

CHAPTER I

INTRODUCTION

1.1 Background of the Study:

Economic development is the foundation development of any country. Economic development is supported by the financial infrastructure of that country. Financial institution constitutes an important part of the financial infrastructure. The main function of the bank is the collecting of idle funds and mobilizes them to productive sector causing overall economic development, which finally leads to national development of the country. Bank pools the fund through deposit and mobilize them to productive sector in the form of loans and advances. Bank is the financial institution which deals with money by accepting various types of deposits, disbursing loan and rendering several of financial services. It is the intermediary between the deficit and surplus of financial sources.

It cannot be denied that the issue of development rest upon the mobilization of resources and the bank deals in process channelising the available resources in the needed sectors. Commercial bank collects deposits from the public and the largest portion of deposited funds is utilized by disbursing loan and advances. The balance sheet of a commercial bank reflects deposit constitutes a major portion of the liabilities and the loan and advances constitutes a major portion of the assets side. Similarly, the profit of the bank depends upon the spreads that it enjoys between the interest 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. The return that the bank enjoys of deposit mobilization through loan and advances is very attractive but they do not come free of cost and free of risk. There is risk in lending. The bank faces number of risk like interest rate risk, liquidity risk, credit risk, borrower risks etc. such in excessive form had led many banks to go bankrupt in number of countries.

Assets and liabilities are the two major parts of balance sheet of commercial bank. Cash reserves, deposits to other banks, investment in securities, loan and advances and other assets comprise the total assets. Liabilities comprise public deposits, borrowings, other current liabilities and share capital. As this study is focused with the Non-performing Asset (NPA), it is mainly concerned with the assets of bank. Generally, the loan advances occupy more than two third parts of assets of bank in balance-sheet and it is found that they produce more than half of bank revenues. Therefore, in practice loan quality is mostly studied as assets quality. In banking literature, loan is often found synonymously used to assets. According to onsite inspection manual, for Commercial Banks Finance Companies, Volume – two, published by Nepal Rastra Bank, the study of asset quality is mainly concerned with loans quality. So, it should be clear that assets are used to indicate the meaning of loan.

Since this study is mainly concerned with loan, some facts are highlighted regarding loan. The deposits of public create loanable fund. Banks make their profit by issuing loans. But loans also have higher probability of default than other assets. The loans, which are actively working gives well, return to the banks. The default loans cause the loss in return to the bank. For the strength and stability of banking system, the assets/loan should yield positive returns. The assets/loans, which do not yield positive returns, become Non-performing Assets (NPA). In a narrow sense, Non-performing Assets, NPA refer to loan and advances, which do not yield any positive, return or contribute to the profit of banks. In a broader sense, NPA includes the unutilized cash balances, physical assets and the workforce. In this study major concern is with the narrow sense of NPA, which means the loan/assets that do not yield positive return in cash.

It is well known that the loans, which do not yield positive return in cash, are NPA since the loans do not yield positive returns in cash, it has direct effect to lender bank. In this situation bank can not pay the interest to the depositors and dividend to the share holders. If the interest income which has to maintain the operational expenses including

depositor's interest and share holders' expectations could not be regularized, it may have great financial effect to the bank. On one hand the outstanding interest is not allowed to show as income and on the other hand loan and advances become non-performing, which creates the situation of additional expenses to profit and loss account of bank. As a result there may be significant effect in the financial position of the bank" (Adhikary, 2062:167)

Nepal is an undeveloped country having very low per capita income and corporate growth rate. The traditional concept of business and commerce is deep rooted in the people and most of them are unaware of modern form of commerce. Majority of population live below the poverty line. The agro-dominated economy is further worsened by the complex geographical situation. Various factors like land locked ness, poor resource mobilization, lack of entrepreneurship, lack of institutional commitment, erratic government policies, political instability, Maoists problem etc. are responsible for the slow pace of development in Nepal.

But after the restoration of democracy in 1990 and universal echo of economic liberalization, Nepal has implemented liberal economic policy. As a result, many more companies are established in different sectors such as industrial, tourism, transportation, trade and mostly in the financial sector whose contribution in economy has great significance.

In Nepal, the industrial revolution took after the establishment of Biratnagar Jute Mill in 1993 B.S. (1936 A.D.) and in 1994 B.S. (1937 A.D.) Nepal Bank Limited was established (vaidya, 1999:67). Nepal Rastra Bank was established in 2013 B.S. (1956 A.D.), which has helped to make banking system more systematic and dynamic during that time. In 2022 B.S.(1965 A.D.) Rastriya Banijya Bank was established which is fully government owned bank. His Majesty's Government with the view of accelerate the pace of economic development under the structural adjustment program undertook a significant step towards financial liberalization in the year 2043/44 B.S. (1986/87 A.D.)

The liberalization policy of the government of Nepal has encouraged the private sector to invest in various fields, which support the domestic overall economic growth. The government of Nepal introduced financial sector reforms in 1980s, which encouraged the healthy competition in the financial sector as well as allowed the entry of foreign banks in the Nepalese market in the forms of joint ventures banks.

Definition of NPA

To define NPA first of all meaning of Assets should be understood. Assets mean the property of a person or a company. This indicates that assets are the property of a company accumulated with the help of sources.

Non Performing Assets (NPA) means the amount of loan that the individual commercial banks had provided and the customer has not paid in until the time already matured. The distributed loan is not returned timely by clients and becomes overdue then, it is known as Non Performing assets for the banks.

1.2 Statement of Problem:

Non Performing Assets [NPA] means the amount of loan that the individual commercial bank had provided and the consumer has not paid it until the time is already matured. Once the distributed loan is not returned timely by clients and becomes overdue then, it is known as Non Performing Assets for the bank. Commercial banks are losing their profitability because of non performing assets.

In every commercial bank's profitability is affected by the Non performing assets of the banks. The main focus of this study is to examine the impact of the NPA on profitability of the commercial banks and the proper management of non performing assets of the commercial banks. In same way the study will also be focused on non performing assets regarding made in the past five years of six sample banks.

Financial institution in Nepal have been facing several problems like lack of smooth functioning of economy, different policies and guidelines on Nepal Rastra Bank, political instability, security problems, poor information system, over liquidity caused by lack of good lending opportunity, increasing NPA. etc. in the present context where Nepalese commercial banks are facing the problem of increasing NPAs, more amount has to be allocated for loan loss provision. As earlier mentioned, the provision amount is taken out by deducting from the profit of the bank; the profit of the bank might come down. This research has been conducted to find out the solution of following problem:-

The following are the research question of this study:

- ❖ Is there any relationship between NPA and the profitability of the commercial banks and the other non-banking assets, [NBA]
- ❖ Are there any interest factors of the individual commercial banks in increment of the non-performing assets of them?
- ❖ What might be the other factors that influence the non-performing assets of the commercial banks in the banking industry of Nepal?
- ❖ What is the overall impact of the NPA on the profitability of the commercial banks under the study?

1.3 Objectives of the Study:

Every research study is conducted with a view of achieving some objectives and this study is of no exception. The main objective of this study is to examine of the management of NPA of sample banks. The specific objectives of this study are as follows:

- ❖ To study and evaluate the relationship between the profitability and the non-performing assets of selected Nepalese commercial banks.
- ❖ To study the proportion of NPAs to total assets, total deposits and total lending of selected banks under study.

- ❖ To analyze the non-performing assets and non-performing loan to total loan of the banks under study.
- ❖ To examine whether the joint venture commercial banks are following the NRB directives regarding non performing assets or not.
- ❖ To suggest and recommend on the basis of major findings.

1.4 Significance of the Study:

Banking habit has been an inseparable part of modern people. Whether it is in industrial sector or personal life it has served a lot. For the safety of the depositors along with fulfillment of the need groups, banking behavior has served well. Since commercial banks are the bridge between savers and need group of money, there should be balance between the desires of these two groups. In other words depositors get nothing unless deposits are flowed as loan and advances to borrowers and paid back interest to the depositors. But it is not always true that all loan and advances yield positive income to banks. In practice, there is certain probability of becoming default rate in loan and advances. Such defaulted loan and advances are known a NPA and they create risk.

Generally, it is found that the loan and advances occupy 60 percent of the commercial banks' assets. The income of the commercial bank is covered by interest income earned to loan and advances on one hank, has to maintain the provision against such loan and advances. So, defaulted loan and advances has double effects: minimizing the income of bank and unsafe risk of deposits.

Success of any banks doesn't depend on how much money a bank can lend? But it depend quality of the loan. Therefore we can say that the success of the bank depends upon the amount of its performing assets/loans.

This study mainly concerned with the analysis of the NPA to total assets, total deposits and total lending of Nepalese commercial banks. Therefore it is significant to find out the level of NPAs. It is also significant to find out whether Nepalese commercial banks have maintained loan loss provision according to NRB directives or not. Lastly it also provides literature to the scholars and new researchers who want to do further researcher in this field

Since the study was on the background of the above stated facts, mainly it helped to identify the NPAs to total assets, total lending and total deposit of the banks

1.5 Limitation of the Study:

The following are some limitations of the study:

-) Primary this study is concerned only with NPA of Nepalese Commercial Banks. It does not consider other financial aspects of the banks
-) The study is concentrated only on commercial banks of Nepal. Hence, findings were not applied to other financial institutions; “the development banks i.e. the grade ‘b’ financial institutions and finance companies i.e. the grade ‘c’ financial institutions.”
-) Profitability of an organization is caused by very many factors but here we study only those factors, which are directly affected by the non-performing assets of the commercial banks.
-) The whole study is mainly base on secondary data, provided by the concerned banks; the reliability is up to the available data.
-) The study is concerned with non performing assets of commercial banks.
-) The whole study is based on the data of only five years (F/Y 2006/07 to 2010/11).

-) The study covers only three commercial banks of the Nepalese banking industry.

1.8 Organization of the Study:

The study has been organized into five chapters. The title of each of these chapters is as follows:

CHAPTER I Introduction

Introduction chapter comprises background of the study, focus of the study, statement of problem, objectives of the study, significance of the study, limitation of the study and organization of the study.

CHAPTER II Review of literature

Review of literature chapter comprises conceptual review of the NPA and review of the past thesis.

CHAPTER III Research methodology

Research methodology deals with the method of investigation and includes research design, nature of the data, data collection procedure and tools used.

CHAPTER IV Presentation and analysis of data and major findings

Data presentation and analysis of data deal with different statistical and the financial tools that used in the analysis of the data.

CHAPTER V Summary, conclusion and recommendation

Last chapter includes the summary, findings of the study and recommendation.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter is concerned with the review of relevant literatures available in the books, journals, articles, research reports, newspapers, magazines, policy documents which are published or unpublished. Every study is very much based on past knowledge, study and experiences. The past knowledge or the previous studies should not be ignored as it provides foundation to the present study. Various thesis works have done in different aspects of non performing assets of different organization are also reviewed for the purpose of justifying the study. This chapter consists of two parts-theoretical Framework and Review of Related Studies. In theoretical framework, review of what has been written in academic books is carried out while review of related studies is further divided into review of journals and review of master degree thesis.

2.1 Theoretical Framework

2.1.1 Meaning and origin of bank

In general a bank is referred to as an institution that deals with money, currency and bullion. It collects the deposits in the form of currency and gold from the savers and supplies to the people in demand of money with different terms and conditions as to the interest and repayment. Hence it pays interest to the depositors as consideration to the money received and charges different levies in the form of processing fees, commissions, interests etc., from the people who have taken loan from it. At the same time it in the request of its customers, discounts the bills, gives guarantee, issues letter of credit, investing in different securities, underwriting of securities etc. The word BANK has been derived from Italian word, “Banco” which in Italian means a BENCH. Since the people

who dealt in money used to do their work whilst sat on bench the trade that they were carrying was called as 'Banco', which in the due course got modified into BANK.

Now a day the function of banks are changing which has induced their principle competitors to change. The principle competitors such as other financial institutions including security dealers, brokerage firms and insurance companies are trying to be similar to bank in the services they offer.

Sayers defined the bank as, "Ordinary banking business consists of changing cash for deposits and bank deposits for cash, transferring bank deposits from one person or corporation to another, giving bank deposits in exchange for bills of exchange, government bonds, the secured of unsecured promises of businessmen to repay etc."

Walter Leaf defined the bank as, "A bank is that institution or individual who is always ready to service money on deposits to be returned against the cheque of their depositors."

And Horace White puts bank in his words as, "Bank is a manufacturer of credit and machine for facilitating exchanges." G. Crowther says, "A banker is a dealer in debt in his own and other people's. The bankers business is then to take the debt of other people to offer his own in exchange and thereby to credit money." Dr. H. L. Hart exclaims, "A banker is one who, in the ordinary course of his business, receives money which he repays by honoring cheques of persons from whom or on who account he receives it."

The first renowned bank was called the "Bank of Venice", set up in Venice, Italy in the year 1157 A.D. The Bank of Barcelona and the Bank of Genoa were established in the year 1401 A.D. and 1407 A.D. respectively. In England the banking embarked on with English Goldsmith only after 1640 A.D. The Bank of Amsterdam was the grandest bank during the 17th Century.

2.2 Concepts of Commercial Banks

Commercial banks are the heart of the financial system. They hold deposits of many persons, government establishments and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms, and government units in doing so they assist both the flow of goods and services from the producers to consumers. They dispense the large portion of medium through which monetary policy is affected. This shows the consequential role in the smooth functioning of the economy.

Commercial banks play the most important role in the modern economic organization. Their businesses mainly consist of receiving deposits, giving loans and financing the trade of a country. They provide short-term credit i.e., lend money for short period. According to the American Institute of Banking, “Commercial Banks is a corporation that accepts demand deposits subject to check and makes short-term loans to business enterprise regarding of the scope of its other services.”

In the Nepalese context, the Nepal Commercial Bank Act, 2031 B.S. (1974A.D.) defines, “A commercial bank is one which exchanges money, deposits money, accepts deposits, grant loans and performs commercial banking functions.”

In the like manner, various writers on banking have defined the bank in different ways. Since a modern bank performs number of functions. So, it has become very difficult to give a precious definition of a commercial bank.

2.2.1 Evolution of banking system in Nepal

There are several types of banks but among them commercial banks play significant contribution in the financial system of the country. They pool together the savings of the

community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from public on condition that they are repaid on demand or on short notice. Their business is confined to financing the short-term and medium term needs of trade and industry such as working capital financing.

Commercial Bank Act, 2031 B.S. (1974A.D.) of Nepal has defined the commercial banks as an organization, which exchanges money, accepts, grants loans and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industries or for such specific purpose. (Bank and Financial Institution Ordinance 2005)

It is the fact that financial sector plays a vital role for the economic development of a country. Even before the establishment of a banking system in Nepal, financial transactions were in practice as undertaken by some moneylenders like sahu-mahajans, zamindars, relatives, friends, and few informal organizations limited to ethnic group such as Guthi. The borrowing from the other and the informal organization was limited and based on personal understanding. At that time people deposit their gold, silver and valuable goods for the sake of security. Thus, the private moneylenders can be taken as forerunner of the concept of financial institution.

However, the private money lenders supported the economic development of a country, the transactions undertaken by them was totally based on their personal understanding. No legal restriction was against them and their monopolies in transactions were the reasons for covering the interest in personal understandings and exploiting the people. Thus, it was then realized the need to establish financial intermediaries in supporting the economic development of a country.

