	68,806	24,793,155	-111,329.40	9,217,187.10	-1,026,143,909,530.74	12,394,235,304.36	84,956,538,036,406.40
09-10	692,640	27,980,629	5125.04.60	12,404,661.10	6,357,445,875,191.06	262,660,965,021.16	153,875,617,005,853.00
Total	1,801,354.	155,759,679			5,413,798,391,390.40	317,412,352,424.40	405,049,520,537,745.00

Calculation of Mean of Loan Loss Provision (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{1801354.00}{10} = 180135.4$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{155,759,679}{10} = 15575967.9$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{5413798391390.40}{\sqrt{317412352424.40} \sqrt{405049520537745.00}}$$

$$r = \frac{5413798391390.40}{563393.60 * 20125842.11}$$

$$r = 0.4774$$

$$\text{Coefficient of Determination } (r^2) = 0.4774 * 0.4774 = 0.2279$$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.2279}{\sqrt{10}} = 0.1647$$

$$6(\text{P.E.}) = 0.9882$$

Appendix – 3

Coefficient of Correlation between Loan Loss Provision and Loan and Advances of LBL

F/Y	LLP(X)	Loan & Advances(Y)	x	Y	xy	x ²	y ²
00-01	41,407	1,735,951	-149,341.30	-1,645,626.20	245,759,956,022.06	22,302,823,885.69	2,708,085,590,126.44
01-02	150,781	2,085,332	-39,967.30	-1,296,245.20	51,807,420,781.96	1,597,385,069.29	1,680,251,618,523.04

02-03	-20,239	2,441,639	-210,987.30	-939,938.20	198,315,022,984.86	44,515,640,761.29	883,483,819,819.24
03-04	61,630	2,980,398	-129,118.30	-401,179.20	51,799,576,299.36	16,671,535,394.89	160,944,750,512.64
04-05	303,412	3,167,724	-3,078,165.20	-213,853.20	658,275,478,148.64	9,475,100,998,491.04	45,733,191,150.24
05-06	855,593	2,983,895	664,844.70	-397,682.20	-264,396,902,954.34	442,018,475,118.09	158,151,132,196.84
06-07	217,859	3,840,687	217,859	459,109.80	100,021,201,918.20	47,462,543,881.00	210,781,808,456.04
07-08	164,628	4,489,494	164,628	1,107,916.80	182,394,126,950.40	27,102,378,384.00	1,227,479,635,722.24
08-09	66,182	4,983,388	66,182	1,601,810.80	106,011,042,365.60	4,380,057,124.00	2,565,797,838,996.64
09-10	66,230	5,107,264	66,230	1,725,686.80	114,292,236,764.00	4,386,412,900.00	2,977,994,931,694.24
Total	1907483	33,815,772			1,444,279,159,280.74	10,085,538,251,009.30	12,618,704,317,197.60

Calculation of Mean of Loan Loss Provision (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{1907483.00}{10} = 190748.3$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{33,815,772}{10} = 3381577.2$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{1444279159280.74}{\sqrt{10,085,538,251,009.30} \sqrt{12,618,704,317,197.60}}$$

$$r = \frac{1444279159280.74}{3175773.646 * 3552281.564}$$

$$r = 0.1280$$

$$\text{Coefficient of Determination } (r^2) = 0.1280 * 0.1280 = 0.0164$$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.0164}{\sqrt{10}} = 0.21$$

$$6(\text{P.E.}) = 1.26$$

Appendix – 4

Coefficient of Correlation between LLP and NPL of NABIL

F/Y=	LLP	NPL	x	Y	Xy	x ²	y ²
00-01	165,767	123,799,518.40	100,306.20	85,614,920.06	8,587,707,294,522.37	10,061,333,758.44	7,329,914,536,880,190
01-02	-	53,106,570.30	-65,460.80	14,921,971.96	-976,804,222,079.17	4,285,116,336.64	222,665,247,175,026
02-03	-	42,967,963	-65,460.80	4,783,364.66	-313,122,877,335.33	4,285,116,336.64	22,880,577,470,536.90
03-04	1,052	27,436,476.55	-64,408.80	-10,748,121.79	692,273,626,747.75	4,148,493,517.44	115,522,122,012,673
04-05	4,207	13,973,744.40	-61,253.80	-24,210,853.94	1,483,006,805,069.97	3,752,028,014.44	586,165,448,504,014
05-06	3,770	17,833,109.34	-61,690.80	-20,351,489.00	1,255,499,637,601.20	3,805,754,804.64	414,183,104,517,121
06-07	14,206	17,411,272.48	-51,254.80	-20,773,325.86	1,064,732,662,289.13	262,7054,523.04	431,531,067,285,745
07-08	64,055	15,810,139.22	-1,405.80	-22,374,459.12	31,454,014,630.90	1,976,273.64	500,616,420,912,551
08-09	45,722	22,071,946.40	-19,738.80	-16,112,651.94	318,044,414,113.27	389,620,225.44	259,617,552,539,586
09-10	355,829	47,435,243.31	290,368.20	9,250,644.97	2,686,093,128,777.95	84,313,691,571.24	85,574,432,360,986.30
Total	654,608	381,845,983.40			14,828,884,484,338.10	117,670,185,361.60	9,968,670,509,658,430

Calculation of Mean of Loan Loss Provision (\bar{X}) and Non Performing loans (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{654,608}{10} = 65460.8$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{381,845,983.40}{10} = 38184598.34$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{14828884484338.10}{\sqrt{117670185361.60} \sqrt{9968670509658430.00}}$$

$$r = \frac{14828884484338.10}{343030.88 * 99843229.66}$$

$$r = 0.433$$

Coefficient of Determination (r^2)= 0.433*0.433=0.1875

$$\text{Probable Error(P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.1875}{\sqrt{10}} = 0.1735$$

F/Y	LLP	NPL	x	Y	xy	x ²	y ²
00-01	134,320	129,516,393.20	-45,815.40	43,563,010.17	-1,995,856,735,913.54	2,099,050,877.16	1,897,735,854,635,890
01-02	166,506	74,429,595.40	-13,629.40	-11,523,787.64	157,062,311,192.47	185,760,544.36	132,797,681,456,579
02-03	202,873	100,818,648	22,737.60	14,865,264.97	338,000,448,668.18	516,998,453.76	220,976,102,479,657
03-04	186,226	106,132,596.70	6,090.60	20,179,213.67	122,903,518,748.05	37,095,408.36	407,200,664,137,723
04-05	55,709	92,573,762.40	-124,426.40	6,620,379.37	-823,749,971,021.24	15,481,929,016.96	43,829,422,936,517.90
05-06	145,154	96,640,889.40	-34,981.40	10,687,506.37	-373,863,935,156.61	1,223,698,345.96	1,142,227,92,301,916
06-07	90,689	61,362,769.17	-89,446.40	-24,590,613.87	2,199,541,884,014.34	8,000,658,472.96	604,698,290,257,530
07-08	58,431	46,014,147.20	-121,704.40	-39,939,235.84	4,860,780,733,757.17	14,811,960,979.36	1,595,142,559,083,750
08-09	68,806	53,553,214.80	-111,329.40	-32,400,168.24	3,607,091,289,501.61	12,394,235,304.36	1,049,770,901,656,300
09-10	692,640	98,491,814.08	512,504.60	12,538,431.05	6,426,003,587,345.31	262,660,965,021.16	157,212,253,070,220
Total	1801354.00	859,533,830.35			14,517,913,131,135.70	317,412,352,424.40	6,223,586,522,016,090

$$6(\text{P.E.})=1.041$$

Appendix –5

Coefficient of Correlation between LLP and NPL of HBL

Calculation of Mean of Loan Loss Provision (\bar{X}) and Non Performing Loans (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{1801354.00}{10} = 180135.4$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{859,533,830.35}{10} = 85953383.04$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{14517913131135.70}{\sqrt{317412352424.40} \sqrt{6223586522016090.00}}$$

$$r = \frac{14517913131135.70}{563393.6034 * 78889711.13}$$

$$r = 0.3266$$

Coefficient of Determination (r^2) = $0.3266 * 0.3266 = 0.1067$

$$\text{Probable Error(P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.1067}{\sqrt{10}} = 0.1908$$