Nepal has been ruled over by many rulers like Kirati, Lichchhavi, Malla, Ranas, and Shahs. Mostly Kirati, Lichchhavi and Malla regimes, who were concerned with the construction of temples, pati-pouwa, chautaris, etc. At that period neither the people nor the government needed to think about the economic development of the country. According to ancient "Vanshawali" in fourteenth century, the ruler of the Kathmandu 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 borrowing and lending of money (coins). Hence, Tankadharis can be regarded as the traditional bankers of Nepal.

After long time, during the Rana regime, only handfuls prime minister thought about the economic development of the country. They established some offices in 1993 B.S. (1936A.D.) 'Tejarath Adda' was established during the tenure of Prime Minister Ranoddip Singh Rana as a first institutionized credit house. Tejarath Adda provided loans under the security of gold and silver to the government employees and public. 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 institution and for a quite long time it rendered a good service to the government employees as well as to the general public. The government also implemented the rules against the vast interest rate taken by moneylenders. Thus, the government financial institution occupies an important role in the banking history of Nepal.

No financial institutions were established over a long period due to political reasons. To fulfill the growing need of economy in Nepal, banking activities were performed only after the establishment of Nepal Bank Limited in 1994 B.S. (1937A.D.) as the first

commercial bank in Nepal. This bank was established under the Nepal Bank Act 1994 B.S. (1937A.D.).

At beginning, 49% of the ownership belongs to the promoters as well as general public and remaining belongs to government. The incorporation of Nepal Bank Ltd. is the real starting of the banking institution in Nepal? The bank started the act of consolidating the scattered capital since its establishment in order to mobilize it in productive sector. It developed systematic tradition in culture of modern banking system in Nepal. Such system could be able to establish a strong base for the enlistment of national economy. Beside, it also acted as central bank for more than three decades.

Nepal Rastra Bank was established in Baisakh 14, 2013 B.S. (26 April 1956 A.D.) under Nepal Rastra Bank Act, 2012 B.S. (1955 A.D.), the central bank of Nepal. It is totally owned by government. NRB is heavily assisting for the development of the whole economy. It is giving timely directives to all financial institutions operating and conducting in all over the country.

After a long period, the second commercial bank namely Rastriya Banijya Bank (RBB) has been established in 2022 B.S. (1965A.D.) with cent percent government ownership. This bank has been established under the Rastriya Banijya Bank Act 2021 B.S. (1964 A.D.) Both Nepal Bank Limited. (NBL) and Rastriya Banijya Bank (RBB) have made a remarkable contribution by providing reliable banking services to the Nepalese people. Its contribution is well noted in terms of capital formation to the small dispersed saving into meaningful capital investment in order to flourish industry, agriculture, and commercial sector in the country.

The government introduced Commercial Bank Act in Nepal in 2033 B.S. (1976A.D.) to cover the vast field of financial sector. This act has helped to emerge number of commercial bank with a view to maintain economic interest in comfort of the public in general facilitated to provide loan for agriculture, industry, trade and make a available banking services to the country and people.

Among vacuum in the banking sector got some rays of hope only when the government forwarded the economic liberalization policy in 2039 B.S. (1982 A.D.) 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 (JVBs) would support the country in various ways.

In Nepalese context the main purpose of joint venture is top develop economic forces in order to achieve distinguished result, which the partners separately could not achieve. Nowadays, joint venture banks (JVBs) are playing dynamic and vital role in economic development of the country.

The Nabil Bank Ltd. Is the first joint venture bank established in 2041 B.S. (1984 A.D.) and started its operation with modern banking services. In the same way, Nepal Indosuez Bank (currently Nepal Investment Bank), the second joint venture bank established in 2042 B.S. (1985 A.D.) with an objective to encourage efficient banking services and facilities. Likewise Standard Chartered Bank is operated in 2044 B.S. (1987 A.D.).

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., Nepal Investment Bank, Kumari Bank Ltd., Machhapuchchhre Bank Ltd., Siddhartha Bank Ltd., Kumari Bank Ltd. came into operation with cent percent domestic investment by Nepalese promoters which are the plus point of development of banking sector of Nepal. Now, there is a strong competition between commercial bank for the existence so that the growing needs of the customers can easily achieve.

2.2.2 Function of Commercial Banks

Banks can be defined according to the functions they perform. A bank is established with the prime objective of profit maximization. To achieve this, the bank carries out functional activities, “Principally, commercial banks accepts deposits, provide loan, primarily to business firms thereby facilitating the transfer of funds in the economy”. Although, in the yester years banks were viewed as acceptor of deposits then provider of loan, but modern commercial banks have to perform overall development of trade, commerce, industry, agriculture including supports for priority and deprived sectors. The growing bank needs and habits of people and competitive environment has made the banking sector challenging and their operation cannot be underemphasized in present context of market globalization. Hence, a bank is a commercial institution licensed as a taker of deposits, concerned mainly with the making and receiving payments on behalf of their customers, accepting deposits, creating money and making short-term loans to private individuals, companies and other organization.

Although profit maximization is a major objective of commercial bank, to achieve this objective commercial bank performs various functions under the mandatory rules and regulations and directives of NRB and the Commercial Bank Act 2031 B.S. (1974 A.D.).

Primary Functions

Accepting Deposits:

Accepting a deposit is the most important function of commercial banks. Commercial banks collect money from those who want to deposit in different types of accounts such as:

-) Fixed Deposit Account
-) Current Deposit Account
-) Saving Account

Advancing of Loans:

Commercial banks provide the loans required or credit to various sectors of economy such as industry, trade, agriculture, business-deprived sector etc. In this way bank creates credit facilities. It provides loans from various procedures in different form such as:

-) Overdraft
-) Cash Credit
-) Direct loan with collateral
-) Discounting of bills of exchange
-) Loans of money at call and short notice

General Utility Functions:

Commercial banks also perform general utility functions such as:

-) Issuing of letter of credit to its customers.
-) Issuing of bank drafts and traveler's cheque etc., for transfer of funds from one place to another.
-) Dealing in foreign exchange and financing foreign trade by accepting or collecting foreign bills of exchange.

-) Serving as referred to the financial standing and credit worthiness of its customers.
-) Underwriting loans to be raised by public bodies and corporations.
-) Providing safety vaults of lockers for the safe custody of valuables and securities of the customers.
-) Acting as a trustee and executing the will of the deceased.
-) Remittance of money

Agency Function:

Apart from the above functions, commercial banks also perform agency functions for which they act as agent and claim commission on some facilities such as:

-) Collection of customer's money from other banks.
-) Receipt and payment of dividend, interest.
-) Security brokerage service.
-) Financial advisory service.
-) To underwrite the government and private securities.

2.3 Some Important Terms:

2.3.1 Definition of loan and advances

Loan is defined as a thing that is lent esp. a sum of money. Likewise, debt means a sum of money owed to somebody. However, in financial terms loan or debt means principal or interest available to the borrower against the security. Debt means the money that bank owes or will lend to individual or person.

Likewise, the term loan is defined as a lending. Delivery by one party to and receipt by another party of sum of money upon agreement expressed to implied, to repay it with or

without interest. Any thing furnished for temporary use to a person at his request on condition that it shall be returned, or it's equivalent in kind, with or without compensation for its use. Loan includes:

-) The creation of debt by lender's payment of or agreement to pay money to the debtor or to a third party for the account of the debtor.
-) The creation of debt by a credit to an account with the lender upon which the debtor is entitled to draw immediately.
-) The creation of debt pursuant to a lender credit card or similar arrangement.
-) The forbearance of debt arising from a loan.(Koirala, 2006: 35 - 36)

Further, debt means 'Principal and interest provided to debtor by banks or financial institutions, with or without the pledge of immovable or moveable property of other securities of guarantees or without guarantee, and the word also mean over dues of the transactions beyond balance or fees, commission and interest incurred in that relation (Debt recovery act for Bank and Financial Institutions).

The supreme court of India has defined the debt during the decision of the case of United Bank of India vs. DRT. Sudhir Gupta states that "In the case in hand, there cannot be any dispute that the expression 'debt' has to be given the widest amplitude to mean any liability which is alleged as dues from any person by a bank during the course of any business activities undertaken by the bank either in cash or otherwise, whether secured or unsecured, whether payable under a decree or other of any court or otherwise and legally recoverable on the date of the application.

2.3.2 Concepts of Non Performing Assets:

Non Performing Assets [NPA] means the amount of loan that the individual commercial bank had provided and the consumer has not paid it until the time is already matured.

Once the distributed loan is not returned timely by clients and becomes overdue then, it is known as Non Performing Assets for the bank. Reduction of NPA has always been a significant problem for every commercial bank. NPA may be defined broadly as the Bad Debt; however, it in terms of banking sector consists of those loans and advances which are not performing well and likely to be turn as bad debt. NPA as per the current directives of Nepal Rastra Bank, NRB, has been categorized as classified loans and advances. NPA has severe impacts on the financial institutions. On the one hand, the Investment becomes worthless as expected return cannot be realized and on the other, due to the provision required for the risk mitigation the profitability is directly affected. The existence of the bank can be questioned in this situation. Thus, interest along with principal has to be recovered timely and without any obstacles.

To start with performance in terms of profitability in a benchmark for any business enterprises, including the banking industry, however increasing non performing assets have a direct impact on banks profitability as legally banks are not allowed to book income on such assets (Manamohan, 2002 : 06).

Loans and Advances dominate the assets side of balance sheet of any bank. Similarly, earning from such loans and advances occupy major space in income statement of the banks. However it is very important to be reminded that most of the bank failures in the world are due to shrinkage in the value of the loan and advances. Hence loan is known as risky assets. Risk of non-repayment of loan is known as credit risk or default risk. Performing loans have multiple benefits to the society while non-performing loans erodes even existing capital.

Performing assets are those loans that repay principal and interest to the bank from the cash flow it generates. Loans are risky assets, though a bank interest most of its resources in granting loans and advances. If an individual bank has around 10% non-performing

assets or loans, it sounds the death knell of that bank other remaining the same. The objectives of bound loan policy are to maintain the financial health of the banks, which result in safety of depositor's money increases in the returns to the shareholders. Since the loan is a risky asset there is inherent risk in every loans, however, the bank should not take risk above the certain degree irrespective of the returns prospects.

2.4 Classification of NPA:

As per the NRB directives NPA are said as classified loans. And this includes sub-standard, doubtful and loss categories as defined by new NRB directives. The circular further says a NPA is a credit facility in respect of which interest has remained unpaid for two quarters.

According to the circulars, the loans are classified based on weakness and dependence on collateral securities into four categories and prescribed the provisioning rate as follows:

Table No. 2.1
Classification of Loan and Advances

Classifications of loan and advances	Criteria for Provisioning	Provision Rate
Pass	Not past due and past due for a period up to 3 months. [Performing loans]	1%
Substandard	Past due for a period of 3 months to 6 months	25%
Doubtful	Past due for a period of 6 month to 1 years	50%
Loss	Past due for a period of more than 1 years or advances which have least possibility of recovery.	100%

Source: Nepal Rastra Bank, Directives for commercial banks.

2.5 Effects of NPA on Profitability of Banks:

Under the circumstances assets that do not earn any income to the bank affect the profits in a number of ways, which are explained as follows (Koirala, 2006:38 – 40):

Profitability Impact:

-) The resources locked up in NPA are borrowed at a cost and have to earn a minimum returns to service this cost.
-) NPA on the one hand do not earn any income but on the other hand drain the profits earned by performing assets through the claim on provisioning requirements.
-) Since they do not earn interest they bring down the yield on advances and the net interest margin or spread.
-) NPA have a direct impact on assets and returns on equity, the two main parameters for measuring profitability of the commercial banks.
-) Return on assets will be affected because while the total assets include the NPA they do not contribute to profits which are the numerators in the ratio.
-) Return on equity is also affected as provisioning eats more and more into profits earned.
-) The cost of maintaining these include administration costs, legal costs and cost of procuring the resources locked in them.
-) NPA bring down the profits, affects the shareholders value and thus, adversely affect the investor confidence.

As a whole, the impact of NPA can be assessed with the following:

-) Lower ROE and ROA
-) Lower image and rating of banks
-) Disclosure reduces investor's confidences.
-) Increases costs/difficulties in raising capital.
-) NPA do not generate income.
-) They require provisioning.
-) Borrowing cost of resources locked in

-) Opportunity loss due to non-recycling of funds.
-) 100% risk weight on net NPA for CRR.
-) Capital gets blocked in NPA.
-) Utilizes capital but does not generate income to sustain the capital that is locked.
-) Recapitalization by government comes with string.
-) Administration and recovery costs of NPA.
-) Effects in employee morale and decision.

2.6 Causes and Measures of NPA:

[Country-wise Analysis]

(Source: Reddy, Prashant K ' A comparative study of NPA in india in the global context, a report page 4-8)

China

Causes

- I. Moral Hazard: The SOE's believe that there the government will bail them out in case of trouble and so they contribute to take high risks and have not really strived to achieve profitability and to improve operational efficiency.
- II. Bankruptcy laws favors borrowers and law courts are not reliable enforcement vehicles.
- III. Political and social implications of restructuring bi SOE's force the government to keep them afloat.
- IV. Banks are reluctant to lend to the private enterprises due to
 - a. Non- standard accounting practices.
 - b. While an NPA of an SOE is financially undesirable, an NPA of a private enterprise is both financially and politically undesirable.

Measures

- I. Reducing risk by strengthening banks, raising disclosure standards and spearheading reforms of the SOE's by reducing their level of debt.
- II. Laws were passed allowing the creation of asset management companies, foreign equity participation in securitization and asset-backed securitization.
- III. The government, which bore the financial loss of debt 'discounting'. Debt/equity swaps were allowed in case a growth opportunity existed.
- IV. Incentives like tax breaks, exemption from administration fees and clear-cut asset evaluation norms were implemented.

Thailand

Causes

- I. Liberalized capital and current account and external borrowings with inaccurate assessment of exchange rate risk and risk of capital flight in a crisis.
- II. A legal system that made credit recovery time consuming and difficult.
- III. Real estate speculators took massive loans projecting high growth in demand and prices of properties. When this did not materialize all the loans went bad.
- IV. Steep interest rate rise turned a lot of loans into NPAs
- V. Inability to correctly assess credit risk.

Measures:

- I. Amendments were made to the Bankruptcy Act.
- II. Corporate Debt Restructuring Plan (1998) focused on capital support facilities for bank recapitalization and setting up of AMC's.
- III. New rules governing NPA exit procedures based on international standards were introduced.
- IV. Privatization of government entities was mooted, but faced strong political oppositions for fear of a social backlash.

- V. Adoption of international standards for loan classification and provisioning.
- VI. Caps on Foreign equity ownership in financial institutions were removed.

Korea

Causes

- I. Directed Credit: Protracted periods of interest rate control and selective credit allocations gave rise to an inefficient distribution of funds. The Chaebols' focus on increasing market share and pursuing diversification with little attention to profitability caused tremendous stress on the economy.
- II. The “compressed growth” policy via aggressive, leveraged expansion worked well as long as the economy was growing and the ROI exceeded the cost of capital. This strategy backfired when slowing demand and rising input costs placed severe stress on their profitability.
- III. Lack of Monitoring-Banks relied on collaterals and guaranteed in the allocation of credit, and little attention was paid to earnings performance and cash flows.
- IV. Contagion effect from South East Asia coincided with a period of structural adjustments as well as a cyclical downturn in Korea.

Measures

- I. Speed of action:- the speedy containment of systemic risk and the domestic credit crunch problem with the injection of large public funds for bank recapitalization were critical steps towards normalizing the financial system.
- II. Corporate Restructuring Vehicles (CRVs) and debt/equity swaps were used to facilitate the resolution of bad loans.
- III. Creation of the Korea Asset Management Corporation (KAMCO) and a NPA fund to fund to finance the purchase of NPA's.

- IV. Securitization KAMCO's recoveries came through asset-backed securitization and outright sales. International investors like the Lone Star Fund participated in the process.
- V. Strengthening of Provision norms and loan classification standards based on forward-looking criteria (like future cash flow) were implemented.
- VI. The objective of the central bank was solely defined as maintaining price stability. The Financial Supervisory Commission (FSC) was created (1998) to ensure an effective supervisory system in line with universal banking practices.

Japan

Causes:

- I. Investments were made Real Estate at high prices during the boom. The recession caused prices to crash and turned a lot of these loans bad.
- II. Legal mechanisms to dispose bad loans were time consuming and expensive and NPA's remained on the balance sheet.
- III. Expansionary fiscal policy measures administered to stimulate the economy supported industrial sectors like construction and real estate, which may have further exacerbated the problem.
- IV. Crony capitalism to the Keiretsus.
- V. Weak corporate governance coupled with a non-bankruptcy doctrine was a moral hazard in Japanese economy.
- VI. Inadequate accounting systems and information flow makes assessment of loan performance outside a bank in Japan difficult.

Measures:

- I. Amendment of foreign exchange control law (1997) and the threat of suspension of banking business in case of failure to satisfy the capital adequacy ratio prescribed. Legislation to improve information flow has been passed.

- II. Accounting standards: - Major business groups established a private standard setting vehicle for Japanese accounting standards (2001) in line with international standards.
- III. Government Supports: - The government's committee public funds to deal with banking sector weakness.

2.7 Reviews of Articles:

On the way of conducting this research work, some books, journals and publications have been studied to formulate ideas about the subject matter. Although, the specific books regarding the NPA could not be found, however, some banking related books have been consulted such as Tannan's Banking Law and Practices in India, (1997). Assessing the gravity of the problem Tannan found that the banks and financial institutions at present face considerable difficulties in recovery of dues from the clients and a significant portion of the funds of the banks and financial institutions is thus, blocked in unproductive assets.

In India for addressing the question of speeding up the process of recovery was examined in great detail by committee set-up by the government under the chairmanship of the Late Shri Tiwari.

Suneja, (1992) pointed out the causes of NPA that the risk connected with lending to business depends on an enormous number of factors. For any particular type of business the risk failure is affected. The state of economy trend in demand for the project or service provided competition from any other suppliers, financial resources are too limited and management skills and lacking. Reiterating the difficulties that Suneja says probably the most difficult decision facing a banker is to determine when it becomes necessary to recall a loan and to begin the process of liquidating the security. Further she suggests that

if a customer fails to make repayment on the due date, the bank has to consider what steps need be taken to recover the debt.

Basyal (2057), discussing the financial performance of government owned banks in the article, "Placing RBB and NBL under Management Contracts Rational and Opposition" agreed that the disappointing performance of these two banks has become serious concern to all the stakeholders. Further he mentions that they are having with huge level of NPA, which could be termed as the darkest sides of their operational inefficiency and undisciplined financial behaviour.

Ghimire (2056) in her article, "efficiency indicators of commercial bank" she has made a comparative analysis and found that efficiency indicator of the banks may be viewed on the basis of amount allocated for loan loss provisioning against loan and investment.

Pradhan (2058) in his article, "NPA Some suggestion to tackle them" expressed that unless the growth of 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 bodies misused the credits and delayed payments and contributed indirectly for enhancing NPA ratio. He further argues that 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 coordination among various financiers, lack of initiatives to take timely action against willful defaulters, indecision on existing out of bad loans for fear of investigating agencies like special policy, 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 during his interview to New Business Age agrees that the challenging target of RBB turn around in restructuring and collection of NPA.

2.8 Review of Related Thesis:

Dinesh Kumar Khadka, (2007) "Non-Performing Assets of Nepalese Commercial Banks", his objectives to study and examine the level of NPAs in total assets, total deposits and total lending of commercial banks of the banking industry of Nepal. He also had studied whether the Nepalese commercial banks have been following the directives of NRB regarding loan loss provision for non-performing loan/assets or not. He had taken sample banks as Nepal SBI Bank Limited, Nepal Investment Bank Limited, Nepal Bangladesh Bank Limited, Nepal Investment Bank Limited, Nabil Bank Limited. From his studies, it is found that the level of NPA of Nepal Bangladesh Bank Limited seemed greater than all of the other banks under his study. Similarly, Nepal SBI Bank and Nepal Investment Bank stand at second and third position respectively. The position of Nabil Bank Limited seemed to be quite satisfactory because, the bank has been reducing its NPA every year. NPA of Nepal Investment Bank reducing it at minimum than that of all the other banks. From the study it has also been found that none of the banks have been following the directives of NRB regarding the loan loss provision. Despite of high level of NPA the loan loss provision made by the Nepal Bangladesh Bank seemed to be quite satisfactory than any of the other banks. Despite of the outstanding success in managing the NPA the loan loss provision made by Nepal Investment Bank is not considerable. It meant the loan loss provision of Nepal Investment Bank is very less than the requirement.

Govinda Ghimire (2008) "Non Performing Assets of Commercial Banks" main objectives to evaluate the impact of NPA on the profitability of the commercial banks. He also studied about the internal and the external factors that affect the non-performing assets to increase from the loan and advances. The internal factors that influence the effective management of the NPA and its increment. The objective of his study is also to find out the relationship between the non-banking assets and the non performing assets, in which he was able to find out the internal responsible factors that contribute turning good loan into bad loans, bad intention, weak monitoring and mismanagement are the most responsible factors. Similarly, weak legal provision and credit concentration are also found as the least preferred factors in turning good loans into bad loans. Some factors such as lack of portfolio analysis, not having effective credit policy and shortfall on security were identified as having average effect on NPA growth. In connection to the external factors it has been found that recession, political and legal issues are more relevant factors in turning good loans into bad one. Like wise legal provision for recovery as a reason for increment in NPA in Nepalese Banks have been found the factors having less impact. Supervision and monitoring system have been identified as average factors. It is therefore, can be generalized that economic and industrial recession and not having strong legal provision for loan recovery are the major external factors that have major contribution for the increment of NPA.

It has also been concluded in the study that Nepalese Commercial Banks gave must priority to trade sector for lending its resources, at the same time it is found that service sectors are not being given that much emphasis. He had recommended to the sample banks, Nepal Bangladesh Bank Ltd. Nepal SBI Bank Ltd and Nepal Investment Bank Ltd. as on different headings, subject matter such as financial strength, personal integrity and security, monitoring and control system, avoidance of credit concentration, strong legal system, assets management company, avoidance of undue pressure, etc.

Niva shrestha, (2009) “Non performing loans and loan loss provisioning of the commercial banks” revealed that the Standard Chartered Bank Limited had risk averse attitude of the management or they have policy of investing low in the risky assets i.e. loans and advances as compared to Nepal Bank Limited and Nabil Bank because the loans and advances to total assets ratio on NBL, NABIL and SCBNL during the study period was appeared to be 52.3%, 47% and 29.34% respectively. The SCBNL has higher proportion of the investment in risk free or nominally risky assets like treasury bills, National Saving bonds etc.

Similarly the loans and advances to total deposits ratio of NBL, NABIL and SCBNL during the study period was found to be 57.63%, 56.35% and 35.94% respectively. It indicates that the SCBNL has the most consistent and variability during the study period whereas the NBL has the higher consistent and variability as compared to other two banks. NABIL has the moderate level of consistent and variability.

In the same way, the proportion of Non Performing loan with regard to total loans of NBL, NABIL and SCBNL was found to be 48.37%, 10.67%, and 4.38% respectively. That means 51.63%, 89.33% and 95.62% of the total loan of NBL, NABIL and SCBNL was found to be performing loans. Not only the public sector bank, even private sector bank like NABIL has higher proportion of non-performing loan. However, in recent years, NABIL has shown significant decrement in non-performing assets, which are the efforts of recovering bad credit through the recovery of establishment of recovery cell.

In the same way, proportion of loan loss provision of NBL was found to be significantly higher i.e. 40.17% as compared to other two commercial banks. The proportion of NABIL and SCBNL was found to be 5.69% and 4.49%.

The average ratio of provision held to non performing loan of NBL, NSABIL and SCBNL was found to be 80.03%, 57.85% and 122.32% respectively shows that the SCBNL has maintained adequate level of provision against non performing loan where as NABIL was found to be comparatively lower. The NBL was found to be an average position.

Subash koirala, (2010) “Non performing assets and profitability of commercial banks in Nepal” his objectives were to evaluate the impact of NPA on the profitability of the commercial banks. he also studies about the internal and external factors those influence the performing assets to non performing one. He had taken sample banks as Nabil banks Limited, Himalayan Bank Limited, Nepal Bangladesh Bank Limited, Everest Bank Limited, Nepal SBI Bank Limited and Nepal Investment Bank Limited.

The NPA of Nepal Investment Bank during the study period was increasing. The ratio of NPA to lending was found to be decreasing over the years as it was 8.29% in fiscal year 2006/07 and decreased to 2.69% in the fiscal year 2010/11. The net profit was also increasing during the study period.

In case of Everest Bank Limited, the level of NPA was decreased to 1.6% on the fiscal year 2010/11 which was 6.79% in the fiscal year 2006/07. the NPA was increasing during this period and despite of the increasing NPA profit of the bank was found to be increasing during study period.

In case of Nepal Bangladesh Bank Limited, the level of NPA was increased from 9.03% in fiscal year 2006/07 to 19.04% in fiscal year 2010/11. The NPA of the bank was found to be increased and that causing the gradual decrease in the profitability of the bank.

The NPA of the Nabil Bank Limited was decreased upto one fifth from the fiscal year 2006/07 to fiscal year 2010/11. The level of NPA was found to be decreased from 16.20% in fiscal year 2057/58 to 1.32% in fiscal year 2010/11 whereas the ROA was found to be increased from 1.71% to 3.06% over the five years period.

In case of the Nepal SBI Bank Limited, the level of NPA was found to be fluctuation in it. Although it was decreasing it was not desirable level. The level of NPA in fiscal year 2006/07 was 8.64% and in fiscal year 2010/11 it was 6.54%.

The NPA of Himalayan bank Limited was found to be fluctuating during the study period, though it was found to be decreased in fiscal year 2006/07 in comparison to fiscal year 2006/07. The level of NPA was found to be highest for the Nepal Bangladesh Bank Limited in the fiscal year 2006/07, whereas the lowest was found that of Everest Bank Limited in fiscal year 2008/09. In overall the performance of the Nabil Bank was found to be satisfactory as the level of NPA was gradually decreasing over the years covered by this study.

2.9 Research Gap:

From the study of previous thesis it has found that increasing Non-performing assets is one of the major challenges faced by Nepalese commercial banks in the present context. Some researchers were done in which matter relating to loan loss provision for Non-performing assets or not. Some researcher was done what is the internal and external factors affects the Non performing assets to increase from the loan advances. The previous theses covered only upto the fiscal year 2010/11 but this thesis also based on secondary data provided by concerned Nepalese commercial banks up to the fiscal year 2010/11. Hence this thesis had attempted to fill this research gap by taking the reference of Nepal Investment Bank, Machhapuchchhre Bank Limited and Kumari Bank Limited. This research will be able to deliver some of the present issue, latest information and data relating to Non-performing assets.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction:

“Research methodology refers to the various sequential steps to adopt by a research in studying a problem with certain objective in view’ (Kothari, 1994:19). Therefore, we can conclude that research methodology tries to make clear view of the method and process adopted in the entire aspect of the study. It is also considered as the path from which researcher can systematically solve the research problem. This research tries to perform a well-designed quantitative and qualitative research in a very clear and direct way using both financial and statistical tools. Detail research methods are described in the following headings.

3.2 Research Design:

The main objective of this study is to analyze the relationship between NPA and Profitability of the commercial banks and provide suggestion on the basis of findings. To fulfill this purpose, the study follows the analytical and descriptive research design. It also analyses the loan loss provision maintained by commercial banks.

In order to achieve the predetermined objectives of the study, secondary data have been used. This study tries to make comparison and establish relationship between two or more variables. So the research design of this study is based on descriptive and analytical study.

3.3 Population and Sample:

The term “population” of universe for research means the universe of research study in which the research is based” (Pant, 2000:75). At present there are 30 commercial banks operating in Nepal and most of their stocks are traded actively in the stock market. All 31

commercial banks are the population of this study. Among them Machhapuchchhre Bank, Kumari Bank and Nepal Investment Bank are chosen as sample for the present study on the basis of good financial performance.

3.4 Nature and Sources of Data:

The main sources of information are the concerned banks and their published documents, NRB and its published documents, experts' views, newspaper, and many others if possible. The major sources of data may be the secondary sources of data are the information received from the books, journals, newspapers, published reports and dissertation etc. The major sources of secondary data are:

-) Economic survey, Ministry of Finance
-) Nepal Rastra Bank Directives
-) Nepal Rastra Bank Samachar
-) Annual General Reports of the concerned commercial banks.
-) National and international newspaper, journals, magazines etc.
-) And many other books as far as possible.
-) Different websites

3.5 Data Collection Procedure

The required information was collected by conducting visit to the branch office of each bank at kathmandu, consulting library at Nepal Commerce Campus and Shanker Dev Campus, Internet Surfing and related text books. The annual reports of each Bank for the study period were obtained from its kathmandu branch through personal approach and internet surfing to the banks' official website. NRB regulatory directives, Statistics of the Commercial Banks of Nepal and other related publication were obtained through internet surfing to NRB's official website and periodicals. Existing literature on the subject matter was collected from various research papers placed in Western Regional Library (T.U.),

Pokhara, Library of Nepal Commerce Campus and Central Library (T.U.). Likewise, the review of working papers conducted by various international scholars on the related matter was done through internet surfing to various websites.

3.6 Data Processing

The financial data from the published documents and audited financial statements were manually extracted into the computer files of Microsoft Excel program which acted as master database file. The data was refined further into spreadsheets to carry out financial ratio calculation and graphical illustrations through mathematical functions and Chart program of the Excel program.

3.7 Tools for Analysis:

Few statistical packages such as Excel are used to process and analyze information. Secondary information collected from annual general reports of the sample banks was first tabulated in Excel spreadsheet and then analyzed using formula and charts of the same software. For these statistical tools such as correlation analysis is done and in some cases, financial tools such as Returns on assets have also been made. Suitable tools such as descriptive statistics, Mean, Standard Deviation, etc. were done wherever necessary.

Statistical tools

In this research, following statistical tools are used

Average:

Average is defined as sum of observations divided by their number in the selected sample.

$$\text{Average (mean)} = \frac{\text{Sum of observations}}{\text{Number of values}}$$

$$\bar{X} = \frac{\sum X}{N}$$

Coefficient of correlation (r):

The correlation coefficient indicates the linear relationship between two or more variables. The measures of correlation called the “correlation coefficient” can be summarized in one figure, the degree and direction of movement. It can be calculated by using the method of Karl Person’s correlation coefficient, because it is one of the widely used mathematical methods of calculation, the correlation coefficient between two variables. In symbolically, it is defined as:

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{N})(\sum Y^2 - \frac{(\sum Y)^2}{N})}}$$

Assumptions

-) If r = 1, there is positively perfect correlation between the two variables.
-) If r = -1, there is negatively perfect correlation between the two variables.
-) If r = 0, the variables are uncorrelated.