$$6(\text{P.E.}) = 1.1448$$

Appendix – 6

Coefficient of Correlation between LLP and NPL of LBL

F/Y	LLP	NPL	X	Y	xy	x ²	y ²
00-01	41,407	26,976,678.54	-149,341.30	-20,222,020.14	3,019,982,776,333.78	22,302,823,885.69	408,930,098,542,566
01-02	150,781	40,288,614.24	-39,967.30	-6,910,084.44	276,177,417,838.81	1,597,385,069.29	47,749,266,967,930.10
02-03	-20,239	28,567,176.30	-210,987.30	-18,631,522.38	3,931,014,601,845.77	44,515,640,761.29	347,133,626,196,441
03-04	61,630	21,935,729.28	-129,118.30	-25,262,969.40	3,261,911,661,880.02	16,671,535,394.89	638,217,622,905,336
04-05	303,412	48,244,436.52	112,663.70	1,045,737.84	117,816,694,284.41	12,693,109,297.69	1,093,567,630,007.87
05-06	855,593	92,470,906.05	664,844.70	45,272,207.37	30,098,987,127,245.40	442,018,475,118.09	2,049,572,760,152,280
06-07	217,859	78,234,794.19	27,110.70	31,036,095.51	841,410,274,542.96	734,990,054.49	963,239,224,505,842
07-08	164,628	66,983,250.48	-26,120.30	19,784,551.80	-516,778,428,381.54	682,270,072.09	391,428,489,926,883
08-09	66,182	45,149,495.28	-124,566.30	-2,049,203.40	255,261,685,485.42	15,516,763,095.69	4,199,234,574,571.55
09-10	66,230	23,135,905.92	-124,518.30	-24,062,792.76	2,996,258,047,727.51	15,504,807,034.89	579,017,995,410,708
Total	1907483.00	471,986,986.80			44282041858802.60	572,237,799,784.10	5,430,581,886,812,570

Calculation of Mean of Loan Loss Provision (\bar{X}) and Non Performing Loans (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{1907483.00}{10} = 190748.3$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{471,986,986.80}{10} = 47198698.68$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{44282041858802.60}{\sqrt{572,237,799,784.10} \sqrt{5,430,581,886,812,570.00}}$$

$$r = \frac{44282041858802.60}{756464.0108 * 73692481.88}$$

$$r = 0.794$$

$$\text{Coefficient of Determination } (r^2) = 0.794 * 0.794 = 0.630$$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.630}{\sqrt{10}} = 0.0789$$

$$6(\text{P.E.}) = 0.4734$$

Appendix – 7

Coefficient of Correlation between Deposit and Loan and Advances of NABIL

F/Y	Loan & Advances (X)	Total Deposit (Y)	x	Y	xy	x ²	y ²
00-01	7,732,637	15,839,008	-7,406,846	-7,340,235	54,367,985,090,662	54,861,361,742,239	53,879,045,451,084
01-02	7,437,895	15,506,428	-7,701,588	-7,672,815	59,092,854,550,618	59,314,451,560,474	58,872,085,420,536
02-03	7,755,950	13,447,661	-7,383,533	-9,731,582	71,853,450,731,513	54,516,553,655,263	94,703,682,383,775
03-04	8,189,993	14,119,033	-6,949,490	-9,060,210	62,963,833,083,969	48,295,405,700,508	82,087,399,807,974
04-05	10,586,170	14,586,609	-4,553,313	-8,592,634	39,124,947,293,395	20,732,655,633,319	73,833,353,902,376
05-06	12,922,543	19,347,399	-2,216,940	-3,831,844	8,494,966,039,541	4,914,821,190,048	14,683,026,141,230
06-07	15,545,779	23,342,285	406,296	163,042	66,243,499,538	165,076,764,653	26,582,791,589
07-08	21,365,053	31,915,047	6,225,570	8,735,804	54,385,364,670,273	38,757,726,805,356	76,314,276,767,899
08-09	27,589,933	37,348,256	12,450,450	14,169,013	176,410,597,308,590	155,013,715,162,860	200,760,937,895,577
09-10	32,268,873	46,340,701	17,129,390	23,161,458	396,741,661,454,020	293,416,015,475,612	536,453,150,582,639
total	151,394,826	231,792,427			923,501,903,722,119	729,987,783,690,332	1,191,613,541,144,680