The nearer the value of r to +1, the closer will be the relationship between two variables and the nearer the value of r, the lesser will be the relation.

Probable error (P.E):

The probable error of the correlation coefficient helps to interpret its value. P.E., which is the measure of testing the reliability of correlation coefficient, denotes it. If r be the calculated value of r from a sample of n pair of observation the P.E. is denoted by

$$P.E. = \frac{0.6745(\sum Zr^2)}{\sqrt{n}}$$

It can be interpreted to know weather its calculated value of r is significant or not in the following ways.

-) If r < PE, it is Insignificants perhaps there is no evidence of correlation

) If $r > 6PE$, it is significant.

If there are other causes, nothing can be concluded. The probable error of correlation may be used to determine the limits within which the population correlation coefficient lies. The limits for population correlation are $r \pm PE$.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction:

This chapter deals with data presentation, analysis and interpretation following the research methodology presented in the third chapter. Data presentation and analysis are the central steps of the study. The main purpose of this chapter is to analyze and elucidate the collected data to achieve the objective of the study following the conversion of unprocessed data to an understandable presentation. The chapter deals with the main body of the study.

4.2 Data presentation and Analysis of Sample Banks:

4.2.1 Data Presentation and Analysis of “ Kumari Bank Limited”:

Table 4.2.1 (1)

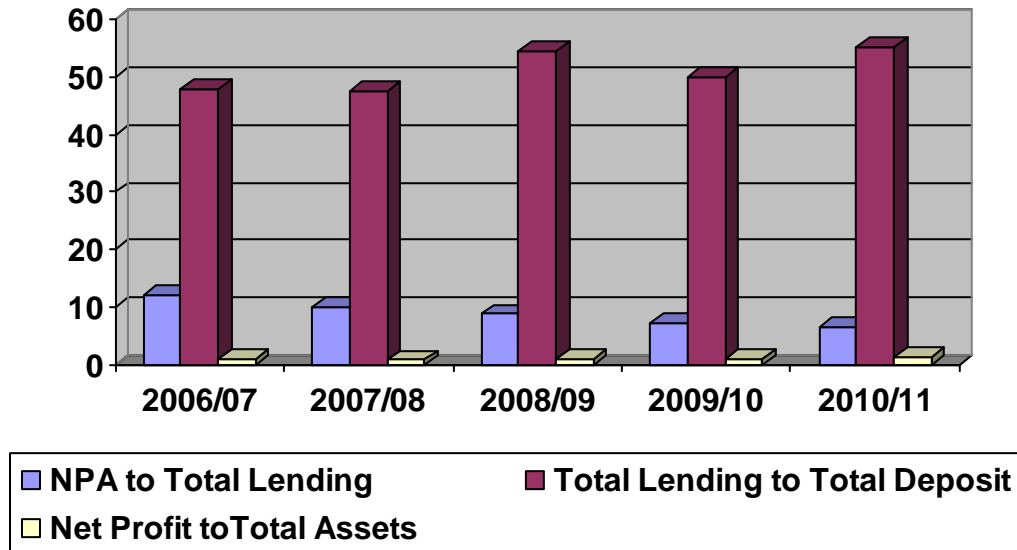
Relation between NPA, Net profit, Total lending and Total deposit

Ratio / year	2006/07	2007/08	2008/09	2009/10	2010/11	Mean
NPA to Total Lending	12.10	10.08	8.88	7.44	6.60	9.2
Total Lending to Total Deposit	47.89	47.61	54.30	50.07	55.27	51.03
Net Profit to Total Assets	1.14	0.91	1.06	1.11	1.55	1.15

Source: Annual reports of the concern bank of fiscal year 2006/07 to 2010/11

Figure No. 4.2.1 (1)

Relation between NPA, Net Profit, Total Lending and Total Deposits



From Table and Figure 4.2.3. (1), it can be said that the ratio between the Non performing assets and total lending was found to decreasing. It was found to be 12.10 % for the fiscal year 2006/07 which was found to be 6.60 % at the end of fiscal year 2010/11. The average ratio between NPA and total lending of five years period was 9.02 %. The decreasing trend of NPA to total lending ratio indicates the effectiveness in the management of NPA.

The total lending to total deposit ratio was following increasing trend. It was found to be 47.89 % for the fiscal year 2006/07 which has increased to 55.27 % for the end of year 2010/11. Although it has been decreasing to 50.07 % for the fiscal year 2009/10. The average ratio between total lending to total deposit of five years period was 51.03 percent.

And the net profit to total assets ratio was also found to be increasing, it was found to be - 1.14 % in the fiscal year 2006/07 and it becomes to 1.55 % for the fiscal year 2010/11.

Although it has increasing to 0.91 % for the fiscal year 2007/08. It shows a good trend of increasing the profit in comparison to total assets of the bank shows that the bank is able to increase its profit over the five years. The average ratio between net profit to total assets of five years period was 1.15 %.

Table 4.2.1 (2)

Relation between Net Profit and Total NPA

Fiscal year	Net Profit	Total NPA
2006/07	235,023,510	1,156,041,462
2007/08	212,128,485	1,092,839,487
2008/09	263,053,495	1,147,462,638
2009/10	308,275,171	1,001,347,320
2010/11	457,458,000	1,040,757,823

Source: Annual reports of the concern bank of fiscal year 2006/07 to 2010/11

In Table 4.2.3. (2), shows that the status of non-performing assets (NPA) and net profit of the bank in different years, in fiscal year 2006/07, the bank had NPA amount to Rs 1156041462 and bank's net profit amount to be Rs 235023510. In fiscal year 2007/08 the NPA amount to Rs. 1092839487 i.e. NPA decreased by Rs 63201975 (i.e.5.47 %) in comparison of previous year. As the result the bank decrease its profit by Rs 22895025 in comparison of previous year and net profit reached amounted to Rs 21212885 at the end of fiscal year 2007/08.

In fiscal year 2008/09, unfortunately the NPA amount increased by Rs 54623151 (i.e. 5.0 %) in comparison of previous year. As the result the bank could able to increase its net profit. The net profit increased by Rs 50925010 (i.e.24.01 %) in comparison to previous year and reached amounted Rs.263053495 at the end of the fiscal year.

In fiscal year 2009/10 the banks NPA decreased by 12.73 % i.e.Rs 146115318 and reached to Rs.1001347320. As the result the net profit of the banks increased and reached to Rs 308275171 at the end of fiscal year 2009/10.

Similarly, in fiscal year 2010/11, the NPA increased by 3.94 % i.e. Rs 3910503 and reached to amount Rs 1040757823. The net profit highly increased to amount Rs 149182829 i.e.48.39% in comparison with previous year's net profit.

There is no doubt that the net profit of the bank affected by non performing assets. But NPA is not any cause for increment and decrement of the net profit. There are many factors other than NPA's, which affect the profit of the bank. So the bank should continue to control over the non performing assets.

Loan loss provisioning of Kumari Bank Ltd:

The loan loss provision maintains by Kumari Bank Ltd. is presented in the table 4.2.3. (3)

Table 4.2.1 (3)

Loan loss provisioning of Kumari Bank Ltd:

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	0.99	1.00	1.00	1.00	1.01
Sub-standard loan	25% of sub-standard loan	24.29	27.92	26.08	60.20	57.78
Doubtful loan	50% of doubtful loan	48.22	49.13	50.71	47.23	68.16
Bad loan	100% of loss loan	94.50	96.60	97.79	99.54	100.26

Source: Annex 1(e)

Commercial banks have to maintained loan loss provision as per the NRB's directives for the commercial bank. In fiscal year 2006/07, the bank unable to maintain the loan loss provision in all classes. The bank made 0.99 % loan loss provision for pass loan which was slightly lower than the requirement i.e.1 %. Similarly the bank made 24.29 %, 48.22 % and 94.50 % loan loss provision for substandard, doubtful and bad loan which was lower than as per the NRB's directives.

In fiscal year 2007/08, Loan loss provision for pass loan exactly met the NRB's directives, which were 1 percent of pass loan. The similarly, the bank made 27.92 % % loan loss provision for sub-standard which was more than as per NRB's directives. It was found than the bank unable to maintain loan loss provision for doubtful and bad loan as per the NRB's directives.

Fiscal year 2008/09, Loan loss provision for pass loan exactly met the NRB's directives, which was 1 percent of pass loan. The Similarly, the bank made 26.08 % and 50.71 % loan loss provision for sub-standard and doubtful which was more than as per NRB's directives. It was found than the bank unable to maintain loan loss provision for bad loan as per the NRB's directives. The bank provisioned 97.79 % for bad loan.

In fiscal year 2009/10, Loan loss provision for pass loan exactly met the NRB's directives, which was 1 percent of pass loan. Similarly, the bank made 60.20 % loan loss provision for sub-standard which was highly more than as per NRB's directives. It was found than the bank unable to maintain loan loss provision for doubtful and bad loan as per the NRB's directives. The bank provisioned 47.23 % and 99.54% for doubtful and bad loan.

In fiscal year 2010/11, the bank made 1.01 % and 100.26 % for pass loan and bad loan which was slightly more than the requirement i.e. more than 1 % and 100 %. Similarly,

the bank made 57.78 % and 68.16 % loan loss provision for sub-standard and doubtful loan which was highly more than as per NRB’s directives.

It is found that the bank could not maintained loan loss provision, perfectly in accordance to the NRB’s directives. The bank maintained higher than requirement for one class loan when lower for another class. Therefore, the bank should give priority to maintain loan loss provision as requirement as per NRB’s directives.

4.2.2 Data Presentation and Analysis of “ Nepal Investment Bank”:

Table No. 4.2.2 (1)

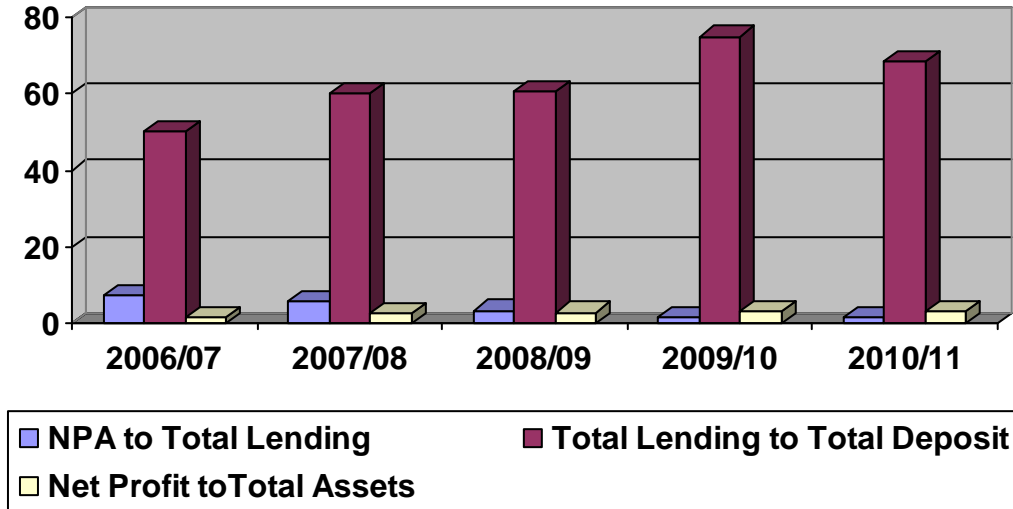
Relation between NPA, Net profit, Total lending and Total deposit

Ratio / year	2006/07	2007/08	2008/09	2009/10	2010/11	Mean
NPA to Total Lending	7.14	5.54	3.35	1.32	1.38	3.75
Total Lending to Total Deposit	50.31	60.34	60.55	75.05	68.63	62.98
Net Profit to Total Assets	1.53	2.43	2.73	3.06	3.23	2.60

Source: Annual reports of the concern bank of fiscal year 2006/07 to 2010/11

Figure No.4.2.6 (1)

Relation between NPA, Net Profit , Total Lending and Total Deposits



From Table 4.2.2 (1), it can be said that the ratio between the Non performing assets and Total lending was found to decreasing trend, although it has been slightly increased to 1.38% for the year 2010/11. It was found to be 7.14% for the fiscal year 2006/07 which was found to be 1.38% at the end of fiscal year 2010/11. The average ratio between NPA and total lending of five years period was 3.75 %. The decreasing trend of NPA to total lending ratio indicates the effectiveness in the management of NPA.

The total lending to total deposit ratio was following increasing trend. It was found to be 50.31% for the fiscal year 2006/07 which has increased to 75.05 % for the end of year 2009/10. It was decreased in the fiscal year 2010/11 and reached to 68.03 %. The average ratio between total lending to total deposit of five years period was 62.98 %.

And the net profit to total assets ratio was also found to be increasing during the study period. It was 1.53 % for the fiscal year 2006/07 which was increased to 3.23 % for the fiscal year 2010/11 and the average ratio between net profits to total assets of five years

In Table 4.2.2. (2), shows that the status of non-performing assets (NPA) and net profit of the bank in different years, in fiscal year 2006/07. The bank had NPA amount to Rs 556877682 and bank's net profit amount to be Rs 271638612. In fiscal year 2007/08 the NPA amount to Rs. 449630763 i.e. NPA decreased by Rs 107246919 (i.e.19.26 %) in comparison of previous year. As the result the bank increase its profit by Rs 144597199 in comparison of previous year and net profit reached amounted to Rs 416235811 at the end of fiscal year 2007/08. The profit was increased for the following years and the non performing assets were decreasing during the study period except 2010/11.

Similarly, in fiscal year 2010/11, the NPA increased by 26.38 % i.e. Rs 38117587 and reached to amount Rs 182624480. The net profit increased by amount Rs 116626690 i.e.22.49 % in comparison with previous year's net profit and reached to Rs 635262439. This trend of non performing assets indicates that the bank could not able concentration towards NPA in fiscal year 2010/11. Above analysis clearly states that the bank could able to increase its net profit due to decrement in non performing assets. So the bank should be continued to control over NPA.

Loan loss provisioning of Nepal Investment Bank:

The loan loss provision maintains by Nepal Investment Bank is presented in the Table 4.2.2.(3).

Loan loss provisioning of Nepal Investment Bank

Table 4.2.2 (3)

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.95	1.60	1.55	2.18	1.64
Sub-standard loan	25% of sub-standard loan	24.08	24.01	23.22	31.10	67.94
Doubtful loan	50% of doubtful loan	49.55	48.95	49.40	73.20	47.00
Bad loan	100% of loss loan	69.95	85.14	97.19	97.05	94.55

Source: Annex 1(f)

Commercial banks have to maintained loan loss provision as per the NRB's directives for the commercial bank. In fiscal year 2006/07, Loan loss provision for pass loan was 1.95 % which was higher than the requirement as per NRB's directives. But loan loss provision for substandard loan, doubtful loan and bad loan was found lower than the NRB's directives. The bank provisioned 24.08 %, 49.55 % and 69.55 % respectively for the substandard, doubtful and bad loan which was highly lower than that of requirement. The loan loss provision for bad loan was too much lower than NRB's directives.