Calculation of Mean of Deposit (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{151,394,826}{10} = 15139482.6$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{231,792,427}{10} = 23179242.7$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{923,501,903,722,119}{\sqrt{729,987,783,690,332} \sqrt{1,191,613,541,144,680}}$$

$$r = \frac{923,501,903,722,119}{27018286.1 * 34519755.81}$$

$$r = 0.9902$$

Coefficient of Determination (r^2) = $0.9902 * 0.9902 = 0.9805$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.9805}{\sqrt{10}} = 0.4166$$

$$6(\text{P.E.}) = 2.4996$$

Appendix – 8

Coefficient of Correlation between Deposit and Loan and Advances of HBL

F/Y	Loan & Advances (X)	Total Deposit (Y)	x	Y	xy	x ²	y ²
00-01	8,537,666	17,636,848	-7,038,302	-8,839,407	62,214,416,490,634	49,537,693,635,544	78,135,119,647,412
01-02	8,913,724	18,619,375	-6,662,244	-7,856,880	52,344,452,185,481	44,385,493,783,087	61,730,566,477,152
02-03	10,001,850	21,007,379	-5,574,118	-5,468,876	30,484,160,719,304	31,070,790,363,100	29,908,606,890,926
03-04	11,951,869	22,010,333	-3,624,099	-4,465,922	16,184,943,732,506	13,134,092,836,981	19,944,461,096,453
04-05	12,442,710	24,814,012	-3,133,258	-1,662,243	5,208,236,638,121	9,817,305,067,912	2,763,052,455,946
05-06	14,642,559	26,490,851	-933,409	14,596	-13,623,849,623	871,252,174,599	213,037,378
06-07	16,997,997	30,048,418	1,422,029	3,572,163	5,079,719,451,537	2,022,166,761,247	12,760,347,069,704

07-08	19,497,520	31,842,789	3,921,552	5,366,534	21,045,141,893,111	15,378,570,873,014	28,799,685,026,542
08-09	24,793,155	34,681,345	9,217,187	8,205,090	75,627,847,858,902	84,956,538,036,406	67,323,498,626,064
09-10	27,980,629	37,611,202	12,404,661	11,134,947	138,125,241,420,529	153,875,617,005,853	123,987,040,238,830
Total	155,759,679	264,762,552			406,300,536,540,502	405,049,520,537,745	425,352,590,566,408

Calculation of Mean of Deposit (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{155,759,679}{10} = 15,575,968$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{264,762,552}{10} = 26476255.2$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{406,300,536,540,502}{\sqrt{405,049,520,537,745} \sqrt{425,352,590,566,408}}$$

$$r = \frac{406,300,536,540,502}{20125842.11 * 20624077.93}$$

$$r = 0.9788$$

Coefficient of Determination (r^2) = $0.9788 * 0.9788 = 0.958$

$$\text{Probable Error(P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.958}{\sqrt{10}} = 0.896$$

$$6(\text{P.E.}) = 5.376$$

Appendix – 9

Coefficient of Correlation between Deposit and Loan and Advances of LBL

F/Y	Loan & Advances (X)	Total Deposit (Y)	x	Y	xy	x ²	y ²
00-01	1,735,951	2,097,492	-1,645,626	-2,326,490	3,828,532,568,912.8	2,708,085,590,126.44	5,412,554,789,504.04
01-02	2,085,332	2,646,106	-1,296,245	-1,777,876	2,304,562,971,946.16	1,680,251,618,523.04	3,160,842,360,225.64
02-03	2,441,639	2,959,745	-939,938	-1,464,237	1,376,292,102,165.76	883,483,819,819.24	2,143,989,406,474.24
03-04	2,980,398	3,777,605	-401,179	-646,377	259,312,927,522.56	160,944,750,512.64	417,802,967,578.24
04-05	3,167,724	4,031,221	-213,853	-392,761	83,993,153,914.56	45,733,191,150.24	154,261,046,016.64
05-06	2,983,895	4,786,440	-397,682	362,458	(144,143,174,384.04)	158,151,132,196.84	131,375,946,747.24
06-07	3,840,687	6,024,598	459,110	1,600,616	734,858,583,458.76	210,781,808,456.04	2,561,972,219,702.44
07-08	4,489,494	5,703,734	1,107,917	1,279,752	1,417,858,962,216.96	1,227,479,635,722.24	1,637,765,693,404.84
08-09	4,983,388	6,444,904	1,601,811	2,020,922	3,237,135,005,919.76	2,565,797,838,996.64	4,084,126,538,452.84
09-10	5,107,264	5,767,973	1,725,687	1,343,991	2,319,307,873,156.16	2,977,994,931,694.24	1,806,312,345,677.44
Total	33,815,772	44,239,818			15,417,710,974,829.40	12,618,704,317,197.60	21,511,003,313,783.60

Calculation of Mean of Deposit (\bar{X}) and Loan and Advances (\bar{Y})

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{33,815,772}{10} = 3381577.2$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{44,239,818}{10} = 4423981.8$$

Coefficient of Correlation (r):

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

$$r = \frac{15,417,710,974,829.40}{\sqrt{12,618,704,317,197.60} \sqrt{21,511,003,313,783.60}}$$

$$r = \frac{15,417,710,974,829.40}{3552281.564 * 4367995.613}$$

$$r = 0.9358$$

$$\text{Coefficient of Determination } (r^2) = 0.9358 * 0.9358 = 0.8757$$

$$\text{Probable Error (P.E.)} = 0.6745 * \frac{1 - r^2}{\sqrt{n}} = 0.6745 * \frac{1 - 0.8757}{\sqrt{10}} = 0.0265$$

$$6(\text{P.E.}) = 0.159$$

Appendix – 10

Trend Analysis of Total Loan and Advances for NABIL, HBL and LBL Banks

Year(t)	X=t-2005	X ²	Total Loan and Advances (Y)			XY			Y=a+bx		
			NABIL	HBL	LBL	NABIL	HBL	LBL	NABIL	HBL	LBL
2001	-4	16	7,732,637	8,537,666	1,735,951	-30,930,548	-34,150,664	-6,943,804	886,907.04	3,653,169.2	1,097,335
2002	-3	9	7,437,895	8,913,724	2,085,332	-22,313,685	-26,741,172	-6,255,996	4,450,050.9	6,633,868.9	1,668,395.6
2003	-2	4	7,755,950	10,001,850	2,441,639	-15,511,900	-20,003,700	-4,883,278	8,013,194.8	9,614,568.5	2,239,456.1
2004	-1	1	8,189,993	11,951,869	2,980,398	-8,189,993	-11,951,869	-2,980,398	11,576,339	12,595,268	2,810,516.7
2005	0	0	10,586,170	12,442,710	3,167,724	0	0	0	15,139,483	15,575,968	3,381,577.2
2006	1	1	12,922,543	14,642,559	2,983,895	12,922,543	14,642,559	2,983,895	18,702,626	18,556,668	3,952,637.8
2007	2	4	15,545,779	16,997,997	3,840,687	31,091,558	33,995,994	7,681,374	22,265,770	21,537,367	4,523,698.3
2008	3	9	21,365,053	19,497,520	4,489,494	64,095,159	58,492,560	13,468,482	25,828,914	24,518,067	5,094,758.9
2009	4	16	27,589,933	24,793,155	4,983,388	110,359,732	99,172,620	19,933,552	29,392,058	27,498,767	5,665,819.4
2010	5	25	32,268,873	27,980,629	5,107,264	161,344,365	139,903,145	25,536,320	32,955,202	30,479,466	6,236,880
Total	5	85	151,394,826	155,759,679	33,815,772	302,867,231	253,359,473	48,540,147			