In fiscal year 2007/08, Loan loss provision for pass loan was 1.60 % which was higher than the requirement as per NRB's directives. But loan loss provision for substandard loan, doubtful loan and bad loan was found lower than the NRB's directives. The bank

provisioned 24.01 %, 48.95 % and 85.14 % respectively for the substandard, doubtful and bad loan which was highly lower than that of requirement.

Similarly in fiscal year 2008/09, Loan loss provision for pass loan was 1.55 % which was higher than the requirement as per NRB's directives. But loan loss provision for substandard loan, doubtful loan and bad loan was found lower than the NRB's directives. The bank provisioned 23.22 %, 49.40 % and 97.19 % respectively for the substandard, doubtful and bad loan which was highly lower than that of requirement.

Fiscal year 2009/10, Loan loss provision for pass loan, sub standard loan and doubtful loan as per NRB's directives, which was 1 percent of pass loan 25% of sub standard loan and 50% of doubtful loan respectively. The bank made 2.18 % loan loss provision for pass loan, 31.10% of sub standard loan and 73.20 % of doubtful loan respectively which were higher than requirement. It was found that the bank unable to maintain loan loss provision for bad loan as per the NRB's directives. The bank made 97.05 % provisioned for bad loan.

Fiscal year 2010/11, Loan loss provision for pass loan and sub standard loan as per NRB's directives, which was 1 percent of pass loan 25% of sub standard loan respectively. The bank made 1.64 % loan loss provision for pass loan and 67.94 % of sub standard loan respectively which were higher than requirement. It was found that the bank unable to maintain loan loss provision for bad loan and doubtful loan as per the NRB's directives. The bank made 97.05 % and 47.00 % provisioned for bad loan and doubtful loan respectively.

It is found that the bank could not maintained loan loss provision, perfectly in accordance to the NRB's directives. The bank maintained higher than requirement for one class loan

when lower for another class. Therefore, the bank should give priority to maintain loan loss provision as requirement as per NRB's directives.

4.2.2 Data Presentation and Analysis of “Machhapuchchhre Bank Limited”:

Table 4.2.3 (1)

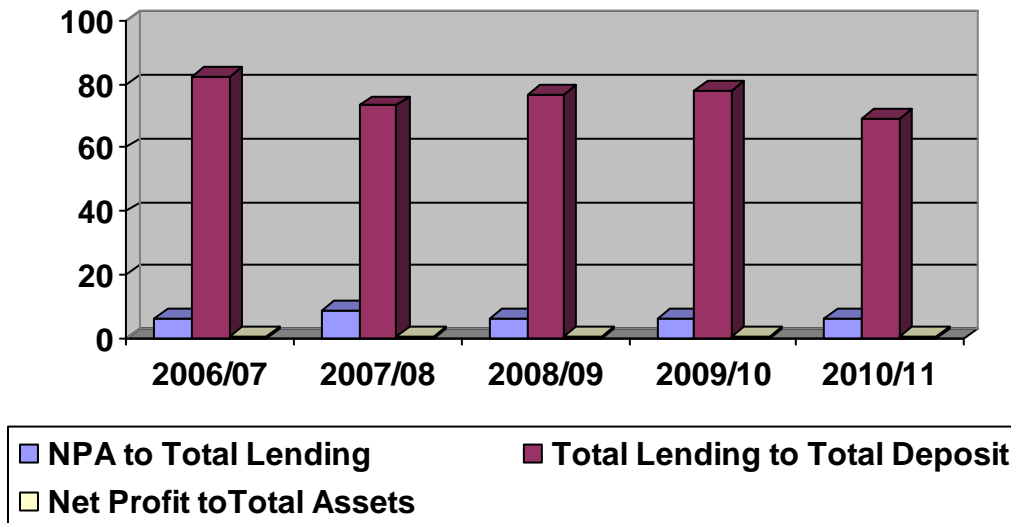
Relation between NPA, Net profit, Total lending and Total deposit

Ratio / year	2006/07	2007/08	2008/09	2009/10	2010/11	Mean
NPA to Total Lending	6.32	8.90	6.25	6.54	6.13	6.83
Total Lending to Total Deposit	82.27	73.27	76.85	77.87	69.32	75.92
Net Profit to Total Assets	0.58	0.64	0.72	0.55	0.90	0.68

Source: Annual reports of the concern bank of fiscal year 2006/07 to 2010/11

Figure No. 4.2.2 (1)

Relation between NPA, Net Profit, Total Lending and Total Deposit



From Table and Figure 4.2.3. (1) , it can be said that the ratio between the Non performing assets and total lending was found to fluctuating trend, although it has been increase to 8.9 % for the year 2007/08 and decreased to 6.25 % for the fiscal year

2008/09. Again it was found to be 6.54 % for the fiscal year 2009/10 and it was found to be 6.13 % at the end of fiscal year 2010/11. The average ratio between NPA and total lending of five years period was 6.83 %. The bank should continue to control over the non performing assets.

Similarly the total lending to total deposit ratio was following decreasing trend. It was found to be 82.27% for the fiscal year 2006/07 and it becomes to 69.32 % at the end of the fiscal year 2010/11. Although it was found to be increasing for the fiscal year 2008/09 and 2009/10. The average ratio between total lending to total deposit of five years period was 75.92 %.

And the net profit to total assets ratio was also found to be increasing, it was found to be 0.58 % in the fiscal year 2006/07 and it becomes to 0.90 % for the fiscal year 2010/11. It shows that the profit was increasing in comparison to total assets of the bank, showing the improvement in the profit of the bank and the average ratio between net profit to total assets of five years period was 0.68 %.

Table No. 4.2.3 (2)

Relation between Net Profit and Total NPA

Fiscal year	Net Profit	Total NPA
2006/07	40,843,769	289,766,401
2007/08	48,748,221	426,947,082
2008/09	60,851,673	345,821,458
2009/10	57,386,634	441,017,011
2010/11	117,001,973	505,336,919

Source: Annual reports of the concern bank of fiscal year 2006/07 to 2010/11

Table 4.2.3 (2), shows that the status of non-performing assets (NPA) and net profit of the bank in different years, in fiscal year 2006/07. The bank had NPA amount to Rs 289766401 and bank's net profit amount to be Rs 40843769. In fiscal year 2007/08 the NPA amount to Rs. 426947082 i.e. NPA increased by Rs 137180681 (i.e.47.34 %) in comparison of previous year. As the result the bank increase its profit by Rs 7904452 in comparison of previous year and net profit reached amounted to Rs 48748221 at the end of fiscal year 2007/08.

In fiscal year 2008/09, unfortunately the NPA amount decreased by Rs 81125624 (i.e. 19 %) in comparison of previous year. The net profit increased by Rs 12103452 (i.e.24.83 %) in comparison to previous year and reached amounted Rs.60851673 at the end of the fiscal year. In fiscal year 2009/10 the banks NPA increased by 27.53 % i.e. Rs 95195553 and reached to Rs.441017011. As the result the net profit of the banks decreased by 5.69% at the end of fiscal year 2009/10.

Similarly, in fiscal year 2010/11, the NPA increased by 14.58 % i.e. Rs 64319908 and reached to amount Rs 505336919. The net profit highly increased by amount Rs

59612339 i.e.103.88 % in comparison with previous year's net profit and reached to Rs 117001973.

There is no doubt that the net profit of the bank affected by NPA. But NPA is not only a cause for increment and decrement of the net profit. There are many other causes that affect the profit of the bank. But NPA would be a major cause of decreasing profit of the bank so the bank has to control its NPA as efficiently as possible.

Loan loss provisioning of Machhapuchchhre Bank Ltd:

The loan loss provision maintains by Machhapuchchhre Bank Ltd. is presented in the Table 4.2.3 (3).

Loan loss provisioning of Machhapuchchhre Bank Ltd:

Table 4.2.3 (3)

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.19	1.19	0.94	0.95	0.96
Sub-standard loan	25% of sub-standard loan	26.11	22.41	13.39	20.94	17.71
Doubtful loan	50% of doubtful loan	50.00	52.17	48.39	15.67	29.18
Bad loan	100% of loss loan	100.22	89.22	95.83	98.00	99.13

Source: Annex 1(d)

Commercial bank has to maintained loan loss provision as per the NRB's directives for the commercial bank. In fiscal year 2006/07, Loan loss provision for doubtful loan exactly met the NRB's directives, which was 50 percent of doubtful loan. Similarly, the

bank made 1.19 %, 26.11 % and 100.22 % loan loss provision for pass loan, sub-standard and bad loan which was higher than requirement as per NRB's directives.

In fiscal year 2007/08, Loan loss provision for pass loan and doubtful loan higher than the NRB's directives, which was 1 percent of pass loan and 50 percent of doubtful loan? The similarly, the bank made 1.19 % and 52.17 % loan loss provision for pass loan and doubtful loan. It was found that the bank unable to maintain loan loss provision for substandard and bad loan as per the NRB's directives.

Fiscal year 2008/09, It was found that the bank unable to maintain loan loss provision for all classes of loan as per the NRB's directives. The bank provisioned 0.94 %, 13.39 %, 48.39 % and 95.83 % for pass, substandard, doubtful and bad loan. In fiscal year 2009/10, It was found that the bank unable to maintain loan loss provision for all classes of loan as per the NRB's directives. The bank provisioned 0.95 %, 20.94 %, 15.67 % and 98.0 % for pass loan, substandard loan, doubtful loan and bad loan.

In fiscal year 2010/11, It was found that the bank unable to maintain loan loss provision for all classes of loan as per the NRB's directives. The bank provisioned 0.96 %, 17.71 %, 29.18 % and 99.13 % respectively for pass loan, substandard loan, doubtful loan and bad loan.

It is found that the bank could not maintained loan loss provision, perfectly in accordance to the NRB's directives. The bank maintained lower than requirement. Therefore, the bank should give priority to maintain loan loss provision as requirement as per NRB's directives.

- ❖ This study is concerned to find out the level of NPA and its effects on the returns on assets and the other factors of the Nepalese commercial bank. This study especially focuses on three commercial banks of Nepal, viz. Laxmi, Nepal Credit and Commercial and NIBL only, out of the 31 commercial banks operating in the banking industry of Nepal.
- ❖ The correlation coefficient between ROA and level of NPA is found to NIBL bank has high degree of negative correlation i.e. the ROA is indirectly dependent on the level of NPA, higher the NPA the lower will be the returns on assets and vice versa.. MBL have the moderate degree of negative correlation. Only 32 % of return is affected by level of NPA and remaining is affected by other factor. KBL has the low degree of correlation coefficient. Only 7 % of KBL on the profitability is affected by NPA and rest is affected by other factor.
- ❖ The correlation coefficient between total lending and non performing assets of the commercial banks is found to be positive for each of the bank except that the MBL and NIBL Bank Limited under the study period. KBL bank has high degree of positive correlation i.e. the total lending is directly dependent on the level of NPA, higher the NPA the more will be the total lending of banks and vice versa. MBL has the moderate degree negative correlation coefficient. NIBL Bank Limited has high degree negative correlation coefficient. 66% on the lending is affected by the level of NPA and remaining only 34 % is affected by other factors.
- ❖ In overall, the performance of the NIBL bank is found to be satisfactory as the level of NPA is gradually decreasing and net profit is gradually increasing over the years covered by this study period. Followed by KBL and MBL respectively.
- ❖ The percentage of performing assets to total deposit of MBL have been found to be 50,14 % which was higher than other banks.
- ❖ The percentage of performing assets to total assets of the MBL have been found to be 45.04 % which was lower than other banks.

- ❖ The case of Machhapuchchhre Bank Limited (KBL), total NPA and net profit have been found to be increasing, NPA to total lending ratio have been found to be slightly decreasing over the years as it was 6.32 % in the fiscal year 2006/07 and increased to 6.13 % in the fiscal year 2010/11. The total lending to total deposit ratio is found to be decreasing over the five years period. The net profit to total assets ratio is found to be increasing over the years as it was 0.58 % in the fiscal year 2006/07 and decreased to 0.90 % in the fiscal year 2010/11.
- ❖ In case of Nepal Investment Bank (NIBL), total NPA of the bank have been found to be decreasing and net profit have been found to be increasing, NPA to total lending ratio have been found decreasing over the years as it was 7.14 % in the fiscal year 2006/07 and increased to 1.38 % in the fiscal year 2010/11. The total lending to total deposit ratio is found to be increasing over the five years period it was 50.31 % in the fiscal year 2006/07 and slightly decreased to 68.63 %. The net profit to total assets ratio is found to be increasing over the years as it was 1.53 % in the fiscal year 2006/07 and decreased to 3.23 % in the fiscal year 2010/11.
- ❖ In case of the Kumari Bank Limited (MBL), total NPA have been decreased and net profit have been found to be increasing, NPA to total lending ratio have been found decreasing over the years as it was 12.10 % in the fiscal year 2006/07 and increased to 6.60 % in the fiscal year 2010/11. The total lending to total deposit ratio is found to be increasing over the five years period. The net profit to total assets ratio is found to be increasing over the years as it was 1.14 % in the fiscal year 2006/07 and decreased to 1.55 % in the fiscal year 2010/11.

CHAPTER V

SUMMARY CONCLUSION AND RECOMMENDATIONS

Although this chapter is the important chapter for the research because this chapter is the extracts of all the previously discussed chapters. This chapter consists of mainly three parts: summary, conclusion and recommendation. In summary part, revision or summary of all four chapters is made. In recommendation part, suggestion and recommendation is made based on the result and experience of thesis. Recommendation is made for improving the present situation to the concerned parties as well as for further research.

5.1 Summary:

Although banking is a service, it has been a great business to the entrepreneurs in modern age. A commercial bank does same business to earn profit by its transaction. Generally, commercial bank does the functioning pool between the saving communities and need group of the society. They accept deposit from the public on the condition that they pay the deposit on demand or on short notice. The banks mobilize the funds to different need group on their demand of loan. Apart from accepting deposit, banks are engaged in the exchanging currency, operating other commercial transactions viz. purchase and discount of bills other financial instruments. Among the many items of transactions of the bank, accepting deposit and lending or giving loan and advances occupy major space in its transaction. So bank's major concern is found to be concentrated on the loan.

A commercial bank means the bank, which deals with exchanging currency, accepting deposits, giving loans doing other various commercial transactions. Therefore, the major function of commercial bank is to accept deposits and provide loans.

There is not so long history of commercial bank in Nepal. Nepal Bank Limited established in 1994 B.S. was the first commercial bank of the Nepal. But now there are twenty six commercial banks all over the country and they have been expanding their services by establishing branches in every corner of the country.

The assets of commercial bank indicate the manner in which the funds entrusted to the bank are employed. The successful working of the bank depends on ability of the management to distribute the fund among the various kind of investment known as assets outstanding loan advance of the bank. These assets constitute primary source of income to the bank. As being a business unit a bank aims at making huge profit since loan and advances are more profitable than any other assets of the bank, it is willing to lend as much as its fund as possible. But the bank has to be careful about the repayment of loan and interest giving loan. If the bank is too timid, it may fail to obtain the adequate return on the fund, which is confined to it for use. Similarly, if the bank is too liberal, it may easily impair its profits by bad debts. Therefore, bank should not forget the reality that most of the bank failures in the world are due to shrinkage in the value of the loan and advances.

Despite of being loan and advances more profitable than other assets, it creates risk of non repayment for the bank. Such risk is known as credit risk or default risk. Therefore, like other assets, the loan and advances are classified into performing and non performing assets on the basis of overdue aging schedule. If the dues in the form of principal and the interest are not paid, by borrower within a maturity period, that amount of principal and interest is called non performing loan or assets. It means NPA could wreak branch profitability both through loss of interest income and need to write off the principal loan amount. Performing assets have multiple benefits to the company as well as to the society while non performing assets erode even existing capital of the bank.

Escalating level of NPAs has been becoming great problem in banking business in the world. In this context, Nepal can not be run off from this situation. The level of NPA in Nepalese banking system is very alarming. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling non performing assets and the issue of becoming more and more unmanageable day by day. It is well known from different financial reports, newspapers and news that the total NPA in Nepalese banking system is about 32 Billion while it is very worse in case of two largest commercial banks RBB and NBL. (Nepal Rastra Bank, Banking and financial statistics, 2006 : 06)

Therefore, this study is concerned to find out the level of NPA and its effects on the returns on assets and the other factors of the Nepalese commercial bank. This study especially focuses on two commercial banks of Nepal, viz. Everest Bank and Nepal SBI Bank only, out of the 26 commercial banks operating in the banking industry of Nepal.

As per the nature and requirement of the study, secondary data are used with the descriptive and analytical research design, for this research study five years data from fiscal year 2003/04 to 2007/08 has been used. Data are tabulated and presented as per the requirement of the study.

For the analysis of data different statistical tools like arithmetic mean, standard deviation, coefficient of correlation, coefficient of variation, coefficient of determination, probable error of correlation, regression graph, diagrams and hypothesis testing have been used. Similarly, financial tools such as ratio analysis and variance analysis have also been used. This study has been organized in five main chapters consisting of introduction, review of literature, research methodology, presentation and analysis of data and summary,

conclusion and recommendation. Besides this bibliography and appendix has also been included in this research study.

5.2 Conclusion:

- ✚ Every commercial Bank should follow the NRB directives. Commercial bank has to maintain loan loss provision as per NRB directives for the commercial bank. According to NRB directives, loan loss provision for pass loan should be 1 % of pass loan, for substandard loan it should be 25 % of substandard loan, for doubtful loan it should be 50 % of doubtful loan and for bad loan it should be 100 % of bad loan.
- ✚ In overall, the performance of the NIBL bank is found to be satisfactory as the level of NPA is gradually decreasing and net profit is gradually increasing over the years covered by this study period.
- ✚ The average ratio of restricted loan to total loan of five years has been found higher in KBL which was 6.08 %. The average ratio of doubtful loan to total loan of five years was found higher in KBL.
- ✚ MBL and NIBL can able to decreased the level of NPA during the study period as a result they can able to increased to net profit of the banks. In case of Machhapuchchhre Bank Limited, they able to increase net profit of the bank although they can not control the level of non performing assets.
- ✚ The profitability of Nepalese commercial bank is affected by non performing assets of bank. When the level of non performing assets is increasing then the

profit of the bank is decreasing and vice versa. Therefore the NPA and profitability of the bank have negative correlation.

5.3 Recommendations:

- ✚ Every commercial bank should maintain loan loss provision as per NRB's directives regarding non performing assets.
- ✚ Political influences in the loan disbursement should be avoided as it may lead to worse condition to the bank as it may increase the non performing loan of the bank.
- ✚ Loan must be given if the banker is satisfied that the borrower can repay money from the cash flow generated from operating activities. However, the banks want to ensure that their loan is repaid even in case of failure of business. To prevent Diversification of the loan should be managed by the individual banks. In the context of Nepal it is provided to the borrower so often go to the bank not in the new sector. Default by older borrower can be found, which should be avoided.
- ✚ Corporate structure of bank plays key role in the effective loan management. Being loan a risky asset, efforts should be made to have proper control in every steps of loan management. The banks should establish separate department for credit appraisal, documentation, disbursement, inspection and recovery of loan which have possibility of finding mistakes of one department by the others, so that the effectiveness can be achieved.

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Annex 1(a)

KUMARI BANK LIMITED

Loan Loss provision maintained by Kumari Bank

Year	Pass loan(PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	S L	Provision for SL	%Provision for SL	D L	Provision for DL	%Provision for DL	B L	Provision For BL	% Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	1,843,850,969	27,160,388	1.47	286,648,537	88,165,637	30.76	140,207,147	70,507,433	50.29	14,785,697	14,326,572	96.89
2007/08	2,315,583,586	38,961,188	1.68	158,672,493	44,955,970	28.33	108,390,314	57,089,881	52.67	39,713,965	39,713,965	100.00
2008/09	2,985,450,017	40,588,948	1.36	16,643,478	3,920,970	23.56	43,877,357	22,459,321	51.19	176,777,500	175,381,457	99.21
2009/10	2,887,539,940	58,523,374	2.03	59,576,995	14,090,013	23.65	100,905,248	48,149,309	47.72	400,646,029	396,648,344	99.00
2010/11	2,777,631,557	28,171,642	1.01	52,430,788	12,686,798	24.20	26,561,929	12,999,715	48.94	1,260,250,073	1,257,178,999	99.76

Annex 1(b)

NEPAL INVESTMENT BANK LIMITED

Loan Loss provision maintained by Nepal Investment Bank

Year	Pass loan (PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	SL	Provision for SL	%Provision for SL	DL	Provision for DL	%Provision for DL	BL	Provision for BL	%Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	4,001,840,315	68,657,091	1.72	15,732,509	3,933,127	25.00	13,328,276	6,664,138	50.00	13,327,331	16,496,033	123.78
2007/08	4,938,390,206	80,423,477	1.63	41,954,709	10,488,677	25.00	38,055,772	19,027,886	50.00	31,180,622	31,180,622	100.00
2008/09	5,991,085,718	135,522,405	2.26	11,082,572	2,770,643	25.00	40,494,733	20,247,366	50.00	53,178,064	53,178,064	100.00
2009/10	7,453,205,999	74,532,060	1.00	4,408,738	1,102,184	25.00	1,977,471	988,735	50.00	122,421,536	122,421,536	100.00
2010/11	9,757,195,136	97,571,951	1.00	10,669,326	2,667,331	25.00	683,784	341,892	50.00	117,882,680	117,882,680	100.00

Annex 1(c)

MACHHAPUCHCHHRE BANK LIMITED

Loan Loss provision maintained by Machhapuchchhre Bank

Year	Pass loan (PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	SL	Provision for SL	%Provision for SL	DL	Provision for DL	%Provision for DL	BL	Provision for BL	% Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	6,808,770,842	77,991,234	1.15	749,851,030	165,534,796	22.08	422,213,213	148,099,029	35.08	103,151,626	59,943,610	58.11
2007/08	6,948,236,345	117,313,510	1.69	166,127,332	42,010,116	25.29	577,611,361	288,805,680	50.00	269,536,019	265,401,569	98.47
2008/09	8,602,513,914	144,025,487	1.67	127,933,703	31,983,426	25.00	168,578,901	84,276,675	49.99	745,668,223	735,665,552	98.66
2009/10	7,793,969,752	194,937,095	2.50	120,628,590	30,157,147	25.00	160,777,414	80,388,707	50.00	1,551,537,781	1,533,740,211	98.85

Annex 1(d)

Machhapuchchhre Bank Limited

Loan Loss provision maintained by Machhapuchchhre Bank

Year	Pass loan(PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	B L	B L	B L	D L	Provision for DL	%Provision for DL	B L	Provision for BL	% Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	3,937,074,298	46,887,392	1.19	89,285,664	23,315,201	26.11	61,821,433	30,910,717	50.00	138,659,304	138,959,304	100.22
2007/08	4,144,846,125	49,521,539	1.19	121,498,598	27,225,697	22.41	166,868,350	87,053,186	52.17	138,580,134	123,639,748	89.22
2008/09	4,762,590,360	44,776,860	0.94	1,116,600	149,480	13.39	69,303,360	33,535,080	48.39	275,401,498	263,919,410	95.83
2009/10	5,886,791,147	55,863,325	0.95	11,912,170	2,494,642	20.94	6,515,490	1,020,691	15.67	422,589,350	414,128,352	98.00
2010/11	7,393,297,710	70,841,219	0.96	1,797,016	318,214	17.71	3,842,595	1,121,298	29.18	499,697,308	495,361,697	99.13

Annex 1(e)

STANDARD CHARTERED BANK NEPAL LIMITED

Loan Loss provision maintained by Nepal Credit and Commercial Bank

Year	Pass loan(PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	B L	B L	B L	D L	Provision for DL	%Provision for DL	B L	Provision for BL	% Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	8,401,096,542	83,123,176	0.99	246,746,162	59,933,182	24.29	140,455,627	67,729,448	48.22	410,408,245	387,824,703	94.50
2007/08	9,566,445,731	96,016,810	1.00	224,318,058	62,628,890	27.92	375,017,864	184,229,769	49.13	493,503,565	476,711,113	96.60
2008/09	11,275,992,182	112,782,502	1.00	423,163,354	110,380,076	26.08	54,474,884	27,624,508	50.71	669,824,400	654,994,536	97.79
2009/10	11,821,694,843	117,648,411	1.00	69,549,651	41,866,119	60.20	242,116,379	114,358,189	47.23	689,681,290	686,498,503	99.54
2010/11	14,055,103,815	141,354,553	1.01	107,227,888	61,953,985	57.78	228,498,188	155,755,034	68.16	705,031,747	706,896,393	100.26

Annex 1(f)

NIBL Bank Limited

Loan Loss provision maintained by NIBL Bank												
Year	Pass loan(PL)			Sub-standard loan (SL)			Doubtful loan (DL)			Bad loan (BL)		
	PL	Provision for PL	%Provision for PL	S L	Provision for SL	%Provision for SL	D L	Provision for DL	%Provision for DL	B L	Provision for BL	%Provision for BL
	1	2	3=2/1*100	4	5	6=5/4*100	7	8	9=8/7*100	10	11	12=11/10*100
2006/07	7,244,970,881	140,918,813	1.95	260,277,239	62,681,307	24.08	230,936,540	114,424,624	49.55	65,663,903	45,929,143	69.95
2007/08	7,664,053,458	122,587,932	1.60	76,311,974	18,320,228	24.01	279,117,410	136,619,817	48.95	94,201,379	80,204,259	85.14
2008/09	8,261,978,118	127,733,990	1.55	22,139,923	5,140,970	23.22	65,552,224	32,384,357	49.40	198,986,773	193,404,870	97.19
2009/10	10,802,229,684	235,345,571	2.18	22,072,562	6,865,463	31.10	1,934,092	1,415,926	73.21	120,500,239	116,939,615	97.05
2010/11	13,096,157,779	214,301,301	1.64	62,665,914	42,573,904	67.94	29,565,952	13,896,064	47.00	90,392,614	85,467,837	94.55

Annex: 1(a)

Loan loss provisioning of Kumari Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.47	1.68	1.36	2.03	1.01
Sub-standard loan	25% of sub-standard loan	30.76	28.33	23.56	23.65	24.20
Doubtful loan	50% of doubtful loan	50.29	52.67	51.19	47.72	48.94
Bad loan	100% of bad loan	96.89	100.00	99.21	99.00	99.76

Annex: 1(b)

Loan loss provisioning of Nepal Investment Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.72	1.63	2.26	1.00	1.00
Sub-standard loan	25% of sub-standard loan	25.00	25.00	25.00	25.00	25.00
Doubtful loan	50% of doubtful loan	50.00	50.00	50.00	50.00	50.00
Bad loan	100% of bad loan	123.78	100.00	100.00	100.00	100.00

Annex: 1(c)

Loan loss provisioning of Machhapuchchhre Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank			
		2006/07	2007/08	2008/09	2009/10
Pass loan	1% of pass loan	1.15	1.69	1.67	2.50
Sub-standard loan	25% of sub-standard loan	22.08	25.29	25.00	25.00
Doubtful loan	50% of doubtful loan	35.08	50.00	49.99	50.00
Bad loan	100% of bad loan	58.11	98.47	98.66	98.85

Annex: 1(d)

Loan loss provisioning of Machhapuchchhre Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.19	1.19	0.94	0.95	0.96
Sub-standard loan	25% of sub-standard loan	26.11	22.41	13.39	20.94	17.71
Doubtful loan	50% of doubtful loan	50.00	52.17	48.39	15.67	29.18
Bad loan	100% of bad loan	100.22	89.22	95.83	98.00	99.13

Annex: 1(e)

Loan loss provisioning of Nepal Credit and Commercial Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	0.99	1.00	1.00	1.00	1.01
Sub-standard loan	25% of sub-standard loan	24.29	27.92	26.08	60.20	57.78
Doubtful loan	50% of doubtful loan	48.22	49.13	50.71	47.23	68.16
Bad loan	100% of bad loan	94.50	96.60	97.79	99.54	100.26

Annex: 1(f)**Loan loss provisioning of NIBL**

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2006/07	2007/08	2008/09	2009/10	2010/11
Pass loan	1% of pass loan	1.95	1.60	1.55	2.18	1.64
Sub-standard loan	25% of sub-standard loan	24.08	24.01	23.22	31.10	67.94
Doubtful loan	50% of doubtful loan	49.55	48.95	49.40	73.21	47.00
Bad loan	100% of bad loan	69.95	85.14	97.19	97.05	94.55

Annex 2 (a)**KUMARI BANK LIMITED****Calculation of Performing assets to Total Asset, Total Lending & Total Deposit**

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	3,061,650,033	2,285,492,350	2,646,106,974	1,843,850,969	60.22	80.68	69.68
2007/08	3,440,167,990	2,622,360,358	2,959,744,445	2,315,583,586	67.31	88.30	78.24
2008/09	4,364,204,711	3,222,748,353	3,777,605,223	2,985,450,017	68.41	92.64	79.03
2009/10	4,494,904,359	3,685,134,707	4,031,220,989	3,124,006,435	69.50	84.77	77.50
2010/11	4,259,343,044	4,321,586,777	4,786,440,191	2,982,343,987	70.02	69.01	62.31
				Summation	335.46	415.40	366.75
					67.09	83.08	73.35

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (a)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	3,061,650,033	2,285,492,350	2,646,106,974	441,641,381	14.42	19.32	16.69
2007/08	3,440,167,990	2,622,360,358	2,959,744,445	306,776,772	8.92	11.70	10.36
2008/09	4,364,204,711	3,222,748,353	3,777,605,223	237,298,336	5.44	7.36	6.28
2009/10	4,494,904,359	3,685,134,707	4,031,220,989	501,128,272	11.15	13.60	12.43
2010/11	4,259,343,044	4,321,586,777	4,786,440,191	1,339,242,790	31.44	30.99	27.98
				Summation	71.37	82.97	73.75
					14.27	16.59	14.75

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (b)

NEPAL INVESTMENT BANK LIMITED

Calculation of Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	6,607,170,724	4,044,228,431	5,466,609,805	4,001,840,315	60.57	98.95	73.21
2007/08	8,052,209,125	5,049,581,309	6,694,963,060	4,938,390,206	61.33	97.80	73.76
2008/09	9,608,570,861	6,095,841,087	8,063,902,086	5,991,076,718	62.35	98.28	74.30
2009/10	11,732,516,418	7,900,090,271	10,097,690,989	7,771,282,526	66.24	98.37	76.96
2010/11	15,959,284,687	10,136,254,448	13,802,444,988	10,007,018,658	62.70	98.73	72.50
				Summation	313.19	492.13	370.73
					62.64	98.43	74.15