$$a = \frac{\sum Y}{N}$$

and

$$b = \frac{\sum XY}{\sum X^2}$$

Projected Trend Values of Total Loan and Advances for Next Five Years

Banks	a	b	Forecasted Loans and Advances (Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	15,139,482.60	3,563,143.89	36,518,345.94	40,081,489.83	43,644,633.72	47,207,777.61	50,770,921.50
HBL	15,575,967.9	2,980,699.68	33,460,165.98	36,440,865.66	39,421,565.34	42,402,265.02	45,382,964.7
LBL	3,381,577.2	571,060.55	6,807,940.5	7,379,001.05	7,950,061.6	8,521,122.15	9,092,182.7

Appendix – 11

Trend analysis of Total Loan Loss Provision for NABIL, HBL and LBL Banks

Year(t)	X=t-2005	X ²	Loan Loss Provision (Y)			XY			Y=a+bx		
			NABIL	HBL	LBL	NABIL	HBL	LBL	NABIL	HBL	LBL
2001	-4	16	165,767	134,320	41,407	-663,068	-537,280	-165,628	-6,174.96	57,242.28	108,774.18
2002	-3	9	-	166,506	150,781	0	-499,518	-452,343	11,733.98	87,965.56	129,267.71
2003	-2	4	-	202,873	-20,239	0	-405,746	40,478	29,642.92	118,688.84	149,761.24
2004	-1	1	1,052	186,226	61,630	-1,052	-186,226	-61,630	47,551.86	149,412.12	170,254.77
2005	0	0	4,207	55,709	303,412	0	0	0	65,460.8	180,135.4	190,748.3
2006	1	1	3,770	145,154	855,593	3,770	145,154	855,593	83,369.74	210,858.68	211,241.83
2007	2	4	14,206	90,689	217,859	28,412	181,378	435,718	101,278.68	241,581.96	231,735.36
2008	3	9	64,055	58,431	164,628	192,165	175,293	493,884	119,187.62	272,305.24	252,228.89
2009	4	16	45,722	68,806	66,182	182,888	275,224	264,728	83,373.74	303,028.52	272,722.42
2010	5	25	355,829	692,640	66,230	177,9145	3,463,200	331,150	155,005.5	333,751.8	293,215.95
Total	5	85	654,608	1,801,354	1,907,483	1,522,260	2,611,479	1,741,950			

$$a = \frac{\sum Y}{N}$$

and

$$b = \frac{\sum XY}{\sum X^2}$$

Projected Trend Values of Total Loan Loss Provision for Next Five Years

Banks	a	b	Forecasted Loan Loss Provision(Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	65,460.80	17,908.94	172,914.4	190,823.38	208,732.3	226,641.3	244,550.2
HBL	180,135.40	30,723.28	364,475.1	395,198.36	425,921.6	456,644.9	487,368.2
LBL	190,748.30	20,493.53	313,709.5	334,203.01	354,696.5	375,190.1	395,683.6

Appendix – 12

Trend analysis of Non-Performing Loan for NABIL, HBL and LBL banks

Year(t)	X=t-2005	X ²	Non-Performing Loan(Y)			XY			Y=a+bx		
			NABIL	HBL	LBL	NABIL	HBL	LBL	NABIL	HBL	LBL
2001	-4	16	123,799,518.40	129,516,393.20	26,976,678.54	-495,198,074	-518,065,572.8	-107,906,714.2	54,294,721	85,249,545	26,571,634
2002	-3	9	53,106,570.30	74,429,595.40	40,288,614.24	-159,319,711	-223,288,786.2	-120,865,842.7	50,267,191	85,425,505	31,728,400
2003	-2	4	42,967,963	100,818,648	28,567,176.30	-85,935,926	-201,637,296	-57,134,352.6	46,239,660	85,601,464	36,885,167
2004	-1	1	27,436,476.55	106,132,596.70	21,935,729.28	-27,436,477	-106,132,596.7	-21,935,729.28	42,212,129	85,777,424	42,041,933
2005	0	0	13,973,744.40	92,573,762.40	48,244,436.52	0	0	0	38,184,598	85,953,383	47,198,699
2006	1	1	17,833,109.34	96,640,889.40	92,470,906.05	17,833,109	96,640,889.4	92,470,906.05	34,157,068	86,129,342	52,355,465
2007	2	4	17,411,272.48	61,362,769.17	78,234,794.19	34,822,545	122,725,538.3	156,469,588.4	30,129,537	86,305,302	57,512,231
2008	3	9	15,810,139.22	46,014,147.20	66,983,250.48	47,430,418	138,042,441.6	200,949,751.4	26,102,006	86,481,261	62,668,997
2009	4	16	22,071,946.40	53,553,214.80	45,149,495.28	88,287,786	214,212,859.2	180,597,981.1	22,074,475	86,657,221	67,825,763
2010	5	25	47,435,243.31	98,491,814.08	23,135,905.92	237,176,217	492,459,070.4	115,679,529.6	18,046,945	86,833,180	72,982,529
Total	5	85	381,845,983	859,533,830	471,986,987	-342,340,113	14,956,547.24	438,325,117.8			