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (b)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	6,607,170,724	4,044,228,431	5,466,609,805	42,388,116	0.64	1.05	0.78
2007/08	8,052,209,125	5,049,581,309	6,694,963,060	111,191,103	1.38	2.20	1.66
2008/09	9,608,570,861	6,095,841,087	8,063,902,086	104,764,369	1.09	1.72	1.30
2009/10	11,732,516,418	7,900,090,271	10,097,690,989	128,807,745	1.10	1.63	1.28
2010/11	15,959,284,687	10,136,254,448	13,802,444,988	129,235,790	0.81	1.27	0.94
				Summation	5.02	7.87	5.95
					1.00	1.57	1.19

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (c)

MACHHAPUCHCHHRE BANK LIMITED

Calculation of Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	11,102,233,468	8,083,986,711	9,514,457,399	6,808,770,842	61.33	84.23	71.56
2007/08	11,918,508,528	7,961,511,057	10,591,081,091	6,948,236,456	58.30	87.27	65.60
2008/09	14,257,973,488	9,644,694,741	12,807,376,325	8,602,513,914	60.33	89.19	67.17
2009/10	13,277,150,678	9,626,913,537	12,125,578,259	7,793,969,752	58.70	80.96	64.28
				Summation	238.66	341.65	268.61
					59.67	85.41	67.15

Source: Annual Reports of concern bank fiscal year 2006/07 to 2009/10

Annex 2 (c)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	11,102,233,468	8,083,986,711	9,514,457,399	1,275,215,869	11.49	15.77	13.40
2007/08	11,918,508,528	7,961,511,057	10,591,081,091	1,013,274,712	8.50	12.73	9.57
2008/09	14,257,973,488	9,644,694,741	12,807,376,325	1,042,180,827	7.31	10.81	8.14
2009/10	13,277,150,678	9,626,913,537	12,125,578,259	1,832,943,785	13.81	19.04	15.12
				Summation	41.10	58.35	46.22
					10.28	14.59	11.56

Source: Annual Reports of concern bank fiscal year 2006/07 to 2009/10

Annex 2 (d)

Machhapuchchhre Bank Limited

Calculation of Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	7,021,141,146	4,584,394,939	5,572,470,018	4,294,628,538	61.17	93.68	77.07
2007/08	7,566,326,661	4,795,837,227	6,522,816,631	4,368,890,145	57.74	91.10	66.98
2008/09	8,440,405,808	5,531,833,738	7,198,327,428	5,186,012,280	61.44	93.75	72.04
2009/10	10,345,373,370	6,739,347,218	8,654,774,244	6,298,330,207	60.88	93.46	72.77
2010/11	13,035,839,124	8,241,456,544	11,002,040,633	7,736,119,625	59.35	93.87	70.32
				Summation	300.58	465.85	359.18
					60.12	93.17	71.84

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (d)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	7,021,141,146	4,584,394,939	5,572,470,018	289,766,401	4.13	6.32	5.20
2007/08	7,566,326,661	4,795,837,227	6,522,816,631	426,947,082	5.64	8.90	6.55
2008/09	8,440,405,808	5,531,833,738	7,198,327,428	345,821,458	4.10	6.25	4.80
2009/10	10,345,373,370	6,739,347,218	8,654,774,244	441,017,011	4.26	6.54	5.10
2010/11	13,035,839,124	8,241,456,544	11,002,040,633	505,336,919	3.88	6.13	4.59
				Summation	22.01	34.15	26.24
					4.40	6.83	5.25

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (e)

STANDARD CHARTERED BANK NEPAL LIMITED

Calculation of Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	20,672,433,854	9,557,138,004	18,619,375,076	8,401,096,542	40.64	87.90	45.12
2007/08	23,355,223,128	10,844,598,988	21,045,086,740	9,751,759,501	41.75	89.92	46.34
2008/09	24,817,369,870	12,919,630,994	22,010,332,984	11,772,168,356	47.44	91.12	53.48
2009/10	27,418,157,873	13,451,168,267	24,814,011,984	12,449,820,947	45.41	92.56	50.17
2010/11	29,460,389,672	15,761,976,082	26,490,851,640	14,721,218,259	49.97	93.40	55.57
				Summation	225.21	454.90	250.69

					45.04	90.98	50.14
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Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (e)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	20,672,433,854	9,557,138,004	18,619,375,076	1,156,041,462	5.59	12.10	6.21
2007/08	23,355,223,128	10,844,598,988	21,045,086,740	1,092,839,487	4.68	10.08	5.19
2008/09	24,817,369,870	12,919,630,994	22,010,332,984	1,147,462,638	4.62	8.88	5.21
2009/10	27,418,157,873	13,451,168,267	24,814,011,984	1,001,347,320	3.65	7.44	4.04
2010/11	29,460,389,672	15,761,976,082	26,490,851,640	1,040,757,823	3.53	6.60	3.93
				Summation	22.08	45.10	24.58
					4.42	9.02	4.92

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (f)

NIBL Bank Limited

Calculation of Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Performing assets	% of PA to TA	% of PA to TL	% of PA to TD
	T.A (1)	T.L.(2)	T.D. (3)	P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	17,629,252,392	7,801,848,563	15,506,428,215	7,244,970,881	41.10	92.86	46.72
2007/08	16,562,624,992	8,113,684,221	13,447,661,064	7,664,053,458	46.27	94.46	56.99
2008/09	16,745,486,638	8,548,657,038	14,119,032,115	8,261,978,118	49.34	96.65	58.52
2009/10	17,186,330,816	10,946,736,577	14,586,608,707	10,802,229,684	62.85	98.68	74.06
2010/11	22,329,971,078	13,278,782,259	19,347,399,440	13,096,157,779	58.65	98.62	67.69
				Summation	258.21	481.27	303.98

					51.64	96.25	60.80
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Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 2 (f)

Calculation of Non-Performing assets to Total Asset, Total Lending & Total Deposit

Year	Total assets	Total Lending	Total Deposit	Non Performing assets	% of NPA to TA	% of NPA to TL	% of NPA to TD
	T.A (1)	T.L.(2)	T.D. (3)	N.P.A. (4)	(4/1*100)	(4/2*100)	(4/3*100)
2006/07	17,629,252,392	7,801,848,563	15,506,428,215	556,877,682	3.16	7.14	3.59
2007/08	16,562,624,992	8,113,684,221	13,447,661,064	449,630,763	2.71	5.54	3.34
2008/09	16,745,486,638	8,548,657,038	14,119,032,115	286,678,920	1.71	3.35	2.03
2009/10	17,186,330,816	10,946,736,577	14,586,608,707	144,506,893	0.84	1.32	0.99
2010/11	22,329,971,078	13,278,782,259	19,347,399,440	182,624,480	0.82	1.38	0.94
				Summation	9.24	18.73	10.90
					1.85	3.75	2.18

Source: Annual Reports of concern bank fiscal year 2006/07 to 2010/11

Annex 3 (a)

KUMARI BANK LIMITED

Year	Performing Assets				Non Performing Assets						
	Pass loan	PL/TL x 100	Restructured Loan	RL/TL x 100	Sub-standard Loan	SL/TL x 100	Doubtful loan	DL/TL x 100	Bad Loan	BL/TL x 100	Total Loan
2006/07	1,843,850,969	80.68	0	0.00	286,648,537	12.54	140,207,147	6.13	14,785,697	0.65	2,285,492,350
2007/08	2,315,583,586	88.30	0	0.00	158,672,493	6.05	108,390,314	4.13	39,713,965	1.51	2,622,360,358
2008/09	2,985,450,017	92.64	0	0.00	16,643,478	0.52	43,877,357	1.36	176,777,500	5.49	3,222,748,353
2009/10	2,887,539,940	78.36	236,466,495	6.42	59,576,995	1.62	100,905,248	2.74	400,646,029	10.87	3,685,134,707
2010/11	2,777,631,557	64.27	204,712,430	4.74	52,430,788	1.21	26,561,929	0.61	1,260,250,073	29.16	4,321,586,777
Sum	12,810,056,069	404.24	441,178,925	11.15	573,972,291	21.94	419,941,995	14.98	1,892,173,264	47.68	16,137,322,545
Average		80.85		5.58		4.39		3.00		9.54	

Annex 3 (b)

NEPAL INVESTMENT BANK LIMITED

Year	Performing Assets				Non Performing Assets						
	Pass loan	PL/TL x 100	Restructured Loan	RL/TL*100	Sub-standard Loan	SL/TL*100	Doubtful loan	DL/TL*100	Bad Loan	BL/TL x 100	Total Loan
2006/07	4,001,840,315	98.95		0.00	15,732,509	0.39	13,328,276	0.33	13,327,331	0.33	4,044,228,431
2007/08	4,938,390,206	97.80		0.00	41,954,709	0.83	38,055,772	0.75	31,180,622	0.62	5,049,581,309
2008/09	5,991,085,718	98.28		0.00	110,822,572	1.82	40,494,733	0.66	53,178,064	0.87	6,095,841,087
2009/10	7,453,205,999	94.34	318,076,527	4.03	4,408,738	0.06	1,977,471	0.03	122,421,536	1.55	7,900,090,271
2010/11	9,757,195,136	96.26	249,823,522	2.46	10,669,326	0.11	683,784	0.01	117,882,680	1.16	10,136,254,448
Sum	32,141,717,374	485.64	567,900,049	6.49	183,587,854	3.20	94,540,036	1.78	337,990,233	4.53	33,225,995,546
Average		97.13		3.25		0.64		0.36		0.91	

Annex 3 (c)

MACHHAPUCHCHHRE BANK LIMITED

Year	Performing Asset				Non Performing Asset						
	Pass loan	PL/TL*100	Restructured Loan	RL/TL*100	Sub-standard Loan	SL/TL*100	Doubtful loan	DL/TL*100	Bad Loan	BL/TL*100	Total Loan
2006/07	6,808,770,842	84.23		0.0	749,851,030	9.28	422,213,213	5.22	103,151,626	1.28	8,083,986,711
2007/08	6,948,236,345	87.27		0.0	166,127,332	2.09	577,611,361	7.26	269,536,019	3.39	7,961,511,057
2008/09	8,602,513,914	89.19		0.0	127,933,703	1.33	168,578,901	1.75	745,668,223	7.73	9,644,694,741
2009/10	7,793,969,752	80.96		0.0	120,628,590	1.25	160,777,414	1.67	1,551,537,781	16.12	9,626,913,537
Sum	30,153,490,853	341.65		0.0	1,164,540,655	13.94	1,329,180,889	15.90	2,669,893,649	28.51	35,317,106,046
Average		85.41		0.0		3.49		3.97		7.13	

Annex 3 (d)

Machhapuchchhre Bank Limited

Year	Performing Asset				Non Performing Asset						Total Loan
	Pass loan	PL/TL*100	Restructured Loan	RL/TL*100	Sub-standard Loan	SL/TL*100	Doubtful loan	DL/TL*100	Loss Loan	BL/TL*100	
2006/07	3,937,074,298	85.88	357,554,240	7.80	89,285,664	1.95	61,821,433	1.35	138,659,304	3.02	4,584,394,939
2007/08	4,144,846,125	86.43	224,044,020	4.67	121,498,598	2.53	166,868,350	3.48	138,580,134	2.89	4,795,837,227
2008/09	4,762,590,360	86.09	423,421,920	7.65	1,116,600	0.02	69,303,360	1.25	275,401,498	4.98	5,531,833,738
2009/10	5,886,791,147	87.35	411,539,060	6.11	11,912,170	0.18	6,515,490	0.10	422,589,350	6.27	6,739,347,217
2010/11	7,393,297,710	89.71	342,821,915	4.16	1,797,016	0.02	3,842,595	0.05	499,697,308	6.06	8,241,456,544
Sum	26,124,599,640	435.46	1,759,381,155	30.39	225,610,048	4.70	308,351,228	6.22	1,474,927,594	23.23	29,892,869,665
		87.09		6.08		0.94		1.24		4.65	

Annex 3 (e)

STANDARD CHARTERED BANK NEPAL LIMITED

Year	Performing Asset				Non Performing Asset						Total Loan
	Pass loan	PL/TL*100	Restructured Loan	RL/TL*100	Sub-standard Loan	SL/TL*100	Doubtful loan	DL/TL*100	Bad Loan	BL/TL*100	
2006/07	8,401,096,542	87.90	358,431,428	3.75	246,746,162	2.58	140,455,627	1.47	410,408,245	4.29	9,557,138,004
2007/08	9,566,445,731	88.21	185,313,770	1.71	224,318,058	2.07	375,017,864	3.46	493,503,565	4.55	10,844,598,988
2008/09	11,275,992,182	87.28	496,176,174	3.84	423,163,354	3.28	54,474,884	0.42	669,824,400	5.18	12,919,630,994
2009/10	11,821,694,843	87.89	628,126,104	4.67	69,549,654	0.52	242,116,379	1.80	689,681,290	5.13	13,451,168,267
2010/11	14,055,103,815	89.17	666,114,444	4.23	107,227,888	0.68	228,498,188	1.45	705,031,747	4.47	15,761,976,082
Sum	55,120,333,113	440.45	2,334,161,920	18.20	1,071,005,116	9.12	1,040,562,942	8.60	2,968,449,247	23.63	62,534,512,335
Average		88.09		3.64		1.82		1.72		4.73	

Annex 3 (f)

NIBL Bank Limited

Year	Performing Asset				Non Performing Asset						
	Pass loan	PL/TL*100	Restructured Loan	RL/TL*100	Sub-standard Loan	SL/TL*100	Doubtful loan	DL/TL*100	Bad Loan	BL/TL*100	Total Loan
2006/07	7,244,970,881	92.86		0.00	260,277,239	3.34	230,936,540	2.96	65,663,903	0.84	7,801,848,563
2007/08	7,664,053,458	94.46		0.00	76,311,974	0.94	279,117,410	3.44	94,201,379	1.16	8,113,684,221
2008/09	8,261,978,118	96.65		0.00	22,139,923	0.26	65,552,224	0.77	198,986,773	2.33	8,548,657,038
2009/10	10,668,029,166	97.45	134,200,518	1.23	22,072,562	0.20	1,934,092	0.02	120,500,239	1.10	10,946,736,577
2010/11	13,010,864,147	97.98	85,293,632	0.64	62,665,914	0.47	29,565,952	0.22	90,392,614	0.68	13,278,782,259
Sum	46,849,895,770	97.40	219,494,150	1.87	443,467,612	5.21	607,106,218	7.41	569,744,908	6.11	48,689,708,658
Average		95.88		0.93		1.04		1.48		1.22	

ANNEX 4(a)

Calculation of Karl person's correlation coefficient between ROA and

NPA of KUMARI BANK LIMITED

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	-3.2	19.32	10.24	373.2624	-61.824
2007/08	2.59	11.7	6.7081	136.89	30.303
2008/09	0.43	7.36	0.1849	54.1696	3.1648
2009/10	-4.38	15.23	19.1844	231.9529	-66.707
2010/11	-18.92	30.99	357.966	960.3801	-586.33