$$a = \frac{\sum Y}{N}$$

and

$$b = \frac{\sum XY}{\sum X^2}$$

Projected Trend Values of Non-Performing Loan for Next Five Years

Banks	a	b	Forecasted Non Performing loan(Y=a+bx)				
			2011	2012	2013	2014	2015
NABIL	38,184,598.30	-4,027,530.74	14,019,413.86	9,991,883.117	5,964,352.376	1,936,821.6	-2,090,709.105
HBL	85,953,383	175,959.3793	87,009,139.28	87,185,098.66	87,361,058.03	87,537,017	87,712,976.79
LBL	47,198,698.70	5,156,766.092	78,139,295.25	83,296,061.34	88,452,827.44	93,609,594	98,766,359.62

Appendix – 13

Trend Analysis of Net Profit for NABIL, HBL and LBL Banks

year(t)	X=t-2005	X ²	Net Profit (Y)			XY			Y=a+bx		
			NABIL	HBL	LBL	NABIL	HBL	LBL	NABIL	HBL	LBL
2001	-4	16	291,376	277,039	-36,135	-1,165,504	-1,108,156	144,540	110,959.44	114,583.53	-159,160.84
2002	-3	9	271,638	235,023	-97,973	-814,914	-705,069	293,919	237,682.41	189,918.85	-116,191.61
2003	-2	4	416,236	212,130	89,139	-832,472	-424,260	-178,278	364,405.37	265,254.16	-73,222.371
2004	-1	1	455,311	263,054	18,640	-455,311	-263,054	-18,640	491,128.34	340,589.48	-30,253.135
2005	0	0	518,637	325,219	-196,773	0	0	0	617,851.3	415,924.8	12,716.1
2006	1	1	635,264	457,458	-806,062	635,264	457,458	-806,062	744,574.26	491,260.12	55,685.335
2007	2	4	673,959	491,823	192,405	1,347,918	983,646	384,810	871,297.23	566,595.44	98,654.571
2008	3	9	746,468	635,869	327,649	2,239,404	1,907,607	982,947	998,020.19	641,930.75	141,623.81
2009	4	16	1,031,053	752,835	332,206	4,124,212	3,011,340	1,328,824	112,4743.2	717,266.07	184,593.04
2010	5	25	1,138,571	508,798	304,065	5,692,855	2,543,990	1,520,325	1,251,466.1	792,601.39	227,562.28
	5	85	6,178,513	4,159,248	127,161	10,771,452	6,403,502	3,652,385			

$$a = \frac{\sum Y}{N}$$

and

$$b = \frac{\sum XY}{\sum X^2}$$

Projected Trend Values of Net Profit for Next Five Years

Banks	a	b	Forecasted Net Profit($Y=a+bx$)				
			2011	2012	2013	2014	2015
NABIL	617,851	126,723	1,378,189	1,504,912.1	1,631,635	1,758,358	1,885,080.95
HBL	415,925	75,335.3	867,936.7	943,272.02	1,018,607	1,093,943	1,169,277.98
LBL	12,716.1	42,969.2	270,531.5	313,500.75	356,470	399,439.2	442,408.453