Sum	X = -23.48	Y = 84.6	X ² = 394.284	Y ² = 1756.655	XY = -681.39
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Karl Person's correlation coefficient (r)

$$\begin{aligned}
&= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \cdot (-681.39) - (-23.48) \cdot 84.6}{\sqrt{5 \cdot 394.284 - (-23.48)^2} \cdot \sqrt{5 \cdot 1756.655 - (84.6)^2}} \\
&= \frac{-1420.56}{1519.625} = -0.93
\end{aligned}$$

$$\begin{aligned}
\text{Probable error (P.E.)} &= \frac{0.6745 \sqrt{1 - r^2}}{\sqrt{n}} \\
&= \frac{0.6745 \sqrt{1 - (-0.93)^2}}{\sqrt{5}} \\
&= \frac{0.0851}{2.2361} = 0.0380
\end{aligned}$$

ANNEX 4(b)

Calculation of Karl person's correlation coefficient between ROA and

NPA of Nepal Investment Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	1.29	1.04	1.6641	1.0816	1.3416
2007/08	1.17	2.2	1.3689	4.84	2.574
2008/09	1.49	1.7	2.2201	2.89	2.533
2009/10	1.45	1.6	2.1025	2.56	2.32
2010/11	1.5	1.27	2.25	1.6129	1.905
Sum	X = 6.9	Y = 7.81	X ² = 9.6056	Y ² = 12.9845	XY = 10.6736

Karl Person's correlation coefficient (r)

$$= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \cdot 10.6736 - 6.9 \cdot 7.81}{\sqrt{5 \cdot 9.6056 - (6.9)^2} \cdot \sqrt{5 \cdot 12.9856 - (7.81)^2}}$$

$$= \frac{Z0.521}{1.2811} = -0.41$$

$$\begin{aligned} \text{Probable error (P.E.)} &= \frac{0.6745(1 Z r^2)}{\sqrt{n}} \\ &= \frac{0.6745(1 Z (0.41)^2)}{\sqrt{5}} \\ &= \frac{0.5630}{2.2361} = 0.2518 \end{aligned}$$

ANNEX 4(c)

Calculation of Karl person's correlation coefficient between ROA and

NPA of Machhapuchhre Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	0.59	12.26	0.3481	150.3076	7.2334
2007/08	0.6	12.73	0.36	162.0529	7.638
2008/09	0.02	10.81	0.0004	116.8561	0.2162
2009/10	0	19.04	0	362.5216	0
2010/11	0	0	0	0	0
Sum	X = 1.21	Y = 54.84	X ² = 0.7085	Y ² = 791.7382	XY = 15.0876

Karl Person's correlation coefficient (r)

$$\begin{aligned} &= \frac{N \cdot \phi_{XY} \cdot Z(\phi_X) \cdot \phi_Y}{\sqrt{N \cdot \phi_X^2 \cdot Z(\phi_X)^2} \cdot \sqrt{N \cdot \phi_Y^2 \cdot Z(\phi_Y)^2}} \\ &= \frac{4 \mid 15.0876 \mid Z(1.21) \mid 54.84}{\sqrt{4 \mid 0.7085 \mid Z(1.21)^2} \sqrt{4 \mid 791.7382 \mid Z(54.84)^2}} \\ &= \frac{Z6.006}{14.7830} = -0.41 \end{aligned}$$

$$\begin{aligned} \text{Probable error (P.E.)} &= \frac{0.6745(1 - Zr^2)}{\sqrt{n}} \\ &= \frac{0.6745 \mid Z(0.41)^2}{\sqrt{4}} \\ &= \frac{0.5632}{2} = 0.2816 \end{aligned}$$

ANNEX 4(d)

**Calculation of Karl person's correlation coefficient between ROA and NPA of
Machhapuchhre Bank Limited**

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	0.58	6.32	0.3364	39.9424	3.6656
2007/08	0.64	8.9	0.4096	79.21	5.696
2008/09	0.72	6.25	0.5184	39.0625	4.5
2009/10	0.55	6.54	0.3025	42.7716	3.597
2010/11	0.9	6.13	0.81	37.5769	5.517
Sum	X = 3.39	Y = 34.14	X ² = 2.3769	Y ² = 238.5634	XY =22.9756

Karl Person's correlation coefficient (r)

$$\begin{aligned}
 &= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \cdot 22.9756 - 3.39 \cdot 34.14}{\sqrt{5 \cdot 2.3769 - (3.39)^2} \cdot \sqrt{5 \cdot 238.5634 - (34.14)^2}} \\
 &= \frac{0.8566}{3.2716} = -0.26
 \end{aligned}$$

$$\begin{aligned}
 \text{Probable error (P.E.)} &= \frac{0.6745(1 Z r^2)}{\sqrt{n}} \\
 &= \frac{0.6745(1 Z (0.26)^2)}{\sqrt{5}} \\
 &= \frac{0.6283}{2.2361} = 0.2810
 \end{aligned}$$

ANNEX 4(e)

Calculation of Karl person's correlation coefficient between ROA and NPA of KUMARI BANK LIMITED

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	1.14	12.1	1.2996	146.41	13.794
2007/08	0.91	10.08	0.8281	101.6064	9.1728
2008/09	1.06	8.88	1.1236	78.8544	9.4128
2009/10	1.11	7.44	1.2321	55.3536	8.2584
2010/11	1.55	6.6	2.4025	43.56	10.23
Sum	X = 5.77	Y = 45.1	X ² = 6.8859	Y ² = 425.7844	XY 50.868

Karl Person's correlation coefficient (r)

$$r = \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 | 50.868 Z 5.77 | 45.10}{\sqrt{5 | 6.8859 Z (5.77)^2 \sqrt{5 | 425.7844 Z (45.10)^2}}$$

$$= \frac{Z 5.887}{10.3864} = -0.57$$

$$\text{Probable error (P.E.)} = \frac{0.6745(1 Z r^2)}{\sqrt{n}}$$

$$= \frac{0.6745 | Z (0.57^2)}{\sqrt{5}}$$

$$= \frac{0.4578}{2.2361} = 0.2047$$

ANNEX 4(f)

Calculation of Karl person's correlation coefficient between ROA and NPA of NIBL Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	1.53	7.14	2.3409	50.9796	10.9242
2007/08	2.43	5.54	5.9049	30.6916	13.4622
2008/09	2.73	3.35	7.4529	11.2225	9.1455
2009/10	3.06	1.32	9.3636	1.7424	4.0392
2010/11	3.23	1.38	10.4329	1.9044	4.4574
Sum	X = 12.98	Y = 18.73	X ² = 35.4952	Y ² = 96.5405	XY = 42.0285

Karl Person's correlation coefficient (r)

$$\begin{aligned} &= \frac{N \cdot \phi_{XY} \sum \phi_X \cdot \phi_Y}{\sqrt{N \cdot \phi_X^2 \sum (\phi_X)^2} \cdot \sqrt{N \cdot \phi_Y^2 \sum (\phi_Y)^2}} \\ &= \frac{5 \mid 42.0285 \sum 12.98 \mid 18.73}{\sqrt{5 \mid 35.4952 \sum (12.98)^2} \sqrt{5 \mid 96.5405 \sum (18.73)^2}} \\ &= \frac{32.9729}{34.4445} = -0.96 \end{aligned}$$

Probable error (P.E.) = $\frac{0.6745(1 \sum r^2)}{\sqrt{n}}$

$$\begin{aligned} &= \frac{0.6745 \sum (0.96^2)}{\sqrt{5}} \\ &= \frac{0.0564}{2.2361} = 0.0252 \end{aligned}$$

ANNEX 5(a)

**Calculation of Karl person's correlation coefficient between Total Lending and
Total NPA of KUMARI BANK LIMITED**

X = Total lending of Bank

Y = Total NPA of Bank

Amount in 100 million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	22.85	4.42	522.1225	19.5364	100.997
2007/08	26.22	3.07	687.4884	9.4249	80.4954
2008/09	32.22	2.37	1038.1284	5.6169	76.3614
2009/10	36.85	5.61	1357.9225	31.4721	206.7285
2010/11	43.21	13.39	1867.1041	179.292	578.5819
Sum	X = 161.35	Y = 28.86	X ² = 5472.7659	Y ² = 245.342	XY = 1043.1642

Karl Person's correlation coefficient (r)

$$\begin{aligned}
 &= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \cdot 1043.1642 - 161.35 \cdot 28.86}{\sqrt{5 \cdot 5472.7659 - (161.35)^2} \cdot \sqrt{5 \cdot 245.342 - (28.86)^2}} \\
 &= \frac{559.26}{723.722} = 0.77
 \end{aligned}$$

$$\text{Probable error (P.E.)} = \frac{0.6745(1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.6745 \sqrt{Z(0.77A)}}{\sqrt{5}}$$

$$= \frac{0.2717}{2.2361} = 0.1215$$

ANNEX 5(b)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of NEPAL INVESTMENT BANK LIMITED

X = Total lending of Bank

Y = Total NPA of Bank

Amount in 10 million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	404.42	4.24	163555.54	17.98	1714.74
2007/08	504.96	11.12	254984.60	123.65	5615.16
2008/09	609.58	10.48	371587.78	109.83	6388.40
2009/10	790.01	12.88	624115.80	165.89	10175.33
2010/11	1036.62	12.92	1074581.02	166.93	13393.13
Sum	X = 3345.59	Y = 51.64	X ² =2488824.74	Y ² =584.28	XY = 37286.75

Karl Person's correlation coefficient (r)

$$= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \cdot 37286.75 - 3345.59 \cdot 51.64}{\sqrt{5 \cdot 2488824.74 - (3345.59)^2} \cdot \sqrt{5 \cdot 584.28 - (51.64)^2}}$$

$$= \frac{13667.50}{17852.21} = 0.77$$

$$\begin{aligned} \text{Probable error (P.E.)} &= \frac{0.6745(1 Z r^2)}{\sqrt{n}} \\ &= \frac{0.6745(1 Z (0.77)^2)}{\sqrt{5}} \\ &= \frac{0.2792}{2.2361} = 0.1248 \end{aligned}$$

ANNEX 5 (c)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of MACHHAPUCHCHHRE BANK LIMITED

X = Total lending of Bank

Y = Total NPA of Bank

Amount in 100 million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	80.84	12.75	6535.1056	162.563	1030.71
2007/08	79.62	10.13	6339.3444	102.617	806.5506
2008/09	96.45	10.42	9302.6025	108.576	1005.009
2009/10	96.27	18.33	9267.9129	335.989	1764.6291
Sum	X = 353.18	Y = 51.63	X ² = 31444.9654	Y ² = 709.745	XY = 4606.8987

Karl Person's correlation coefficient (r)

$$\begin{aligned}
&= \frac{N \cdot \phi_{XY} Z \phi_X \phi_Y}{\sqrt{N \cdot \phi_X^2 Z(\phi_X)^2} \cdot \sqrt{N \cdot \phi_Y^2 Z(\phi_Y)^2}} \\
&= \frac{4 \mid 4606.8987 Z 353.18 \mid 51.63}{\sqrt{4 \mid 31444.9654 Z(353.18)^2} \sqrt{4 \mid 709.745 Z(51.63)^2}} \\
&= \frac{192.911}{425.329} = 0.45
\end{aligned}$$

$$\begin{aligned}
\text{Probable error (P.E.)} &= \frac{0.6745(1 Z r^2)}{\sqrt{n}} \\
&= \frac{0.6745 \mid Z(0.45 \text{Å})}{\sqrt{4}} \\
&= \frac{0.53575}{2} = 0.2679
\end{aligned}$$

ANNEX 5 (d)

**Calculation of Karl person's correlation coefficient between Total Lending and
Total NPA of Machhapuchchhre Bank Limited**

X = Total lending of Bank

Y = Total NPA of Bank

Amount in 100 million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	45.84	2.9	2101.31	8.41	132.936
2007/08	47.96	4.27	2300.16	18.2329	204.789
2008/09	55.32	3.46	3060.3	11.9716	191.407
2009/10	67.39	4.41	4541.41	19.4481	297.19
2010/11	82.41	5.05	6791.41	25.5025	416.171
Sum	X = 298.92	Y = 20.09	X ² = 18794.6	Y ² = 83.56	XY = 1242.49

Karl Person's correlation coefficient (r)

$$\begin{aligned}
 &= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \cdot 1242.49 - 298.92 \cdot 20.09}{\sqrt{5 \cdot 18794.6 - (298.92)^2} \cdot \sqrt{5 \cdot 83.56 - (20.09)^2}} \\
 &= \frac{207.161}{256.284} = 0.81
 \end{aligned}$$

$$\text{Probable error (P.E.)} = \frac{0.6745(1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.6745 \sqrt{Z(0.81A)}}{\sqrt{5}}$$

$$= \frac{0.2338}{2.2361} = 0.1046$$

ANNEX 5(e)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of STANDARD CHARTERED BANK NEPAL LIMITED

X = Total lending of Bank

Y = Total NPA of Bank

Amount 100 in million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	95.57	11.56	9133.6249	133.634	1104.7892
2007/08	108.44	10.93	11759.2336	119.465	1185.2492
2008/09	129.2	11.47	16692.64	131.561	1481.924
2009/10	134.51	10.01	18092.9401	100.2	1346.4451
2010/11	157.62	10.4	24844.0644	108.16	1639.248
Sum	X = 625.34	Y = 54.37	X ² =80522.503	Y ² =593.02	XY = 6757.6555

Karl Person's correlation coefficient (r)

$$= \frac{N \cdot \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \cdot 6757.6555 - 625.34 \cdot 54.37}{\sqrt{5 \cdot 80522.503 - (625.34)^2} \cdot \sqrt{5 \cdot 593.02 - (54.37)^2}}$$

$$= \frac{2211.458}{322.597} = -0.66$$

$$\text{Probable error (P.E.)} = \frac{0.6745(1 - Zr^2)}{\sqrt{n}}$$

$$= \frac{0.6745(1 - (-0.66)^2)}{\sqrt{5}}$$

$$= \frac{0.38469}{2.2361} = 0.1720$$

ANNEX 5(f)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of NIBL Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank

Amount 100 in million

Fiscal Year	X	Y	X ²	Y ²	XY
2006/07	78.02	5.56	6087.12	30.9136	433.7912
2007/08	81.14	4.5	6583.7	20.25	365.13
2008/09	85.49	2.87	7308.54	8.2369	245.3563
2009/10	109.47	1.45	11983.68	2.1025	158.7315
2010/11	132.79	1.82	17633.18	3.3124	241.6778
Sum	X = 486.91	Y = 16.2	X ² = 49596.23	Y ² = 64.8154	XY = 1444.687

Karl Person's correlation coefficient (r)

$$\begin{aligned}
 &= \frac{N \cdot \phi_{XY} \sum \phi_X \cdot \phi_Y}{\sqrt{N \cdot \phi_X^2 \sum (\phi_X)^2} \cdot \sqrt{N \cdot \phi_Y^2 \sum (\phi_Y)^2}} \\
 &= \frac{5 \mid 1444.687 \sum 486.91 \mid 16.2}{\sqrt{5 \mid 49596.23 \sum (486.91)^2} \sqrt{5 \mid 64.8154 \sum (16.2)^2}} \\
 &= \frac{Z664.51}{819.652} \qquad = -0.81
 \end{aligned}$$

$$\begin{aligned}
 \text{Probable error (P.E.)} &= \frac{0.6745(1 \sum r^2)}{\sqrt{n}} \\
 &= \frac{0.6745 \sum (0.81^2)}{\sqrt{5}} \\
 &= \frac{0.2312}{2.2361} \qquad = 0.1034
 \end{aligned}$$

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